

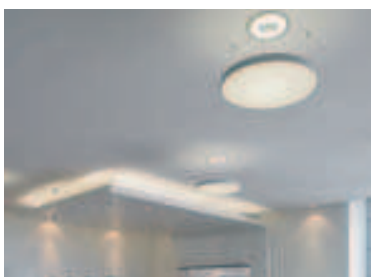


Acoustics

Programme overview



Contents



Sto Acoustics

- 4 **Room acoustics**
Acoustics you can feel
- 6 **Acoustic panel systems**
Functionality and technology combined to perfection
- 8 **Room concepts for special effects**
Innovative materials for superior room acoustics
- 10 **Design and acoustics**
Uncompromising interior design
- 12 **Acoustic ceiling elements**
The acoustic retrofit for every scenario
- 14 **Acoustic plaster systems**
Perfect solutions for special requirements
- 15 **Acoustic covering system**
For better communication

Acoustics you can feel

Visual and acoustic impressions induce moods and feelings and have a special influence on the way we experience our surroundings. Our senses determine whether or not we feel at home in a room.

Hearing involves interpreting sound waves, and our ears are often simultaneously exposed to a broad array of different sound waves at the most diverse frequencies. As sound acts directly on our central nervous system, factors such as volume, frequency and the number of sound sources influence our sense of well-being and our powers of concentration. In the long term, poor room acoustics can be harmful to health. A room's acoustic properties – the audibility of the spoken word or the purity of a sound – are dependent on the reflection or absorption characteristics of the flooring, the walls, the ceiling and the fixtures and fittings in the room.

Excessively long reverberation times result in unpleasant room acoustics – sounds become unclear and the spoken word becomes incomprehensible.

The Sto acoustic systems have a positive influence on room acoustics and a room's acoustic properties, at the same time offering much more than premium acoustics: they are multi-functional sound optimisation and interior design solutions, ranging from panel systems to acoustic plasters and coverings.

Growing numbers of our products – like the Sto Silent Superfein coating, for example – bear the international natureplus® quality mark. This is a seal of approval for health, environmental and functional aspects.



Functionality and technology combined to perfection

Superlative acoustic panel systems

The Sto acoustic panel systems offer the ideal solution for all needs – as the elegant finishing touch to a room featuring an ultra-fine surface texture, in tinted or curved form or as acoustic cooling/heating systems.

In flow-proof design, the systems are even perfectly suited to use in rooms of high humidity or areas in which increased air circulation prevails.

Overview of Sto acoustic panel systems

- **StoSilent Panel:** For improved acoustics in reverberant rooms, from function rooms through lecture theatres to swimming baths
- **StoSilent Panel Robust:** A mesh-reinforced panel used for curved and arched surfaces
- **StoSilent A-Tec:** The acoustic system, suitable for use wherever non-combustible wall and ceiling linings are required
- **StoSilent Top:** The acoustic system with the ultra-fine surface finish
- **StoSilent Top A-Tec:** Acoustic system with ultra-fine coating, suitable for use wherever non-combustible wall and ceiling linings are required
- **StoSilent Cool:** Combines perfect room acoustics with an optimum ambient interior climate on walls and ceilings
- **StoSilent Top Cool:** Additionally features an ultra-fine surface texture to add an elegant finishing touch to the room



Aqua Dome spa, Längenfeld in Tyrol, A
Architects: Schnögass + Partner, R. Fischer



Left and below:
Bodensee-Therme spa complex, D-Constance
Architekturbüro 4a



Innovative materials for superior room acoustics

Hi-tech for the indoor environment



AstraZeneca – Cancer Research Centre, Cheshire, UK;
Stephenson Bell Architects

Innovative materials

The core of our acoustic panel systems is the carrier board, made from an extremely robust and highly absorbent high-tech material based on expanded glass granulate.

High absorption level

The open-pored design of this material results in a high absorption level of up to 85 % and a low system weight.

Perfect ambient interior climate

In addition to perfect room acoustics, the panel systems such as StoSilent Cool also enable perfect indoor temperature control. Our cooling and heating ceilings meet the very highest acoustic and air-conditioning requirements.

Built-in sound

Loudspeakers can be integrated invisibly into the acoustic panel systems as a special option.

