



On average,
investments pay
for themselves
in 14 days

REHAU ACOUSTIC SOLUTIONS

Solutions for uninterrupted concentration



REHAU ACOUSTIC SOLUTIONS

Acoustic furnishings for greater office productivity

Solutions for customised near-field shielding

The trend towards open-plan offices is leading to growing interest in acoustic solutions. Even if the building's exterior is well-insulated against noise, poor room acoustics can have a considerable impact on your staff's productivity.

With its sound-absorbing products, REHAU helps to modify the room acoustics to allow uninterrupted concentration in relaxing surroundings.

The product range comprises acoustic solutions for furniture fronts and acoustic partition screen systems:



Acoustic solutions for front panels

REHAU is a member or partner of the following networks:



acousticgroup)))
RAUMAKUSTIK GESTALTEN

You can also find our products in pCon planner, which you can use to plan and design the visual and acoustic aspects of office spaces.



Acoustic screen and partition systems

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REQUIREMENTS FOR MODERN OFFICE ENVIRONMENTS

Customised near-field shielding for work stations

The average person spends around a third of their life at work. Typical everyday life at the office: a printer clatters nearby, the phone rings on the desk to your right, and a colleague is on the phone to your left.

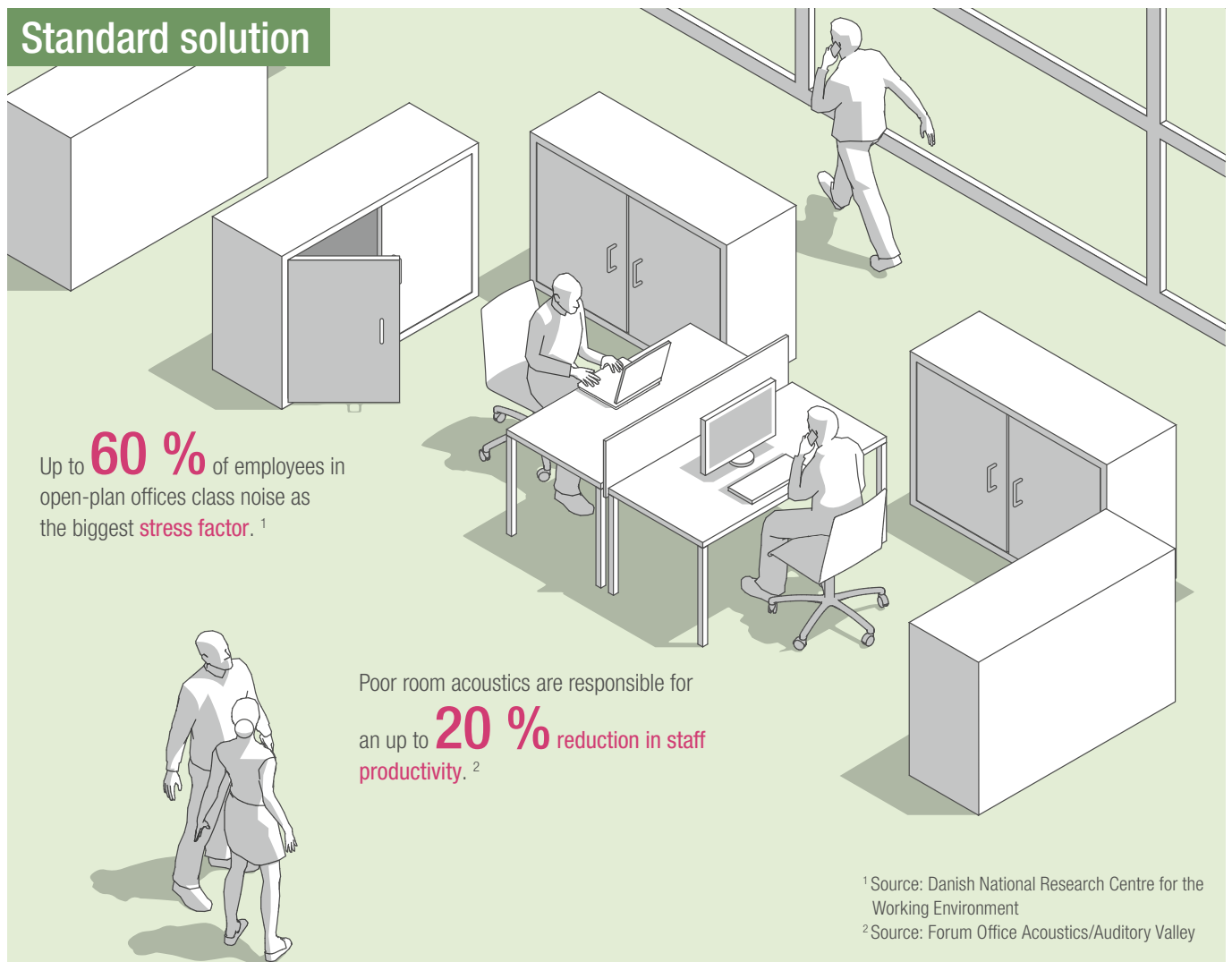
Noise is one of the key stress factors in open-plan office environments. This is not only irritating but also has adverse effects on staff's mental health, accompanied by a reduction of up to 20% in productivity.

