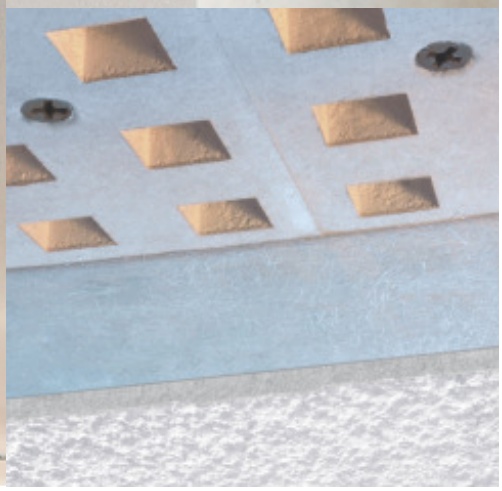
Acoustic Plaster Ceilings

VoglToptec® System
Technical Information

VOGL DECKENSYSTEME

VoglToptec®



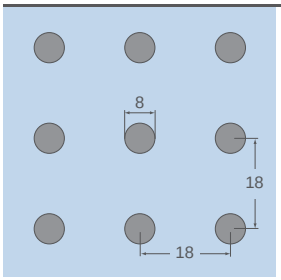
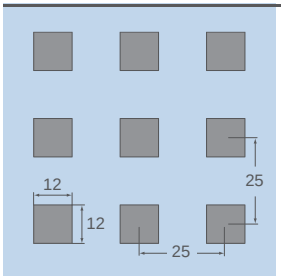
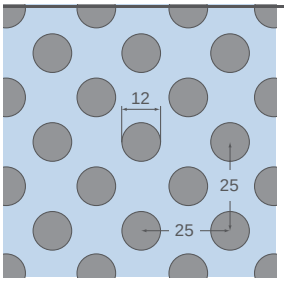
Attractive in Appearance,

Highly Active in Acoustics

The acoustic plaster system
with guaranteed results

Acoustic Plaster Ceilings

VoglToptec® System
Perforation Patterns and Sound Absorption Values

Article	Article No.	Description	Details	m² / pallet Boards / pallet
	7221100010	**Acoustic plaster system panel Reflexio (smooth)** Black acoustic fleece on reverse Rated sound absorption: α_W **= 0.10** Sound absorption class: Not classified Use: To create reflective areas in the ceiling's surface	**1206 x 2006 x 12.5 mm** Perforated area: 0.0% Weight: 10.0 kg/m² Long edge: SK Short edge: SK Delivery includes Vogl screw kit	60.5 m² / pallet 25 boards / pallet
	7221102110	**Acoustic plaster system panel 8/18R** Black acoustic fleece on reverse Rated sound absorption: α_W **= 0.70** sound absorption class **C** Backed with 30 mm glass wool: α_W **= 0.75** sound absorption class **C**	**1194 x 2004 x 12.5 mm** Perforated area: 15.4% Weight: 8.5 kg/m² Long edge: SK Short edge: SK Delivery includes Vogl screw kit	59.8 m² / pallet 25 boards / pallet
	7221109110	**Acoustic plaster system panel 12/25Q** Black acoustic fleece on reverse Rated sound absorption: α_W **= 0.75** sound absorption class **C** Backed with 30 mm glass wool: α_W **= 0.90** sound absorption class **A**	**1206 x 2006 x 12.5 mm** Perforated area: 22.9% Weight: 7.7 kg/m² Long edge: SK Short edge: SK Delivery includes Vogl screw kit	60.5 m² / pallet 25 boards / pallet
	7231113110	**Ultracoustic panel 12/25R DLV** Black acoustic fleece on reverse Rated sound absorption: α_W **= 0.80** sound absorption class **B** Backed with 30 mm glass wool: α_W **= 0.95** sound absorption class **A**	**1232.5 x 1950 x 12.5 mm** Perforated area: 35.3% Weight: 6.5 kg/m² Long edge: SK Short edge: SK Delivery includes Vogl screw kit	60.0 m² / pallet 25 boards / pallet

VoglToptec® Ultrakustik Panel

All panels are supplied detailed installation instructions for board perimeter and intermediate screw fixings and stop bars. Perfect smoothness and excellent stability even with very highly perforated areas of up to 35.3%.

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Acoustic Plaster Ceilings

VoglToptec® System
System Components

Article	Article No.	Description	Contents	Packing unit Packing units / pallet
	**90501300**	**Vogl Supergrund LF 20l** Universal base coat, absorbency regulating, free from solvents and softening agents, low-emission, free from active fogging substances	1 canister = 20 litres	**1 PU = 1 canister** 24 canisters/pallet
	**90605000**	**VoglToptec® plaster base fleece** Special glass fibre fleece as plaster base for coating with acoustic plaster, not flammable, A2, crack-bridging properties, moisture-resistant, dimensionally stable, white colour	Roll width: = 1.145 mm Roll length: = 100 m	**1 PU = 1 roll** 15 rolls / pallet
	**90604000**	**VoglToptec® Special Adhesive** Ready-to-use, non-toxic dispersion adhesive to bond the plaster base fleece to perforated ceiling panels, free from solvents and softening agents, low-emission, free from active fogging substances, ready-mixed product	1 bucket = 16 kg	**1 PU = 1 bucket** 24 buckets / pallet
	**90602000**	**VoglToptec® Akustik Nano SF** Decorative, organically bound, open-pored acoustic machine-applied plaster, very fine texture, particle size up to 0.5 mm, dull matt, high degree of whiteness, ready-mixed product	1 bucket = 18 kg	**1 PU = 1 bucket** 24 buckets / pallet
	**90602100**	**VoglToptec® Akustik Color Nano SF** Decorative, organically bound, open-pored acoustic machine-applied plaster, very fine texture, particle size up to 0.5 mm, ready-mixed product, please state color selection (RAL etc.) when ordering	1 bucket = 18 kg	**1 PU = 1 bucket** 24 buckets / pallet
	**90603000**	**VoglToptec® Akustik Mineral SF** Decorative, minerally bound, open-pored acoustic machine-applied plaster, very fine texture, must be mixed with water on-site	1 bag = 10 kg	**1 PU = 1 bag** 40 bags / pallet

In-built quality assured!

