



RAILWAY

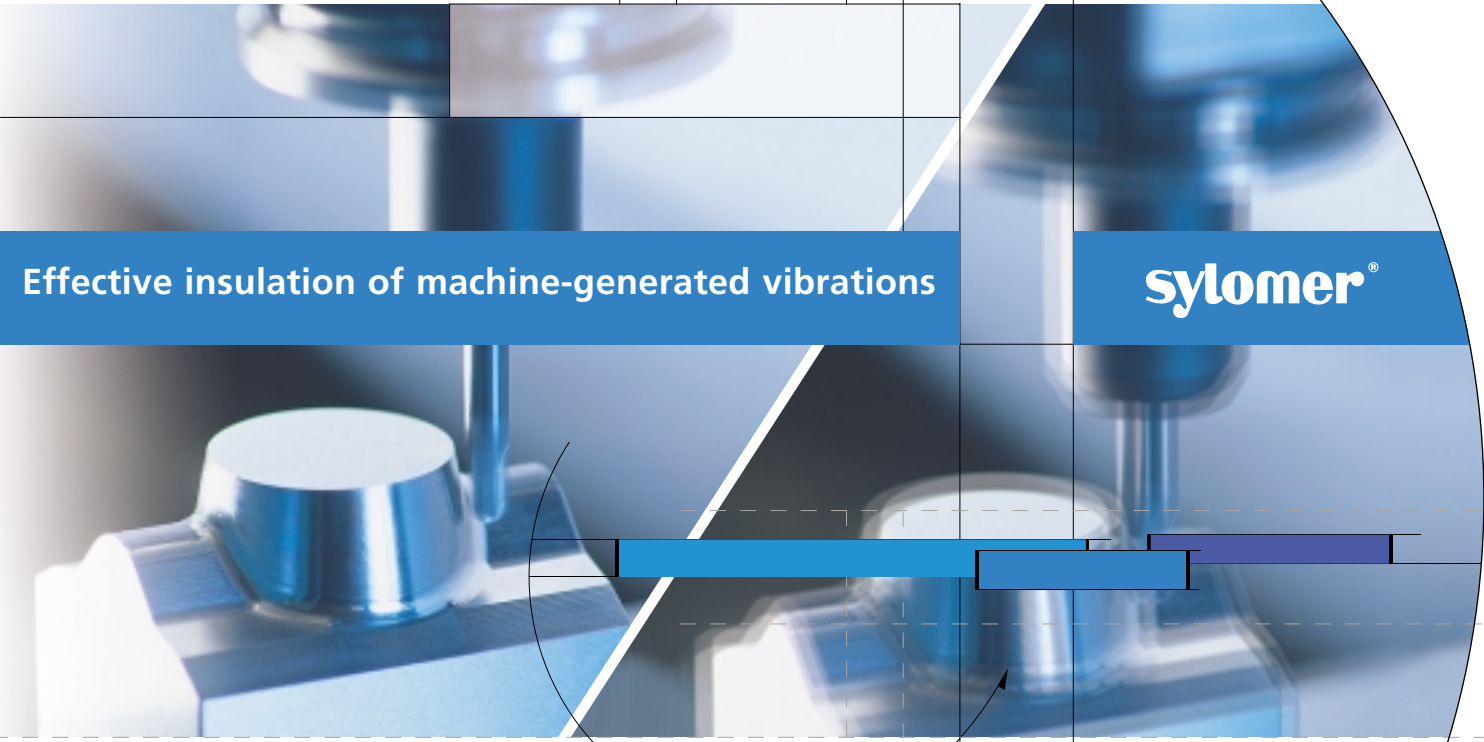
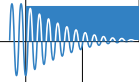


