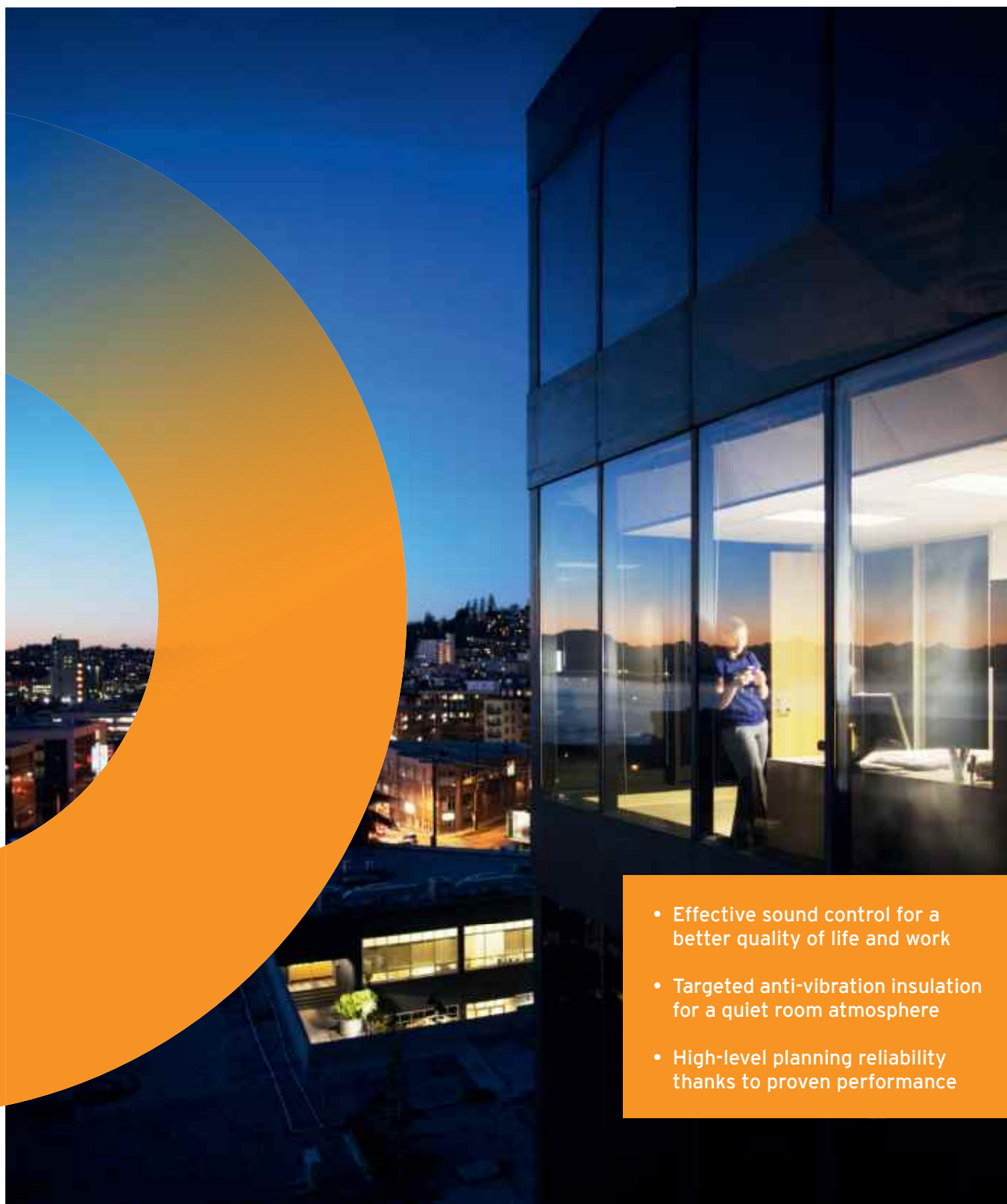


# BUILDING ACOUSTICS



- Effective sound control for a better quality of life and work
- Targeted anti-vibration insulation for a quiet room atmosphere
- High-level planning reliability thanks to proven performance

**SUSTAINABLE PROTECTION  
AGAINST NOISE AND VIBRATIONS**

**getzner**

# NOISE AND ITS EFFECTS

PEACE AND QUIET IS A BASIC HUMAN NEED, ESPECIALLY IN OUR FAST-MOVING TIMES.



