StoSilent Distance
Application guideline

Please note that the details, illustrations, general technical information, and drawings contained in this brochure are only general proposals and details which merely describe the basic functions schematically. They are not dimensionally accurate. The applicator/customer is independently responsible for determining the suitability and completeness for the product in question. Neighbouring works are described only schematically. All specifications and information must be adjusted or agreed in the light of local conditions and do not constitute work, detail, or installation plans. The technical specifications and product information in the Technical Data Sheets and in system descriptions/approvals must be observed.

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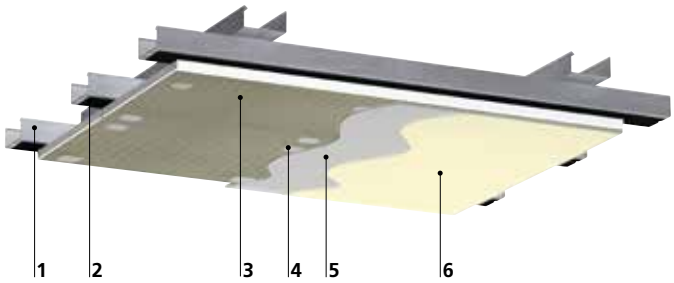
System build-up and description

StoSilent Distance, StoSilent Board 300, coated with StoSilent Top



1 **Sub-construction:** metal sub-construction in accordance with EN 13964 with vernier hanger

2 **Profile Tape:** self-adhesive special tape for decoupling the sub-construction and carrier board **StoSilent Profile Tape**

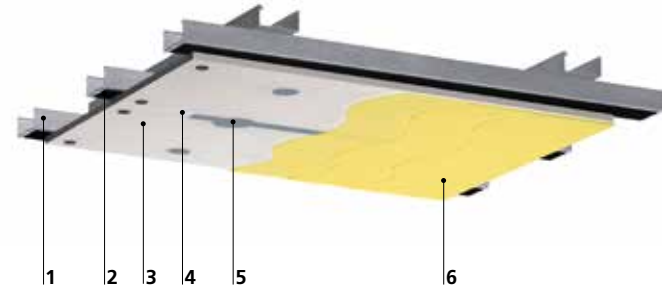
3 **Acoustic panel:** sound-absorbing, flow-proof acoustic panel made of expanded glass granulate **StoSilent Board 300** (for walls and ceilings)

4 **Bonding and filling:** joint filler for bonding the board joints and filling the screw heads **StoSilent Fix**

5 **Intermediate coat:** sound-permeable intermediate coat **StoSilent Top Basic**

6 **Top coat:** fine, sound-permeable top coat **StoSilent Top Finish Alternatively:** textured, sound-permeable top coat **StoSilent Top Basic**

StoSilent Distance, StoSilent Board 310, coated with StoSilent Decor



1 **Sub-construction:** metal sub-construction in accordance with EN 13964 with vernier hanger

2 **Profile Tape:** self-adhesive special tape for decoupling the sub-construction and carrier board **StoSilent Profile Tape**

3 **Acoustic panel:** sound-absorbing, flow-proof acoustic panel made of expanded glass granulate **StoSilent Board 310**

4 **Bonding:** joint filler for bonding the board joints **StoSilent Fix**

5 **Filling:** filler for board joints and screw heads **StoSilent Plan**

6 **Top coat:** sound-permeable top coat **StoSilent Decor M**

StoSilent Distance, StoSilent Board 300, coated with StoSilent Top

Seamless acoustic panel system with a fine texture

Areas of application	• In interiors on walls and ceilings • Only of limited suitability for areas subject to mechanical stress • Suitable for damp rooms, however not for splash water zones
Properties	• Rated sound absorption factor α_w of up to 0.60 • Seamless up to 200 m² • Curves and vaultings with bending radii of min. 10 m are possible • Reaction to fire in accordance with EN 13501-1: B - s1, d0 • Low system weight (with sub-construction): 12.2 kg/m²
Appearance	• StoSilent Top Finish fine surface • Tintable in more than 250 colour shades of the StoColor System
Application	• Execution with an all-around open joint at all adjacent building elements. • Complete detail solutions
Approvals	• The relevant European and/or national approvals apply.

StoSilent Distance, StoSilent Board 310, coated with StoSilent Decor

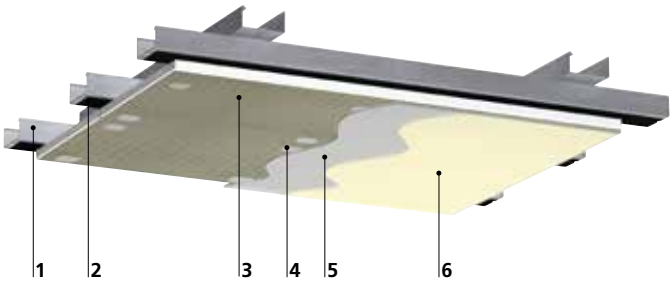
Seamless acoustic panel system with a rough texture

Areas of application	• In interiors on walls and ceilings • Only of limited suitability for areas subject to mechanical stress • Suitable for damp rooms, however not for splash water zones
Properties	• Rated sound absorption factor α_w of up to 0.55 • Seamless up to 200 m² • Curves and vaultings with bending radii of min. 10 m are possible • Reaction to fire in accordance with EN 13501-1: B - s1, d0 • Low system weight (with sub-construction): 10.0 kg/m²
Appearance	• StoSilent Decor M rough surface • Tintable in more than 450 colour shades of the StoColor System (marked with a circle in the colour fan)
Application	• Execution with an all-around open joint at all adjacent building elements. • Complete detail solutions
Approvals	• The relevant European and/or national approvals apply.

The detailed technical specifications and information on the products contained in the Technical Data Sheets and approvals must be observed.

System build-up and description

StoSilent Distance A2, StoSilent Board 200, coated with StoSilent Top



1 **Sub-construction:** metal sub-construction in accordance with EN 13964 with vernier hanger

2 **Waterproofing:** self-adhesive special tape for decoupling the sub-construction and carrier board **StoSilent Profile Tape**

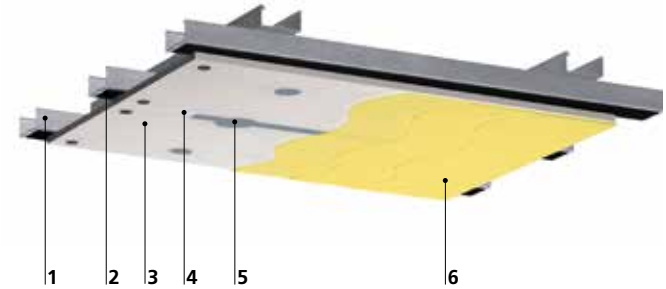
3 **Acoustic panel:** sound-absorbing, flow-proof acoustic panel made of expanded glass granulate **StoSilent Board 200** (for walls and ceilings)

4 **Bonding and filling:** joint filler for bonding the board joints and filling the screw heads **StoSilent Fix**

