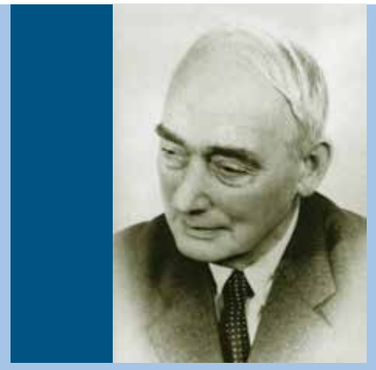
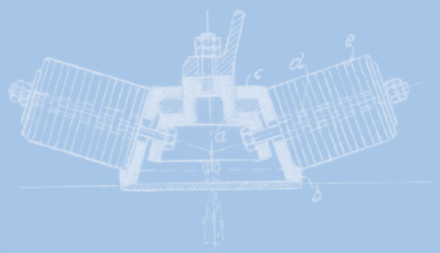
GERB
Company Profile

Vibrations can be controlled wherever they occur

William Gerb
Company's Founder





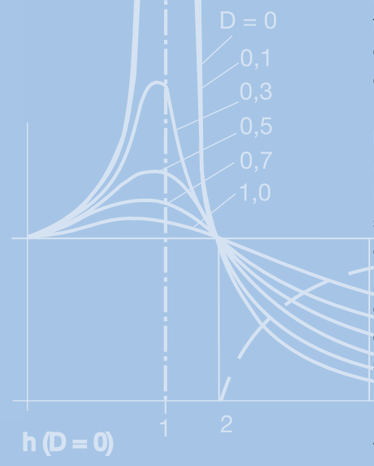
Dämpfer für Geräusche u Erschütterungen

Zeitschrift des Vereines deutscher Ingenieure

Band 55 Nr. 28. 15. Juli 1911

ETZ 27. April 1911

a = Gußkörper zur Befestigung am Maschinenfuß
b = Am Boden befestigtes Gußstück
c = elastische Zwischenlage
d = Drei um 120° versetzte Zugstangen
e = Zwischengeschaltete federnde Platten



The GERB Group – your partner with worldwide experience in solving vibration problems of all types.

More than 100 years ago, the history of GERB began when its founder, William Gerb, became fascinated with an idea that others thought could never be successful. He accepted the challenge of using steel springs to protect work areas and surrounding neighbourhoods from machinery vibrations. Since then, the GERB Group of companies has continued to develop this idea, solving dynamic problems in many new fields of application.

Machinery and equipment in power generation and metal forming plants now employ an active vibration isolation system (source isolation), to reduce foundation size and cost. Sensitive measurement and test equipment, and even entire buildings, employ a passive isolation system (receiver isolation) to protect against disturbing vibrations from nearby machines and traffic, or from earthquakes. Both active and passive isolation systems permit easy realignment of the foundation when poor soil conditions cause the foundation to settle.

Tuned mass dampers are a special type of vibration protection, used to stabilize and reduce vibrations on bridges, buildings, stadiums and ships.

Aspire Tower, Doha, Qatar

Management (from left to right):
Dr. Peter Nawrotzki,
Christoph von Waldow,
Ehrenfried von Waldow,
Kai Askan Bünte

The GERB principle: innovative thinking, resolute performance

The GERB name is known for international service.

William Gerb knew that innovation is the only way to secure the future. GERB companies don't rely on old, established technologies. Vibration isolation of railway trackbeds, and seismic protection of sensitive buildings are just some of our exciting new applications.

Engineers who are familiar with vibration and structure borne noise, may also be challenged by room-within-a-room solutions separating TV and recording studios, recital and rehearsal rooms as well as discos, fitness studios and special hospital rooms dynamically and acoustically from the surrounding environment.

GERB's research and development center located in Berlin, Germany, cooperates with highly regarded research institutions in Germany and abroad.

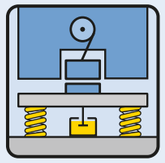
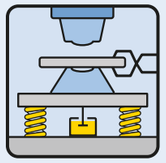
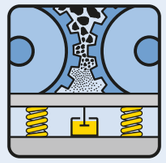
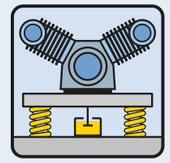
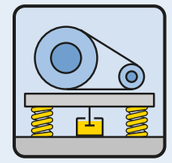
Today, our growing export business, as well as our many other worldwide activities, confirm the international acceptance of GERB's technology. We will continue to respond to opportunities with new and innovative solutions.

