KRAIBURG RELASTEC

VIBRATION ISOLATION IN THE BUILDING INDUSTRY

made from high-quality elastomer granules

DAMTEC® VIBRA SERIES

DAMTEC®

EN #1 | 2019

DAMTEC® VIBRATION ISOLATION IN THE BUILDING INDUSTRY

ADVANTAGES AND PROPERTIES OF THE DAMTEC® VIBRA SERIES

reduction of vibrations and oscillations

permanently elastic

waterproofed and rot-proofed

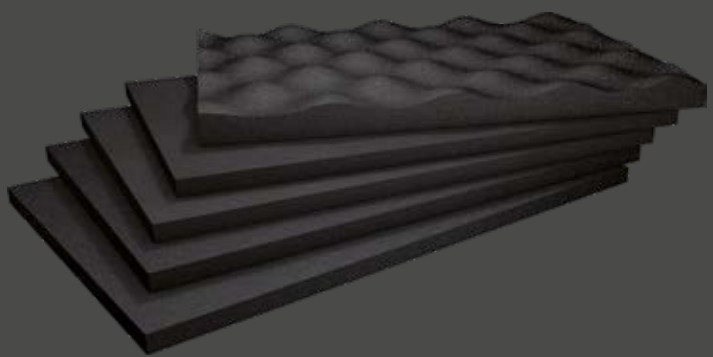
fast and easy installation

outstanding compressive strength and load-bearing performance

very low emission; very environment-friendly, recycled rubber can be recycled again

Why vibration isolation?
Industry, transport and residential construction increasingly coming closer together. This proximity results in impairments due to noise and vibrations.

Which problems occur?
Without appropriate measures, buildings, the people who live in them, machines and machine foundations or sensitive components are defenceless against vibrations from the immediate surroundings.
Undesirable or excessively powerful vibrations can also occur in buildings or industrial plant. Secondary airborne noise also increases, since structural elements such as ceilings or walls are also stimulated.



DAMTEC® VIBRATION ISOLATION IN THE BUILDING INDUSTRY

APPLICATIONS OF THE DAMTEC® VIBRA SERIES

Specifically to solve the vibration problems encountered in the construction industry, KRAIBURG Relastec can offer DAMTEC® vibra, a range of products made from special kinds of rubber granulate.
This wide range of products helps architects and specialist planners to accurately plan and calculate their projects in terms of technical requirements and financial viability.

The material
DAMTEC® vibra is a series of acoustic insulation mats made of rubber granulate made from recyclate, some of which is sourced from brand-new rubber remnants from the automotive and medical industry, manufactured by KRAIBURG Relastec in Germany.
For lower loads, these mats are smooth on the upper side and ribbed on the underside. This geometry generates additional softness, further enhancing the elasticity of the rubber. For higher loads, both sides are smooth. A targeted mixture of foamed and unfoamed rubber granulates creates an optimum balance for the anticipated load levels.

The choice of products is based on the anticipated compression stress level in the material. Optimum vibration damping and suppression of structure-borne sound transmission can be guaranteed by the scope for using different thicknesses of product and/or the option of laying two or three layers of product.

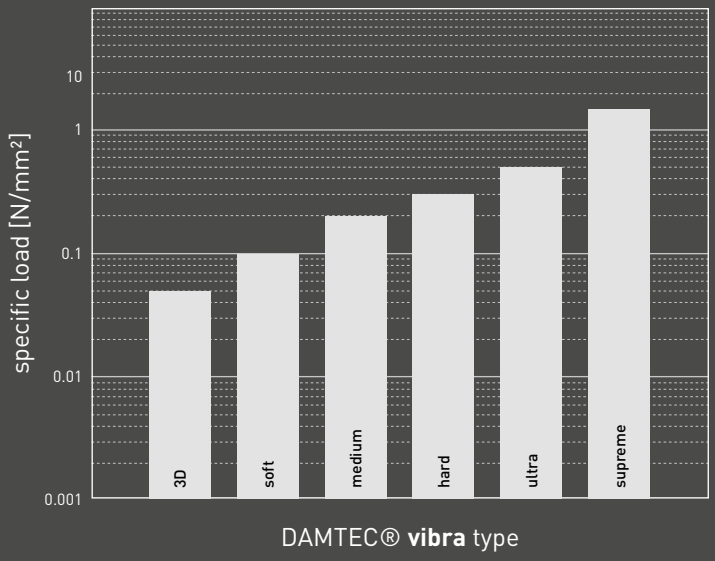
Application examples
The illustration below shows a few typical examples of applications for DAMTEC® vibra products.