Given that staff costs account for more than 80 % of a business's outgoings, this leads to significant financial losses that no company should have to simply endure.

The solution to this is clear: given the current popularity of architectural design features such as concrete and glass, the use of effective indoor acoustics is becoming increasingly important.

When used correctly, acoustic furniture has the versatility to significantly improve comfort in the office, reduce stress and, in turn, boost staff productivity.

Standard solution



Up to **60 %** of employees in open-plan offices class noise as the biggest **stress factor**.¹

Poor room acoustics are responsible for an up to **20 %** reduction in staff productivity.²

¹ Source: Danish National Research Centre for the Working Environment

² Source: Forum Office Acoustics/Auditory Valley

REHAU solution

With its Acoustic Solutions, REHAU has developed a range of effective products that suppress noise directly at source while simultaneously functioning as acoustic screens to prevent its dispersal. Efficient and attractive solutions for a customised acoustic office environment – acting primarily in the near field and therefore more effective than measures in the far field.

Up to **4x** higher absorption values thanks to a system depth of 5.5 cm. ³

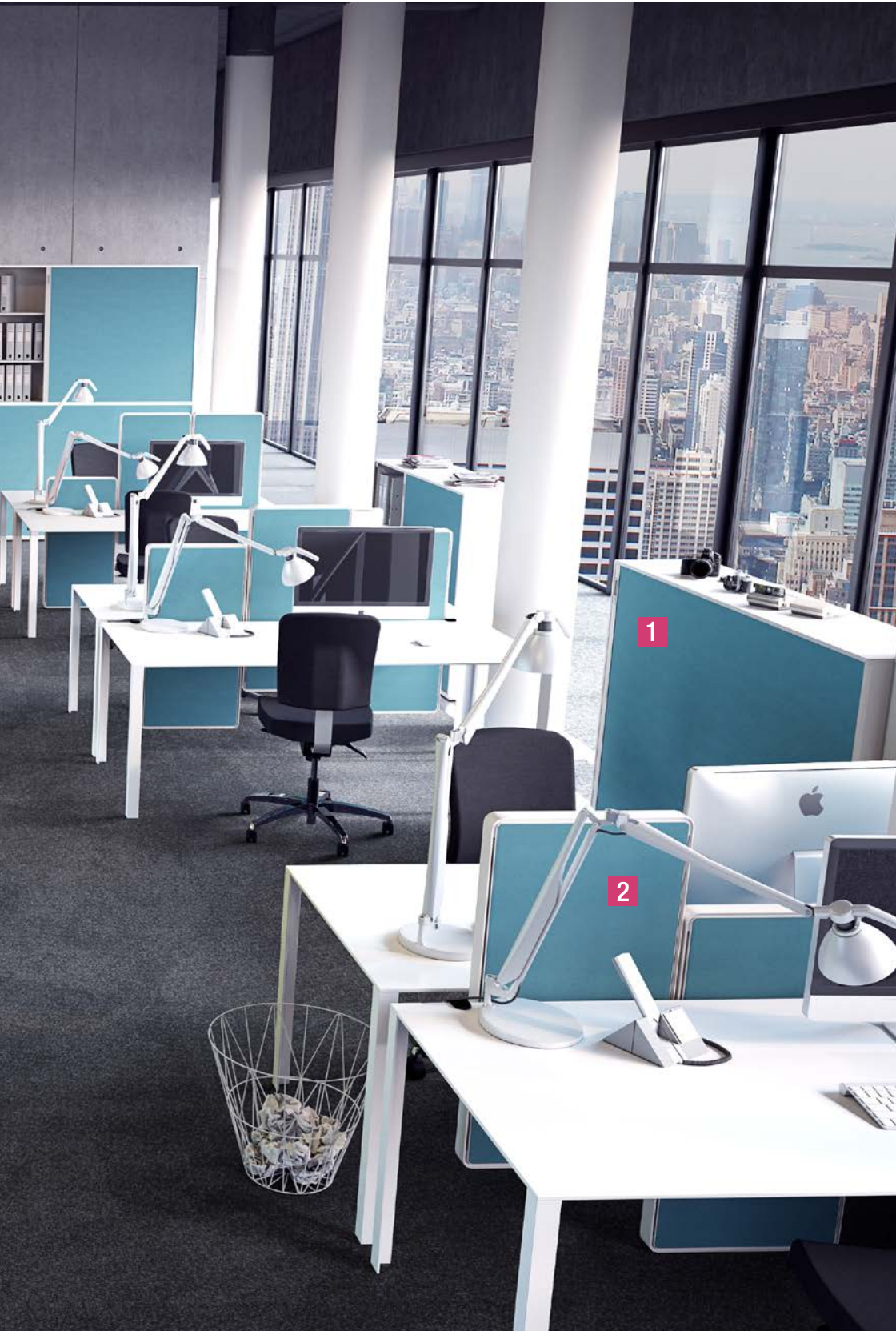
On average, it takes **14 days** for investments in acoustic measures to **pay for themselves.** ⁴

