CALENBERG

CIBATUR® Vibration isolation and structure-borne noise insulation Construction and industry

A LISEGA Group Company

WITH CALENBERG

REDUCE VIBRATIONS

AND INCREASE LIVING COMFORT

Building authority approved Cibatur® guarantees consistently low natural frequencies and effective noise insulation over a broad compressive stress range (0.02 N / mm^2 - 0.5 N / mm^2). This eliminates the need for complex installation plans. The special material properties prevent the bearing from absorbing water. Cibatur® can therefore be used as an elastomeric bearing in almost all buildings and in industry.

KNOW HOW

Reduce vibrations and noise

The increasing shortage of construction space has resulted in a more compact use of the available space. In urban areas this has resulted in railway lines, roads, residential areas and adjacent industrial zones moving ever closer together. External sources of disturbance, such as railways, generate vibrations and structure-borne noise that can disturb residents and effect adjacent buildings and therefore effective measures for structure-borne noise and vibration protection are essential.

Elastomeric bearings with their insulating properties have proven their worth wherever it is necessary to protect people and buildings from vibration. For these applications, our products offer effective protection against vibrations and shocks and ultimately lead to an increase in the value of land and buildings.

Bearings for buildings and machines can be designed as points, strips or surfaces.

Calenberg vibration bearings are extremely effective over a broad load range using low natural frequencies. In addition to the resulting vibration isolation, the elastomer bearings also have material-induced damping.

Increasing the quality of living and working as well as increasing the value of the building:

- Reduction of vibrations and noise
- Reduction of airborne and structure-borne noise

Costs are reduced by:

- Simple installation using only one type of mat
- An installation plan is not required
- There is no requirement for a protective concrete layer on the mat
- The mats do not have to be glued
- Simple outdoor storage exposed to any weather

Reliable planning through:

- Constant natural frequency over a broad load range
- Guaranteed effectiveness even if the load assumptions vary
- High-quality rubber-based materials
- No water absorption
- Approved by the building authorities

Cibatur®

Product description

The profiled Cibatur®mat consists of a fabric reinforced elastomer sheet with truncated cone-shaped spring elements on its underside.

The top layer is abrasion, oil and ozone-resistant and it is not sensitive to weather conditions. The spring elements are made of high-quality natural rubber compounds that have excellent dynamic properties.

Cibatur® has a vulcanized overlapping strip that covers the longitudinal joints. The mat is resistant to temperatures ranging from -40°C up to +70°C. Water absorption is significantly below 2 %.

Use and areas of application

Cibatur® can essentially be used wherever vibrations and structure-borne noise needs to be reduced. Typical uses are for elastic bearings on buildings and machines.

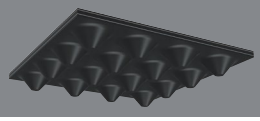
Cibatur® is used as an elastic element to reduce the forces acting on a bearing or foundation.
In this way the transmission of vibrations or structure-borne noise is reduced. The unique design makes the protective measures extremely efficient. The natural frequencies remain almost constant over a broad range of compressive stresses. The stud structure enables Cibatur® to act like a surface drainage system under the building floor slab preventing the accumulation of ground and seepage water. The use of high-quality elastomers and synthetic, non-rotting fabric materials ensures unhampered functionality over their entire service life.

Cibatur® is usually applied in one layer. If lower natural frequencies are required the mat can also be used in two layers (with an intermediate slab).

Building authority approval

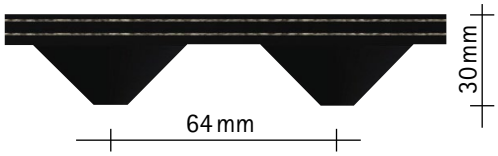
The approval for use as a bearing in building construction is regulated by the standard building authority certification Z-16.32-495, issued by the Deutsches Institut für Bautechnik.

