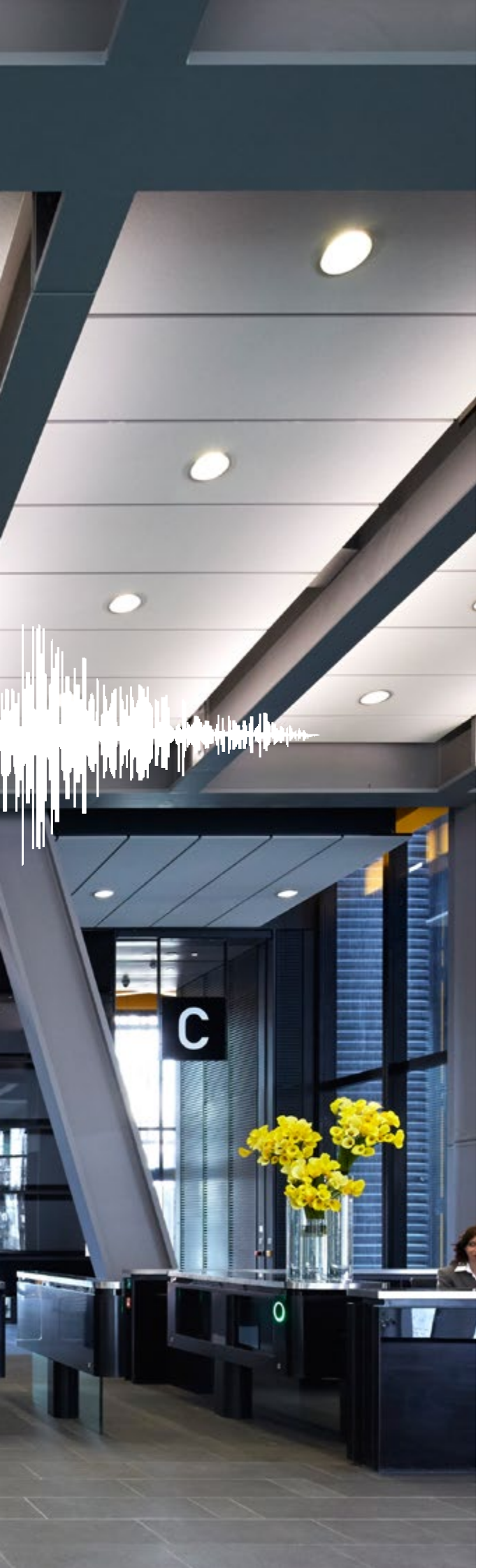
StoSilent
Setting the tone in acoustics.

Acoustic systems by Sto

The Leadenhall Building, London, United Kingdom

The art of the invisible
Room acoustics



Effective acoustic solutions are becoming increasingly important in modern architecture. Even during the planning stage, ways to positively influence the sound of a room as inconspicuously as possible is a major consideration. Ultimately, the way a room is perceived depends heavily on how it is heard, and seen, by those who use it.

At Sto, we have been researching this topic for over 30 years. Our aim has always been to provide you with the means and materials you need to design acoustically perfect rooms that look as good as they sound.

Pure Design Freedom
StoSilent acoustic solutions

Requirements for reverberation time, sound distribution or speech, intelligibility change depending on the way a room is used. Whereas cushioned silence is often valued in offices or lobbies, a concert hall often requires every sound, no matter how soft, to be heard. Acoustics are influenced by various factors, including the composition of floors, walls and ceilings, the ambient interior climate, the type of furniture, and the number of people. Thanks to our extensive research, our experience gained from all types of successful projects, and our co-operation with leading architects, tradesmen and acoustic experts, we are able to take all these factors into account and optimise the acoustics performance of any room.

727 Collins Square, Melbourne, Australia

Sto Logistics Centre, Stühlingen, Germany

The perfect acoustics for any room
Our acoustic systems offer more than just outstanding technical performance and a comfortable sound environment. With a range of finishes and over 1,000 colour shades, StoSilent gives you the freedom to bring your design to life.