GERB

Our activities:

- International project management by highly trained and experienced engineers.
- Custom-designed, yet economical foundation systems for machinery, equipment and buildings.
- Static and dynamic foundation analysis.
- Workshop drawings and construction supervision for both steel and reinforced concrete structures.
- Elastic support systems for buildings, structures and equipment to protect against subsidence, vibrations, structureborne noise and earthquakes.
- Installation of spring elements and Viscodampers®, or installation supervision, by our trained and experienced technicians.
  Hydraulic jack systems with load capacities up to 6,000 tons are available for lifting buildings or machine foundations.
- GERB engineers measure and analyse vibrations and structureborne noise emissions from machinery and equipment on new applications.

GERB is certified according
ISO 9001
ISO 14001
OHSAS 18001
DIN EN 1090-1
DIN EN 1090-2
ISO 3834
and other standards

For quality production, precision is everything – GERB can help

Application Areas

- **Metal Forming**
- **Industrial Machinery**

GERB has developed elastic support systems consisting of spring elements and Viscodampers® for:

Metal forming machinery (forging hammers, presses), machine tools, shredders, compressors, centrifuges, test stands, and textile machinery;

- to protect the machine operator and nearby sensitive equipment from vibrations at the work location (source isolation),

- to protect the neighbourhood against disturbing vibrations and structure-borne noise.

Precision machinery of all types (e.g. roll grinders, laser measurement machines, test machines, and microscopes)

- to protect against disturbing vibrations from nearby machinery, equipment and traffic. (receiver isolation)


GERB systems are essential for today's industrial plant. All types of machines and equipment can be installed on custom-made, yet economical elastic foundations.

The elastic foundation has a long history at GERB, ever since William Gerb began to improve production quality by elastically supporting machines. There is a broad range of suitable applications, from precision machinery to power generation and metal forming equipment.
Machine performance is critical to high product quality.

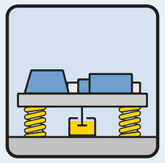
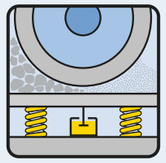
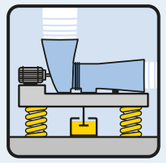
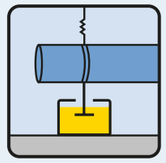
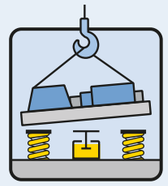
Today, new equipment is often supplied with a vibration isolation system. Equipment suppliers to the automotive industry, for example, cannot accept excessive tolerances and imprecise control of their production systems.

GERB's elastic foundations provide a competitive technical advantage, as well as maintenance-free operation.

Linear Forging Hammer with Servo Technology (Schuler)

Automated Hammer Cell (Lasco)

Automated Press Line (Schuler)

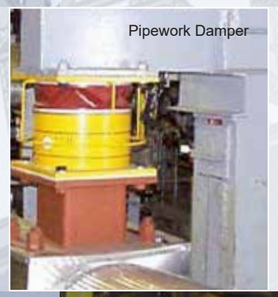
A fundamental GERB philosophy: safety and reliability

Vibration reduction is a modern and sophisticated technology, with an age-old concern for equipment safety and reliability.

If the foundation of a steam turbine-generator, for example, is to have an expected lifetime of more than 30 years, the machine foundation must be carefully designed and constructed.

Since GERB`s beginning, we have required that our systems must be easily maintained, and safe and reliable for the lifetime of the foundation. Every element can be inspected and serviced without difficulty, even during operation of the machine.

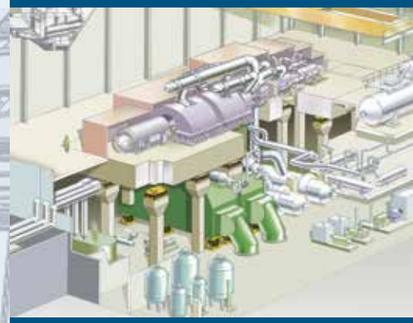
All load-carrying springs are designed to DIN-standards, and have an unlimited lifetime. A high quality corrosion protection system complies with GERB's quality philosophy.