5 **Intermediate coat:** sound-permeable intermediate coat **StoSilent Top Basic**

6 **Top coat:** fine, sound-permeable top coat **StoSilent Top Finish Alternatively:** textured, sound-permeable top coat **StoSilent Top Basic**

StoSilent Distance A2, StoSilent Board 210, coated with StoSilent Decor



1 **Sub-construction:** metal sub-construction in accordance with EN 13964 with vernier hanger

2 **Waterproofing:** self-adhesive special tape for decoupling the sub-construction and carrier board **StoSilent Profile Tape**

3 **Acoustic panel:** sound-absorbing, flow-proof acoustic panel made of expanded glass granulate **StoSilent Board 210**

4 **Bonding:** joint filler for bonding the board joints **StoSilent Fix**

5 **Filling:** filler for board joints and screw heads **StoSilent Plan**

6 **Top coat:** sound-permeable top coat **StoSilent Decor M**

StoSilent Distance A2, StoSilent Board 200, coated with StoSilent Top

Seamless acoustic panel system with a fine texture

Areas of application	• In interiors on walls and ceilings • Only of limited suitability for areas subject to mechanical stress • Suitable for damp rooms, however not for splash water zones
Properties	• Rated sound absorption factor α_w of up to 0.55 • Seamless up to 200 m² • Curves and vaultings with bending radii of min. 10 m are possible • Reaction to fire in accordance with EN 13501-1: A2 - s1,d0 • Low system weight (with sub-construction): 12.2 kg/m²
Appearance	• StoSilent Top Finish fine surface • Tintable in more than 250 colour shades of the StoColor System
Application	• Execution with an all-around open joint at all adjacent building elements. • Complete detail solutions
Approvals	• The relevant European and/or national approvals apply.

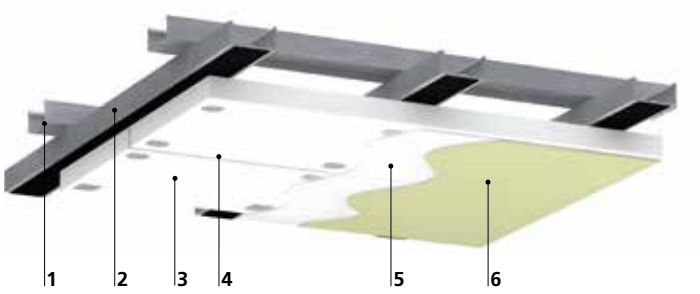
StoSilent Distance A2, StoSilent Board 210, coated with StoSilent Decor

Seamless acoustic panel system with a rough texture

Areas of application	• In interiors on walls and ceilings • Only of limited suitability for areas subject to mechanical stress • Suitable for damp rooms, however not for splash water zones
Properties	• Rated sound absorption factor α_w of up to 0.55 • Seamless up to 200 m² • Curves and vaultings with bending radii of min. 10 m are possible • Reaction to fire in accordance with EN 13501-1: A2 - s1,d0 • Low system weight (with sub-construction): 10.0 kg/m²
Appearance	• StoSilent Decor M rough surface • Tintable in more than 450 colour shades of the StoColor System (marked with a circle in the colour fan)
Application	• Execution with an all-around open joint at all adjacent building elements. • Complete detail solutions
Approvals	• The relevant European and/or national approvals apply.

System build-up and description

StoSilent Distance A2, StoSilent Board 100, coated with StoSilent Top



1 **Sub-construction:** metal sub-construction in accordance with EN 13964 with vernier hanger

2 **Waterproofing:** self-adhesive special tape for decoupling the sub-construction and carrier board **StoSilent Profile Tape**

3 **Acoustic panel:** sound-absorbing, flow-proof acoustic panel made of expanded glass granulate **StoSilent Board 100** (for walls and ceilings)

4 **Bonding and filling:** joint filler for bonding the board joints and filling the screw heads **StoSilent Fix**

5 **Intermediate coat:** sound-permeable intermediate coat **StoSilent Top Basic**

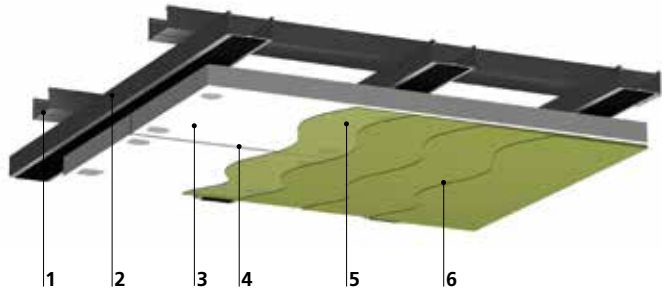
6 **Top coat:** fine, sound-permeable top coat **StoSilent Top Finish Alternatively:** textured, sound-permeable top coat **StoSilent Top Basic**

StoSilent Distance A2, StoSilent Board 100, with StoSilent Top coating

Seamless acoustic panel system with a fine texture

Areas of application	• In interiors on walls and ceilings • Only of limited suitability for areas subject to mechanical stress • Suitable for damp rooms, however not for splash water zones
Properties	• Rated sound absorption factor α_w of up to 0.80 • Seamless up to 200 m² • Reaction to fire in accordance with EN 13501-1: A2-s1,d0 • Low system weight (with sub-construction): 12.2 kg/m²
Appearance	• StoSilent Top Finish fine surface • Tintable in more than 250 colour shades of the StoColor System
Application	• Execution with an all-around open joint at all adjacent building elements. • Complete detail solutions
Approvals	• The relevant European and/or national approvals apply.

StoSilent Distance A2, StoSilent Board 110, coated with StoSilent Decor



1 **Sub-construction:** metal sub-construction in accordance with EN 13964 with vernier hanger

2 **Waterproofing:** self-adhesive special tape for decoupling the sub-construction and carrier board **StoSilent Profile Tape**

3 **Acoustic panel:** sound-absorbing, flow-proof acoustic panel made of expanded glass granulate **StoSilent Board 110**

4 **Bonding:** joint filler for bonding the board joints **StoSilent Fix**

5 **Filling:** filler for board joints and screw heads **StoSilent Plan**

6 **Top coat:** sound-permeable top coat **StoSilent Decor M**

StoSilent Distance A2, StoSilent Board 110, coated with StoSilent Decor

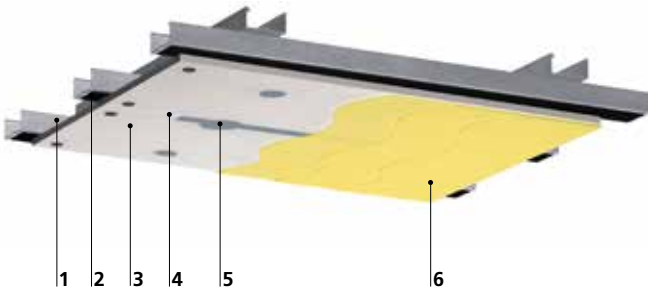
Seamless acoustic panel system with a rough texture

Areas of application	• In interiors on walls and ceilings • Only of limited suitability for areas subject to mechanical stress • Suitable for damp rooms, however not for splash water zones
Properties	• Rated sound absorption factor α_w of up to 0.80 • Seamless up to 200 m² • Reaction to fire in accordance with EN 13501-1: A2-s1,d0 • Low system weight (with sub-construction): 10.0 kg/m²
Appearance	• StoSilent Decor M rough surface • Tintable in more than 450 colour shades of the StoColor System (marked with a circle in the colour fan)
Application	• Execution with an all-around open joint at all adjacent building elements. • Complete detail solutions
Approvals	• The relevant European and/or national approvals apply.