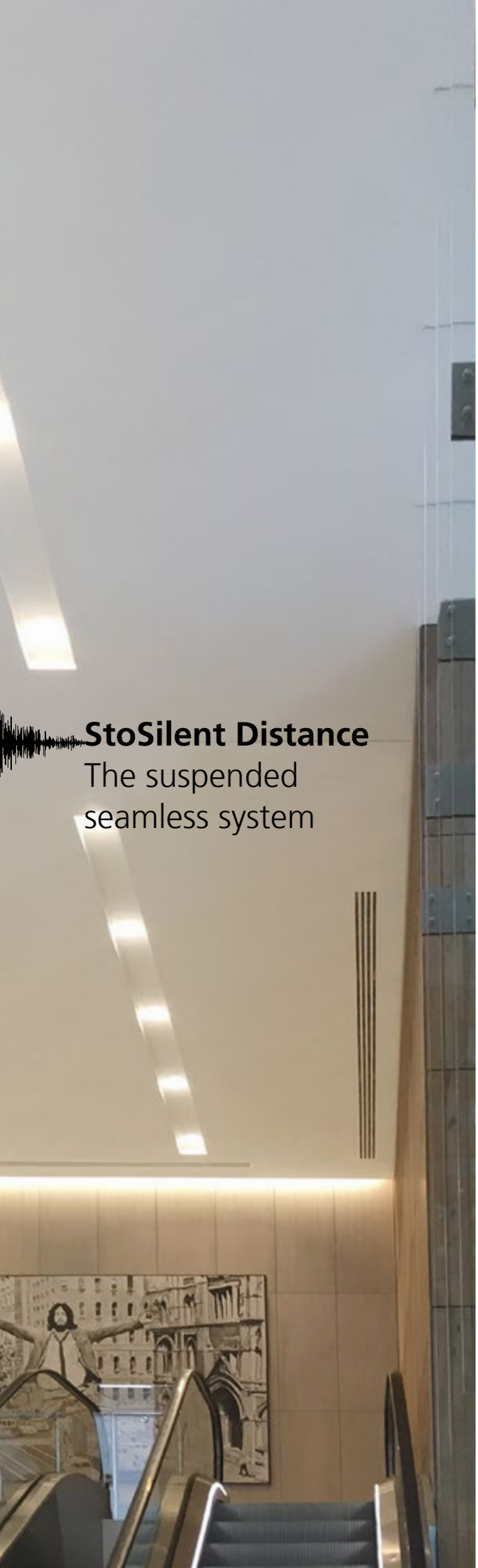
StoSilent Distance
A suspended seamless acoustic panel system that offers the ultimate design flexibility.

StoSilent Direct
An acoustic system that can be applied directly to a wide range of substrates, to create an economical, seamless solution.

Max Planck Institute, Seewiesen, Germany

Supreme Court of New Zealand, Wellington, New Zealand

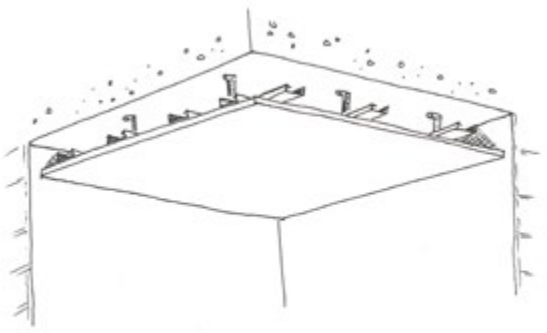
727 Collins Square, Melbourne, Australia



StoSilent Distance

The suspended seamless system

It's hard to imagine modern architecture without large, clean, seamless surfaces. The StoSilent Distance board system allows you to create these types of sound-absorbent walls and ceilings, in situations where they must be suspended to reduce room height, accommodate services or to achieve a certain aesthetic.