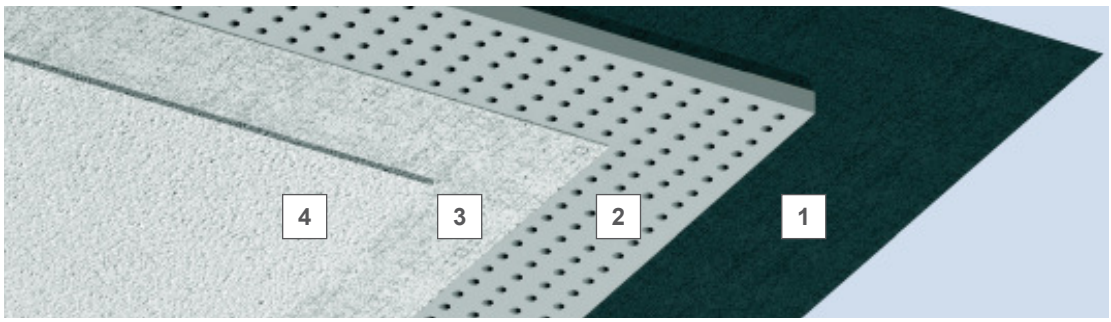
Our perfectly matched components are fully inspected to guarantee an unparalleled reliability on site and the performance of our acoustic plaster ceilings.

1 Acoustic fleece **Factory-supplied**

2 VoglToptec® Acoustic plaster system panel

3 Plaster base fleece **Installed on-site**

4 Acoustic plaster **Installed on-site**



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Acoustic Plaster Ceilings

CD/CD Framework
System Structure

The primary profiles are hung from the structural soffit with suspended brackets using fixing materials approved by the relevant building authorities. The grid centres and number of suspended brackets, as well as the fixing device, are subject to site requirements and EN 13964/DIN 18181. The CG 60/27 secondary profiles are attached to the primary profiles CD 60/27 using cross connectors.

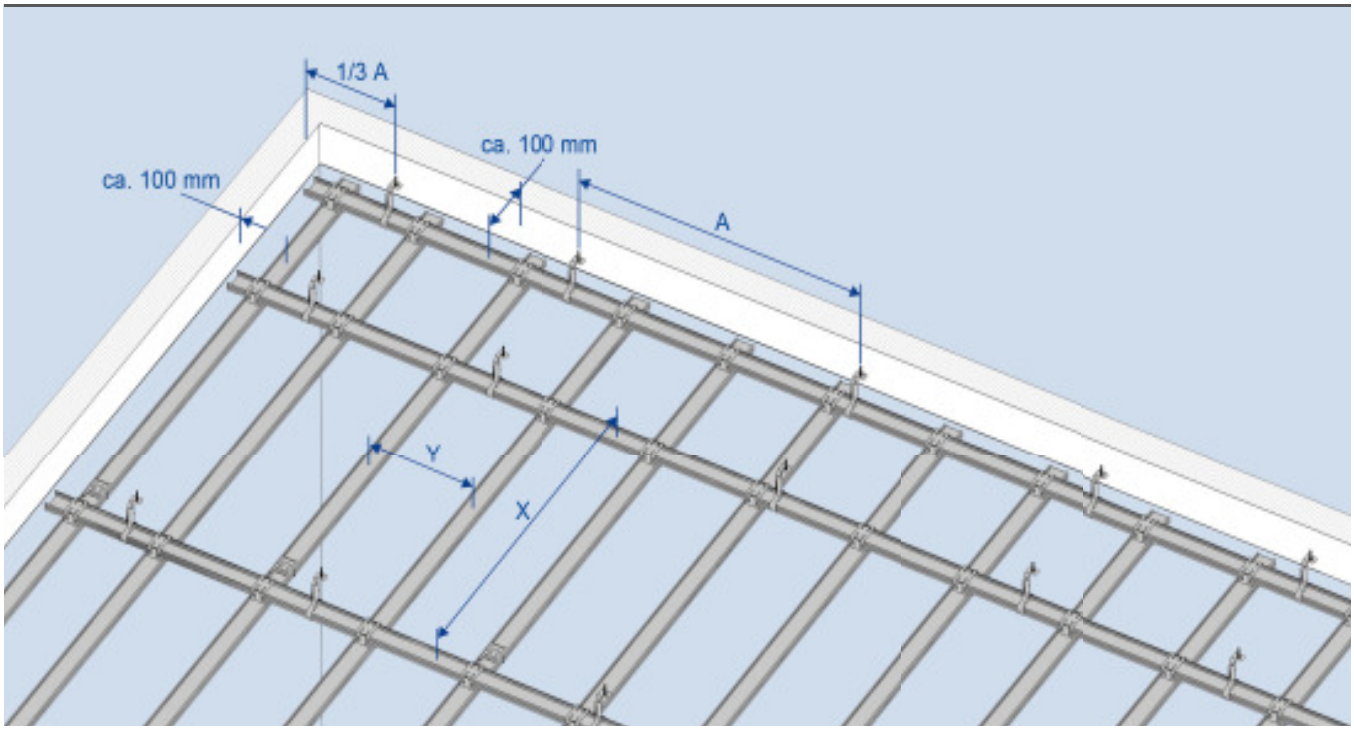
CD 60/27 is extended using straight connectors. For primary grid profiles always ensure that the joint is close to a suspended bracket (max. 100 mm). For secondary grid profiles joints are generally offset from each other.