Pipework Damper


Turbo Generator, China


Turbo Generator, Germany


Turbo Generator, China



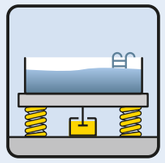
Application Areas

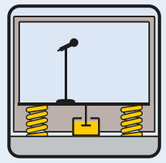
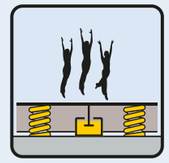
- **Power Generation**
- **Damper Systems**
- **Restauration & Upgrade of Foundations**

Elastic foundation systems consisting of spring/Viscodampers® for power plant machinery, including turbinegenerators, boiler feed pumps, coal mills, fans, diesel generators, and piping systems:

- to reduce vibrations and structure borne noise,
- to protect against subsidence,
- to protect against earthquakes,
- to reduce foundation costs.


Turbo Generator Foundation, France




No matter where you are or what you are doing, you don't need to be disturbed


Residential Building, Berlin

Application Area

› Buildings

GERB engineers develop, design and supply elastic support systems for buildings and other structures:

- to protect against vibrations and structure-borne noise from subways, railways and industrial plants,
- to protect against subsidence,
- to protect against earthquakes.

Even the smallest environmental disturbance can be distracting. GERB can help.

When concert halls, opera houses and cinemas open their doors, GERB vibration isolation systems are already in their place. The most sophisticated foundation system helps make the experience unlike any other. Vibrations and structure borne noise are completely isolated, and the evening belongs to the fine arts.

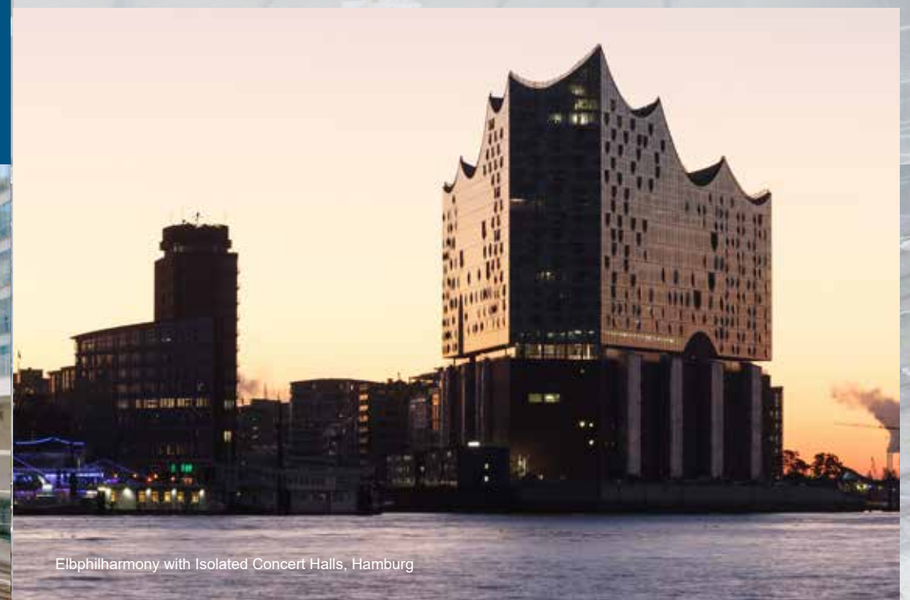
The modern Sheraton hotel at Charles de Gaulle Airport, Paris, has also been supported on GERB spring elements, to protect hotel guests from TGV railway traffic passing beneath the hotel.

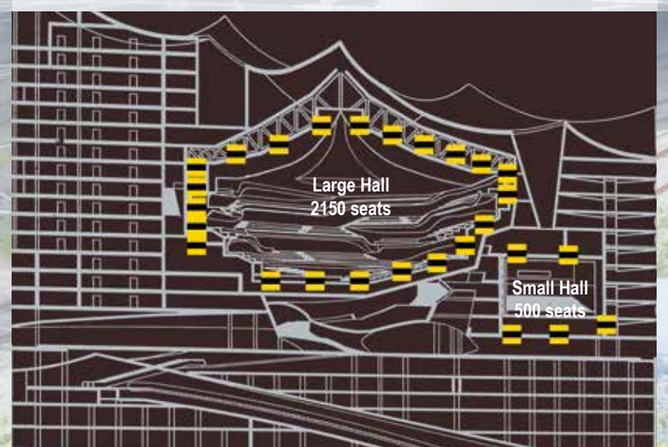
GERB can manage large and complex projects, offering a range of services including vibration analysis and consultation, system design and supply, construction and installation supervision, and performance verification.

Examples include a spring supported office building in Paris, the Elbphilharmony in Hamburg with isolated concert halls and the „Bosco Verticale-Building“ in Milano, elastically supported for protection from subway vibrations and earthquakes.