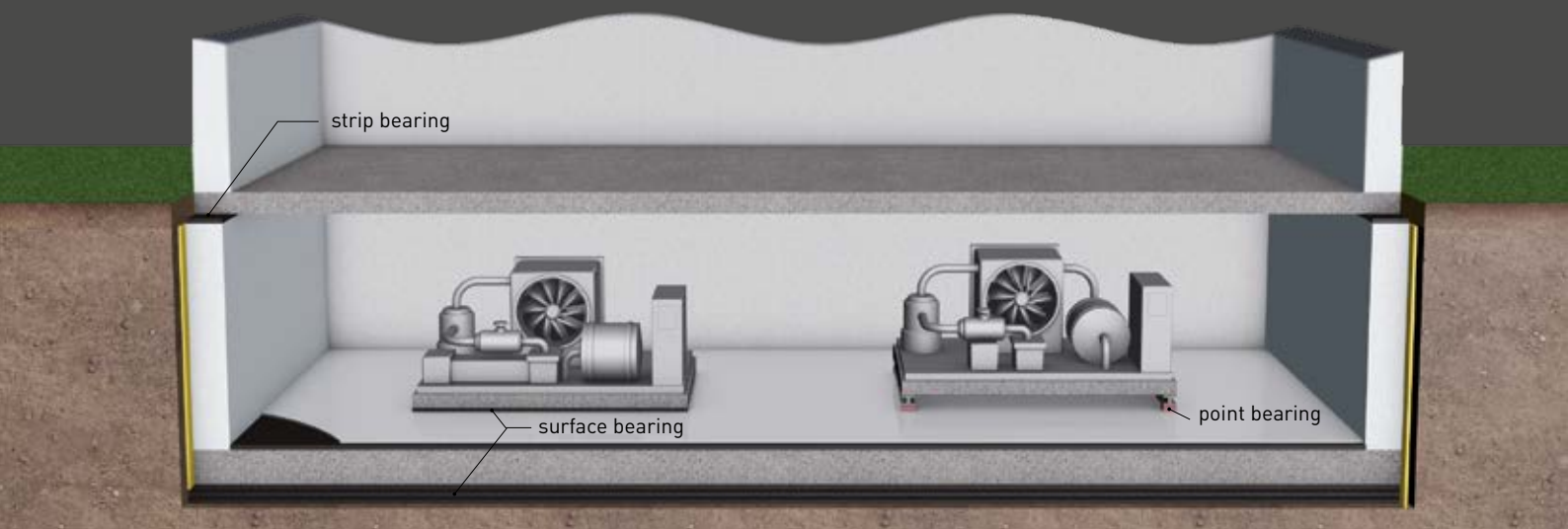
public buildings, convention centres

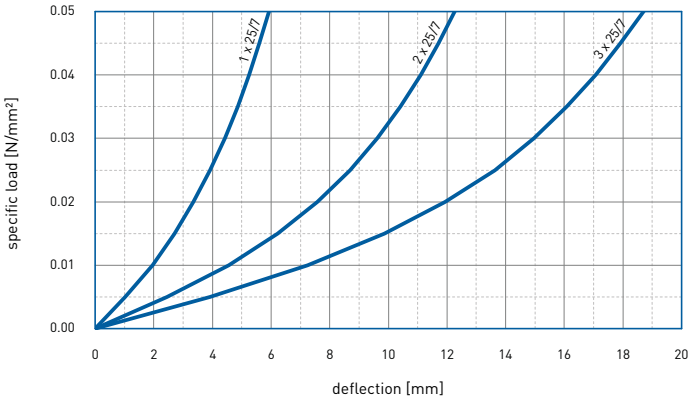
production halls

hotels

apartments

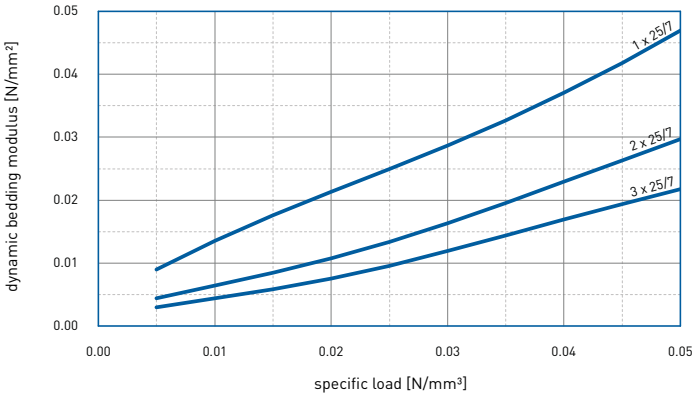






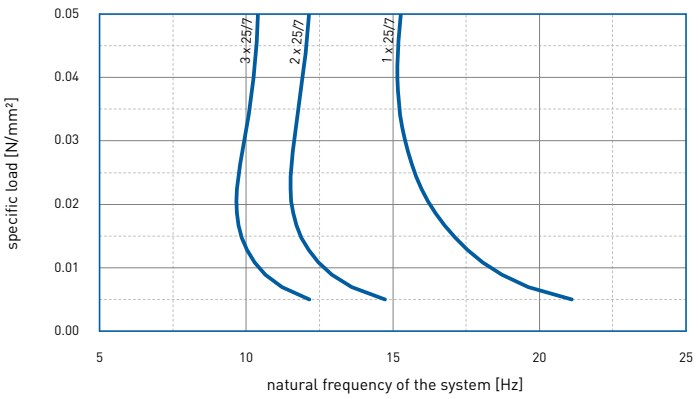
Static load deflection

This diagram illustrates the static load deflection curve of a DAMTEC® vibra material for a compression test.
There is no specific dynamic working range for these materials. The total loading, static plus dynamic, should be within the application range. The special feature of rubber granulate is that the products can be subjected to overloads without having any negative influence on the properties of this material.



Dynamic properties

This diagram illustrates the dependent relationship at 10 Hz between loading level and the dynamic bedding modulus.
The bedding modulus shows a linear progression. Investigations have shown that, even when spring compression of 90% is applied, the insulation action can be maintained almost completely.



Natural frequency

This diagram shows the natural frequency calculated for a system comprising a compact mass and an elastic bearing made of DAMTEC® vibra.
Through the selection of a suitable profile and possible laminar structure, the natural frequency can be set in the desired manner.

Service

We will be glad to help you in choosing the right product based on the following requirements:
- Existing loads
- Available surface and overall heights
- Vibration-related specifications

Independent, external tests

Tests were conducted at the TU Dresden.
Test reports no. 24/06, 12/09, 13/09, 14/09, 15/09.

