

Concepts

Products

Service



An impressive look for any room.

Lindner Expanded Metal Ceilings and
Plafotherm® Expanded Metal Heated and Chilled Ceilings



Lindner

Building New Solutions

Building new solutions.

Lindner undertakes major projects worldwide in all areas of interior fit-out, insulation technology, industrial services and building facades. From pre-planning through to project completion Lindner is your partner of choice.

The Company's extensive manufacturing capability enables quality to be strictly maintained whilst allowing maximum flexibility to meet individual project requirements.

Environmental considerations are fundamental to all Lindner's business principles.

Through partnerships with clients Lindner turns concepts into reality.

Choosing Lindner you have:

Lindner Concepts:
Tailored solutions specifically geared to satisfy individual project requirements

Lindner Products:
Quality materials and systems to the very highest industry standards

Lindner Service:
Comprehensive project management services

Lindner

Expanded Metal Ceilings

Open to your ideas.

It is difficult to imagine today's modern architecture without Expanded Metal Ceilings. As well as providing an important function they also offer an almost infinite variety of structures, formats and surfaces. The light weight of the material, together with its accentuated structured appearance, opens up many new design opportunities.

Expanded metal is produced using environmentally friendly, resource conserving techniques such as the punch or pull process. These manufacturing processes give Expanded Metal Ceilings their unique character: the ability to see – to a greater or lesser extent depending on aesthetic requirements – into the ceiling cavity. In case of an emergency this enables you to quickly locate the cause of a fire or smoke.

Combine your ceilings with light fittings installed within, or above, the mesh infill panel or extend them to incorporate Plafotherm® heating and cooling technology – Expanded Metal Ceilings always give you the opportunity of creating something special. You can be certain that your Lay-In or Swing-Down solution is just as maintenance-friendly and flexible as other Lindner ceiling systems.



Indoor swimming pool, Querenburg, Germany

Advantages at a glance

- Extensive design and finishing options
- Very flexible and maintenance-friendly
- Large range of surface design options
- Perfectly integrated lighting solutions from Lindner
- Comfortable room temperature with Lindner efficient Heating and Cooling Technology possible

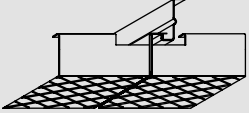
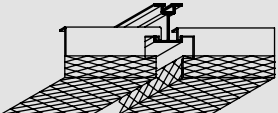
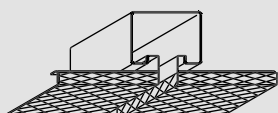

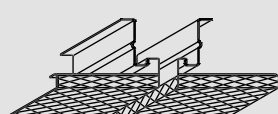
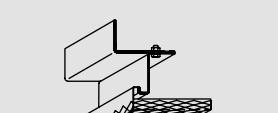
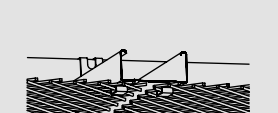
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LMD

Expanded Metal Ceilings

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LMD-St 700 BWS		Directly fixed, ball-impact resistant Screwed ceiling panels	27

Tested quality



Building material class A2-s1, d0
tested to EN 13501-1
Class A (IBC) tested to ASTM E 84



Durability
exposure class A
tested to EN 13964, table 8 and 9



Sound absorption
up to sound absorption class A
tested to EN ISO 354



Environmental product declarations
validated to ISO 14025

Certification / Regulations



Execution of the system ceilings
tested to EN 13964



Quality standard according to the technical
regulations of TAIM (Association of Industrial
Metal Ceiling Manufacturers TAIM e.V.)

Technical data

Metal ceiling system	
Size	Top layer – length up to 3,000 mm, width up to 1,200 mm, dependent on length and mesh, made of galvanised steel, special materials on request
Surface	electrostatically applied powder-coating further surfaces see Surface Brochure
Colour	Standard 9006 acc. to Lindner, other colors in RAL and NCS available
Sound absorption	To improve sound absorption, various absorbers and inlays are available.
Relevant norms	DIN EN 10152 / 10327 / 13964, BS 2989, DIN EN ISO 12944, ASTM A 653