Schematic diagram of StoSilent Distance

Endless design possibilities
StoSilent Distance

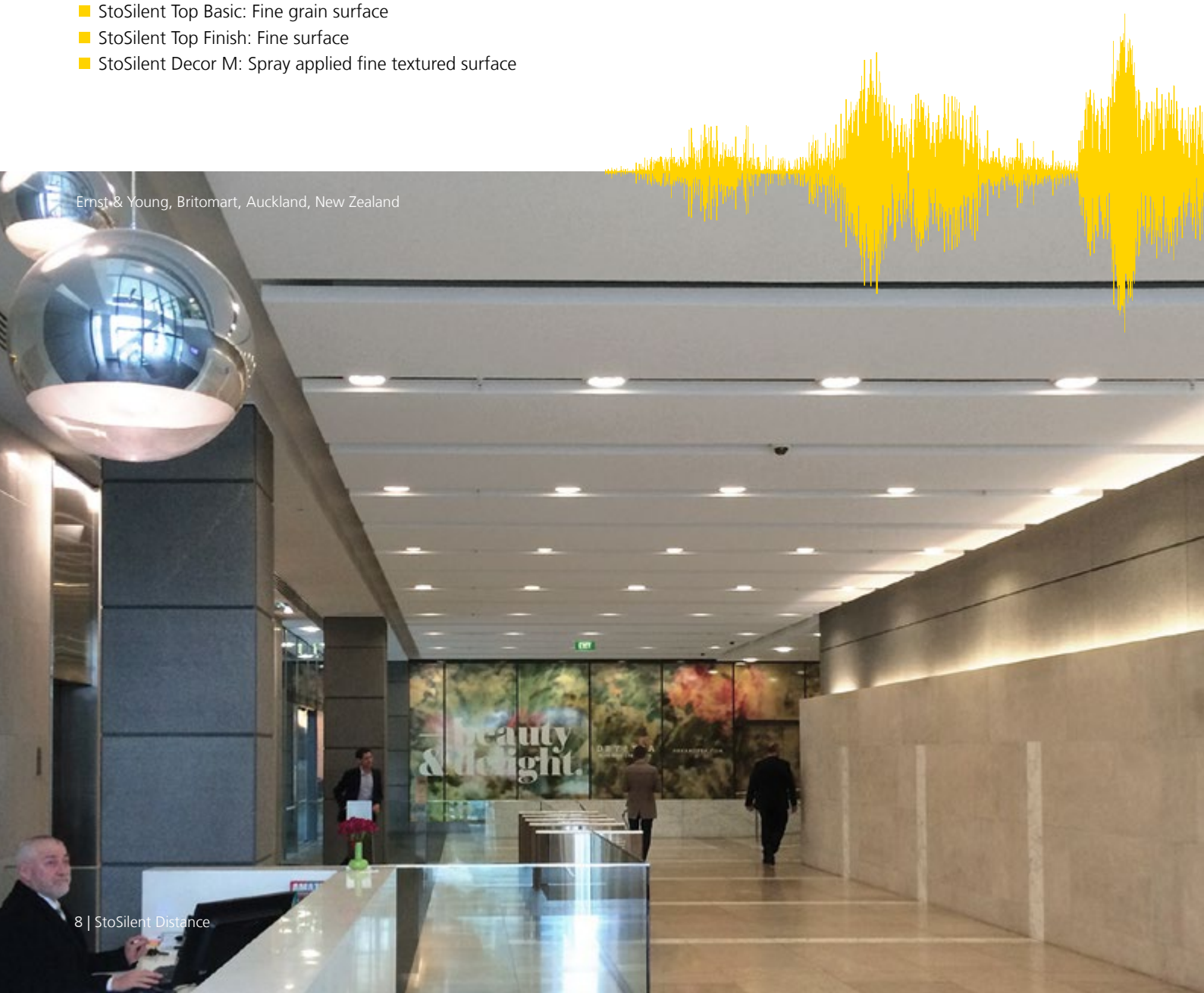
The StoSilent Distance system can be installed as a suspended ceiling or as a wall covering with cavity. The sub-construction is made of metal profiles and the acoustic panel consists of expanded glass granulate. The advantages of this material; it is light, absorbs sound, and can be adjusted to any shape of room to form a homogeneous, seamless surface.