³Source: Assuming an absorption value of 0.2 for the standard system, compared with 0.8 for RAUWORKS
⁴Source: Calculation by REHAU AG + Co

REHAU ACOUSTIC SOLUTIONS

An overview of our products and their advantages





Highly effective class B broadband absorbers

absorb up to 80 % of acoustic sound

Up to 4x higher absorption values

with the desk screen and partition systems

Suitable for retro-fitting to

existing office furniture at any time

Products feature matching designs

and can be combined with ease

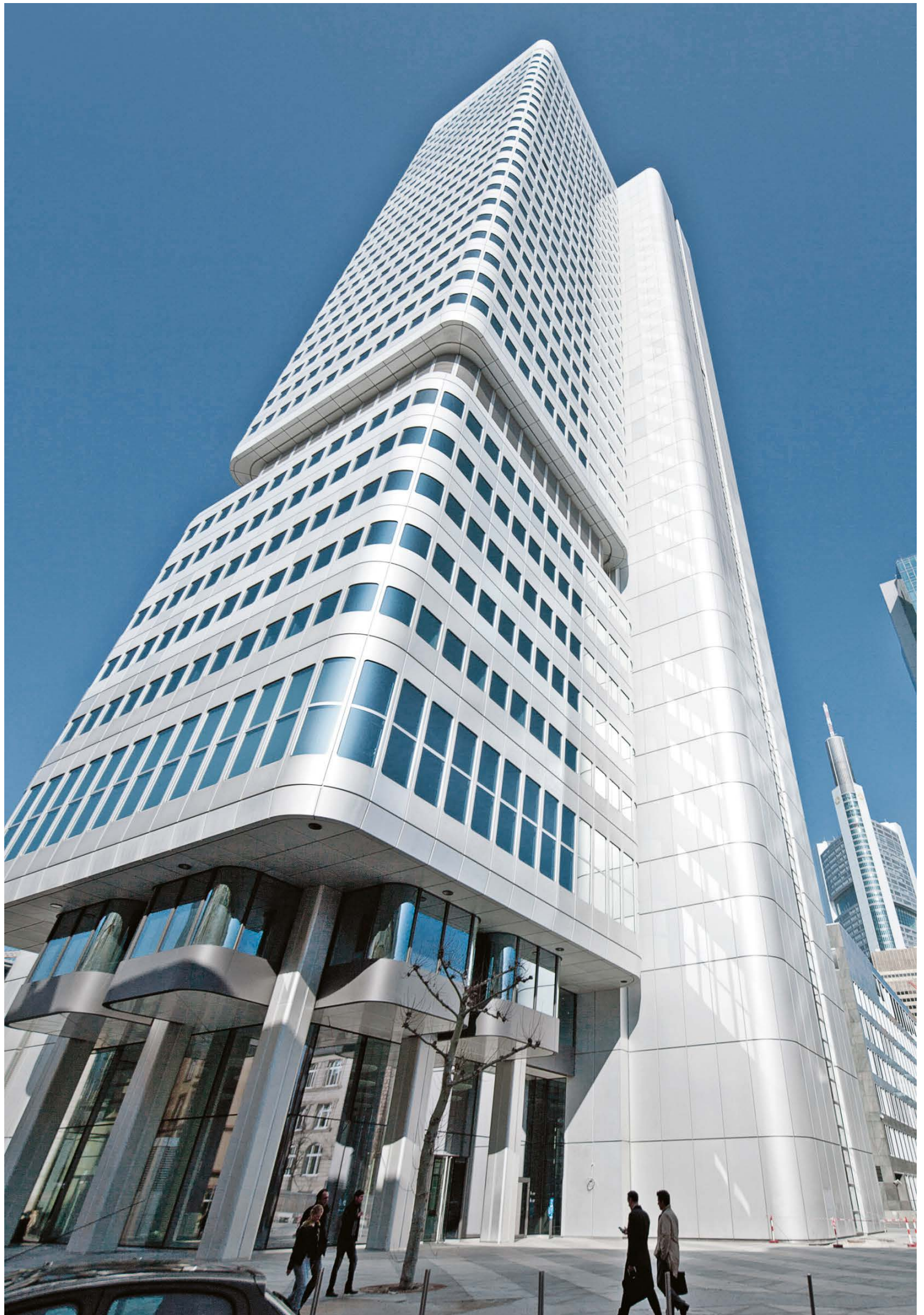
Versatile and

adaptable to the specific room situation

1 RAUVOLET fabric-line
Textile cabinet closure

2 RAUWORKS screen
Desk screen system

3 RAUWORKS partition
Partition wall system



Reference project	Deutsche Bahn Silver Tower, Frankfurt, Germany
Developer	DB Services Immobilien GmbH, DB Systel GmbH
Planning	Quickborner Team
Interior designer	Schneider + Schumacher
Product	RAUVOLET acoustic-line