Expanded Metal for Suspended Ceilings

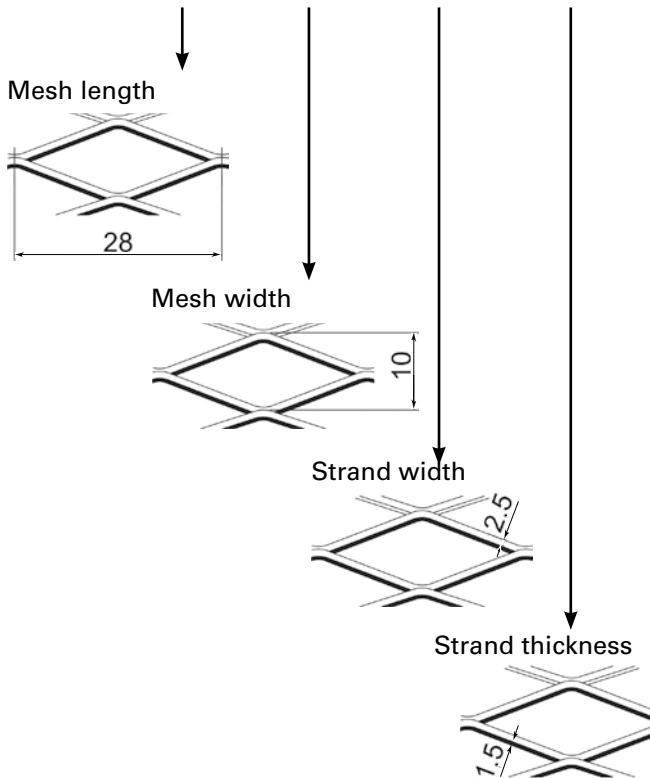
Individuality through materials and shapes.

Their special punched shapes and mesh designs give Expanded Metal Ceilings an attractive finish. During the planning period all options should be taken into consideration.

Definition / Dimensions

As a rule expanded metal is defined using the following four dimensions.

Example: 28 x 10 x 2.5 x 1.5 mm



Expanded metal is available in the following standard widths: 1,000 mm, 1,250 mm and 1,500 mm. Some mesh types and sizes are available in 2,000 mm widths.

The design and the stability of the ceiling construction are influenced by mesh shape and size, the material (steel or aluminium) and its thickness and, last but not least, by the ceiling system itself. Another important aesthetic criterion is the visible expanded metal which appears either more open or more closed, depending on the angle of vision.

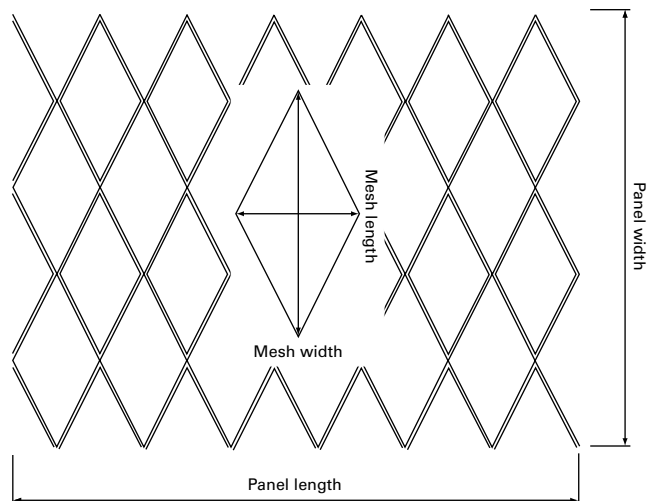
Quality standards

As a member of the Federation of Industrial Metal Ceiling Manufacturers (TAIM) we produce and supply according to the quality standards for expanded metal.

More information can be found at: www.taim.info

Expanded metal pattern / mesh arrangement

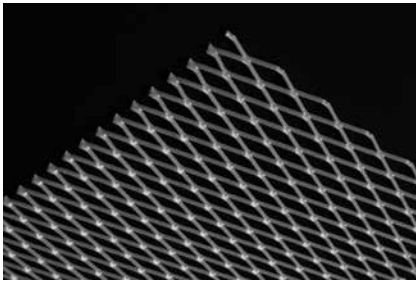
To maximise the stability and the deflection properties of the ceiling panels or integrated expanded metal sheets the following mesh arrangement should be chosen:



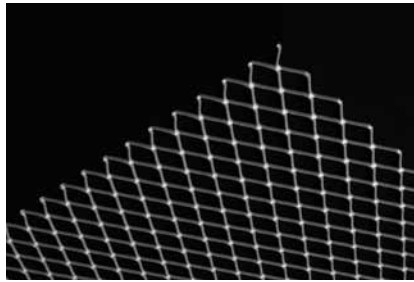
For customised, project-specific constructions we recommend the manufacture of a customised prototype.