Benefits

- Seamless installation up to 200 m²
- Can form sharp joints and creases
- Very high crack resistance
- Can be used to create curved surfaces and vaults
- Options available for humid and damp conditions - e.g. swimming pools
- Options available to accommodate air movement situations - e.g. ventilation behind the ceiling

Surface design

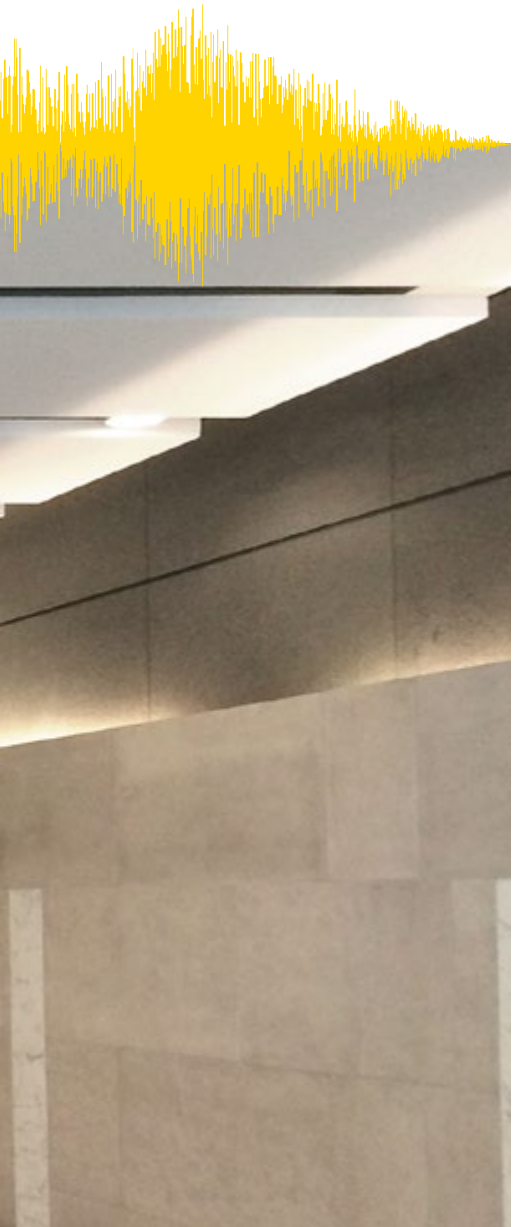
- StoSilent Top Basic: Fine grain surface
- StoSilent Top Finish: Fine surface
- StoSilent Decor M: Spray applied fine textured surface