Photos on this page: © Kinnarps



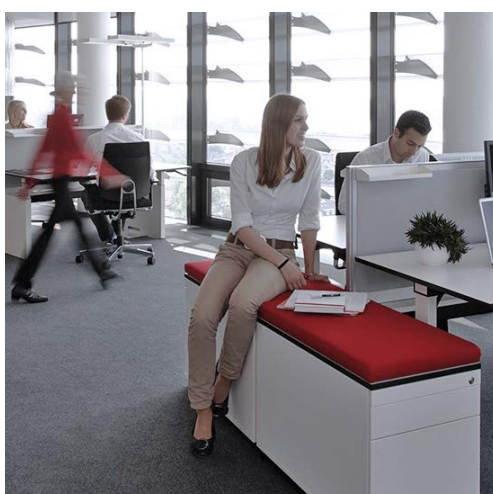
Reference project **Vodafone Campus, Düsseldorf, Germany**

Developer Vodafone GmbH

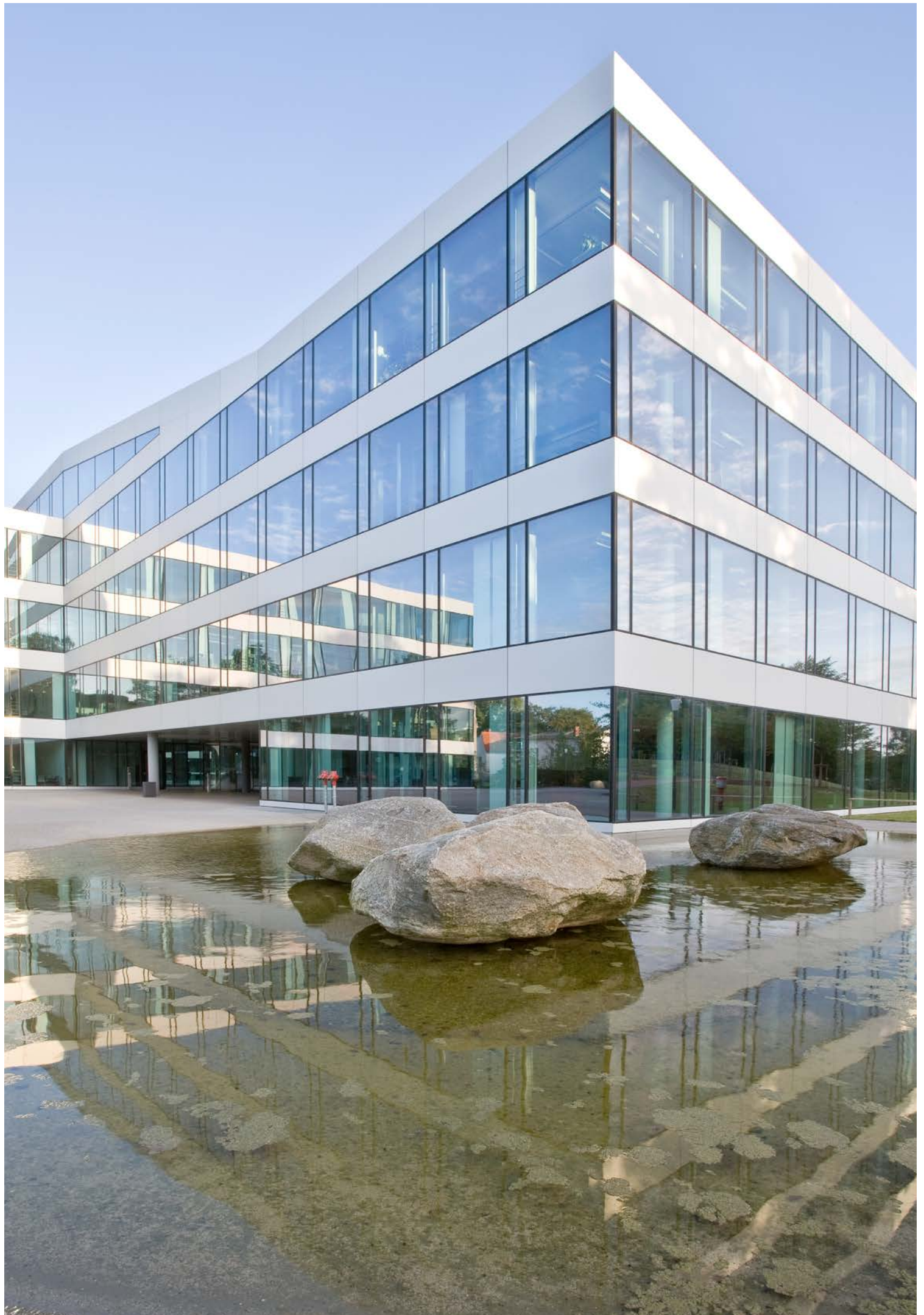
Planning Quickborner Team

Interior designer HPP Architects

Product RAUVOLET acoustic-line



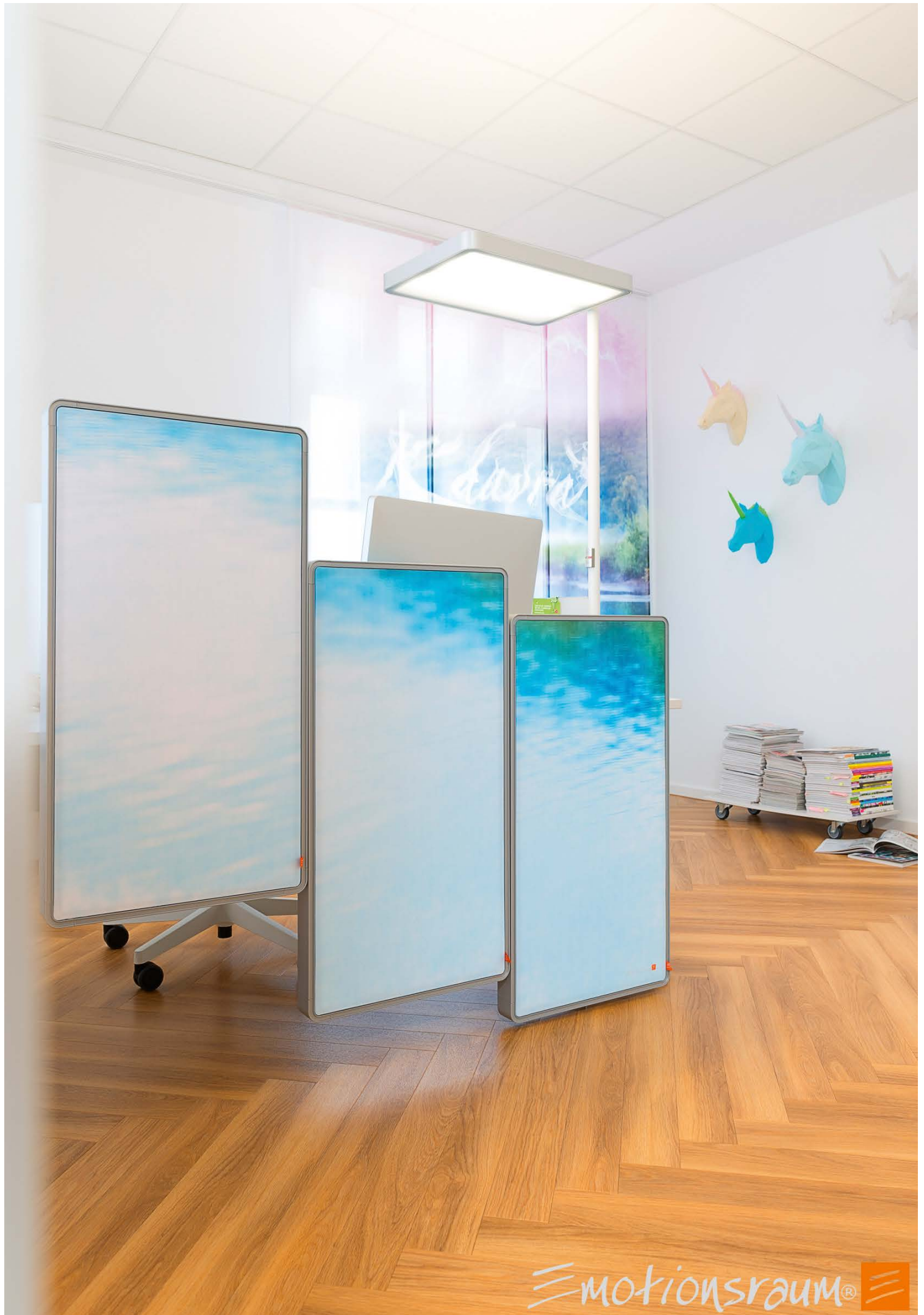
Photos on this page: © Sedus/Reinhard Schwederski



Reference project Drägerwerk, Lübeck, Germany

Developer	Drägerwerk AG & Co. KGaA
Planning	Goetz Hootz Castorph, Architekten und Stadtplaner GmbH, Munich
Acoustics	Architect Jens-Michael Baum
Product	RAUVOLET acoustic-line





Reference project **Emotionsraum office building, Rosenheim, Germany**

Developer Emotionsraum

Planning Manuela Roth

Design Manuela Roth

Product RAUWORKS screen & partition



ACOUSTIC SOLUTIONS FOR FRONT PANELS

RAUVOLET acoustic-line & RAUVOLET fabric-line

With its unique RAUVOLET systems, REHAU has developed effective alternatives to conventional cabinet closures.