Reference projects - vibration isolation

DAMTEC® vibra

DC Tower, Vienna, Austria

Nurol Tower, Istanbul, Turkey

Palladium Tower, Istanbul, Turkey

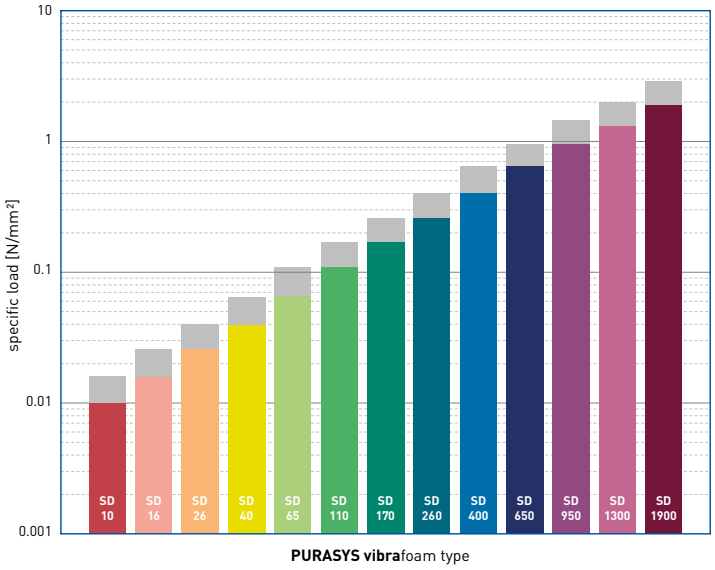
Lufthansa training centre, Seeheim, Germany

PURASYS vibrafoam

PURASYS **vibra**foam is a cellular elastomer made of a special kind of polyetherurethane. Elastomer springs are used in mechanical engineering and in the construction sector to isolate and/or damp vibration levels. PURASYS **vibra**foam elastomers exhibit outstanding characteristics as both pressure and compression-loaded springs.

For almost every application, there are 13 basic types of PURASYS **vibra**foam available, ranging from SD 10 to SD 1900. The desired requirements can be achieved easily through an appropriate selection of PURASYS **vibra**foam types, support surface area and construction height.

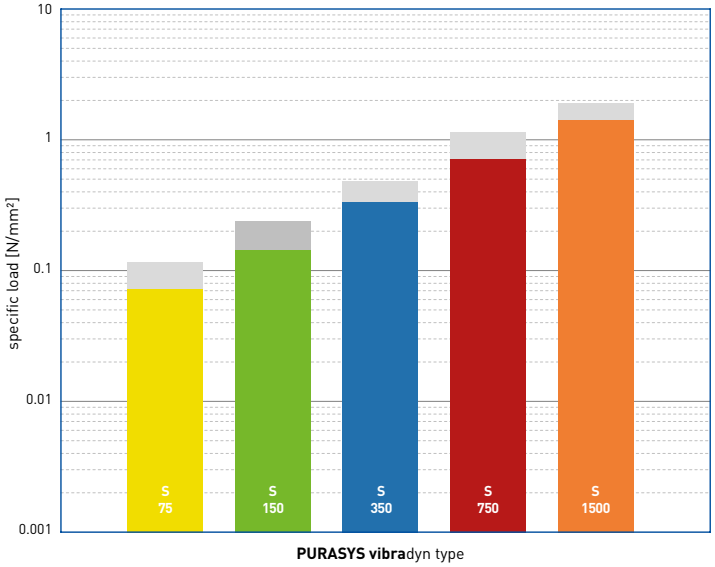
PURASYS **vibra**foam is available as mats for maximum floor coverage, but can also be obtained in the form of technical moulded parts.



PURASYS vibradyn

PURASYS **vibra**dyn is a closed-cell elastomer and it is made of a special kind of polyetherurethane. Thanks to its structure, this material absorbs almost no fluids and can therefore be used in pressing groundwater.

There are 5 basic types of PURASYS **vibra**dyn, S 75 to S 1500, to suit virtually any application scenario. The desired requirements can be achieved easily through an appropriate selection of PURASYS **vibra**dyn types, support surface area and construction height.



KRAIBURG PURASYS

DAMTEC®

Acoustics and Vibration Isolation
made from rubber granules and polyurethane

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ISO 9001:2015 NR. 00186/0
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CERTIFIED IQNet MANAGEMENT SYSTEM

U.S. GREEN BUILDING COUNCIL MEMBER