The detailed technical specifications and information on the products contained in the Technical Data Sheets and approvals must be observed.

System build-up and description

StoSilent Distance Flex, StoSilent Board 310, with StoSilent Decor coating



1 **Sub-construction:** metal sub-construction in accordance with EN 13964 with vernier hanger

2 **Waterproofing:** self-adhesive special tape for decoupling the sub-construction and carrier board **StoSilent Profile Tape**

3 **Acoustic panel:** sound-absorbing, flow-proof acoustic panel made of expanded glass granulate **StoSilent Board 310 F** (for increased mechanical resistance, e.g. in wall areas and for bending radii of min. 5 m)

4 **Bonding:** joint filler for bonding the board joints **StoSilent Fix**

5 **Filling:** filler for board joints and screw heads **StoSilent Plan**

6 **Top coat:** sound-permeable top coat **StoSilent Decor M**

StoSilent Distance Flex, StoSilent Board 310 F, coated with StoSilent Decor

Seamless acoustic panel system with a rough texture

Areas of application	• In interiors on walls and ceilings • Only of limited suitability for areas subject to mechanical stress • Suitable for damp rooms, however not for splash water zones
Properties	• Rated sound absorption factor α_w of up to 0.55 • Seamless up to 200 m² • Curves and vaultings with bending radii of min. 5 m are possible • Reaction to fire in accordance with EN 13501-1: B k- s1, d0 • Low system weight (with sub-construction): 10.0 kg/m²
Appearance	• StoSilent Decor M rough surface • Tintable in more than 450 colour shades of the StoColor System (marked with a circle in the colour fan)
Application	• Execution with an all-around open joint at all adjacent building elements. • Complete detail solutions
Approvals	• The relevant European and/or national approvals apply.

General information

Procedure

- The applicator is to take part in a training or introduction before applying the product for the first time.
- Ensure that the acoustic panels are always protected against humidity and weather influences.
- Always store the acoustic panels on a level surface.
- No later than 24 hours before final application, adapt the storage of the panels to suit installation conditions.
- Only install the acoustic panels after the room has reached the suitable temperature and equilibrium humidity.
- Due to the fact that application is carried out manually, unevenness or gaps may become visible in unfavourable light conditions (glancing light).
- To avoid uncontrolled low-pressure areas in the ceiling cavity, seal open connections in neighbouring walls.
- Force-transmitting connections to adjacent building elements are not permitted.
- Always produce acoustic panel systems with an open, all-around joint.
- After installing the acoustic system, treat the surface carefully to prevent the acoustic material from losing its pre-calculated characteristics, and to prevent its aesthetic appeal from being adversely affected. Ensure the following are avoided:
  - Damage resulting from installations on the ceiling, etc.
  - Soiling caused by hand perspiration when installing light fixtures, etc.
  - High levels of dust resulting from grinding down wooden floors, etc.
- When installing acoustic systems, we recommend wearing personal protective equipment such as a fine dust mask, safety goggles, etc.

Construction site requirements

- The lowest permitted application and substrate temperature is 12 °C.
- The maximum relative air humidity and building element moisture level must not exceed 70 %.
- Quick heating or cooling during installation and drying can cause cracks.

Guide values for seamless Sto acoustic panel systems	
Max. surface area	200 m^2
Max. projection length	20 m
Joint width (surface ≤ 100 $m^{2)}$	Open, all-around joint, b = 20 mm*
Joint width (surface > 100 m^2)	Open, all-around joint, b = 25 mm*
Partial area, projection length ≤ 10 m	Expansion joint, b = 15 mm*
Partial surface area, projection length > 10 m	Expansion joint, b = 20 mm*

*in accordance with details.
The share of the open, all-around joint must account for min. 0.8 % of the ceiling surface area, however, it should not fall below 20 mm.

Specifications for ceiling installations	
Loading conditions	**Fixing**
Loads ≤ 2.0 kg point load	Cavity mounting, max. 2 pc./m^2
Loads ≤ 10.0 kg/m^2	Directly convert into the metal sub-construction or distributed load, e.g. by placing a multi-layer board behind it.
Loads > 10.0 kg/m^2	Directly to bare ceiling

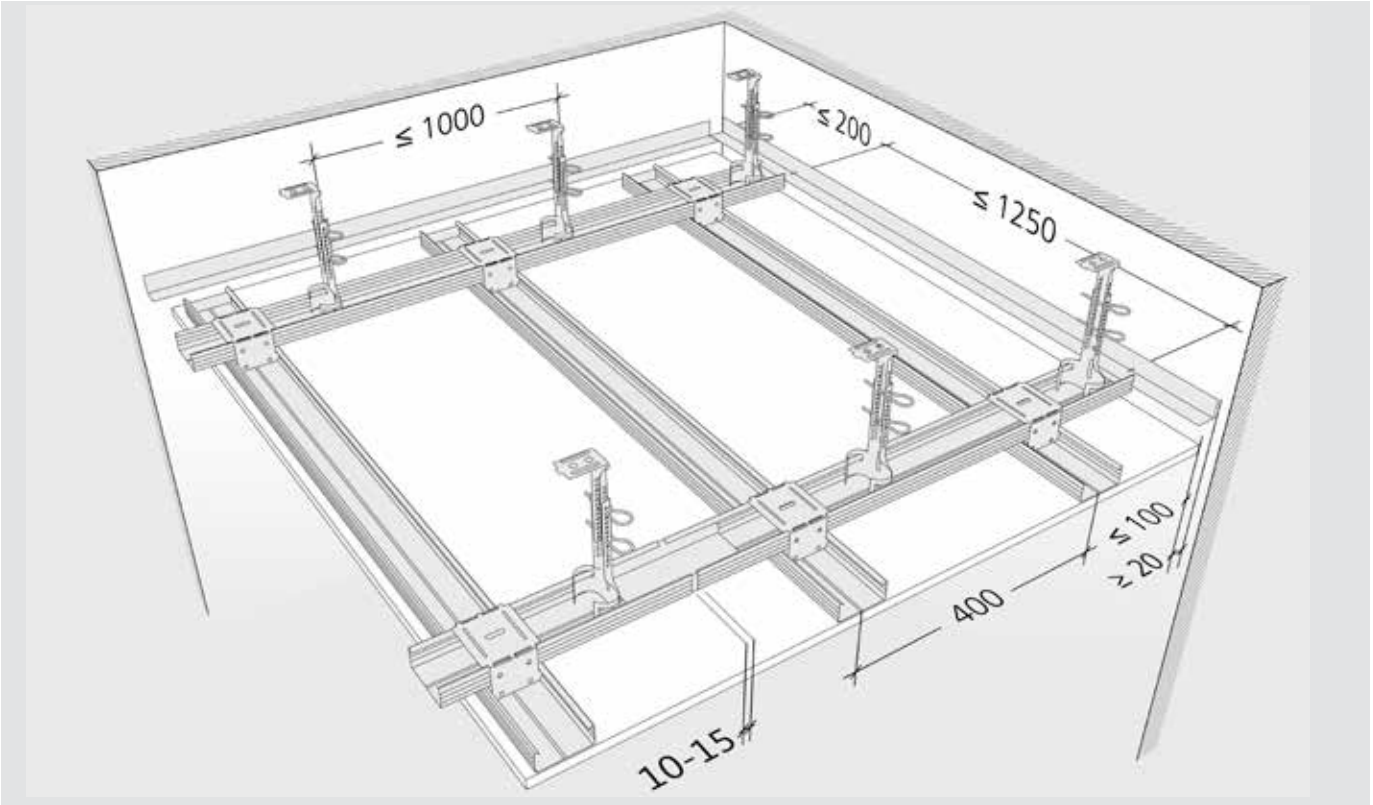
The detailed technical specifications and information on the products contained in the Technical Data Sheets and approvals must be observed.

