engineering connections® – since 1963

Infrastructure | Buildings | Industrial structures
mageba products – at a glance

Infrastructure & industrial structure products

Bridge bearings
- Pot bearings
- Spherical bearings
- Elastomeric bearings
- Disc bearings
- ILM bearings
- Deformation bearings
- Special bearings

Seismic protection / Structural protection
- Hydraulic dampers
- Shock transmission units
- Preloaded spring dampers
- Friction pendulum
- Rubber isolators
- Fuse-Box for expansion joints

Expansion joints
- Single gap joints
- Modular expansion joints
- Sliding finger joints
- Cantilever finger joints
- Mat joints
- Railway joints
- Flexible plug joints

Structural Monitoring & Services
- Structural health monitoring
- Inspections
- Refurbishments
- Tests

Building products

Bearsings
- Slab bearings
- Wall bearings
- Separation bearings
- Sliding bearings and foils
- Deformation bearings
- Sliding sheets
- Elastomeric bearings
- Heat insulating bearings

Vibration isolation and impact sound insulation
- Vibration isolation bearings
- Impact sound insulation
- Staircase bearings
- Vibration isolation mats
- Noise insulated retaining pins
- Craneway bearings

Seismic devices / Structural protection

Seismic protection
- Seismic joints
- Flexible plug joints

Structural Monitoring

Structural Monitoring & Services
- Structural health monitoring
- Inspections
- Refurbishments
- Tests
People at the heart of everything we do

Those who manufacture important components for bridges or buildings carry a large responsibility to society. In our daily work we strive to exercise this responsibility and to effect positive change for each other, our customers and the wider society.

mageba’s employees are the foundation on which the success of the company rests. We are proud to have many of the industry’s most knowledgeable and capable individuals in our team. They expertly serve our customers’ often very particular needs, and ensure that the quality of our products and services remains at the high level expected.

mageba highlights in a nutshell

- Since its founding over 50 years ago, mageba has equipped well over 20,000 bridges worldwide with its quality products.
- The mageba team offers the expertise and competence of more than 900 employees worldwide, including over 150 engineers.
- Strong global network with 20 subsidiaries, 7 licensees, and agents in more than 50 countries.
- A distinct spirit of pioneering and innovation, long-term experience, and continual improvement of products and services make mageba a technological leader worldwide.
- Honoured in 2009 with an award for sustainability, reflecting outstanding performance under the headings Economy, Ecology, and Social.

• Finalist at the 2012 “Entrepreneur of the Year” awards for Switzerland’s best companies.
• In 2013, the year of the company’s 50th anniversary, honoured at the Prix SVC awards as one of the three best SMEs (small and medium enterprises) in the Zurich economic area.
• Through the acquisition and integration of the RW Sollinger Hütte GmbH group of companies in 2014, mageba continues to grow internationally.
• With the acquired business operations of Ludowici Engineered Rubber Products by mageba (Australia) in 2015, mageba can now offer the full range of products and services at competitive pricing throughout Australia and New Zealand.
• In 2016, the new AISC-certified production facility in Pottstown, USA was established.
mageba structural bearings – versatile, strong and long-lasting

Support you can depend on
Bridge bearings transfer forces from the bridge deck to its support pillars or abutments. They can be designed as fixed, guided sliding or free sliding, to suit the movement requirements of the bridge deck.

Wide range of high-quality bearings
mageba offers many types of bearings to satisfy bridge-specific requirements: Pot bearings, spherical bearings, elastomeric bearings, horizontal force bearings, linear rocker bearings, lifting and measuring bearings, pendulum bearings, incremental launch bearings and seismic bearings. In the production of these bearings, only high-quality materials are used. These include ROBO®SLIDE, a sliding material with exceptional qualities, and the POM sealing chain which has proven its worth over several decades in sealing the elastomeric pad at the heart of a pot bearing.

High quality as standard
Bearings are manufactured in accordance with EN1337 unless otherwise specified. The CE-label declares conformity with the standard’s requirements.

Highlights - mageba bridge bearings
- RESTON®POT bearings are among mageba’s core products, with over 50,000 delivered to date. One of these set a new world record in 2007 with its ability to carry 21,000 metric tons.
- RESTON®SPHERICAL is a spherical bearing which, especially together with ROBO®SLIDE, offers exceptional durability. It is particularly suitable for large rotations and low temperatures.
- LASTO®BLOCK is an elastomeric bearing which, when using CR elastomer, is highly resistant to aging, UV light and ozone.
- RESTON®POT LIFT-CONTROL is a pot bearing which allows the load from a structure to be monitored. It can also be used as a jack to lift the structure if necessary.