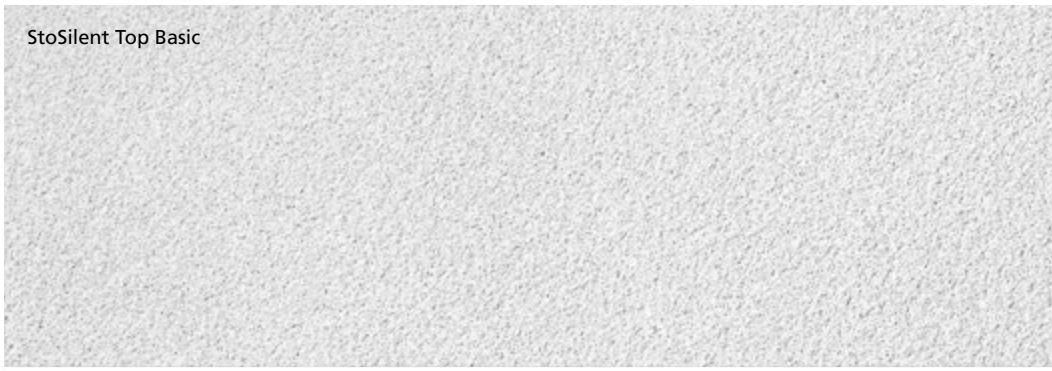


Ernst & Young, Britomart, Auckland, New Zealand

StoSilent Distance System Variants

- StoSilent Board 100S / StoSilent Top Basic: Trowel applied fine grain surface. Sound absorption values up to a maximum of NRC = 0.60. Group 1-S in accordance with DIN EN 13501-1 and ISO 5660, AS/NZS 3837.
- StoSilent Board 100S / StoSilent Top Finish: Trowel applied fine surface. Sound absorption values up to a maximum of NRC = 0.75. Group 1-S in accordance with DIN EN 13501-1 and ISO 5660, AS/NZS 3837.
- StoSilent Board 110S / StoSilent Decor M: Spray applied fine textured surface. Sound absorption values up to a maximum of NRC = 0.80. Group 1-S in accordance with DIN EN 13501-1 and ISO 5660, AS/NZS 3837.

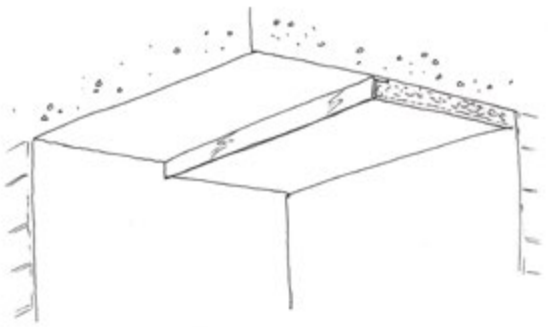




Sto Logistics Centre, Stühlingen, Germany

StoSilent Direct
The economical seamless system

StoSilent Direct, a mineral wool board system which also offers seamless ceiling and wall solutions, yet provides a particularly economical option especially for the creation of visible joints. It requires no sub-construction, and can be applied directly to walls and ceilings. It represents a highly sound absorbent solution that is especially suited where room height is restricted, with a full range of StoSilent surface finishes.