Overview of acoustic panel systems

	System name	System properties				Solution			
		Max. absorption α_w	Combustibility	Mechanical resistance	Max. panel size	Area of application		Cooling/heating	Available as flow-proof variant
						Ceiling	Wall		
Panels	StoSilent Panel	0.80	limited combustibility	●	1200 x 2400	●●	●		✓
	StoSilent Panel Robust	0.75	limited combustibility	●●	1200 x 2400	●	●●		✓
	StoSilent A-Tec	0.85	non-combustible	●	625 x 1200	●●	●		✓
	StoSilent Top	0.65	limited combustibility	●●	1200 x 2400	●●	●●		✓
	StoSilent Top A-Tec	0.80	non-combustible	●	625 x 1200	●●	●		✓
Cooling/heating ceiling panels	StoSilent Cool	0.60		●	800 x 1200	●●	●	✓	✓
	StoSilent Top Cool	0.50		●	800 x 1200	●●	●●	✓	✓

●● excellent ● good ● limited ✓ yes

Also ideal for areas of high humidity

Sound-reflecting and smooth surfaces such as glass and steel are particularly prevalent in the modern architecture of swimming baths. And the surface of the water represents an additional sound-reflecting body which compounds the situation.

The flow-proof StoSilent Panel Alu copes supremely with these acoustic challenges and the requirements resulting from the high humidity. All Sto acoustic panels are available in flow-proof design, making them ideal for use in areas of high humidity, such as swimming baths or areas with increased air circulation.

InterActiveCorp., USA - New York
Architects: Frank Gehry & Assoc.



Radonbad swimming baths, D-Menzenschwand; Sacker Architekten

Uncompromising interior design

Acoustics and aesthetics in perfect combination

In fine form

The acoustic systems from Sto AG are not only extremely flexible in use – the acoustic panel itself can also be installed in curved form. This means

that flowing transitions can be created between surfaces of different heights or sweeping three-centre arches and circular segments can be produced.

Seamless installation over extensive areas

Extensive ceiling and wall areas of up to 200 m² and 20 m in length can be produced in seamless design with the acoustic panel systems – for uncompromising aesthetic room concepts.



Blue Heaven Radisson SAS Hotel, D-Frankfurt a. M.; Architects: Schindler und Werb

Ultra-fine coating

The ultra-fine surface finish of the StoSilent Top acoustic panel system provides for a sleek, purist, ultra-modern look.

This ensures that the system meets the highest design requirements, in addition to its outstanding acoustics-enhancing properties.

Apart from brilliant white, which creates a shimmering effect in various light situations, a broad choice of pastel tones is also available for the finishing coat. This means maximum scope for creative colour design.



Münchner Tor, D-Munich; Architekturbüro Brandt

The design options with acoustic panel systems

		Design						
	System name	Seamless	Surface texture in mm	Colour choice	Formability	Max. luminous reflectance	Max. lightness value	Max. whiteness
Panels	StoSilent Panel	●●	0.5–0.8 fine	●●	●	90 %	83 %	66 %
	StoSilent Panel Robust	●●	0.5–0.8 fine	●●	●●	90 %	83 %	66 %
	StoSilent A-Tec	●●	0.5–0.8 fine	●●		90 %	83 %	66 %
	StoSilent Top	●●	0.3–0.5 finest	●	●●	75.4 %	77 %	69 %
	StoSilent Top A-Tec	●●	0.3–0.5 finest	●		75,4 %	77 %	69 %
Cooling/heating ceiling panels	StoSilent Cool	●●	0.5–0.8 fine	●●		90 %	83 %	66 %
	StoSilent Top Cool	●●	0.3–0.5 finest	●		75.4 %	77 %	69 %

●● excellent ● good ● limited

The acoustic retrofit for every scenario

The versatile ceiling element

The versatile ceiling element combines aesthetics and technology. It can be integrated into any existing room concept to provide for a marked improvement in acoustics, its attractive design at the same time making it an architectural eye-catcher. The surface area of StoSilent Modular can be altered at any time. Alternatively, its simple method of installation on hangers allows it to be removed and installed elsewhere.

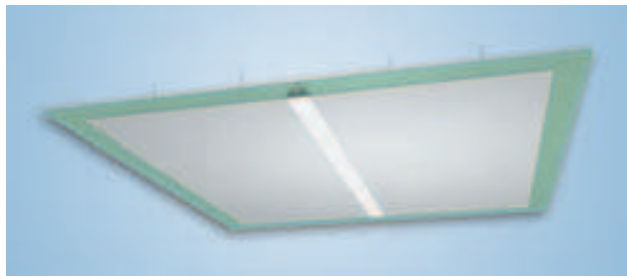
Improved acoustics despite activation of structural components

The variability of the distance from the ceiling and the minimal contact area of the mounting points mean that the ceiling element is also an ideal means of improving acoustics in buildings in which parts of the building structure or the concrete core are activated.