DIMENSIONS AND WEIGHTS

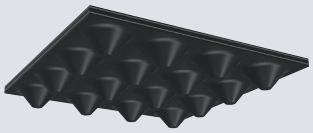


Dimensions

- Width approx.: 1536 mm
- Total thickness approx.: 30 mm
- Thickness of the top layer approx.: 10 mm
- Length max.: approx. 120 m
- Weight: approx. 16 kg / m²
- Roll material: Shorter rolls and blanks on request

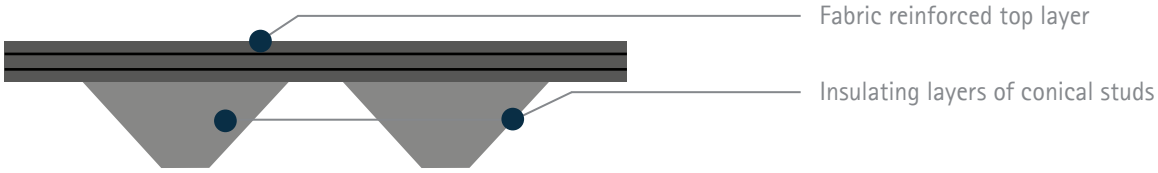


EXCERPT FROM THE TECHNICAL DATA

Bearing designation	Description, application	Bearing thickness [mm]	Technical specifications
Cibatur® 	The profiled mat comprises a fabric reinforced elastomer sheet with truncated cone-shaped spring elements on its underside. It has a constant natural frequency over a broad load range. The surface of the top layer is not only insensitive to weather but also resistant to abrasion, oil and ozone. High-quality natural rubber compounds are used for the spring elements.	approx. 30 (single layer) approx. 63 (double layer)	Load range: 0.02 – 0.5 N/mm² Lowest natural frequency: 9.5 Hz single layer 7.0 Hz double-layer with intermediate plate Load peaks (occasional and short-term): ≤ 1,2 N/mm²

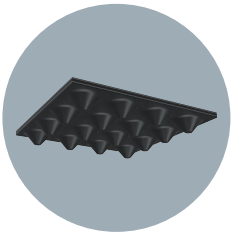
Extract from the installation instructions

Calenberg Cibatur® is laid loosely on a load-bearing and sufficiently level blinding layer. It is important that the protective and wear layer face upwards. To protect against the ingress of concrete slurry, the overlapping strips are tacked or the mat is covered with film over the entire surface. The free edge of the overlapping strips is sealed with adhesive tape. We offer an extensive product range for vertical vibration isolation and many different requirements. Free deformation of the elastomeric bearing must be guaranteed at all times to avoid structure borne sound bridges.



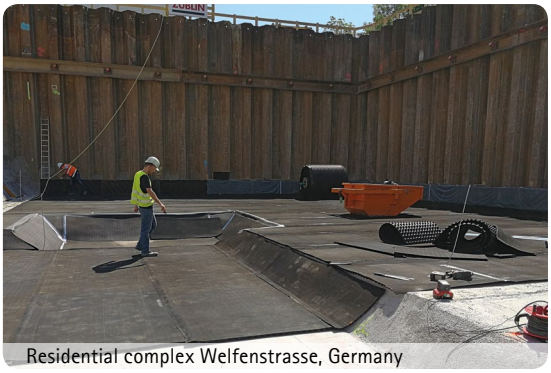
We can provide complete installation information on request.

Extract from our client reference projects



CIBATUR®

- Decoupling of machine foundations, Uni Würzburg, Germany, 2019
- Tafelhof Palais, Nuremberg, Germany, 2018
- Welfenstrasse residential complex, Munich, Germany, 2017
- Hotel Hampton by Hilton, Frankfurt/M., Germany, 2016
- Care and nursing centre, Kriftel, Germany, 2013
- Aspanggronde / Eurogate, Vienna, Austria, 2012
- The Charles Hotel, Munich, Germany, 2005
- Cement mills, Obajana, Nigeria, 2004
- Opera House, Hangzhou, China, 2003



Residential complex Welfenstrasse, Germany

The Charles Hotel, Germany

Opera House, Hangzhou, China

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