Schematic diagram of StoSilent Direct

Economical seamless or visible joints
StoSilent Direct

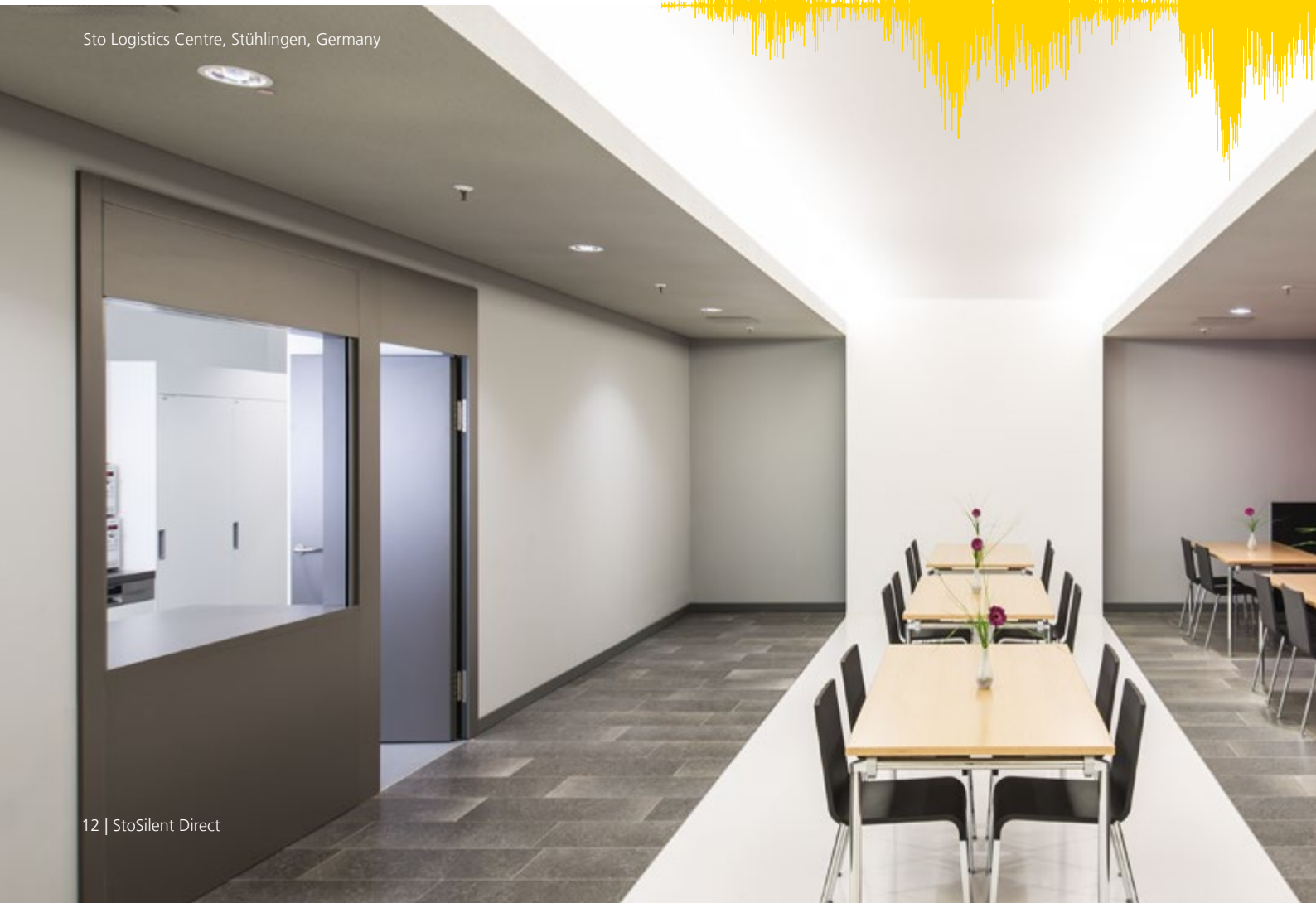
The StoSilent Direct system consists of mineral wool boards with a pre-applied, textured surface. The boards are bonded directly to the substrate, and their pre-chamfered joints can be left as is, or filled prior to applying one of the StoSilent textured finishes. Seamless surfaces up to 700 m² can be created without the need for a break in the system, as well as curves down to a radius of 5m.

Benefits

- Seamless installation up to 700 m²
- Direct bonding on to walls or ceilings above a height of 2 meters, ideal for restricted ceiling heights
- High sound absorption due to a porous texture and sandwich structure
- An economical solution, especially when joints are left exposed
- Wide range of possible coatings

Surface design

- StoSilent Top Basic: Fine grain surface
- StoSilent Decor M: Spray applied fine textured surface
- StoColor Climasan: Interior paint for surfaces with visible joints. Breaks down odours and harmful substances



Sto Logistics Centre, Stühlingen, Germany

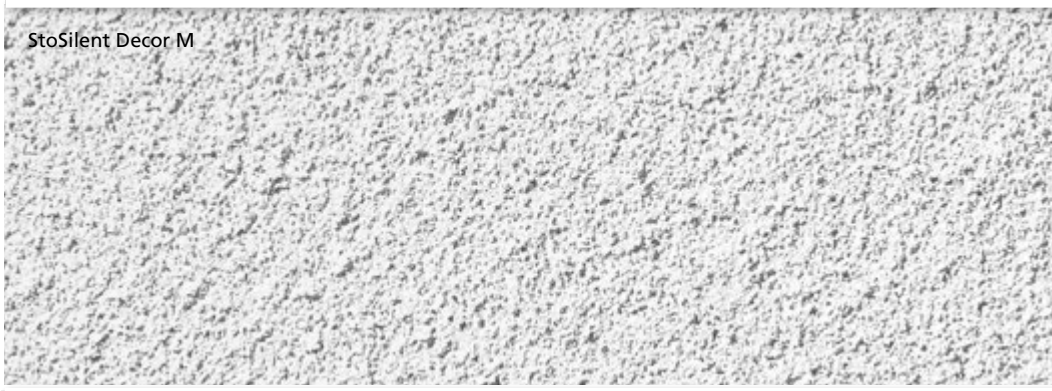
StoSIlent Direct Seamless System Variants