## **We all need peace and quiet**

Noise is a constant presence in our modern world and its negative effects can be felt throughout our environment. As a consequence, sound control is becoming ever-more important and taking a key role in the building and construction industry.



The detrimental effects of noise in our day-to-day lives may be experienced in many different ways: It can bring about stress, concentration problems and even cause chronic illness. When people are able to withdraw from the world to a place where peace and quiet reigns, they are more attentive, more relaxed, more able to cope with the challenges of daily life and, evidence has shown, are more healthy.

### **Sources of noise in everyday life**

Noise in buildings is produced by airborne noise or structure-borne stimuli. These stimuli are produced by people speaking, music, walking across floors or up and down stairs (impact noise) or through the operation of building service installations (wastewater systems, energy supply and heating systems, ventilation and air conditioning units, lifts, powered doors, etc.).

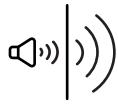
If suitable measures are not implemented, the sound may be transferred to adjoining rooms through the building structure causing noise nuisance.

### **Sound control solutions from Getzner**

Getzner has been offering specific solutions to isolate sound sources and prevent sound transmission for more than four decades. Applications range from elastic bearings on ventilation units to impact noise protection in buildings.

# HOW SOUND TRANSMISSION WORKS

## Different types of sound transmission



### Airborne noise

Noises, such as music or people speaking, cause the air to vibrate and these vibrations propagate in the form of waves, indirectly exciting components such as the walls and ceiling. These components then radiate noise that can be heard in adjoining rooms.

To determine the airborne noise insulation of a component, such as a wall or the ceiling, this excitation is generated deliberately.



### Impact noise

Impact noise is a special form of structure-borne noise, which is generated by walking, moving or dropping objects directly into the ceiling or stairs. Secondary airborne noise radiates into adjoining rooms.

To determine the impact noise insulation of a component, a standard hammer is used to deliberately excite the component.



### Structure-borne noise

If vibrations are generated in the building structure itself - for example, due to water pipes in a wall, hammering or drilling or household appliances - this is referred to as structure-borne noise.

### Transmission of sound through flanking elements

Components must always be considered in combination with the building system. A proportion of the sound is transmitted through what are known as flanking components. Doors, shafts or ceiling ducts may act as transmission paths for sound. The perceived noise level always depends on the interaction of all transmission paths.



## Sound control solutions from Getzner

Getzner develops and markets solutions to protect against structure-borne and impact noise and its transmission. The product range from the sound control experts is made up of Sylomer® and Sylodyn®, both of which are elastic, microcellular materials, and Isotop® products. The products and systems decouple floors, ceilings, walls, stairs and building service installations.

Getzner ensures that noise and vibrations do not freely propagate and makes a significant contribution to a better quality of living.

### YOUR BENEFITS:

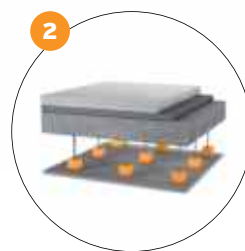
- Targeted reduction in noise for a high standard of comfort
- Increased quality of life and work due to optimum insulation effect
- Sound control adds value to residential apartments and buildings
- Long-term, durable and pioneering sound-proofing solutions
- A high degree of planning reliability thanks to proven effectiveness



# PRODUCT OVERVIEW



**Impact sound insulation**



**Elastic ceiling hangers**



**Separation of adjacent components (flanking sound)**



**Elastic suspension of pipes**



**Elastic bearing of building service installations**



**Elastic bearing of stairs and landings**

## Tried and tested materials and products



### Sylomer® and Sylodyn®

Our polyurethane materials Sylomer® and Sylodyn® developed in our own laboratories and manufactured in-house are suitable for universal use, deliver maximum isolation performance and have proven themselves time and again under a range of conditions in various installation locations. They are used as bearings for floors, stairs, landings, machine foundations, to decouple ceilings and as dry lining as well as in timber construction.