Sub-construction

Installation notes

- For all seamless acoustic panel systems, always use a metal sub-construction in accordance with EN 13964 with a vernier hanger. Anchor the sub-construction in the ceiling substrate according to the structural requirements of the structural situation on site. A good option are steel nail anchors, to which the sub-construction is mounted using a range of different hanger systems. It is not permissible to use hangers with quick-clamping springs or wire suspensions.
- Install the sub-construction in accordance with the manufacturer's specifications, taking into consideration the ceiling and lighting plan.

Observe the following points:
- Installations: take ceiling installations such as lighting fixtures, ventilation ducts, or service areas into consideration when determining the distances of the sub-construction, to prevent any subsequent construction changes.
- Aligning the StoSilent Board 200/210/300/310/310 F sub-construction: when the sub-construction has been laid completely, the rails of the fine grid point toward the main source of light. For multi-sided glazing, it is better to install the fine grid in an east-west direction. This minimises glancing light shadows that can form when the sun is low. Aligning the StoSilent Board 100/110 sub-construction: when the sub-construction has been laid completely, the rails of the fine grid point CROSSWISE to the main source of light.



Specifications

- Maximum spacing hanger: 1000 mm
- Maximum spacing coarse grid: 1250 mm
- Spacing fine grid: 400 mm
- Maximum distance fine grid/wall: 100 mm
- Maximum distance hanger/wall: 200 mm
- Maximum projection of the acoustic panel from the last srcew connection: 100 mm
- Distance straight connector (CD profiles): 10–15 mm (do not butt-joint)

The detailed technical specifications and information on the products contained in the Technical Data Sheets and approvals must be observed.

Sub-construction

Aligning the sub-construction

Align and check
Align sub-construction and check for evenness. We recommend a laser straightener or a straight edge (minimum length 2 m).

Notes

- The sub-construction must be tension-free.
- Adequately secure sloping ceilings and ceilings with high suspension against lateral shifts using diagonally running hangers.

Check vernier clamps
Fix the vernier hanger with two safety pins to achieve the required compressive strength.

Check spacing of the fine grid
In order to install the boards without cutting them to size, the distance between the fine grid profiles must be 340 mm (400 mm from centre to centre).

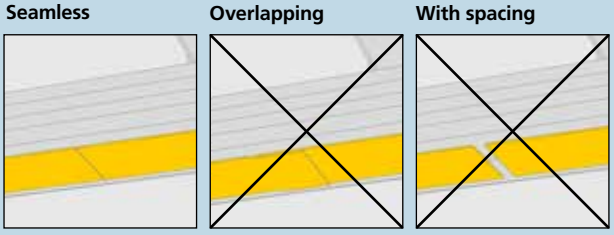
Decoupling

Applying StoSilent Profile Tape
Adhere the self-adhesive StoSilent Profile Tape across the complete length of the fine grid. To do so, remove the protective film piece by piece from the adhesive tape.

Bonding StoSilent Profile Tape
Bond the StoSilent Profile Tape piece by piece without any bubbles.

Bonding of butt joints
Bond the tape seamlessly using double cuts. Avoid creases in the StoSilent Profile Tape and remove them if necessary.

Important note



The detailed technical specifications and information on the products contained in the Technical Data Sheets and approvals must be observed.

Board installation

Installing the 1st board

Notes

- Do not start installing the boards in the corner area. Determine the best possible coverage before starting board installation, in order to avoid or minimize the need to cut boards in the rim zone.
- Use a building screwdriver with bit stop for the screw connection of the acoustic panels. To do this, use phosphate-treated drywall screws with needle point (TN).
  Board thickness: 15 mm, screw: TN 3.5 x 25/TN 3.5 x 35
  Board thickness: 25 mm, screw: TN 3.5 x 35

1

Installing the 1st board
We recommend installing the first board starting from the second fine grid profile from the wall.

2

Aligning the board
Place the board with its front side against the wall and align with its long side parallel to the fine grid.
Important: the back of the board is marked with an imprint.

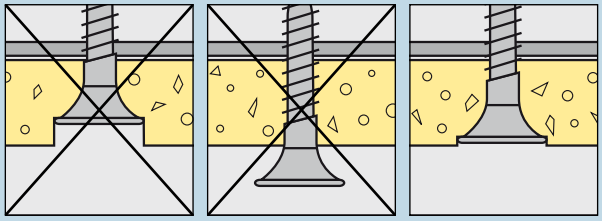
Note: produce the open, all-around joint using a shadow joint saw afterwards.

3

Screw connection of the board
Screw the board with all the fine profiles. Screw spacing is approx. 200 mm. The screws should be approx. 20 mm from the edge of the board. Drive the screws into the board up to a depth of max. 1 mm.

Important note

Turn screws until flush



Bonding the edges and installing the 1st row

1

Applying the adhesive
Prepare StoSilent Fix to application consistency and apply it full-surface to the edges to be butt-jointed using a spatula. Apply the adhesive in the form of a bead. Important: the adhesive edges must be dust-free. Apply sufficient material so that the adhesive is applied to the entire surface of the edges.

Notes

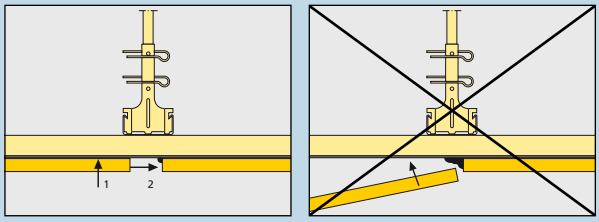
- Do not use hardened StoSilent Fix! StoSilent Fix that has already hardened cannot be made re-workable even if diluted or stirred.
- It is also possible to apply the adhesive using a refillable cartridge.