1 Assembly of a RESTON®SPHERICAL bearing.
2 Cut view of a free-sliding RESTON®POT bearing.
3 Reading of the force acting on a RESTON®POT LIFT-CONTROL lifting and measuring bearing, using a portable device.
4 RESTON®POT LIFT-CONTROL bearings permanently display loads and can also be used to lift the structure.
Installation of a RESTON® FORCE horizontal force bearing.
Final assembly work before installation of a large TENSA® MODULAR expansion joint.
mageba expansion joints – for lasting driver comfort

Ensuring a smooth driving surface
Expansion joints play a vital role on almost any bridge, because the bridge deck moves as a result of temperature and other influences. The movement gap at each end of the bridge deck must be bridged with a flat and even driving surface: the expansion joint. As bridge technology improves, and the spans of new bridges continue to increase, the demands on bridge expansion joints also increase.

Wide and well-proven range
mageba supplies a wide range of expansion joint types, including single gap joints, modular joints, cantilever joints and sliding finger joints, mat joints, railway joints, sliding plate joints and flexible plug joints. Worthy of special mention is the modular expansion joint, which was invented by mageba several decades ago and has been continually developed ever since. This exceptional type of joint has been installed on over 5,000 bridges around the world.

Highlights – mageba expansion joints
- TENSA®MODULAR (Type LR) is an exceptionally flexible and durable joint with optional features such as noise-reducing surface plates, special sliding material, anti-skid coating and earthquake protection.
- TENSA®FINGER (Type RSFD) is a cantilever finger joint which offers high driving comfort.
- POLYFLEX®ADVANCED PU is a flexible plug joint system, based on elastic polymers. Its key benefits include driver comfort, no additional noise emissions and watertightness.
- TENSA®CRETE (Type RE) is a single gap joint consisting of steel edge profiles anchored in high-strength polymer concrete.

1 A TENSA®MODULAR joint (type LR24, with 1,920 mm movement capacity) during installation.
2 Removal of asphalt and cutting of support ribs in preparation for the installation of a POLYFLEX®ADVANCED PU expansion joint.
3 Installation of a TENSA®FLEX (Type RC) sliding finger joint. The modular nature of the joint allows installation with minimal impact on traffic.
4 The TENSA®CRETE SILENT (Type RE-LS) joint is particularly suited to replacement of old joints in busy roads. It normally requires no breaking out of concrete and its special polymer concrete cures in only a few hours.
Seismic devices

mageba seismic devices – damping, absorbing and protecting

Growing demand for seismic protection
Bridges, buildings and other structures can be subjected to extreme movements and vibrations during an earthquake. This can cause a structure to fail if suitable protection has not been detailed. The demand for seismic protection features, especially for key buildings and transportation routes, continues to grow strongly.

Protecting bridges and buildings
In addition to supplying infrastructure and building products, mageba also specialises in reliable solutions for the protection of structures. A wide range of products are offered, including Fuse-Box protection for modular joints, hydraulic and spring dampers, lead rubber bearings, and vibration isolation products for buildings.

Highlights – mageba seismic devices
• Hydraulic dampers, Shock Transmission Units (STU) and preloaded spring dampers absorb and dissipate excessive energy during dynamic events such as earthquakes.
• Spring disc dampers are particularly valued for their reliability, top-quality materials, and durability.
• Lead Rubber Bearings (LRB) constitute the world’s most widespread solution for the protection of bridges and buildings during earthquakes.
• Fuse-Box – The Fuse-Box feature ensures that a modular joint will disconnect from the main structure in a controlled way during an earthquake. This prevents major damage to the bridge or expansion joint.

Customized solutions
mageba is also pleased to assist in the development of specialised solutions for any particular set of requirements, and of sustainable solutions with consideration of durability, long life and future needs.

1 RESTON® hydraulic dampers. mageba dampers offer an economical means of strengthening a structure. They can be expected to function for well over 50 years.

2 Thorough testing of a spring disc damper at the independent testing laboratory EMPA (Switzerland).

3 Lead Rubber Bearings have proven their worth in many earthquakes around the world.

4 A modular expansion joint featuring Fuse-Box seismic protection (on the left), before installation on a bridge.
Installation of a RESTON SPENDULUM Curved Surface Slider.
ROBO®CONTROL sensor for measurement of forces in cables.
mageba monitoring & services – control and safety at all times

The increasing need for control

The ability of engineers to design, construct and maintain structures has greatly improved in recent decades. The need for structural health monitoring has also grown accordingly.

Real-time monitoring

mageba monitoring systems provide real-time information on any desired characteristic of a structure – for example forces, movements, vibrations, crack widths or temperature. This increases confidence in the structural integrity of a structure, and ensures that safety measures can be implemented in good time, if necessary.