The ceiling canopies are available in three variants which can be intercombined and expanded.



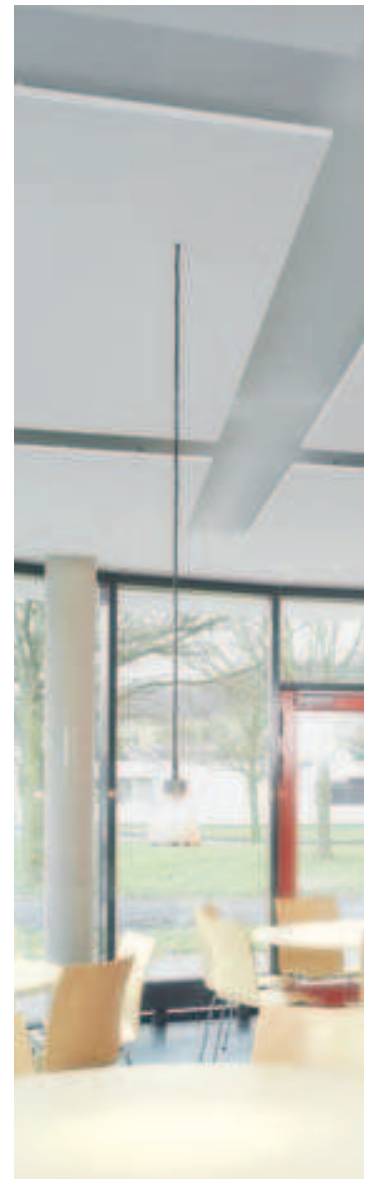
Type 100



Type 200



Type 400



Casino Milupa, D-Fulda



Office building of AS-Fassaden GmbH,
D-Gars/Inn



Perfect solutions for special requirements

Acoustic plasters for individual solutions

Acoustic plasters

The given building scenario sometimes means that it is not possible to use suspended acoustic systems. Cross vaults in listed historical buildings require direct coating, for example. For these specific cases, Sto has developed acoustics-enhancing plaster systems for direct application to ceilings and walls. These plasters enable curves in two directions and minimal radii. Sto Acoustic Spray Plaster is also suitable for use as an anti-condensation plaster in areas of high humidity.



Catholic parish church
Maria Hilf, D-Stadtbergen

Overview of acoustic plaster and acoustic covering systems

	System name	System properties			Solution		Design		
		Max. absorption α_w	Combustibility	Load-bearing capacity	Retrofitting	Area of application		Surface texture	Colour choice
						Ceiling	Wall		
Plaster systems	Sto Acoustic Plaster	0.45	limited combustibility	●		●●	●	fine	●●
	Sto Acoustic Spray Plaster	0.50	non-combustible	●		●●	●	coarse	●
Acoustic wallpaper	Sto-Silentlyl	0.40	limited combustibility	●●	●●	●●	●●		●

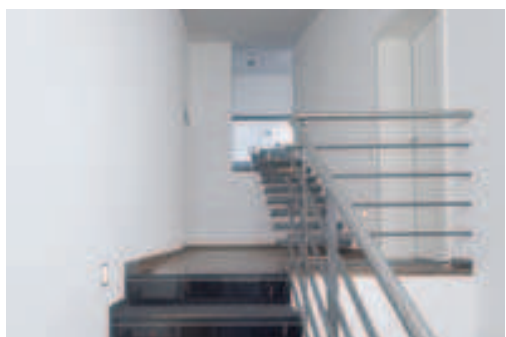
●● excellent ● good ● limited

For better communication

Acoustic wallpapers – fast and simple

Acoustic covering system

Acoustic wallpaper is the perfect choice wherever communication between people needs to be enhanced – in open-plan offices, doctors' surgeries, kindergartens, restaurants or sales rooms, for example. The covering system is particularly effective in the high-frequency range, making it ideal at kindergartens. Swift and simple application and the attractive finish make this system component a tried and tested acoustic solution which is particularly suited to fast renovation projects.