2

Installing the 2nd board
Press the board onto the fine grid, then push it towards the already installed board. Important: to ensure full-surface bonding of edges, StoSilent Fix must emerge from the upper and the bottom side across the entire joint length.

Important note

Board installation



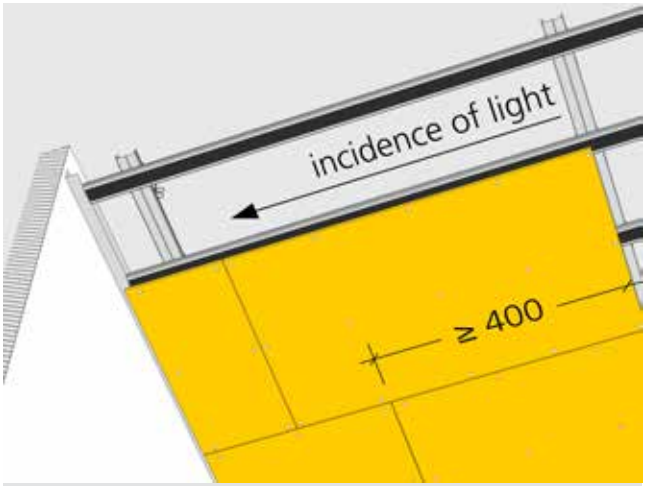
3

Screw connection of the board
Screw the second board exactly like the first. Bond/fix all other boards in the same way up to the wall.

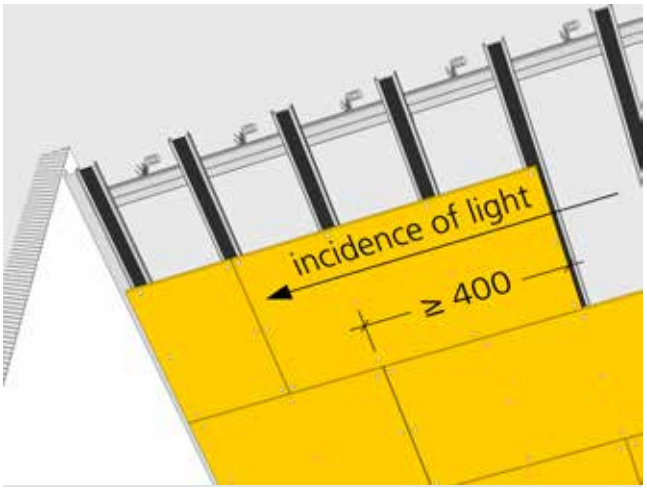
Continuing the boarding

In order to avoid cross joints, install the boards with offset transverse joints in a bond. Adhere to an offset of min. 400 mm.

StoSilent Board 200/210/300/310/310 F



StoSilent Board 100/110



Important note

Use StoSilent Fix or StoColor Opticryl Matt to waterproof or re-coat all cut edges (exposed expanded glass) that have been created subsequently or on site. Then bond with StoSilent Fix. We recommend wet-in-wet technique to do this.

Bonding the edges
When installing the remaining boarding, always apply StoSilent Fix to the adhesive edges.

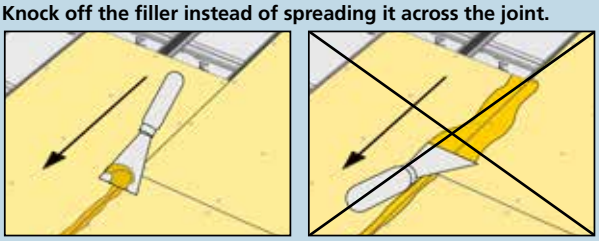
Board installation
Always start with pressing the boards onto the fine grid and then move them towards the pre-installed boards. Then screw onto all fine grid profiles.

Installing the boards in the wall area
Measure the board and cut it to size in such way that the cut edges face the wall. Then install the board.
Important: waterproof all cut edges with StoSilent Fix or StoColor Opticryl Matt.

Knocking off adhesive
Cleanly knock off the emerged StoSilent Fix after approx. 20 to 30 minutes.

Important note

Knock off the filler instead of spreading it across the joint.



The detailed technical specifications and information on the products contained in the Technical Data Sheets and approvals must be observed.

Shadow joint

Important note

Produce all acoustic panel systems with an open, all-around joint! The open cross section of the joint must be min. 0.8 % of the total ceiling surface area, but should not be less than 20 mm. For acoustic panel systems with a surface area of more than 100 m², we recommend a joint width of 25 mm.
If it is not possible to achieve the open joint in the required width, additional apertures must be made in the ceiling until the specified open cross section of 0.8 % of total ceiling surface area has been achieved. These openings can, for example, be covered by unused speaker covers, ventilation covers or similar items. We recommend using special dry walling profiles when carrying out the shadow joints of round or bent ceiling or wall constructions or for connections to columns.

Sawing the shadow joint
Adjust the machine to the desired joint width and saw the shadow joint.

Cutting out the shadow joint in the corner area
Position the template and cut out the shadow joint with a cutting knife.

Product tip

StoSilent Profile AP
Non-visible edge protection profile for a clean completion of the sound transparent coating on the edges. Depending on the board thickness, the following heights are available: 16.5 mm (for 15 mm boards) and 26.5 mm (for 25 mm boards).

Important note:
When coating with StoSilent Top, use the StoSilent Profile AP to achieve a visually perfect top coat in the perimeter area. Alternatively, other profiles with a smoothing edge of approx. 1 mm in height can be used.

Installing Sto Silent Profile AP
Using a suitable installation adhesive, apply adhesive fixing dabs to the inside of the stop profile. Alternatively, apply the installation adhesive to the front sides of the acoustic panels.

Screw the StoSilent Profile AP into the joint
Screw the stop profile into the shadow joint and apply pressure. Beforehand, apply StoSilent Fix or StoColor Opticryl Matt to the front side of the board.

Fixing the StoSilent Profile AP
Fix the stop profile e.g. with a wedge-shaped board strip until the installation adhesive has dried.

Remove excess adhesive
Remove excess adhesive with a spatula.

Filling and grinding

Before carrying out the filling and grinding work, leave the Sto acoustic panel systems to dry for min. 24 hours.

Note

We recommend wearing safety goggles and a P1 dust mask when grinding and cleaning.

1

Filling the screw heads
If coating with StoSilent Decor M, fill the screw heads with the StoSilent Plan filler. If coating with StoSilent Top, use the StoSilent Fix joint filler.

2

Filling the joints (only if coating with StoSilent Decor M)
Thinly fill the joints with StoSilent Plan (max. 30 mm wide) to guarantee the best possible acoustic effectiveness.

3

Grinding (only if coating with StoSilent Decor M)
After approx. 2 hours' drying time, grind the filled spots until they are even using an abrasive grid or an emery board.

4

Cleaning (only if coating with StoSilent Decor M)
Suction clean or sweep off sanding dust and loose fleece parts.