Standard mesh types

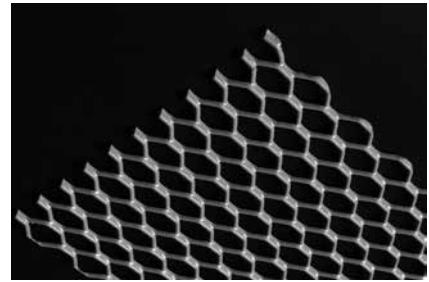
Diamond mesh



Square mesh

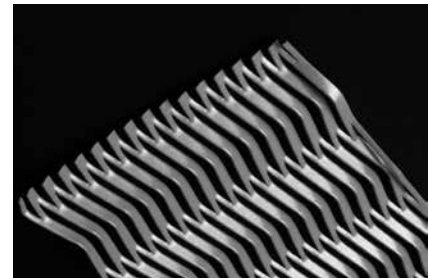
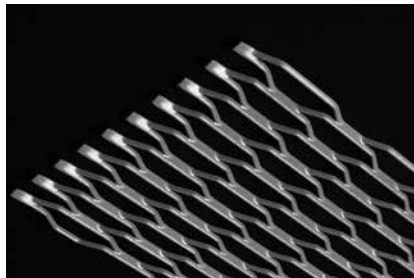
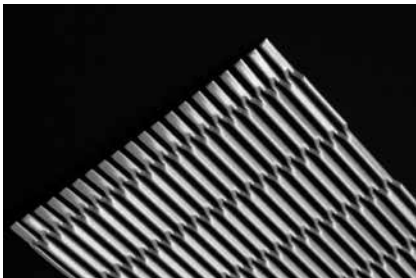


Long-link/hexagonal mesh



Special shapes

Special shapes and executions of mesh types are available on request.
Extract of possible mesh types:



Material

Galvanised steel and aluminium, powder-coated

During powder coating, electrostatically charged polyester-based powder particles are blown onto a grounded base material. Afterwards the coating film is cross-linked at 180 °C.

Natural aluminium

Natural aluminium corrodes when it is exposed to oxygen in the air or animal fats; because of this aluminium should always be covered and protected with a clear varnish to preserve its metal surface.

Other materials are available on request.

Expanded Metal Meshes

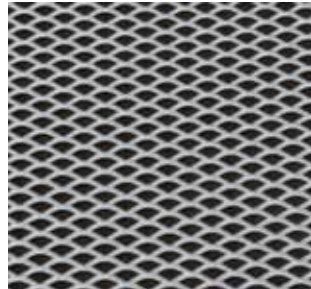
Extract from possible expanded metal meshes, further meshes on request

Diamond meshes

12.7 x 6 x 2.0 x 1.0

Expanded metal thickness approx. 3.5 mm
33 % open area

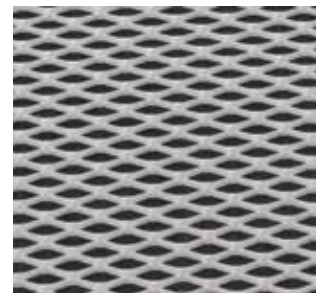
Mesh length	Mesh width	Strand width	Strand thickness
12.7 mm	6 mm	2 mm	1 mm



16 x 8 x 2.0 x 1.5

Expanded metal thickness approx. 3.5 mm
50 % open area

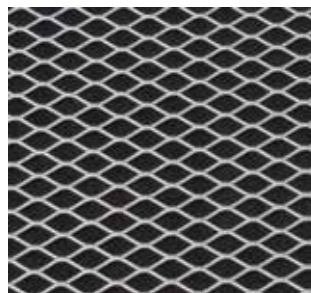
Mesh length	Mesh width	Strand width	Strand thickness
16 mm	8 mm	2 mm	1.5 mm



16 x 8 x 2.5 x 1.0

Expanded metal thickness approx. 3.0 mm
37 % open area

Mesh length	Mesh width	Strand width	Strand thickness
16 mm	8 mm	2.5 mm	1 mm



20 x 8 x 2.0 x 1.0

Expanded metal thickness approx. 3.5 mm
50 % open area

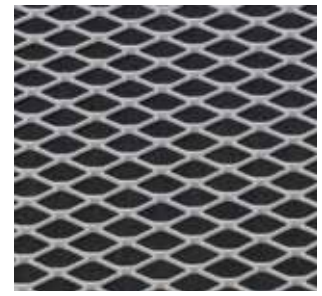
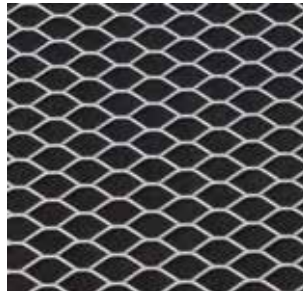
Mesh length	Mesh width	Strand width	Strand thickness
20 mm	8 mm	2 mm	1 mm