The plasterboards should be installed in accordance with EN 13964/DIN 18181 and the manufacturer's guidelines.

Additional items such as lighting, ventilation, sprinkler systems etc. must be independently supported.

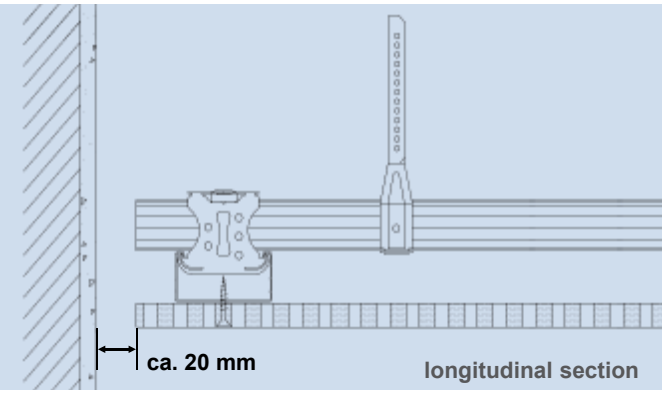
Any changes in the grid resulting from additional ceiling mounted items must be considered.

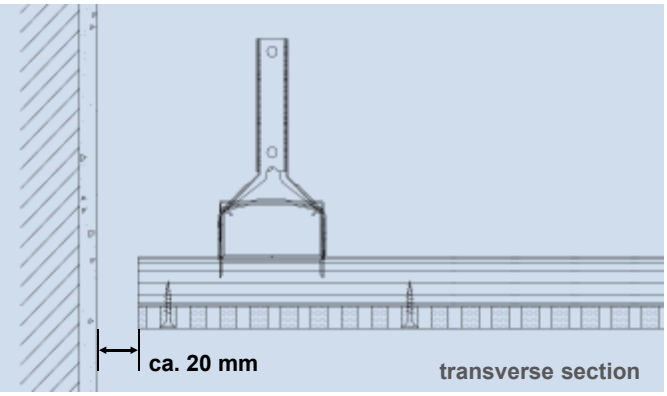
Construction Specification		**Acoustic Plaster Ceiling**						
Panel thickness	**mm**	**12.5**						
Distributed load	**kN/m²**	**≤ 0.15**					**≤ 0.30**	
Centre distance of suspended bracket A	mm	1150	1050	1000	950	900	900	750
Centre distance of primary grid X	mm	600	800	900	1000	1100	600	1000
Centre distance of secondary grid Y								
VoglToptec® Acoustic plaster system panel 8/18R, 12/25Q, Reflexio (smooth)	mm	334						
VoglToptec® Ultracoustic panel 12/25R DLV	mm	325						



Acoustic Plaster Ceilings

CD/CD Framework
System Structure

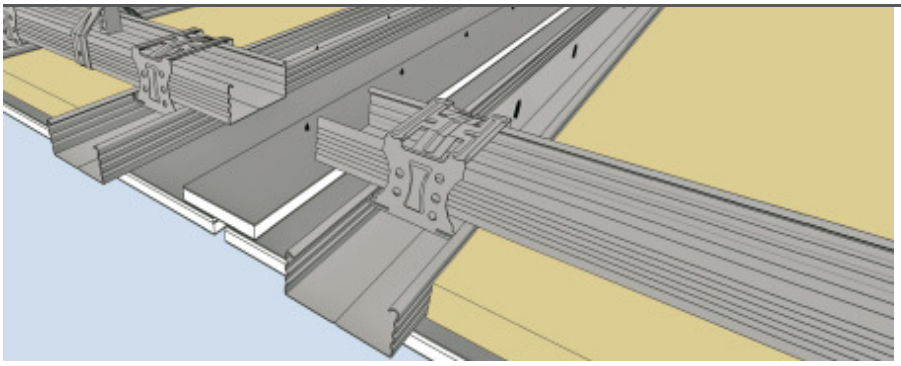




Wall Connection:

To avoid different pressure ratios / temperatures between the ceiling void and useable space, we recommend ventilating the ceiling. To do this, we advise you to fit the wall connection with an open shadow gap (approx. 20 mm) in the VoglToptec® system.

Please contact us if you require additional details or advice concerning the VoglToptec® system.



Expansion Joints:

To reduce the risk of cracking expansion joints should be installed every 10 linear metres / 100 m² of ceiling area.

The framework must be completely separated (see diagram) and the additional board strips above the joint must only be fixed to one side.