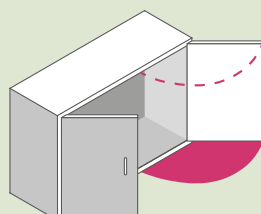
These acoustic solutions take advantage of the existing surfaces on the fronts of the modules, providing efficient acoustic screening and absorption. Moreover, they achieve a smart combination of storage space and additional functionality.

Unlike in conventional swing-out doors, the opening mechanisms take up no additional space in the room. The functional area specified for furniture in DIN 4534 is therefore unnecessary.

The patented **1** RAUVOLET acoustic-line multi-element shutter system, already widely in use, impresses as a highly effective broadband absorber in absorber class B ($\alpha_W=0.8$).

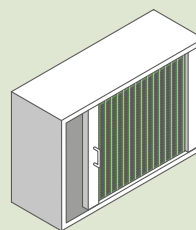
Thanks to its textile surfaces, the unique **2** RAUVOLET fabric-line textile cabinet closure combines cosiness and acoustic comfort within the living space. Sound absorption class B ($\alpha_W=0.8$)

Efficient use of space with RAUVOLET



Conventional swing-out doors

Up to **20% more efficient use of space** with RAUVOLET cabinet closures.



RAUVOLET cabinet closure

Significant **reduction in construction and operating costs** for office spaces.

Too much office noise?

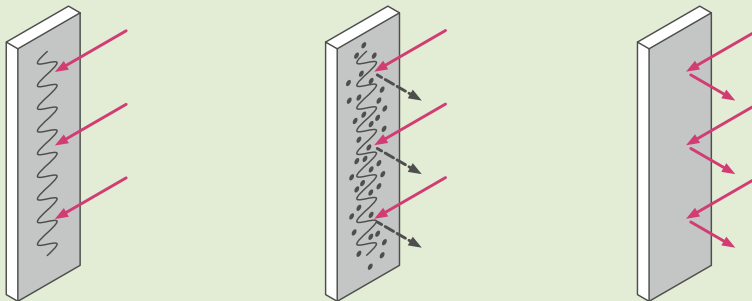
Office work always involves a trade-off between concentration and communication. Acoustic screening and noise absorption can help deliver constructive acoustic conditions in the work space. Here, we explain what this means exactly:

Sound absorption

Effective absorbers can be used to achieve significant reductions in sound pressure levels and reverberation time.

In doing so, they absorb the sound energy and convert it into other forms of energy.

It is advisable to use so-called broadband absorbers, which absorb sound uniformly across the entire relevant frequency range. The sound absorption rate is used as a measure of a material's absorptive capacity and ranges from $\alpha_W = 1$ (complete absorption) to $\alpha_W = 0$ (complete reflection).