Highlights – mageba monitoring & services

- ROBO®CONTROL - a modern and flexible system which offers quick, efficient and inexpensive health checking of any type of structure.
- Inspections - a vital part of any structure’s maintenance plan. Done properly and professionally, they can ensure that possible problems are identified in promptly time.
- mageba can provide complete testing of any bridge product.

1 mageba has over 50 years of experience in the conventional inspection of structures.
2 ROBO®CONTROL is a fully automated monitoring system that makes measured data available via the Internet.
3 A ROBO®CONTROL Box – the heart of mageba’s structural health monitoring system.
4 Low energy systems enable ROBO®CONTROL to be installed in even the most remote locations.
mageba building products –
engineering connections®

Leading supplier of building products
Although mageba is best known around the world for its bridge products, the company has also supplied building products for over 40 years and has in the last decade taken a leading position in the competitive Swiss building products market.

Solutions for movements, vibrations and noise
Residential and industrial buildings, hospitals, stadiums, airports, railway stations and countless other buildings have been fitted with mageba products such as bearings and expansion joints. These can be specified to fulfill a wide range of purposes, including noise and vibration isolation, efficient transmission of forces, and earthquake protection, and to allow controlled movements between sections of a building.

Highlights – mageba building products
• LASTO®STRIP linear strip bearings accommodate forces, movements and rotations, preventing damage and thus extending the life of the building.
• TENSA®COMPRESS A expansion joints facilitate longitudinal, vertical and transverse movements of one part of a building relative to another. The joint’s inner ribbing ensures that it retains its form in any state of compression.
• VIBRAX®STAIR stair bearings are used to dampen vibrations from foot traffic on stairs, significantly reducing the resulting noise.
• VIBRAX®DAMP 17/8 and other high-performance vibration isolation products from the VIBRAX® product family offer excellent impact noise insulation. These products are certified with a European Technical Approval (ETA, CE label).

1 VIBRAX®BLOCK B is a highly resilient and permanently elastic elastomeric bearing for vibration isolation.

2 LASTO®STRIP linear strip bearings are easy to install, and can be provided with a PTFE strip, sliding sheet and silicone grease to facilitate sliding movement.

3 TENSA®COMPRESS A expansion joints are simple and quick to install, making them attractive for many building purposes.

4 Professional installation of impact sound insulation beneath a load distribution slab in a shopping centre.
Positioning of pre-cast concrete elements on the prepared VIBRAK® BLOCK B vibration bearings at EMPA in Dübendorf.
mageba quality and know-how – for lasting and reliable products

**Systematic Quality Management**

- First company in its field to have its quality assurance system certified in accordance with ISO 9001 (in 1991).
- Extensive experience in quality management and assurance. Experienced quality specialists and welding engineers (IWE/CWI), and certified inspectors in all manufacturing facilities.
- Systematic control of all business processes ensured by mageba’s constantly developing and improving quality system.

![Quality Management Logos](image)

**Technical Excellence**

- Experience over many years with movements and transfer of forces in structures, and with damping of impacts, seismic protection and insulation against sound and vibration.
- Inventor of the modern modular expansion joint and holder of a number of patents in the areas of bridge bearings and expansion joints.

![Technical Excellence Logos](image)

- Product testing at external, independent institutions such as universities and material testing bodies.
- Close cooperation in the fields of external quality control and research and development with the Universities of Stuttgart and Karlsruhe (Germany), Innsbruck (Austria), Lehigh (USA), San Diego (USA), and Buffalo (USA).
- Active collaboration in international committees and contribution to the development of international standards (CEN / fib / IABSE) for structural bearings and expansion joints.
- Cooperation with internationally recognized experts and institutions such as ETH Zurich and Lausanne, MPA Stuttgart, University of Karlsruhe and Lehigh University.
mageba –
worldwide success for over 50 years

Audubon Bridge, USA  
SR 520 Floating Bridge, USA  
Verrazano Narrows Bridge, USA  
Bayonne Bridge, USA

Port Mann Bridge, Canada  
Golden Ears Bridge, Canada  
Angus L. MacDonald and A. Murray MacKay Bridges, Canada  
Deh Cho Bridge, Canada

Infernillo Bridge, Mexico  
Metro de Panama, Panama  
Puente Chilina, Peru  
Petrobras Floating Production Unit, Brazil

Öresund Bridge, Denmark/Sweden  
Wallersbach Bridge, Germany  
Pont de la Poya, Switzerland  
Vasco da Gama Bridge, Portugal

Bandra-Worli Sea Link, India  
Tsing Ma Bridge, Hong Kong  
Chongming Bridge, China

Further references are available online.