Material required per m² based on a ceiling of 100 m² (10 m x 10 m, with no allowance for wastage)

Metal framework, suspended bracket centres 1000 mm, primary grid centres 900 mm, secondary gird centres 333 mm			
Article No.	**Article Description**	**Unit**	**Quantity**
	Fixtures Safety nails, DN 6 x 35	Piece	1.3
	Suspended brackets		
2016X000	Direct suspended bracket 50/120/200	Piece	1.3
50809000	Tapping screw LN 3.5 x 9.5	Piece	2.6
	or		
20128 / 20151	Vernier hanger / Vernier base	Piece	1.3
25501000	Vernier safety bolt	Piece	1.3
25XXX000	Vernier top, 200-2400 mm	Piece	1.3
	Profiles and Connectors		
100XX000	CD profile 60/27/0.6 rK, L=XXX mm	m	4.1
20159000	Connector, straight, CD 60/27	Piece	0.8
20135000	Cross connectors, CD 60/27	Piece	3.3
52130000	Perforated panel screw SN 3.5 x 30	Piece	22

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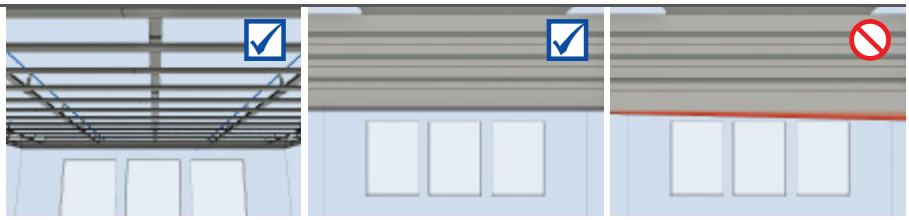
VoglToptec® – Ceiling Panel Installation

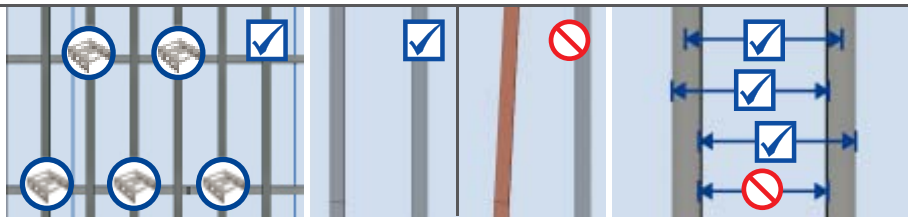
Check that the ceiling grid is rigid and level (using a straight edge)



Then check the centres of the ceiling grid CD sections and adjust as necessary

Always fit straight connectors offset (see figure)

Centre distances must be measured accurately



By viewing from the entrance to the area choose the panel arrangement withshort edge parallel to the windows (main light direction)

Exception: Ultrakustik panels with default screw bars

Locate the centre of the room to position the first ceiling panel and take into account the resulting ceiling perimeter to wall connections

We recommend the following accessories for installation:
Perforated panel screw including screw bit

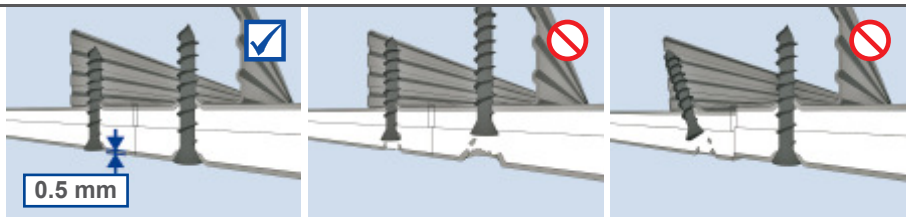
Correct handling of ceiling panels:

- Always take into account the building's loading capacity when storing ceiling panels
- Do not store ceiling panels upright. Always store flat on panel pallets
- Always carry ceiling panels with short edges upright
- Protect ceiling panels from damp, relative humidity 40-80%
- Avoid major temperature fluctuations
- Do not expose the stored ceiling panels to direct sunlight

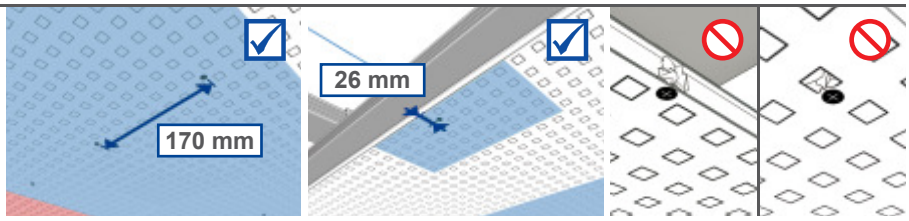
Locate the panel in the correct position on the grid using a panel lifter if you are installing the panels alone. Alternatively, position it with the help of another person

Perforation Pattern	Centre Distance
Acoustic plaster system panel 8/18R, 12/25Q, Reflexio	334 mm
Ultrakustik panel 12/25R DLV	325 mm

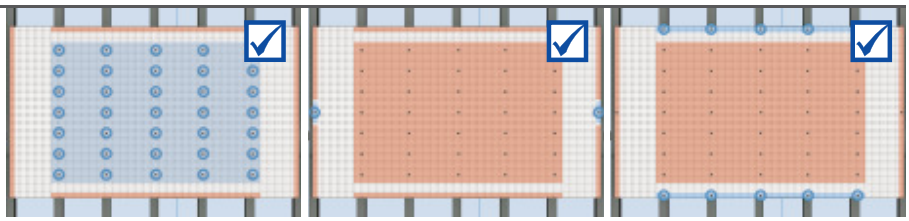
Screw the panel into place ensuring that the screws are at right angles to the panel. The countersunk head must be screwed in up to 0.5 mm below the board's face