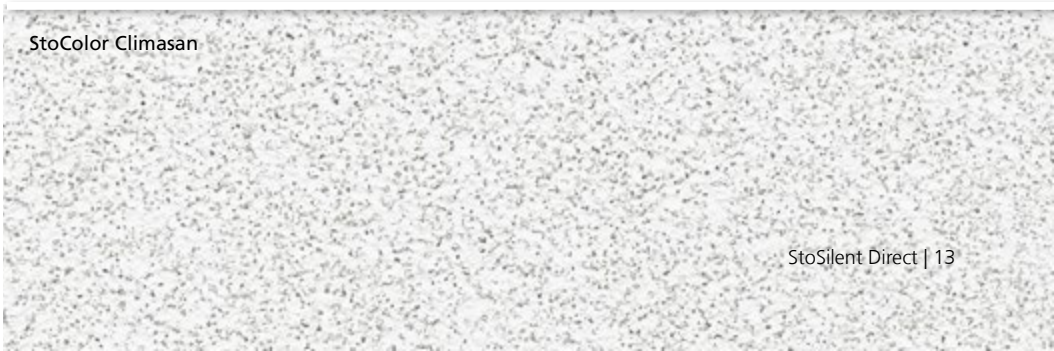
- StoSIlent Board MW / StoSilent Top Basic: Trowel applied fine grain surface. Sound absorption values up to a maximum of NRC = 0.65. Group 1-S in accordance with DIN EN 13501-1 and ISO 5660, AS/NZS 3837.

- StoSIlent Board MW / StoSilent Decor M: Spray applied fine textured surface. Sound absorption values up to a maximum of NRC = 0.80. Group 1-S in accordance with DIN EN 13501-1 and ISO 5660, AS/NZS 3837.

StoSilent Direct Exposed Joint System

- StoSIlent Board MW / StoColor Climasan: The chamfered board joints are left unfilled and the surface is spray-coated with StoColor Climasan, a paint which helps break down any odours and harmful substances in the air. Sound absorption values up to a maximum of NRC = 1.00. Group 1-S in accordance with DIN EN 13501-1 and ISO 5660, AS/NZS 3837.





Acoustics for challenging conditions

In addition to acoustic treatments for everyday interior spaces, when required, StoSilent goes above and beyond by offering acoustic solutions for more demanding scenarios.

Ventilation and air movement
Virtually all acoustic attenuation solutions work by trapping sound energy in tiny cavities, just below the outer surface and dissipating the noise energy. They must therefore be porous by nature.

Many suspended ceilings hide air conditioning plant or have air vents and plenums behind them. This can cause the porous acoustic solution to act as a giant air filter and quickly become marked or dirty.

This is addressed with certain StoSilent solutions by including an impermeable foil on the rear face of the board, allowing it to still perform its sound attenuation function, but preventing airflow through it. The result is a ceiling that stays cleaner for longer.

Swimming Pools
With the pool itself providing a large sound-reflective surface, swimming pools can be particularly noisy and acoustically poor environments. They are usually also aggressive environments, with the pool chemicals and high humidity combining to form a 'C4 environment', with a high risk of corrosion under ISO EN 12944.

Ceilings for swimming pools therefore need special care during the specification, design and construction processes. StoSilent Distance solutions have provided effective acoustic solutions in many such applications right round the world.