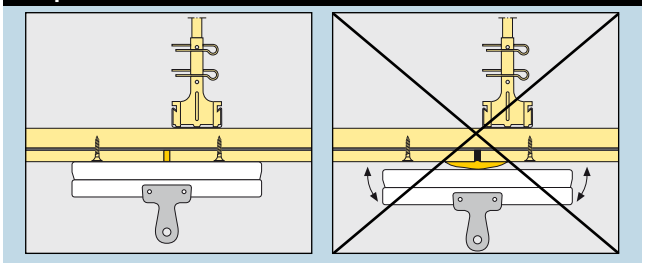
5

Creating evenness (only if coating with StoSilent Decor M)
Repeat the steps until the surface is smooth (normally twice).

6

Checking the evenness
Using a smoother (60 cm), check whether the ceiling is level at the board joints. Guide the smoother so that it does not wobble over the board joints or show any cavities. We recommend using a building spotlight to create glancing light in direction of the planned main source of light (e.g. indirect lighting, window).

Important note



The detailed technical specifications and information on the products contained in the Technical Data Sheets and approvals must be observed.

StoSilent Top top coat

1st layer - StoSilent Top Basic

Notes

- We recommend creating a min. 5 m² test surface of StoSilent Top Basic and StoSilent Top Finish.
- There need to be enough employees available to apply StoSilent Top Basic and StoSilent Top Finish (1 employee per 1.0–1.5 m of work width; increase the manpower accordingly in case of e.g. difficult connection details).
- An areal scaffolding is required for the coating.
- When coating walls in rooms that are subject to a strong draught, drying times might differ due to the different surface temperatures. Therefore pay particular attention when carrying out the levelling step.
- Please observe the checklist on page 20 f.

Drying times and amounts of material

	Amount of material	Subsequent drying time
StoSilent Top Basic	2.5 kg/m²	Natural: 36 hours; white, tinted: up to 48 hours
StoSilent Top Finish	3.0 kg/m²	36 hours

Preparing StoSilent Top Basic
Adjust material to application consistency in accordance with the Technical Data Sheet. Add as little water as possible. For white and tinted StoSilent Top Basic, a smaller quantity of water is required to achieve an optimal application consistency.
Note: in order to avoid waiting times, mix all necessary containers prior to coating.

Applying StoSilent Top Basic
Apply StoSilent Top Basic on to the carrier boards starting from the corner or the edge. The appearance is of secondary importance here. It is much more important to apply a sufficient amount of material for the next step.

Toothing StoSilent Top Basic
Tooth in a criss-cross pattern using a 4 x 4 mm toothed trowel, whereby the 2nd toothing runs parallel to the main incidence of light. Press on the toothed trowel strongly and uniformly at an angle of approx. 30°, ideally until you hear scraping on the board.
Tip: leave approx. 3 cm of material untoothed in the rim zone in order to enable visually perfect smoothing at the stop profile.

Toothing StoSilent Top Basic
Run the second toothing parallel to the main incidence of light.

Tip

In order to ensure as even a layer thickness as possible, always perform toothing in one direction. The application cycle should also be carried out by the same person.

Smoothing StoSilent Top Basic
Applying uniform pressure, smooth the material using a wide smoothing trowel, holding it at an angle of approx. 10°. In doing so, trowel off as little material as possible. First smooth the areas along the edge, and then work on the entire surface. Deburr the entire area again afterwards.

Note: the StoSilent Profile AP stop profile serves as a smoothing edge for StoSilent Top Basic.

Note

Smooth in no fixed smoothing direction, but so that it results in a visually neat appearance. In order to avoid forming trowelling ridges, slightly bend the tool's corners in one direction. Mark the relevant side if necessary. If there is not enough material on a certain area, take some from the surrounding area where possible. If clusters form, level them slowly while applying more pressure.

Leave it to dry for 36 or 48 hours (see above table), then remove protruding material on the edges using a hard plastic object.

2nd layer: StoSilent Top Finish

Preparing StoSilent Top Finish
In order to achieve optimum application consistency, mix the material with a maximum of 2 % water in accordance with the Technical Data Sheet.

Note: to avoid waiting times, mix all necessary containers prior to coating.

Applying StoSilent Top Finish
After the StoSilent Top Basic surface has dried for min. 36 to 48 hours, apply StoSilent Finish. Apply StoSilent Top Finish onto the StoSilent Top Basic intermediate coat starting from the corner or the edge. The appearance is of secondary importance here. It is much more important to apply a sufficient amount of material for the next step.

Toothing StoSilent Top Finish
Tooth in a criss-cross pattern using a 4 x 4 mm toothed trowel, whereby the 2nd toothing runs parallel to the main incidence of light. Press on the toothed trowel strongly and uniformly at an angle of approx. 30°, ideally until you hear scraping on the intermediate coat.
Tip: leave approx. 3 cm of material untoothed in the rim zone in order to enable visually perfect smoothing.

Toothing StoSilent Top Finish
Run the second toothing parallel to the main incidence of light.

Tip

In order to ensure as even a layer thickness as possible, always perform toothing in one direction. The application cycle should also be carried out by the same person.

Smoothing StoSilent Top Finish
Applying uniform pressure, smooth the material using a wide smoothing trowel, holding it at an angle of approx. 10°. In doing so, trowel off as little material as possible. First smooth the areas along the edge, and then work on the entire surface.

Note

Smooth in no fixed smoothing direction, but so that it results in a visually neat appearance. In order to avoid forming trowelling ridges, slightly bend the tool's corners in one direction. Mark the relevant side if necessary. If there is not enough material on a certain area, take some from the surrounding area where possible. If clusters form, level them slowly while applying more pressure.

Preparing the levelling coat
Moisten the plastic trowel with a sponge. Repeat this step constantly during the levelling step in order to remove any smudges building up on the tool.
Important: we recommend using an already-used but undamaged (roughened) tool for this application cycle.

Levelling
Depending on the ambient room temperature and humidity, level the surface with the prepared plastic trowel after approx. 15–45 minutes (noticeable when the surface becomes matt).

Deburring
Deburr the entire area afterwards.

The detailed technical specifications and information on the products contained in the Technical Data Sheets and approvals must be observed.

StoSilent Decor M top coat

Notes

- Lower the scaffold accordingly in order to achieve an ideal working position for the spray coatings.
- Depending on the colour shade, additional spray layers may be necessary.
- We recommend wearing safety goggles and a P1 dust mask when spraying.
- High humidity and/or low temperatures prolong the drying time.
- Please observe the checklist on page 20 f.