Screw centres should be a maximum 170 mm apart. The maximum distance between screws and the external edge of the panel should be 26 mm. Avoid damaging acoustic plaster system panels with countersunk heads



Screw the ceiling panel to the grid in the centre of the panel first, then lower the panel lifter and fix a screw into the middle of each of the short sides at the edge, then screw the long sides



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Acoustic Plaster Ceilings

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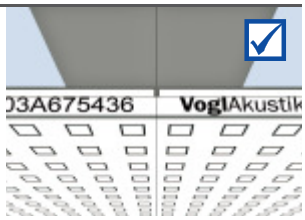
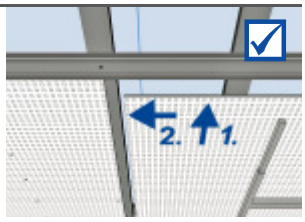
VoglToptec® – Ceiling Panel Installation

Take note of panel labelling (stamp) and mount in the direction of reading (all stamps should point in the same direction)



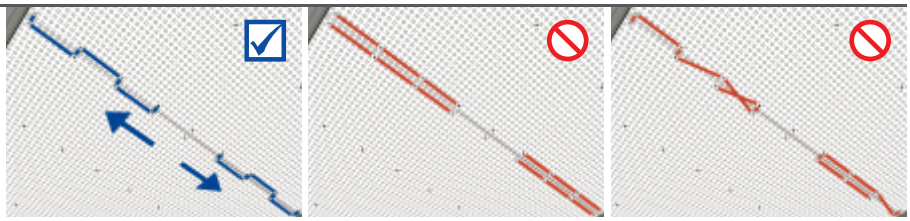
Use a CD profile or straight edge as an end stop. Position the next panel beside the first by sliding it along the CD profile or straight edge and fix it in place



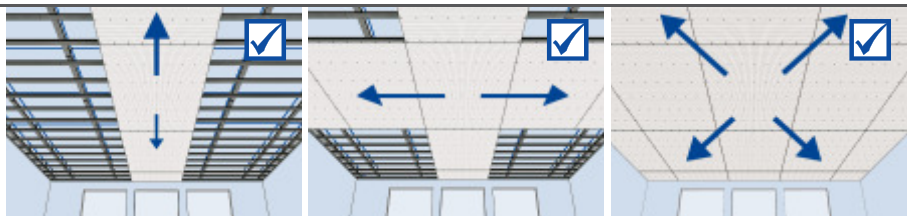
General site conditions / Manufacturer's Instructions

- Take into account the building structure's expansion joints
- Plan to include expansion joints after every 10 m or every 100 m²
- Do not allow screw heads to go through the plasterboard. Screw heads should be slightly below the board surface
- The working temperature should be at least +10°C and the building site temperature should not be below +5°C
- Installed ceiling surfaces must not be connected to the perimeter walls
- Install insulation (mineral wool layers) directly on to the ceiling panels
- Carry out any additional work on the ceiling (inspection openings, light recesses, etc.) immediately after installing the ceiling panels

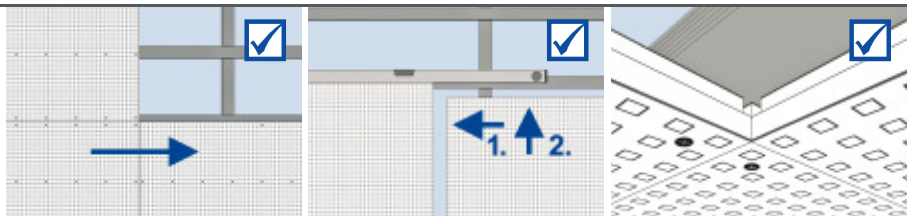
Fix the screws in the panel joint area using alternating pairs across the panels (the "zig-zag" principle), starting on the left or right next to the locating screw which has already been fixed. This will create flush joint areas



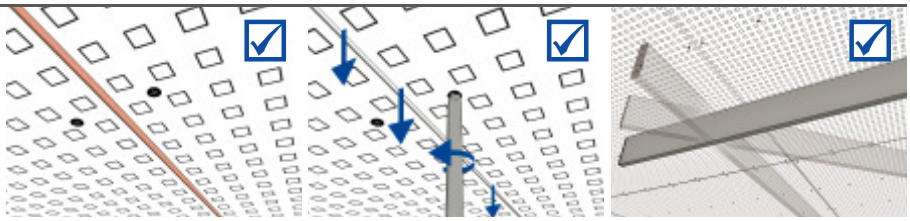
The ceiling panels are first installed lengthways, then crossways, resulting in a cross arrangement on the ceiling. The remaining areas are then boarded in the same manner, working from the centre of the room outwards



Lay the remaining ceiling panels edge-to-edge, always checking that the joints are level. Do not stagger the joints

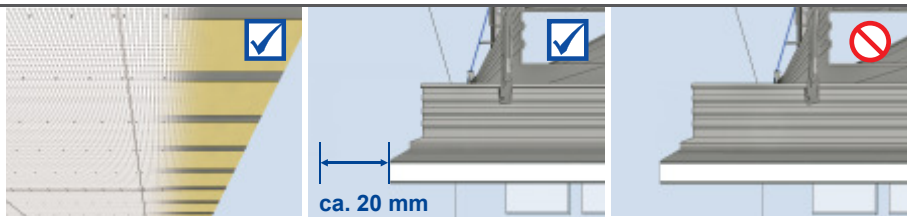


After all the panels have been installed, recheck that all joints are level and adjust, if necessary, using a screwdriver. Then check with a straight edge