Complete sound absorption

Partial sound absorption

Complete sound reflection



A = ultra-absorbent,
 α_W : 0.90–1.0

B = ultra-absorbent,
 α_W : 0.80–0.85

C = highly absorbent,
 α_W : 0.60–0.75

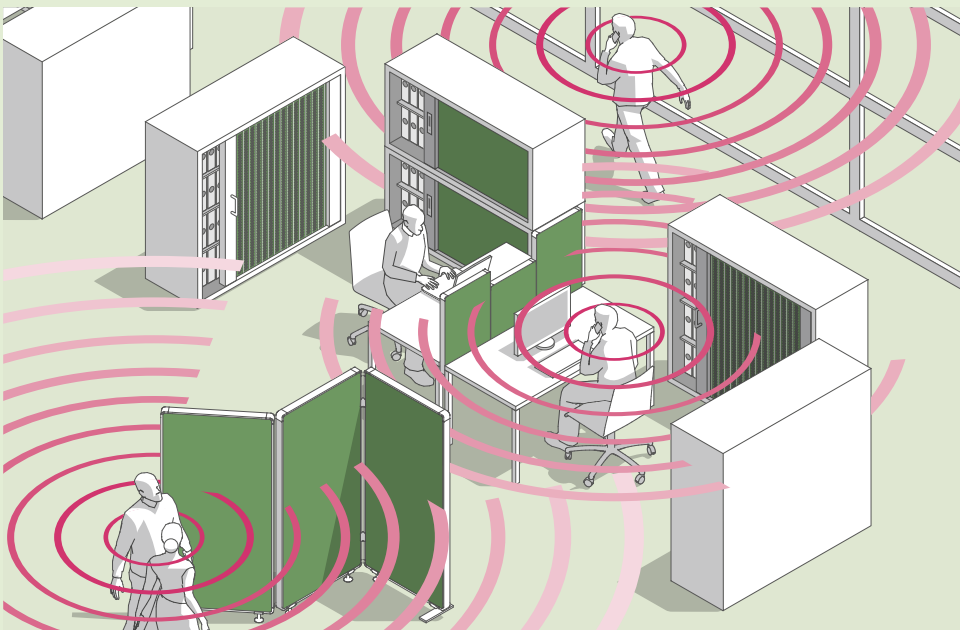
D = absorbent,
 α_W : 0.30–0.55

E = weakly absorbent,
 α_W : 0.15–0.25

Acoustic screening

As a rule, sound disperses spherically from an acoustic source in all directions.

Acoustic screening elements, such as partition walls, desk panelling or cabinets with acoustic front panels, interrupt the sound's direct path from the acoustic source to the receiving end. For effective acoustic screening – e.g. from the person sitting at the next station – the acoustic screen should be positioned immediately next to, or around, the acoustic source.



RAUVOLET acoustic-line

The all-rounder: the patented RAUVOLET acoustic-line multi-element shutter system, already widely in use, performs impressively as a highly effective broadband absorber and ensures complete concentration in all office environments. Moreover, the closure offers unrestricted access to the entire contents of the cabinet.

Highly effective class B broadband absorber

RAUVOLET acoustic-line absorbs sound linearly across the entire frequency range. Its sound absorption rate of 0.8 means up to 80 % of incident sound is absorbed.



Design awards

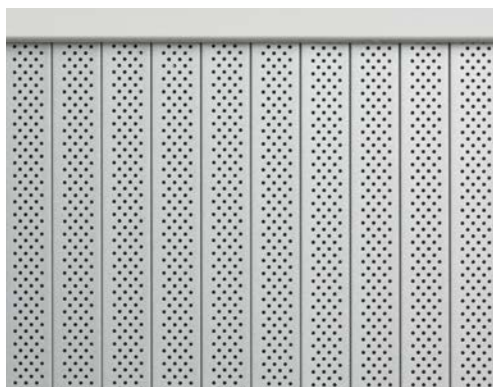


reddot design award
winner 2006



DESIGN PLUS

You can find further product details in our Technical Information "RAUVOLET acoustic-line" (B32600).



Unique profile geometry

RAUVOLET acoustic-line features a special profile geometry with continuous perforation and an acoustic fleece inside the hollow section.

RAUVOLET fabric-line

RAUVOLET fabric-line textile cabinet fronts combines an attractive interior solution whilst proven to contribute to better room acoustics. Thanks to its seamless appearance and textile surface, the roller shutter system for furniture fronts combines a relaxing living-room ambience with acoustic comfort while you work.

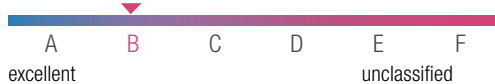


For a relaxing ambience

Thanks to its homely fabric surface, the textile cabinet closure ensures greater comfort in the workplace. Its design clearly sets it apart from conventional multi-element shutter systems.

For effective acoustics

By combining our highly effective RAUVOLET acoustic-line multi-element shutter system with a sound-permeable fabric, the RAUVOLET fabric-line acts as a highly effective class B broadband absorber ($\alpha_W=0.8$) whilst contributing to a pleasant office atmosphere.



Standard colour range

"Nexus" collection from Camira Fabrics. Further colours available on request.



You can find further product details in our Technical Information "RAUVOLET fabric-line" (B50600).

ACOUSTIC SCREEN AND PARTITION SYSTEMS

RAUWORKS screens & partitions

With RAUWORKS, REHAU offers a coordinated product family of highly effective acoustic screen and partition systems. The optimised system structure ensures efficient absorption and shielding of incident sound.

Replaceable
fabric cover



In comparison with other screen and partition systems, the RAUWORKS range impresses in two ways. The systems specific structure and thickness ensure greater efficiency of sound absorption in the near field. The second advantage is the system height, which at 70 cm reduces the spread of sound to colleagues in surrounding areas.

This allows RAUWORKS to deliver a better acoustic performance than thinner, smaller systems.

A beading connection allows versatile and straightforward replacement of the fabric cover. This allows you to easily customise and install replacement covers on your existing system.