Specifications for machinery equipment

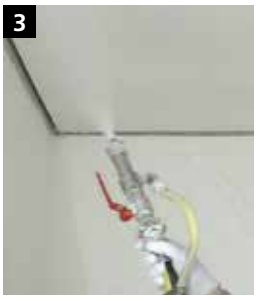
- Screw casing device (e.g. Strobot 203) or peristaltic pump (e.g. Inomat M8)
- Nozzle size: 4–6 mm
- Flow: 0–15 l/min
- Spraying distance: approx. 70–90 cm
- Optimum air quantity: 1.5–2 bar
- Compressor performance: min. 600 l/min

Drying times and amounts of material

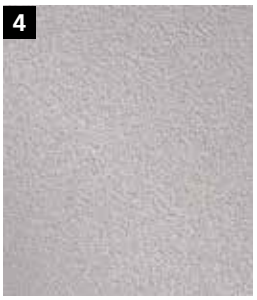
	Amount of material	Subsequent drying time
1st spray application	Approx. 0.7 kg/m²	Min. 5 hours
2nd spray application	Approx. 0.9 kg/m²	Min. 12 hours
3rd spray application	Approx. 1.1 kg/m²	24 hours

Preparing StoSilent Decor M
Stir StoSilent Decor M prior to application (if applying by machine, no additional water is necessary).

Setting up the machine
Set the output. Use a test surface (paper or paper board) to adjust the spray pattern by adapting the air quantity and consistency.



Applying StoSilent Decor M
Spray on StoSilent Decor M in three cycles with circular movements. Alternatively use a hopper gun in accordance with the Technical Data Sheet. Observe the drying times between the spray application cycles.



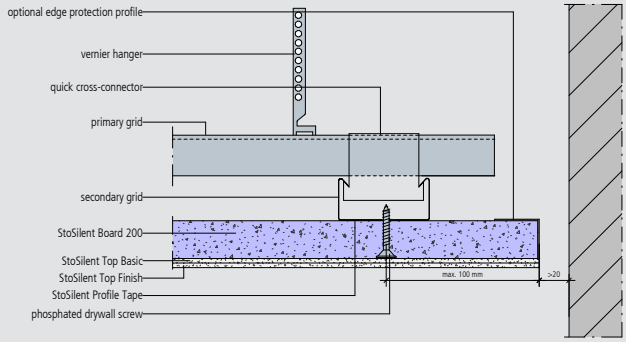
After the last spray application and 24 hours of drying time, the StoSilent Decor M textured surface is finished. The filler and levelling coat underneath is no longer visible. Carefully sweep the ceiling afterwards to remove loose or poorly adhering particles.

Wall junction

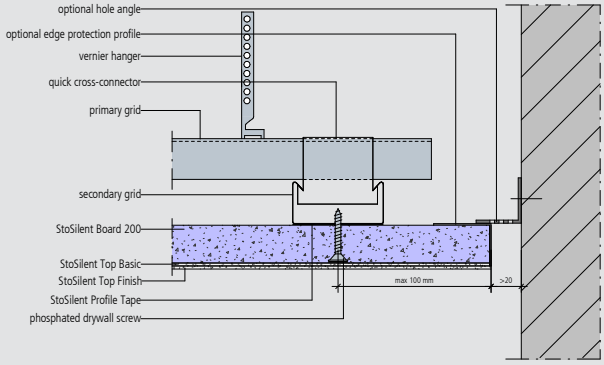
Trimmer

Implementation possibilities

Shadow joint



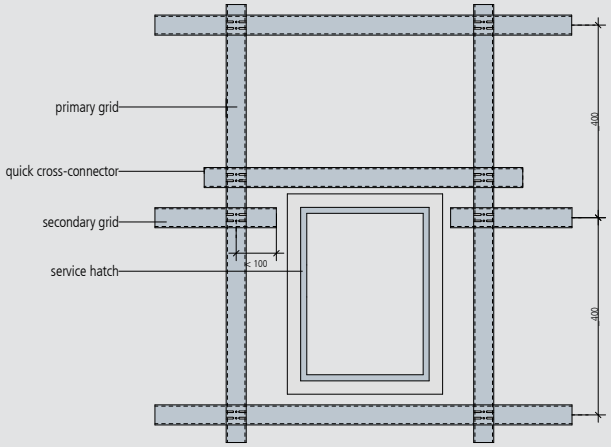
Underlying shadow joint



Note

With light installations in the area of the all-around joint, the ceiling cavity can be illuminated with scattered light. In this case, case the lighting fixture accordingly.

Service hatch with trimmer in the sub-construction



Note

- Depending on the dimensions of the ceiling installations and the additional load, separate the sub-construction from the boarding and add a force-transmitting trimmer.
- Observe the specifications regarding loading conditions (see page 7).
- When separating the coarse grid, secure it using additional hangers.
- Do not cut the coarse grid after board installation as, according to experience, this results in cracks in the ceiling cladding.
- Do not cut the profile with the abrasive cutter as this will result in damage to the corrosion protection.

Note: this drawing is a general, non-binding planning suggestion, which depicts the execution in schematic form only.
The detailed technical specifications and information on the products contained in the Technical Data Sheets and approvals must be observed.

Connection to the column

Take the radius
Mark the column's radius on the acoustic panel.

Transfer the radius
Mark the radius including the desired joint width of the shadow joint on the acoustic panel.

Cut acoustic panel to size
Cut the acoustic panel to size using a keyhole saw.

Board installation
Install the prepared board according to the instructions on page 10. First, use StoSilent Fix or StoColor Opticryl Matt to waterproof or re-coat all cut edges that have been created subsequently or on site.
Important: the pure expanded glass on the board cut-outs must no longer be visible after the waterproofing process.

Preparing the connection profile
Cut the connection profile to size and staple it with rust-free staples for initial fixing.

Apply installation adhesive
Bond the connection profile using an appropriate installation adhesive.

Note

If the radius is known, curves or columns can also be carried out using pre-fabricated column rings or half-shells.

Installations

Create an opening
Cut an opening into the acoustic panel according to the ceiling plan.

Grind and check the opening
Grind the cut edges. Then check whether the installation frame fits, grind again if necessary.

Waterproofing/painting
Use StoSilent Fix or StoColor Opticryl Matt to waterproof or re-coat all cut edges that have been created subsequently or on site. Important: the pure expanded glass on the board cut-outs must no longer be visible after the waterproofing process.

Board installation
Install the prepared board as described on page 10.

Note

- Protect all repairs or wrongly drilled holes in a system-compliant manner: seal all cut edges or reseal the damaged areas on the back side of the flow-proof board lamination.
- Seal small gaps in the flow-proof lamination on the rear side of the board by pressing in the system adhesive. If necessary, remove bits of expanded glass granulate to improve access to the gaps, seal each gap with adhesive, then fill and smooth the board defects with StoSilent Fix.
- Repair larger gaps using an appropriate fitting piece. For this, seal every cut edge (including those on the fitting piece) using StoSilent Fix or StoColor Opticryl Matt.

The detailed technical specifications and information on the products contained in the Technical Data Sheets and approvals must be observed.

Checklist

Notes, tools and auxiliary materials, building site facilities

This checklist is a general aid for applicators when performing a self-check on a building evaluation with Sto products, during calculation and when carrying out application steps. The following notes make no claim to being exhaustive. The particular project-specific conditions must be taken into consideration and it is the responsibility of the user to make their own checks.