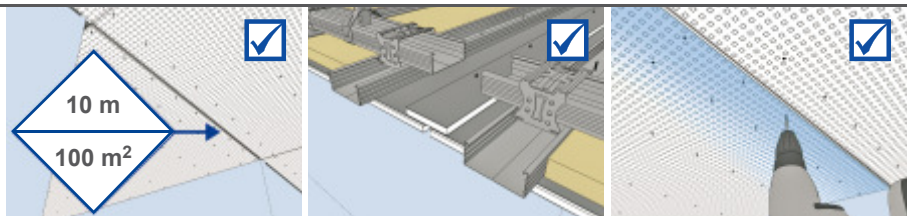
Insulation should be laid directly onto the ceiling panels in the void

We recommend fitting an open shadow gap at the wall connection



An expansion joint of 5-10 mm should be provided every 10 running metres / 100 m²

The additional board strips above the joint must only be fixed on one side



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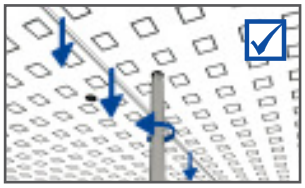
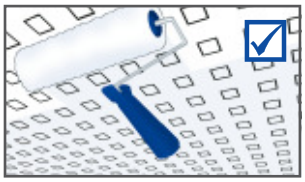
VoglToptec® – Final Coating

Check the panel joint areas and screw heads and adjust height offsets using a screwdriver if necessary

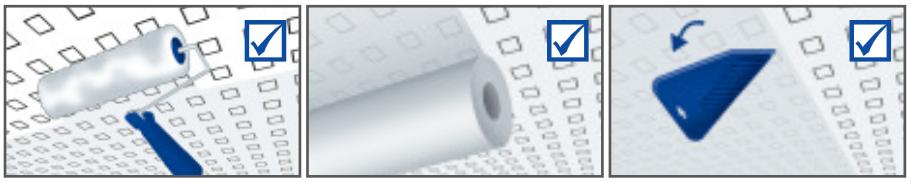


Prime the ceiling surface with Vogl Supergrund LF. The base coat must be free from dirt and separating substances and dry. Apply primer in an undiluted state with lambskin roller

Drying time: 12 hours



Apply VoglToptec® Special Adhesive generously and evenly using a lambskin roller and immediately install the plaster base fleece into the wet adhesive bed; push in with a scraper. You must not spray the adhesive



When papering, you must ensure that the special adhesive has not dried as this can cause bubbles to form. Place further lengths of the plaster base fleece overlapping (5-10 cm) and separate using a double cut

Check the surface and joints. There must not be any adhesive on the visible face of the fleece (light marks)

Drying time: 12 hours

Stir VoglToptec® Nano SF acoustic plaster slowly before use (2-3 minutes)

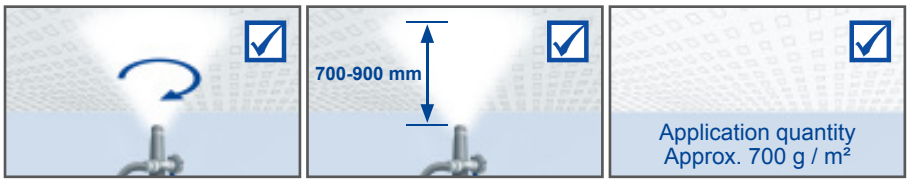
VoglToptec® Nano SF = Readymixed

The optimal speckling pattern must be adjusted depending on the building site (use brown cardboard, etc.)

Spray the acoustic plaster a circular motion when applying the first layer

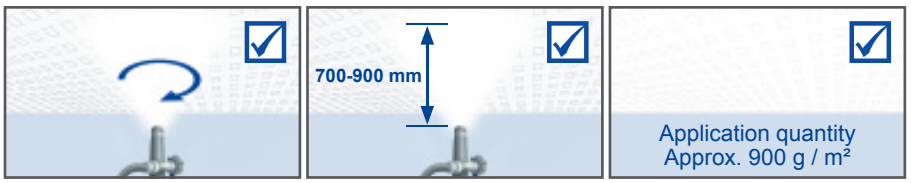
Attention – paint mist should not form; i.e. holes still visible

Drying time: 5 hours



After the drying time, apply the second coat to the ceiling, also in circular motions; holes are still slightly visible

Drying time: 12 hours



General Site Conditions

- Store the primer, adhesive and acoustic plaster in a ** frost-free environment **
- Containers should be closed during long breaks from work
- Stir all materials well before use
- The application temperature must be at least +18°C and the building site temperature not below +10°C
- Relative humidity: 40-80%
- Self-levelling, cement and asphalt screeds must be completely dried – no residual moisture
- No shock heating or cooling of the rooms during assembly or drying times – risk of cracks forming
- Store away from sun and heat

Final Coating of Acoustic Plaster Manufacturer's Instructions

- Machine requirements: plaster spray system with worm conveyor (e.g. Strobot 204S) and high-capacity compressor
- Spray distance (nozzle-ceiling) approx. 700-900 mm
- Air flow 1.5 – 2.0 bar
- Compressor capacity: at least 600 litres / min
- Nozzle size 4-6 mm (dependent on desired finish)
- Application quantities:
  1st coat approx. 700 g / m²
  2nd coat approx. 900 g / m²
  3rd coat approx. 1100 g / m²
  Total approx. 2700 g / m²