20 x 10 x 2.0 x 1.0

Expanded metal thickness approx. 3.5 mm
60 % open area

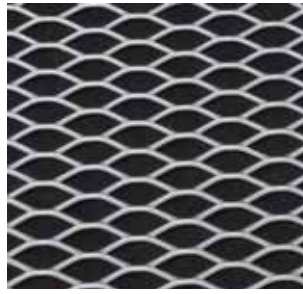
Mesh length	Mesh width	Strand width	Strand thickness
20 mm	10 mm	2 mm	1 mm



28 x 10 x 2.5 x 1.5

Expanded metal thickness approx. 5.0 mm
50 % open area

Mesh length	Mesh width	Strand width	Strand thickness
28 mm	10 mm	2.5 mm	1.5 mm



28 x 12 x 2.5 x 1.5

Expanded metal thickness approx. 5.0 mm
58 % open area

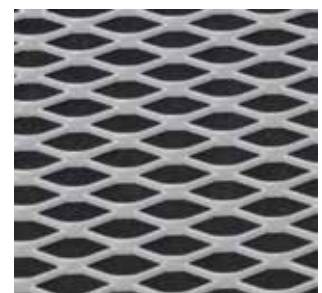
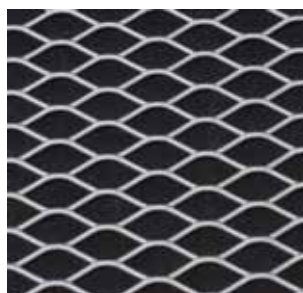
Mesh length	Mesh width	Strand width	Strand thickness
28 mm	12 mm	2.5 mm	1.5 mm



30 x 12 x 2.5 x 1.5

Expanded metal thickness approx. 4.0 mm
58 % open area

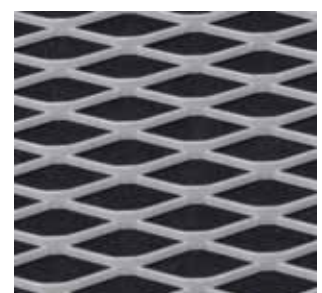
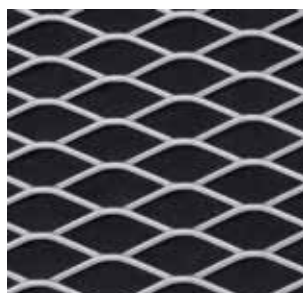
Mesh length	Mesh width	Strand width	Strand thickness
30 mm	12 mm	2.5 mm	1.5 mm



42 x 16 x 3.0 x 2.0

Expanded metal thickness approx. 6.0 mm
62 % open area

Mesh length	Mesh width	Strand width	Strand thickness
42 mm	16 mm	3 mm	2 mm



Expanded Metal Meshes

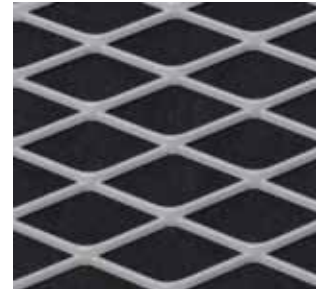
Extract from possible expanded metal meshes, further meshes on request

Diamond meshes

50 x 25 x 3.0 x 2.0

Expanded metal thickness approx. 6.0 mm
76 % open area

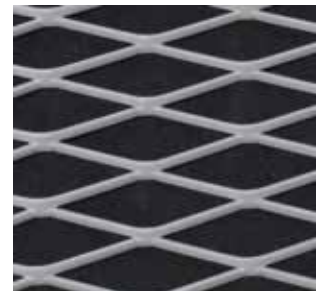
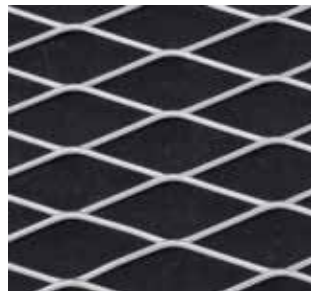
Mesh length	Mesh width	Strand width	Strand thickness
50 mm	25 mm	3 mm	2 mm



62 x 23 x 3.0 x 2.5

Expanded metal thickness approx. 6.0 mm
73 % open area

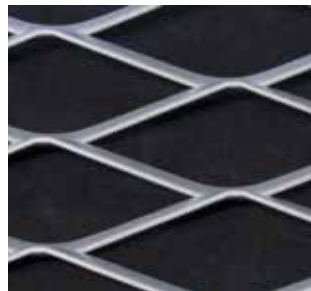
Mesh length	Mesh width	Strand width	Strand thickness
62 mm	23 mm	3 mm	2.5 mm