Bosco Verticale Residential Building, Milano


Office Building, Paris


Elbphilharmony with Isolated Concert Halls, Hamburg



Whenever new rail lines are developed, think of GERB

Our cities are more congested every day, creating more noise and vibrations. State-of-the-art vibration protection becomes more critical.

GERB specializes in providing solutions to vibration problems in cities, protecting people from vibrations and structure-borne noise, and maintaining the quality of life in working and living areas.

Neighbourhoods can be protected from vibrations and noise caused by freight and commuter rail lines, subways and elevated trains. GERB spring-mass-systems provide a vibration-free interface between the trackbed and nearby residential and commercial buildings. When using GERB spring-mass-systems, rail tracks can safely run through highly sensitive areas.

If rail track isolation is not feasible, nearby buildings can also be elastically supported.

Metro Line, Sao Paulo, Brazil

Hakata Line, Tokyo, Japan

High Speed Train, Cheonan Station, Korea

Tram, Basel, Switzerland

Xihuan Station, Beijing, China

Application Area

› Trackbeds

Highly efficient floating slab track systems for trams, subways, railways and elevated trains to protect neighbourhoods from vibrations and structure-borne noise.

Expo Line, Los Angeles, USA

GERB


Cruise Liner MS Deutschland with TMDs


Power Barge MAN, Vibration Isolation of Diesel Generators

Application Areas

- **Earthquake Protection**
- **Shipbuilding**
- **Tuned Mass Dampers**

- Tuned Mass Dampers (TMDs) for buildings, bridges, balconies, stadiums, towers and ships.
- TMDs to reduce structural vibrations caused by wind, earthquakes, machinery or traffic.

Vibration Control Systems:

- Spring elements and Visco-dampers® to protect machinery, buildings and equipment from earthquake vibrations.


Vibration Control Systems and TMDs for Offshore Structures

Whether earthquakes or storm – natural disasters can be controlled

GERB engineers find solutions to protect machinery, buildings and equipment from devastating forces.

Mission impossible? Not at all. GERB knows all about dangerous terrain, and has proved itself in many places around the world. Vibration isolation concepts have been continuously improved for earthquake and storm protection. Relying on our experience, we are able to solve complex problems. Structural stability, safety and economy are the most important design parameters.

Protecting buildings against earthquakes can be accomplished in different ways, depending on the type of building. Earthquake protection can be either base control – a highly efficient protection system for buildings, or base isolation, or dampers installed on each floor, or elastically-supported upper floors.

One outstanding example of protection against natural disasters is the seven star hotel, Burj Al Arab, in Dubai,UAE. This sail-shaped, steel structure is equipped with GERB tuned mass dampers.


Skyscraper with TMD, New York City, USA

320 t TMD


Infinity Bridge with TMDs, GB


Protection of Nuclear Fuel Elements, Switzerland


Hospital Slobozia, Romania with TMDs


Tuning of TMDs

From A like Australia to Z like Zambia – our knowledge and our effort is required worldwide

Australia: Elastic support of power plant machinery.

Austria: Vibration isolation of a 12,000 ton press.

Brazil: Vibration protection of a socker stadium.

Bulgaria: Earthquake protection of newspaper printing presses.

China: Vibration isolation of railway tracks.

Estland: Vibration isolation of compressors.

France: Vibration isolation of buildings.

Germany: Protection of buildings against subsidence.

Great Britain: Tuned mass dampers for the Millennium bridge.

Greece: Protection of a concert hall studio from structure borne noise.

India: Vibration isolation of textile machinery.

Indonesia: Vibration isolation of metal forming machinery.

Italy: Vibration isolation of textile machinery.

Japan: Elastic support of presses.

Korea: Trackbed isolation of a high speed train

Lebanon: Vibration isolation of textile machinery.

Mexico: Earthquake protection of a newspaper printing press.

Malaysia: Vibration isolation of a newspaper printing press.

Nicaragua: Elastic support of barge-mounted diesel gensets.

Norway: Tuned mass dampers for three bridges.

Pakistan: Elastic support of power plant machinery.

Saudi Arabia: Elastic support of power plant machinery.

South Africa: Elastic support of power plant machinery.

Spain: Vibration isolation of a hospital.

Thailand: Vibration isolation of newspaper printing presses.

Turkey: Vibration isolation/earthquake protection of power plant machinery.

UAE: Tuned mass dampers for skyscrapers.

USA: Earthquake protection of private residences.