### Isotop® elements

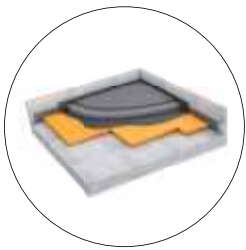
Isotop® products are isolators that, depending on the requirements of the application, are produced in combination with Sylomer® and Sylodyn®. They are mainly used for low-frequency bearing of building service installations.

## PRODUCT BENEFITS:

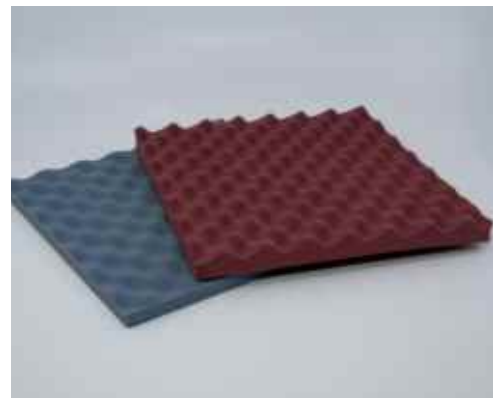
- Long service life
- Maintenance-free
- Simple integration into the construction process
- Specifically designed to meet different building acoustics requirements

# SOLUTIONS IN DETAIL

## Elastic bedding of floors



**Acoustic Floor Mat Fitness Center**



**Acoustic Floor Mat 29 and 35**



**Acoustic Floor Blocks**



**UPGREI**

### Products

- Acoustic Floor Mat
- Acoustic Floor Block
- Sylomer®
- GREI
- UPGREI
- ROLL

- Excellent impact noise insulation effect for all floor construction types (dry and wet screeds)
- Rate of impact noise reduction up to 38 dB
- Low installed height
- Full-surface or point bearings possible
- Quick and easy to install
- Stable material properties over entire service life

- Monitored quality
- Safety approved for planners and developers
- Free from softeners and pollutants
- Load capacity of up to 5 t/m<sup>2</sup>



[getzner.com/  
floors](https://getzner.com/floors)



## Bearing of Swimming Pools

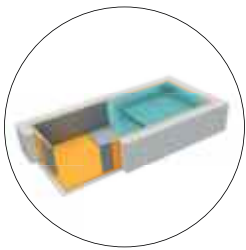


Illustration of bearing of swimming pools



Bearing of Swimming Pools Jumeirah Gate Dubai



Bearing of Swimming Pools Villa Aurea

### Products

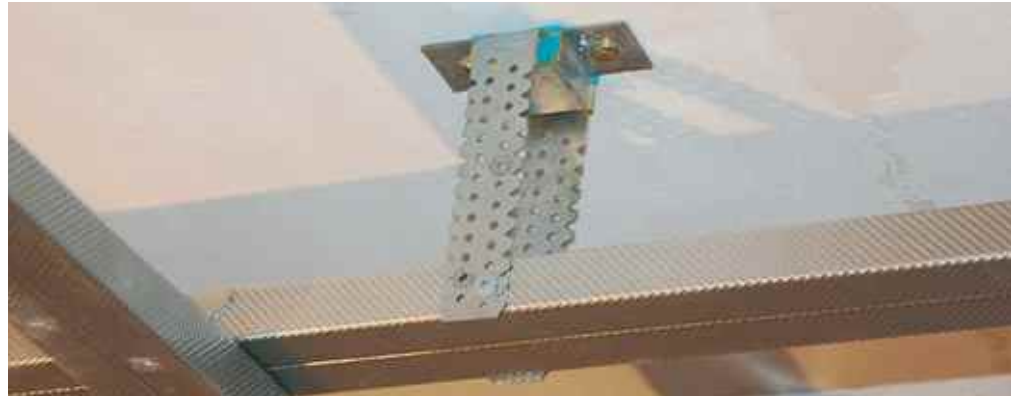
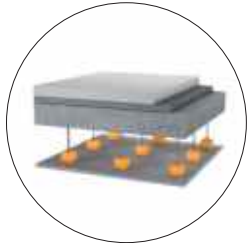
- Acoustic Floor Mat
- Acoustic Floor Block
- Sylomer®