CONSTRUCTION



INDUSTRY

Materials for technical innovations

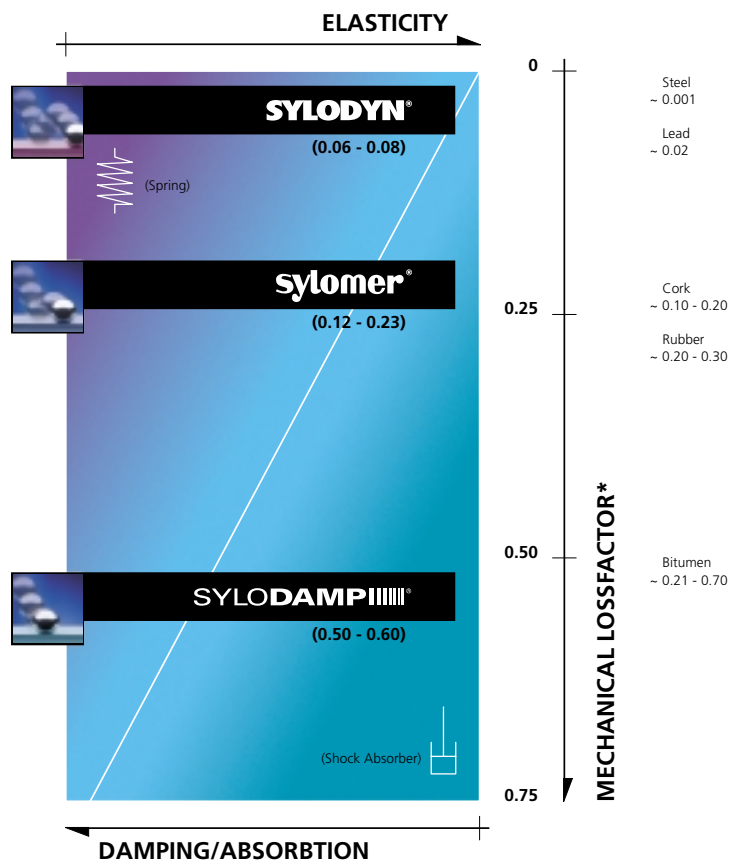


Effective insulation of machine-generated vibrations

sylomer®

Selecting the right material solves half the problem...

At a glance – Sylomer® insulation materials



*medium frequency and 20° C, see Datasheet W2

PROPERTIES:



Sylodyn®, Sylomer® and Sylodamp® are volume compressible:

No profiles or cavities are necessary for deformation.



Low compression set:
After removal of the load, the material returns to its original volume.



Sylodyn®, Sylomer® and Sylodamp® are highly elastic materials:

Depending on the type of material, possible deformation ranges from 25% to 40%.



Sylodyn® for exceptional dynamic performance:

A material which is equally "soft" both dynamically and statically.



Sylomer® the ideal spring-/shock absorber-combination:

A versatile material for a wide range of applications.



Sylodamp® exceptional damping power:

The key advantage of Sylodamp® is its high energy-absorbing and damping properties.



The advertisement features a technical drawing of a spring at the top, with a dashed line indicating its vertical axis. Below this, a horizontal band contains the 'sylomer®' logo. The background is a blue gradient with a sequence of spheres, where the foreground sphere is sharp and reflective, while the others are blurred. The bottom section contains text and a list of services, with a dashed line extending from the spring's axis down to the bottom of the page.

sylomer®

...and our technical team will take care of the rest.

We offer our customers a comprehensive package of products and engineering services:

- calculations and material selection for specific application
- dimension proposals and variants
- material behavior in specific applications
- calculated forecast of spring deflection, natural frequency and efficiency
- calculation of dynamic vibration ranges
- construction and installation suggestions
- development and design of entire systems with elastic components

getzner
WERKSTOFFE

Direct bearings with Sylomer®

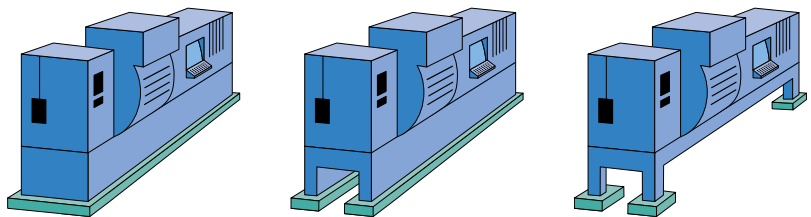
Machinery generates vibrations which are transmitted to the surroundings and can influence the manufacturing processes of other equipment and thereby have an impact on product quality.

Such vibrations can also be a disturbing nuisance for the vicinity and for the environment, and can also lead to damages to buildings. Sylomer® polyurethane elastomers are special materials designed to reduce vibration and structure-borne noise.

Depending on the requirements, these materials are available in a wide

range of densities, thicknesses and dimensions. Their static load capacity lies between 0.005 N/mm^2 - 3.0 N/mm^2 (0.5 t/m^2 - 300 t/m^2). Both the static and dynamic characteristics of these products are exactly defined, allowing the effectiveness of the elastic suspension to be calculated in advance.

Full-surface mount, strip bearings or discrete bearings.