Venezuela: Elastic support of power plant machinery.

Zambia: Vibration isolation of fans.

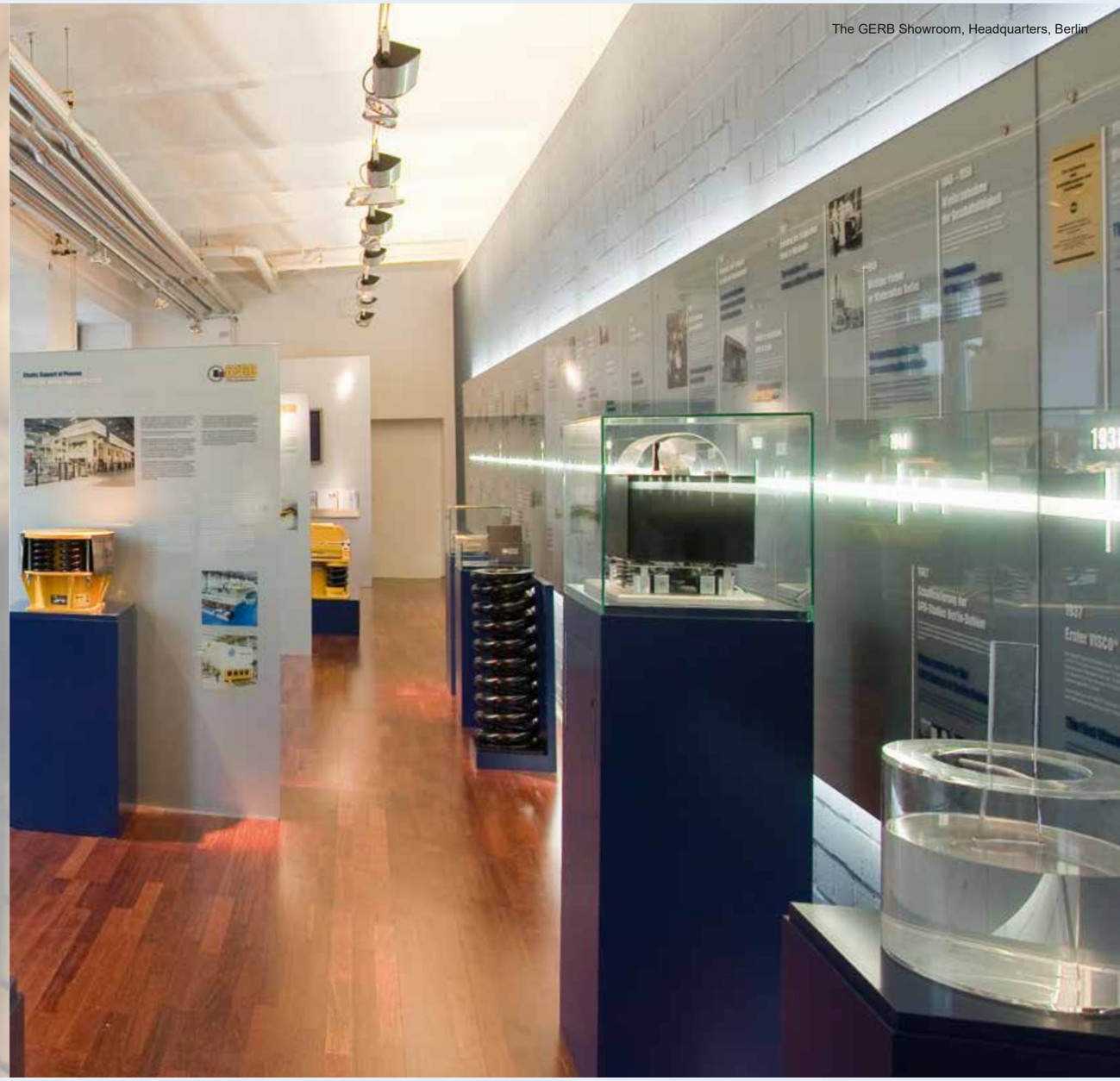
GERB Bangalore, India

Our overseas subsidiaries with production

GERB Qingdao, China

GERB Saint Nazaire, France

GERB Sao Paulo, Brasil



The GERB Showroom, Headquarters, Berlin

GERB

worldwide

Vibrations can be controlled wherever they occur

GERB Schwingungsisolierungen GmbH & Co. KG

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Interested in detailed information or individual consulting service? Please contact us!

Certified: DIN EN ISO 9001 et al.

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