Above and right: Sto-Silentlyl in a private home

	Formability	Max. lightness value	Max. whiteness
	● ●	82 %	62 %
	● ●	71 %	61 %
	● ●	80 %	64 %



Head office

Sto AG
Ehrenbachstrasse 1
D-79780 Stuehlingen
Phone +49 7744 57-0
Fax +49 7744 57-2178
infoservice@stoeu.com
www.sto.com



Quality management system
Sto AG, DIN EN ISO 9001, reg.-no. 3651
Environmental management system
Sto AG, DIN EN ISO 14001, reg.-no. 3651
Plants in Stuehlingen, Donaueschingen,
Tollwitz, Rüssebheim

Subsidiaries abroad

Austria
Sto Ges.m.b.H.
A-9500 Villach
Phone +43 4242 33133-0
info@sto.at
www.sto.at

Belgium
Sto nv
B-1730 Asse
Phone +32 2 4530110
info.be@stoeu.com
www.sto.be

China
Shanghai Sto Ltd.
201201 Shanghai
P.R. CHINA
Phone +86 2158 972295
www.sto.com.cn

Czech Republic
Sto s.r.o.
CZ-25170 Dobřejovice
Telefon +420 225 996311
info.cz@stoeu.com
www.sto.cz

Denmark
Sto Danmark
DK-2650 Hvidovre
Phone +45 702 70143
kundekontakt.dk@stoeu.com
www.stodanmark.dk

Estonia
Sto Finexter Oy
EE-11216 Tallin
Phone +372 675 0001
info@sto.ee
www.sto.ee

Finland
Sto Finexter Oy
FI-01730 Vantaa
Phone +358 207 659191
asiakaspalvelu@stoeu.com
www.stofi.fi

France
Sto S.A.S.
F-95870 Bezons
Phone +33 1 34345700
sto.fr@stoeu.com
www.sto.fr

Germany
StoVerotec GmbH
D-89415 Lauingen/Donau
Phone +49 9072 990-126
infoservice.stoverotec@stoeu.com
www.stoverotec.de

Hungary
Sto Építőanyag Kft.
HU-2330 Dunaharaszti
Phone +36 24 510210
info.hu@stoeu.com
www.sto.hu

Ireland
Sto Ltd.
IR-Dublin 12
Phone +353 1460 2305
info.uk@stoeu.com
www.sto.ie

Italy
Sto Italia srl
I-50053 Empoli (FI)
Phone +39 0571 94701
info.it@stoeu.com
www.stoitalia.it

Malaysia
Sto SEA Sdn. Bhd.
MY-81750 Masai
Kawansan MIEL Bandar
Phone +607 388 1737
www.sto-sea.com

Netherlands
Sto Isoned bv
NL-4004 KD Tiel
Phone +31 344 620666
info.nl@stoeu.com
www.sto.nl

Norway
Sto Norge AS
NO-0664 Oslo
Phone +47 2207 2900
info.no@stoeu.com
www.stonorge.no

Poland
Sto - ispo Sp. z o.o.
PL-03-872 Warszawa
Phone +48 22 5116-102
info.pl@stoeu.com
www.sto.pl

Russia
Sto Russia
RUS-119180 Moskva
Phone +7 495 9741584

Singapore
Sto SEA Pte Ltd
SG-Singapore 575625
Phone +65 64 533080
www.sto-sea.com

Slovenia
Sto Ges.m.b.H.
Podružnica Ljubljana
SI-1000 Ljubljana
Phone +386 1 4303525
m.jeric@stoeu.com
www.sto.com/si

Spain
Sto Ibérica S.L.
E-08302 Mataró (Barcelona)
Phone +34 93 7415972
info.es@stoeu.com
www.sto-iberica.es

Sweden
Sto Scandinavia AB
SE-582 77 Linköping
Phone +46 13 377100
kundkontakt.se@stoeu.com
www.sto.se

Switzerland
Sto AG
CH-8172 Niederglatt/ZH
Phone +41 44 8515353
sto.ch@stoeu.com
www.stoag.ch

United Kingdom
Sto Ltd.
GB-Glasgow G52 4TG
Telefon +44 141 404 9000
info.uk@stoeu.com
www.sto.co.uk

USA
Sto Corp.
Atlanta, GA 30331
Phone +1 404 3463666
sales@stocorp.com
www.stocorp.com

Technical Info Center

Information can be obtained by calling:
Phone +49 9072 990-0
infoservice.stoverotec@stoeu.com

International distribution partners

Information can be obtained by calling:
Phone +49 7744 57-1131