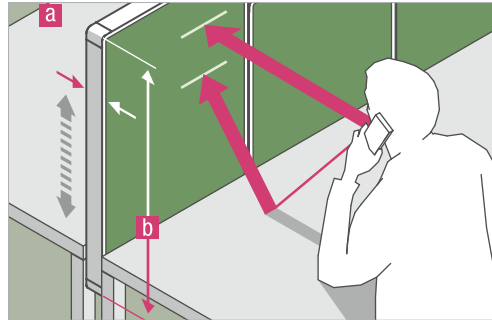
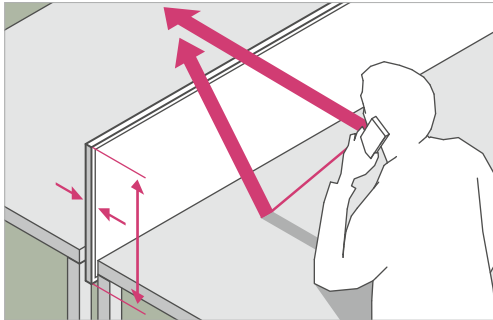
The sound-absorbing **1** RAUWORKS desk screen system was designed especially for use at double work stations. For example, RAUWORKS split screen impresses with versatile shielding thanks to its individually height-adjustable dividing elements that – when lowered – enable easy communication between colleagues and – when raised – allow uninterrupted concentration on the task at hand.

Sound absorption class B/C (depending on the system, the sound absorption rate α_w is between 0.75 and 0.85).

The RAUWORKS partition **2** partition wall system allows not only flexible zoning within open-plan offices, but also improves the room's acoustic conditions. Whether alone or positioned in groups – RAUWORKS partition achieves optimum acoustic and visual privacy in all situations.

Sound absorption class B ($\alpha_w = 0.8$)

Innovative system structure



RAUWORKS screen in comparison

with conventional screen and partition systems without acoustic properties:

- a** System depth of 5.5 cm for significantly higher absorption values
- b** System height of 70 cm for significantly higher acoustic screening efficiency

How does RAUWORKS affect the acoustics of office spaces?

A study by the Institute for Building Services and Energy Design at the TU Braunschweig in collaboration with REHAU

In order to test the effect of RAUWORKS screen and partition systems, the modern office and meeting rooms at the TU Braunschweig were furnished with REHAU products. During the testing phase, which lasted one year, it became clear that RAUWORKS systems were able to demonstrate a clear improvement in room acoustics and the occupants general well-being.

Situation faced by office staff before installation of RAUWORKS

- Noises echo!
- The room is loud!
- I am distracted by my colleagues' conversations!

Using RAUWORKS

Physical effect: reducing sources of perceived noise	Psychoacoustic effect: improving the well-being of office staff
<p>✔ SOUND PRESSURE LEVEL falls by up to 35 %</p>	<p>✔ Immediately after installation, EXPOSURE TO NOISE FALLS by more than 20 %</p>
<p>✔ REVERBERATION TIME falls by up to 25 %</p>	<p>✔ Around 60 % of office staff notice AN IMPROVEMENT IN ROOM ACOUSTICS immediately after installation.</p>
+	
<p>✔ SPEECH INTELLIGIBILITY falls by up to 30 %</p>	<p>✔ 70 % of office staff notice an IMPROVEMENT IN GENERAL WELL-BEING by more than 50 %, immediately after installation. In the long term (1 year later), 100 % of staff report an improvement in well-being by more than 50 %.</p>

RAUWORKS screen

Individually
height-adjustable
and retro-fittable
at any time

With the RAUWORKS screen desk screen systems, REHAU offers a coordinated product family of highly effective acoustic desk screens for versatile applications in the office.

RAUWORKS split screen

The highlight: movable partition segments allow easy switching between communication and concentration – depending on the work situation.



RAUWORKS fixed screen

The classic: fixed to the desk, this partition is particularly suited to more consistent acoustic requirements, such as in call centres.

Frame colour

It goes without saying that the frames are also available in a range of colours.

RAUWORKS lift screen

The independent: this partition is not fixed to the desk and allows electric, stepless height adjustment at the push of a button, as well as flexible installation.



You can find further product details in our Technical Information "RAUWORKS screen / RAUWORKS partition" (B41600).

RAUWORKS partition

The RAUWORKS partition wall system allows individual zones to be created within open-plan offices. These sound absorbing partition walls are not only versatile but also help to improve the room's acoustic conditions at the same time.



RAUWORKS partition on adjustable feet

The static partition: for the office with a more permanent set up, this free standing unit stands on its own two feet to ensure a comfortable workplace atmosphere.



RAUWORKS partition on casters

The screen on wheels: this partition wall allows you the flexibility to place it wherever acoustic shielding or privacy may be needed.



RAUWORKS partition with interlinking

The connectors: thanks to a wide variety of interlinking options, these partition walls can be used to alter the room layout in open-plan office environments depending on requirements.

Available widths:

800 mm / 1,000 mm / 1,200 mm

Standard colour range

"Fiji" collection from Camira Fabrics. Further colours and customised prints available on request.



We're never far away.
For our locations, visit
www.rehau.com/locations

Please feel free to send any enquiries
to acoustics@rehau.com.

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