115 x 40 x 9.0 x 2.0

Expanded metal thickness approx. 18.0 mm
55 % open area

Mesh length	Mesh width	Strand width	Strand thickness
115 mm	40 mm	9 mm	2 mm

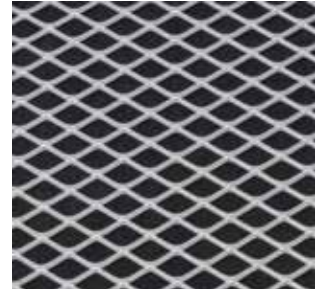
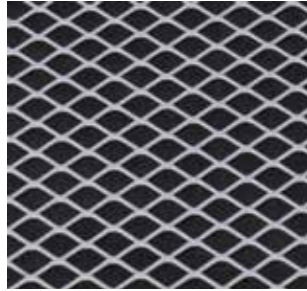


Square meshes

16 x 11 x 1.5 x 1.0

Expanded metal thickness approx. 3.0 mm
73 % open area

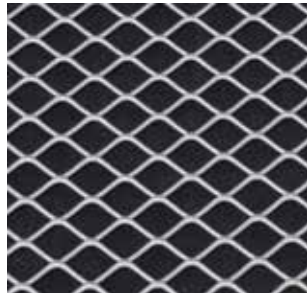
Mesh length	Mesh width	Strand width	Strand thickness
16 mm	11 mm	1.5 mm	1 mm



20 x 15 x 2.0 x 1.5

Expanded metal thickness approx. 4.0 mm
73 % open area

Mesh length	Mesh width	Strand width	Strand thickness
20 mm	15 mm	2 mm	1.5 mm

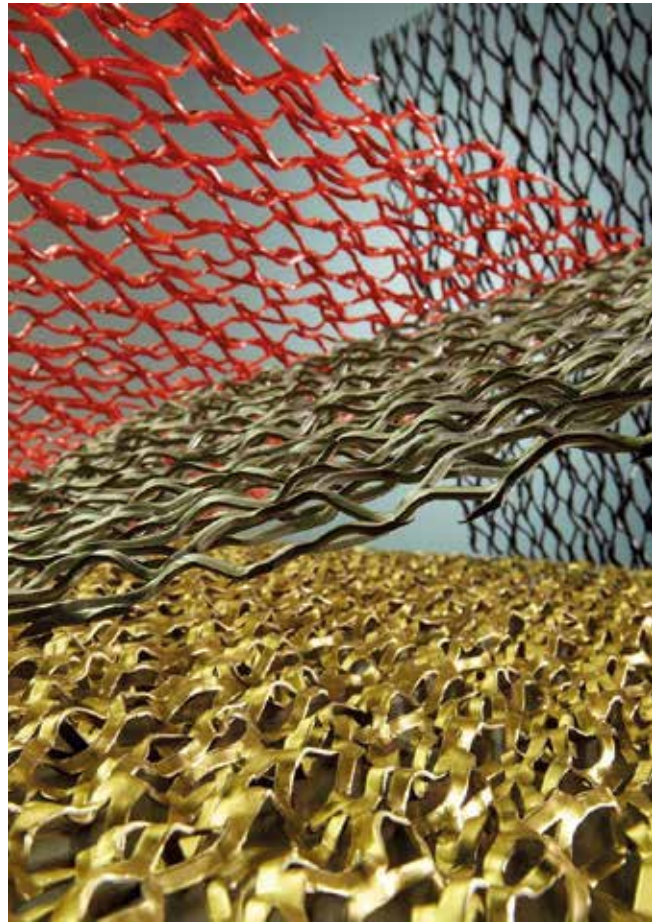


Shaping

TOUCHdesign Viva



Due to the open character, the expanded metal ceiling elements are especially suitable for representative and public areas. The folded expanded metal grants free view into the ceiling void and creates at the same time living, three-dimensional effects.

A high number of sizes, forms and geometries of meshes offer an individual, unique appearance of the ceiling. The structure surface of expanded metal is available in many different colours.