One typical application for Sylomer® is as a direct bearing support for machinery (full-surface mount, strip bearings or discrete bearings).



Weaving machine support leg: a layer of Sylomer® under the legs of the equipment reduce the transmission of vibrations into the floor.



Heat-power cogeneration: Sylomer® strip bearings under the equipment frame lead to an excellent level of insulation for this heavy machinery. A customized elastic bearing is offered for each type of machine.

Elastic insulation of HVAC equipment and other building equipment also hinders the transmission of secondary airborne noise via ceilings and walls, leading to a significant reduction in noise in large-scale installations such as schools, hospitals, hotels and production facilities.



Adjustable machine stand:

an elastic Sylomer® disk under the leg of the machine stand effectively insulates against vibrations caused by motors, fans and pumps. The number of legs on the stand can be varied depending on the weight of the equipment. The Sylomer® disk is bonded to the floor-side of the leg with a PUR coating, making it easy to install.

Machine stand – with Sylomer® elastic insulated.



Mounting on an additional base

Machines whose mounting must be tuned to a lower frequency range or which develop strong dynamic forces are usually mounted on an additional base, such as a machine mount or foundation. Sylomer® materials can be used in two ways in such applications: as active vibration insulation (to protect the surroundings) or as passive insulation (to protect the machine).



Example: "Oasis" casino and hotel in Jericho, the oldest city in the world

In this building 32 machines of different types (e.g. compressors, AC units, pumps, etc.) are housed on three floors. In order to minimize the level of vibrations caused by the equipment at the source, a full-surface elastic Sylomer® bearing was installed under the 25-cm base foundation of the objects generated the structure-borne noise.



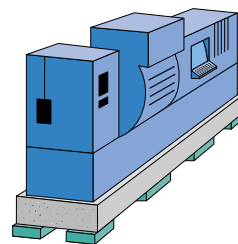
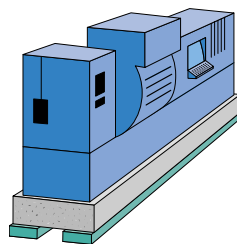
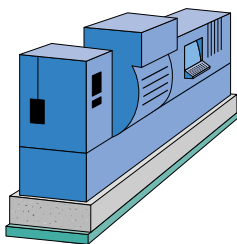
Large-scale foundation based on Sylomer®: Example: Volkswagen AG's Crash Test Facility in Wolfsburg

By mounting the entire foundation on 100 mm of Type M Sylomer® it was possible to tune the natural frequency of the entire system to under 5 Hz, thereby protecting sensitive measurement and recording equipment (and its operating personnel) against vibrations.



Elastically mounted floor slab: Example: Eco-culture industry center in Frankfurt

A printers is situated in the ground floor of the building. The floor slab in the area which house the material delivery, warehousing and cutting operations was mounted on a full-surface L25 Sylomer® bearing, which means that the equipment can be moved around the area subsequently without disturbance of the neighbourhood.



Full-surface mount, strip bearings or discrete bearings on an additional base.



Boilers: Mounting the boiler base on a full-surface Sylomer® bearing can set the "tune" of the foundation to a low frequency range.

Sylomer® materials are manufactured to meet the most stringent demands. They must be suitable for use in an enormously wide scope of applications, provide outstanding insulation and withstand the extreme conditions of highly varied installation sites.

Getzner materials are tested both internally by the quality control laboratory and by internationally renowned institutions, in terms of their durability, quality and effectiveness. Such tests have been conducted by the following institutes:

- Federal Testing Centre Arsenal, Vienna, Austria
- Fraunhofer-Institute for Building Physics, Stuttgart, Germany
- Testing and Inspection Institute Vienna Municipal Works, Dept. 39, Austria
- Technical Inspection Association Rhineland, Institute for Environmental Protection, Cologne, Germany
- Technical University of Munich, Chair and Institute for Road, Railway and Airfield Construction, Germany
- Müller-BBM GmbH, Planegg bei Munich, Germany



Sylomer® materials are resistant against oils, greases, diluted acids and lyes and retain their elasticity even at very low temperatures.



Sylomer®'s unique cellular structure is created in a foaming process that does not use environmentally damaging foaming agents. The materials contain no softeners. PUR materials can be recycled at Getzner.

The physical and chemical properties of Getzner's products are documented in material and products data sheets. Please feel free to request any data sheets or additional information about other areas of application.

Our know-how and expertise is at your disposal for the design, testing and optimization of Sylomer® solutions that meet your needs.



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