Tools/auxiliary materials for the board installation
- Chalk line
- SDS impact drill
- Hammer
- Profile cutter
- Keyhole saw, handsaw, circular hole saw
- Cartridge
- Cutting knife
- Spatula, narrow
- Building screwdriver with bit stop
- Emery board
- Circular hand saw with guide rail
- Shadow joint saw
- Rotary laser, spirit level, straight edge (min. 2 m)
- Dust protection mask, safety goggles, overall
- Broom
- Construction or industrial vacuum
- Building spotlight

Tools/auxiliary materials for coating with StoSilent Top
- Compressor (min. 350 l permanent air capacity)
- Duo stirrer
- Smoothing trowel, toothed, 4 mm (rust-free; per employee)
- Smoothing trowel, plastic (thickness: 1 mm; per employee)
- Wide smoothing trowel, 60 cm (rust-free)
- Special smoothing trowel (rust-free)
- Measuring beaker
- Building spotlight
- Sponge

Tools/aids for coating with StoSilent Decor M
- Compressor (min. 350 l permanent air capacity)
- Duo stirrer
- Hopper gun with 4/6 mm nozzles
- Rotor and stator pump with Vario drive and 4 or 6 mm spray gun
- Measuring beaker
- Building spotlight

Building site facilities
- Areal scaffolding (compulsory for coating with StoSilent Top)
- Sufficient manpower (compulsory for coating with StoSilent Top; guiding value: length of the longest side of the ceiling divided by 2 = number of employees on the areal scaffolding)
- Dehumidifiers (optional)
- Building spotlight
- Mobile scaffold
- Board lift
- Masking material
- Create test surface (compulsory for StoSilent Top coating)

Planning documents, general checklist

Planning documents
- Ceiling plan
- Lighting plan
- Climate plan
- Approximate price calculations
- Installation instructions/application guidelines for Sto products

Checklist for the sub-construction
- Is the substrate load-bearing?
- Has approved fixing (dowels) been used and adapted to the substrate?
- Has a compression-proof metal suspension been created?
- Is the fine grid directed towards the main source of light (or for StoSilent Board 100/110 away from the main source of light)?
- Has the sub-construction been adapted to the subsequent acoustic carrier board (distance, alignment)?
- Have the rail joints with profile connectors been done in a way that they "float"?
- Have the rail joints been installed in an offset pattern?
- Have the carrier rails definitely not been cut while making holes for the lighting fixtures? If they have, has a force-transmitting trimmer been installed?
- Is the perimeter area freely moveable (no screw connections between the sub-construction and adjacent areas, e.g. with brackets)?
- Has the StoSilent Profile Tape been adhered to the fine grid?

Checklist for the board installation
- Have the boards been stored in dry and tempered conditions on the construction site?
- Have the boards been installed in an offset pattern? (Cross joints are not permissible.)
- Has board installation been carried out so that the longitudinal joints are parallel to the main direction of light, and has the installation been done starting from the centre of the room?
- Have the joints been completely bonded in full height and all-around with StoSilent Fix?
- Has the wall junction been done with an all-around open joint?
- Was only non-staining pigment powder used when marking with the chalk line?
- Has 0.8 % of the ceiling surface area been opened (e.g. open shadow joint)?
- Has the white or galvanised StoSilent Profile AP been used?
- Have all subsequent cuts to the board been sealed with StoSilent Fix or StoColor Opticryl Matt?

Checklist

StoSilent Top checklist

Checklist for filling and grinding
- Only fill the screw holes with StoSilent Fix.
- If boards are of different thicknesses, only put filler on the thinner board after grinding (decreasing according to the difference in board thickness – filling width max. 5 cm).
- Checking the board joint: the smoother or the metal ruler must not wobble over the joint area, and there should be no visible gap between the tool and the board in glancing light.
  These areas have to be filled and/or ground again.
  If screw heads have been affected during grinding, these screws have to be replaced or sunk in further.
  Then fill again.

Checklist for coating with StoSilent Top Basic/Finish
- Are there enough employees to do the coating?
- Are sufficient tools available for each employee?
- Is there an areal scaffolding on site, and has it been adjusted to the correct working height?
- Has StoSilent Fix been knocked off and not spread around?
- Has the material been diluted and stirred according to the instructions?
- Have the required drying times been adhered to?
  - StoSilent Top Basic: natural 36 hours; white and tinted up to 48 hours
  - StoSilent Top Finish: 36 hours
- Is the application and substrate temperature ≥ 12 °C?
- Has a humidity and building element moisture level of max. 70 % been adhered to?
- Do the applied quantities correspond to the specifications?
  1st layer with StoSilent Top Basic approx. 2.5 kg/m²
  2nd layer with StoSilent Top Finish approx. 3.0 kg/m²
  Has the material been toothed in a criss-cross pattern? Does the second application cycle run in the direction of the main source of light?
- Tip: collect toothed off material separately (only StoSilent Top Basic) and distribute in the pails.

StoSilent Decor M checklist

Checklist for filling and grinding
- When grinding boards of the same thickness, there should be no filler residue visible on the nonwoven.
  Only fill the upper joint seam and the screw holes with StoSilent Plan.
- If boards are of different thicknesses, only put filler on the thinner board after grinding (decreasing according to the difference in board thickness – filling width max. 5 cm).
- Checking the board joint: the smoother or the metal ruler must not wobble over the joint area, and there should be no visible gap between the tool and the board in glancing light.
  These areas have to be filled and/or ground again.
  If screw heads have been affected during grinding, these screws have to be replaced or sunk in further.
  Then fill again.

Checklist for coating with StoSilent Decor M
- Has the material been stirred without adding water?
- Has the correct nozzle been used?
  - Hopper gun: 4 or 6 mm
  - Screw casing device: 4 or 6 mm
  - Inomat: 4 or 6 mm
- Have the air quantity and the material feed amount been matched in such way that the binder did not run when test-sprinkling it onto a box?
- Has the correct sprinkling distance been observed?
  50–70 cm for a hopper gun
  70–90 cm for a screw casing device or Inomat
  If not, lowering the scaffolding may be necessary to achieve the required distance.
- Does the sprinkling texture correspond to the sample (coarser sprinkling textures may increase the consumption values)?
  If rotor and stator pumps with Vario drive by other manufacturers were being used, check if the screw casing had a diminished flow rate (so that the available quantity of compressed air could sufficiently disperse the conveyed material).
  Output 0–15 l/min.
- Has the spraying been done in circular movements (not pointing at one spot or sprinkling in strips)?
- Have the required drying times been adhered to?
  - 1st spray application: min. 5 hours
  - 2nd spray application: min. 12 hours
  - 3rd spray application: min. 24 hours
- Is the application and substrate temperature ≥ 12 °C?
  Has a humidity and building element moisture level of max. 70 % been adhered to?
- Do the applied quantities correspond to the specifications?
  - 1st spray layer approx. 0.7 kg/m²
  - 2nd spray layer approx. 0.9 kg/m²
  - 3rd spray layer approx. 1.1 kg/m²
- For intense colour shades, expect longer drying times as otherwise there is a risk of clouding. Additional spray application layers may be necessary depending on the colour shade.

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