Advantages

- Unique design by individually folded expanded metal
- Structured surface on demand with high open area to have a wide view into the ceiling void
- The incidence of light creates varied, diverse looks

<p>Material</p>	<p>Steel sheet is the most common material for manufacturing Expanded Metal Ceilings as it is highly stable and flexible. As an alternative we also supply Expanded Metal Ceilings in aluminium. The standard surface coating for Expanded Metal Ceilings is powder coating. Aluminium should always be finished with a clear varnish to prevent corrosion from oxygen in the air and from fingerprints and to help maintain its natural, metallic finish.</p>	
<p>Colours</p>	<p>Expanded Metal Ceilings are very popular in the colour 9006 according to Lindner but are of course available in all RAL and NCS colours. The appearance of an Expanded Metal Ceiling can also be influenced by the use of rolled expanded metal sheets, which, for reasons of stability and deflection, are recommended for ceiling layouts with smaller axial distances.</p>	
<p>Shapes</p>	<p>Expanded Metal Ceilings are available in an array of shapes. Whether square, rectangular, as a freely-hanging canopy ceiling or as concave or convex canopies – with Lindner Expanded Metal Ceilings your ceiling will always be the eye catcher of your room.</p>	

LMD-St 200

Hook-On / Lay-On – Concealed supporting profiles, removable ceiling panels



The expanded metal ceiling LMD-St 200 with overlapping ceiling panels is the universal solution for your rooms.

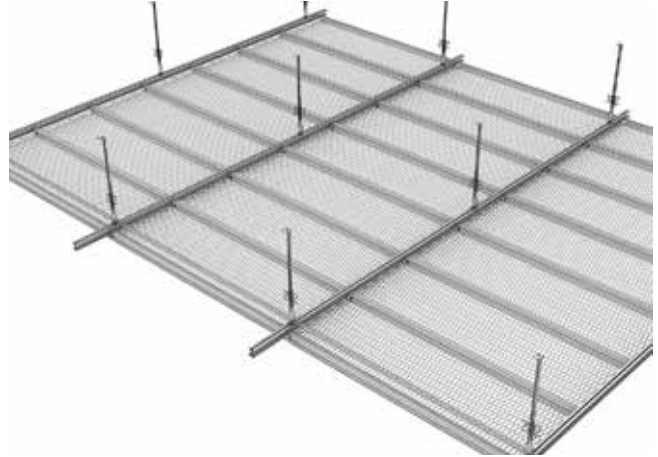
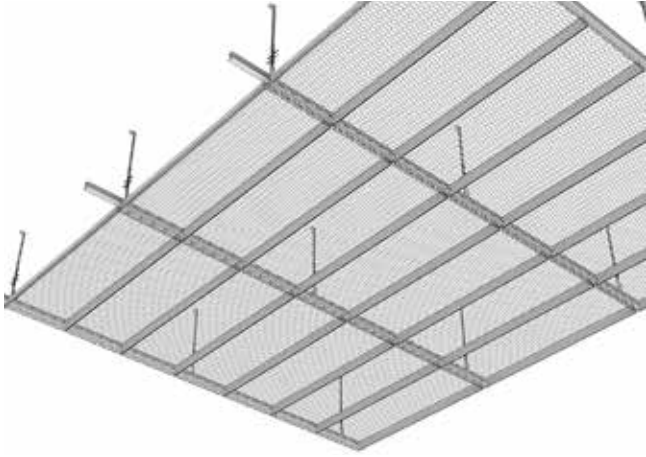
The system impresses by its robust construction and ease of installation and maintenance.

Standard requirements

System	Detail	Installation detail
<p>LMD-St 200 Type 10 Hook-On / Lay-On with folded edge Length up to 2,500 mm Width up to 625 mm</p>		
<p>LMD-St 200 Type 11 Hook-On on both sides Length up to 2,500 mm Width up to 625 mm</p>		

LMD-St 210

Hook-On with butt joints – Concealed supporting profiles, removable ceiling panels



The Hook-On expanded metal ceiling panels of the system LMD-St 210 can be removed without the need for any tools.

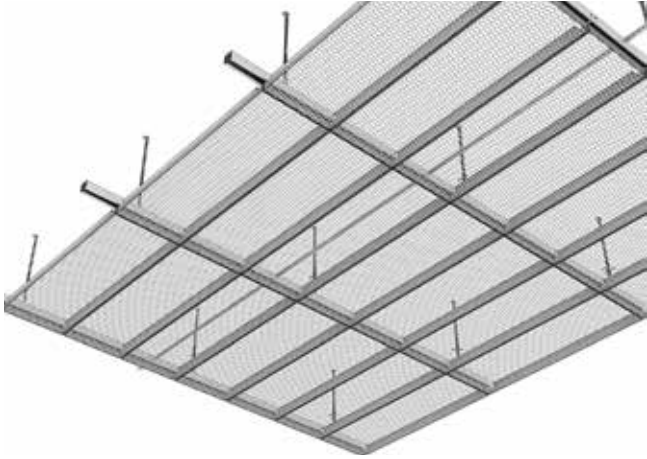
The design of the short sides of the panel and the construction of the profile automatically ensure joint alignment during installation.