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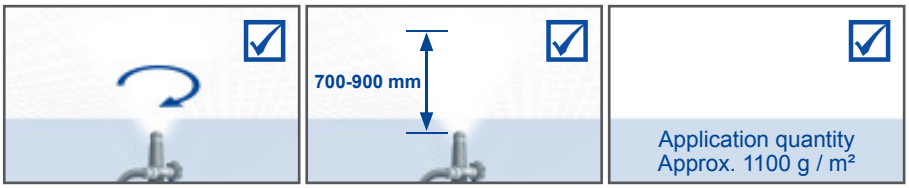
VoglToptec® – Final Coating

After the drying period, apply the 3rd coat to the ceiling, also in a circular motion; holes no longer visible

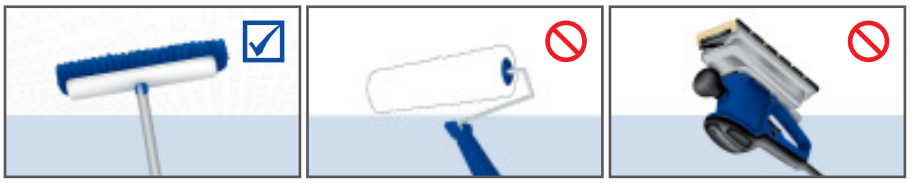
Drying time: 12 hours



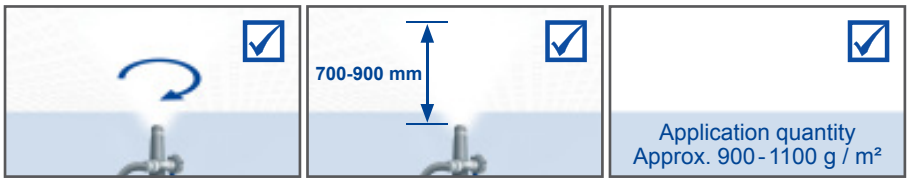
Renovation / Cleaning of Acoustic Plaster Coating

To remove any dirt, the ceiling can be given another coating. Before application, sweep the ceiling with a fine hair broom

Attention: Applying paint will affect the acoustic properties of the ceiling!



With circular motions, apply another coat to the ceiling surface. Depending on the degree of dirt, the application quantity of acoustic plaster can vary



Quantities required for Final Coating per m² (without any allowances for wastage)

Article No.	Article Description	Unit	Quantity
90501300	Vogl Supergrund LF	l	Approx. 0.15
90604000	VoglToptec® Special Adhesive	kg	Approx. 0.30
90605000	VoglToptec® plaster base fleece	m²	Approx. 1.00
90602000	VoglToptec® Akustik Nano SF	kg	Approx. 2.70 – 3.00

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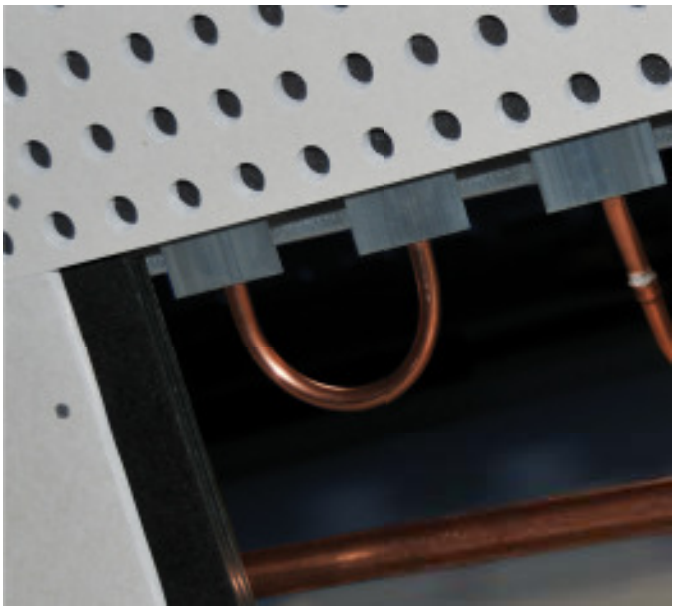
Acoustic Plaster Ceilings

VoglToptec® System
Special Designs

VoglToptec® Thermotec
The Perfect Solution for Your Acoustic Plaster Air-Handling Ceiling

Is your acoustic plaster ceiling meant to be both visually attractive and provide an efficient air-handling performance? Then our VoglToptec® Thermotec system is just the right system for you! With the perfect combination of 10 mm VoglThermotecplatten® panels and the VoglToptec® acoustic plaster system, you will get both the best cooling capacity and sound absorption performances combined an attractively finished surface. And of course, with our in-built reliable results – as all the system components come from the Vogl Ceiling System establishment.



VoglToptec® with Special Foil on the Rear
The Right Choice if Your Ceiling is “under pressure”.

As everyone knows a ventilation system is often required to be installed within the ceiling void to meet air exchange requirements. In many situations this ventilation must take place directly above the ceiling joints or at perimeters as the rest of the ceiling surface must be air-tight. Now there is a safe and easy-to-use solution in the VoglToptec® system. With our special foil, laminated on the reverse of our boards, the acoustic plaster ceiling remains air-tight (flow-proof) – but without compromising acoustic performance. The ideal product if your finished ceiling comes “under pressure” later on.