With a specially protected sub-construction, StoSilent Distance provides relief from the typically unpleasant and echo-laden swimming pool environment.

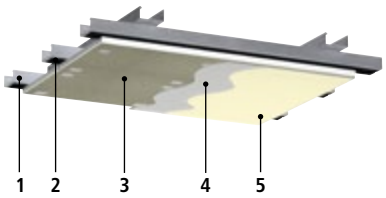
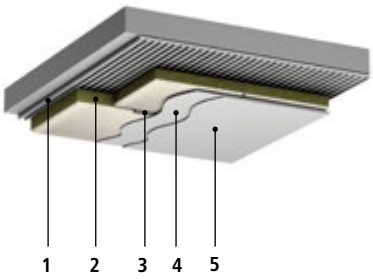
Semi-exposed Areas
With proven resistance to wind loads, StoSilent Distance can also be used in most semi-exposed situations where it will not come into direct contact with water. Numerous successful projects confirm its versatility in contributing to a more relaxed acoustic environment, even outdoors.

Augsburger Aktienbank AG joint stock bank, Augsburg, Germany

Private Pool, Buckinghamshire, United Kingdom

Seamless or variable, fine or rough, coloured or brilliant white: with StoSilent you can give colour and shape to room acoustics. Below you can see in a glance which system is the right for your project.

For more information visit **www.sto.co.nz**

System	Version	Acoustic Board	Finish	NRC - Noise Reduction Coefficient	Board thickness	System weight*
StoSilent Distance  **System build-up (example)** **1 Sub-construction - made of metal profiles** **2 Airtight Seal - StoSilent Profile Tape** **3 Acoustic Board - StoSilent Distance** **4 Intermediate Coat - StoSilent Top Basic** **5 Finish - StoSilent Top Basic / Top Finish / Decor M**	StoSilent Distance	StoSilent Board 100S	StoSilent Basic	0.60	25mm	12.8 kg/m²
		StoSilent Board 100S	StoSilent Top Finish	0.65 - 0.75	25mm	12.8 kg/m²
		StoSilent Board 110S	StoSilent Decor M	0.75 - 0.80	25mm	9.5 kg/m²
StoSilent Direct  **System build-up (example)** **1 Adhesive - Sto Adhesive Render** **2 Acoustic Board - StoSilent Board MW** **3 Joint Filler - StoSilent Filler** **4 Intermediate coat - StoSilent Top Basic** **5 Finish - StoSilent Top Basic / Decor M / Climasan**	StoSilent Direct	StoSilent Board MW 100	StoSilent Top Basic	0.55 - 0.60	36mm	11 kg/m²
		StoSilent Board MW 100	StoSilent Decor M	0.70	36mm	10.7 kg/m²
		StoSilent Board MW 100	StoColor Climasan (visible joints)	0.85	46mm	5.1 kg/m²
		StoSilent Board MW 100	StoSilent Top Basic	0.65	46mm	12 kg/m²
		StoSilent Board MW 100	StoSilent Decor M	0.75 - 0.80	46mm	11.7 kg/m²
		StoSilent Board MW 100	StoColor Climasan (visible joints)	0.85 - 0.90	46mm	6.1 kg/m²

*Board and finishes not including sub-construction or adhesive (MW adhesive - 4.0kg m2).

*StoSilent Systems are indent stock

Head Office

Wellington
Stoanz Ltd
72 Abel Smith Street
Te Aro, Wellington
Phone +64 4 801 7794

General Enquiries
Phone +64 4 801 7794
Email info@sto.co.nz
Web www.sto.co.nz

Auckland & Northland
309 Rosebank Road,
Avondale, Auckland
Phone +64 9 522 1058

Central North Island
Phone +64 4 801 7794
Mobile +64 27 299 9290

Christchurch &
Upper South Island
47A Waterloo Road,
Hornby, Christchurch,
Phone +64 3 338 3570

Lower South Island
Phone +64 4 801 7794
Mobile +64 27 4815 223