Standard requirements

System	Detail	Installation detail
LMD-St 210 Type 1 Hook-On Length up to 2,500 mm Width up to 625 mm		

LMD-St 213

Hook-On with accentuated joints – Concealed Hook-On construction with accentuated joints, removable ceiling panels and optional Swing-Down function

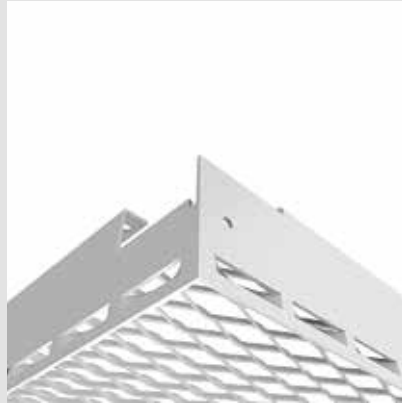
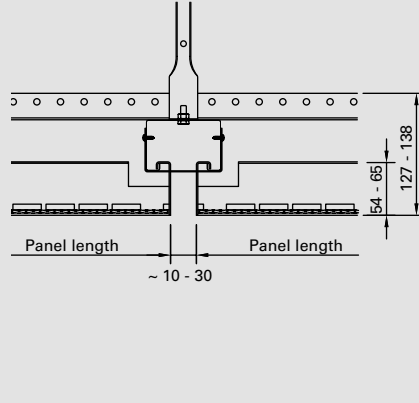
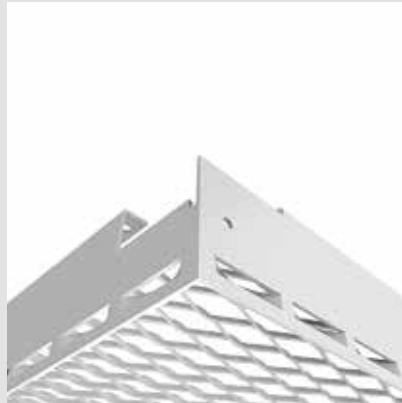
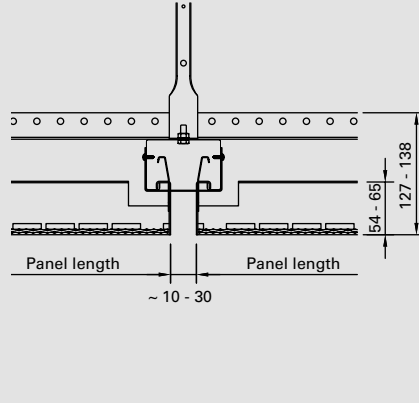
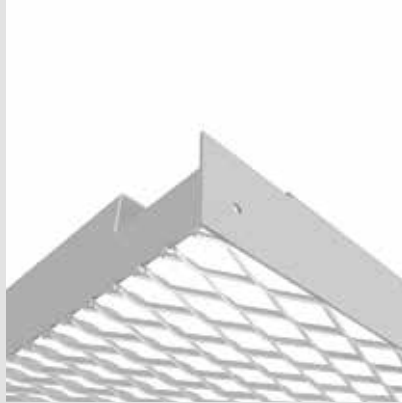
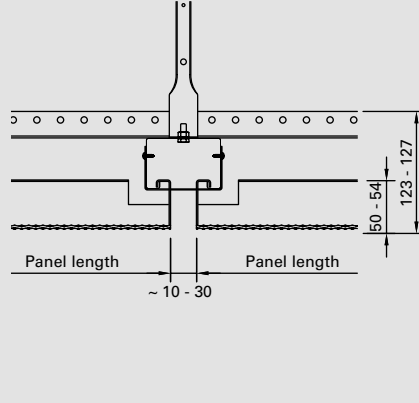
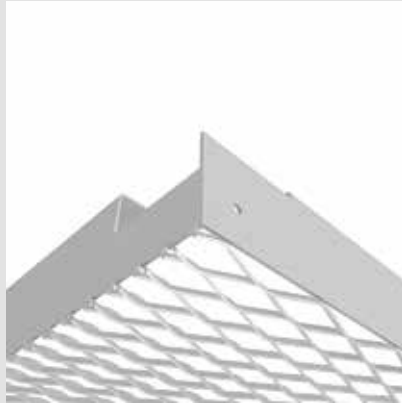
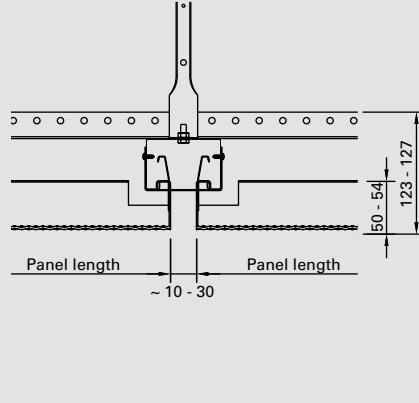