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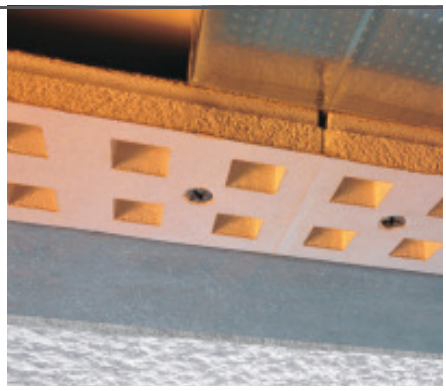
Acoustic Plaster Ceilings

VoglToptec® System
Advantages

Perfect Acoustic Plaster Ceilings are a Question of Technique

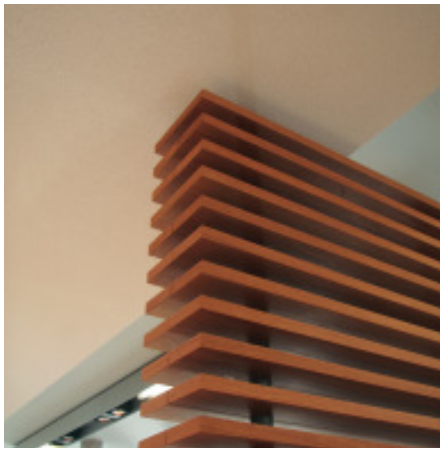
Acoustic plasters come into consideration where a considerable improvement in room acoustics is required and are often combined with highly effective acoustic perforation panels on both ceilings and walls. Each of these techniques can offer a highly effective acoustic solution. Together they are unbeatable in terms of aesthetics and sound absorption. Until now, working with conventional gypsum based panels was more like using traditional smooth plasterboard panels than a modern construction method. VoglToptec® works completely differently and, above all, without requiring jointing.



Economical and Ultra-Efficient

A milestone in acoustic plaster ceilings:

- **Because there is no need for board jointing, there is a considerable increase in the perforated area, thus increasing the acoustic efficiency**
- **Quicker and more economical use due to the precise edge-to-edge installation technique**
- **Sound absorption level of up to α_w = 0.95 (absorption class A)**
- **Everything from one single manufacturer: a complete system, perfectly coordinated and tested**
- **Delivery includes Vogl screw kit**
- **Can also be supplied with mineral acoustic plaster**



Layer Build-up for Final result

The acoustic plaster is applied in three separate coats onto the plaster base fleece over the course of several hours until an open-pored plaster layer of approx. 3 mm is achieved.

VoglToptec Akustik Nano SF

Acoustic machine-applied plaster with a very fine surface structure, particle size up to 0.5 mm

VoglToptec Akustik Color

Solid-coloured acoustic machine-applied plaster in RAL or other color cards

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Acoustic Plaster Ceilings

VoglToptec® System
Tender Specification

Acoustic Plaster Ceiling – VoglToptec® System

Acoustic plaster ceiling installed as a suspended ceiling construction, clad on one side with VoglToptec® acoustic plaster system panels, with acoustic fleece on the reverse, fixed to a rigid ceiling framework made of zinc-plated metal profiles, suspended horizontally and vertically with suspended brackets and installed using materials and fixtures approved by the relevant building authorities, designed in accordance with the structural requirements with or without insulation and designed and installed in accordance with manufacturer's instructions, including all connection and jointing work, connections and fixing materials.

Ceiling system to accommodate an on-site application of machine-applied plaster consisting of VoglToptec® plaster base fleece and final coating using VoglToptec® acoustic plaster in accordance with manufacturer's instructions.

System Structure

Framework in accordance with DIN 18181:2007-02

Profiles:
Pressure-resistant design made from zinc-plated steel plate profiles CD 60/27 as primary and secondary profiles in accordance with EN 14195

Suspended Brackets:
- Suspended brackets with vernier systems (top, vernier hanger),*
- Suspended bracket with vernier systems (top, base),*
- Suspended brackets with direct suspended brackets,*
- Installed using fixing materials approved by the relevant building authorities.

Connection:
Primary-secondary profile connection using cross connectors*, suspended brackets and cross connectors in accordance with EN 13964,

Suspended bracket centre distance: max. 900 mm,
Primary profile centre distance: max. 1000 mm,
Secondary profile centre distance: 325 mm / 334 mm.*

Boarding:
Acoustic plaster system panels as perforated ceiling panels in accordance with EN 14190, laminated on the rear with acoustic fleece, one layer 12.5 mm, laid edge-to-edge and attached to the framework using perforated panel screws SN 30, screw centre distance max. 170 mm. Manufacturer's installation guidelines must be followed.

Perforation pattern / perforated area / mass:
- Reflexio / 0.0% / 10.0 kg/m²*
- 8/18R / 15.4% / 8.5 kg/m²*
- 12/25Q / 22.9% / 7.7 kg/m²*
- Ultra-acoustic 12/25R DLV / 35.3% / 6.5 kg/m²*

Distributed load:
- Less than or equal to 0.15 kN/m²*
- Less than or equal to 0.30 kN/m²*

Joint installation:
VoglToptec system in accordance with manufacturer's instructions, "edge-to-edge" installation principle with no filling, sand down screw heads and panel joints level, screw heads must not be ground, trowel application not required, manufacturer's installation guidelines must be followed.

Surface:
Suspension height: h = mm
Installation height: h = mm
Room height: h = mm
Insulation thickness: d = mm
Subsequent application: Final coating in VoglToptec® System
Whole system: Vogl ceiling systems or equivalent

* Delete as applicable

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