- The elastic bearing ensures long-term noise reduction without regular service
- Reduction of noise transmission into neighbouring rooms, which is particularly important in areas sensitive to noise
- Minimised noise in the pool area improves the atmosphere of well-being
- Expert planning with specialised know-how in vibration isolation and sound insulation



[getzner.com/  
pool-bearing](https://getzner.com/pool-bearing)

## Elastic decoupling of internal structures



Efficient sound insulation for ceilings Acoustics + Sylomer®



Acoustics sound insulation for ceilings with Sylomer®

### Products

- Acoustics+Sylomer®
- Isotop®
- Noise reduction index that is 4 dB higher than standard attachment systems
- Effective even in the low frequency range 50 - 250 Hz
- Simple to install
- Minimal suspension height
- Suitable for all dry construction systems
- Allows for a reduction in the number of dry linings with the same damping efficiency
- Products for various load ranges



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## Elastic bedding of building service installations



Isotop® DZE element



Isotop® SE-DE Elevator and Sylomer®



Isotop® ceiling hangers

### Products

- Isotop®
- Sylomer®
- Sylodyn®

- Natural frequencies of up to 3 Hz can be achieved
- Simple to install
- Elements for various installation heights and load ranges

### Application areas

- Air conditioning (AC) systems
- Combined heat and power plants (CHP plants)
- Heat pumps
- Water chillers
- Cooling towers
- Pumps
- Pipes
- Lifts



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equipment](https://getzner.com/equipment)

## Mounting of staircases and landings



Staircase bearing SB10 under Precast concrete stairs



Stair bearing SB10 under in-situ concrete stairs



Stair base brackets made of Sylomer®

### Products

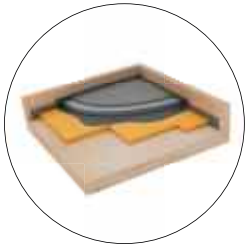
- Stair Bearing SB10
- Sylomer®

- Proven rate of impact noise reduction of 31dB
- Bearing types for wood, steel and concrete steps
- Rapid installation due to flexible design
- Targeted load transmission
- Minimal settlement behaviour



[getzner.com/  
stairs](https://getzner.com/stairs)

## Sound control in timber construction



**Sylodyn® linear support above the raw ceiling**



**GEPI Connect**



**UDQ Hamburg "Woodie" @Götz Wrage**



**Elastic flank decoupling in timber construction**

### Produkte

- GEPI Connect 240 angle brackets
- Sylodyn®
- Elastic washers
- 14 dB improvement in airborne and impact noise
- Low installed height
- Minimal settlement behaviour
- Effective decoupling of flanking components
- Approved materials and fasteners



[getzner.com/  
timber](https://getzner.com/timber)



# CALCULATION EXPERTISE

## Expert advice and calculations

### Specialised services from engineers

- Special calculation tools
- Bespoke, project-specific solutions
- Professional consultancy services from experienced specialists
- Skilled, efficient project management
- Network of established professional planners and engineers from external agencies



The experts at Getzner advise and support engineering consultancies, architects and construction physicists to develop specific solutions - even for the most challenging construction projects.



***Getzner has developed a number of calculation tools to help when planning and implementing solutions.***

Getzner sound control solutions are tested on in-house and external test rigs to identify application options and to test their suitability in daily use. The results of these tests are then used to further develop and improve the product range.



[getzner.com/  
calculation-tools](https://getzner.com/calculation-tools)





Getzner Werkstoffe, Bürs

# ENGINEERING A QUIET FUTURE

We are proud to be the leading global specialist in vibration isolation and vibration protection in the railway, construction and industry sectors.

Our innovative products are based on our own in-house developed materials such as Sylomer®, Sylodyn® and Sylodamp®, and are complemented by spring elements such as Isotop®.

Our applications effectively reduce noise and vibrations. They reduce wear, extend the service life of bedded components and improve application suitability, quality and comfort.

We specialise in integrated solutions and targeted services for sustainable vibration isolation. Our work is based on intensive research, climate-friendly production and decades of experience.

**getzner.com**

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