The accentuated joints of this open Hook-On profile lend the LMD-St 213 system a special visual, whilst the range of joint widths from 10 mm - 30 mm gives

you the freedom to carry out your own designs. The hooked-on ceiling panels can also be combined with Swing-Down ceiling panels.

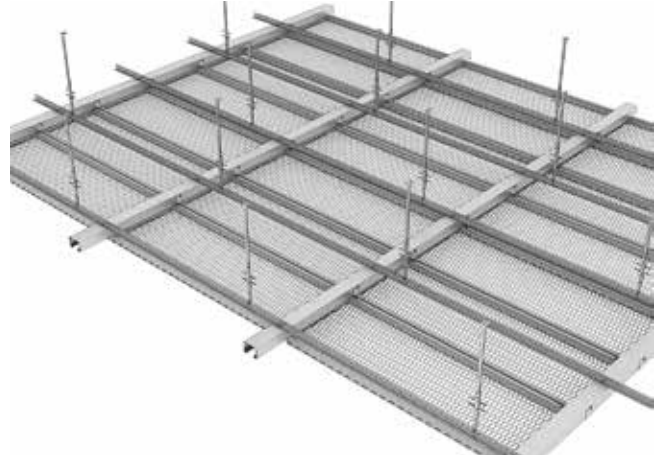
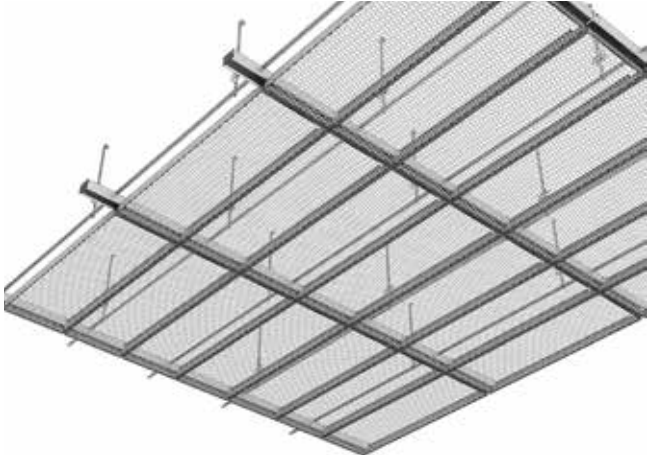
Standard requirements

System	Detail	Installation detail
<p>LMD-St 213 Type 3 Hook-On expanded metal turned up Length up to 3,000 mm Width up to 1,200 mm</p>		
<p>LMD-St 213 Type 6 Hook-On / Swing-Down expanded metal turned up Length up to 3,000 mm Width up to 1,200 mm</p>		

System	Detail	Installation detail
<p>LMD-St 213 Type 4 Hook-On expanded metal bordered Length up to 3,000 mm Width up to 1,200 mm</p>		
<p>LMD-St 213 Type 5 Hook-On / Swing-Down expanded metal bordered Length up to 3,000 mm Width up to 1,200 mm</p>		
<p>LMD-St 213 Type 8 Hook-On expanded metal placed on frame Length up to 3,000 mm Width up to 1,200 mm</p>		
<p>LMD-St 213 Type 9 Hook-On / Swing-Down expanded metal placed on frame Length up to 3,000 mm Width up to 1,200 mm</p>		

LMD-St 213 BWS

Hook-On with accentuated joints, ball-impact resistant – Removable ceiling panels

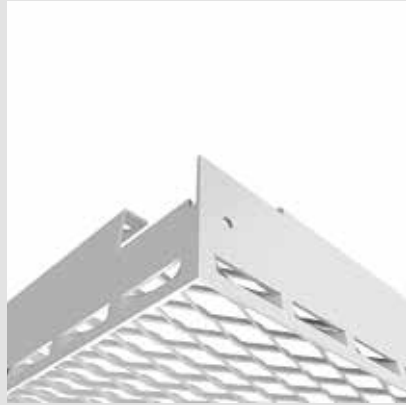
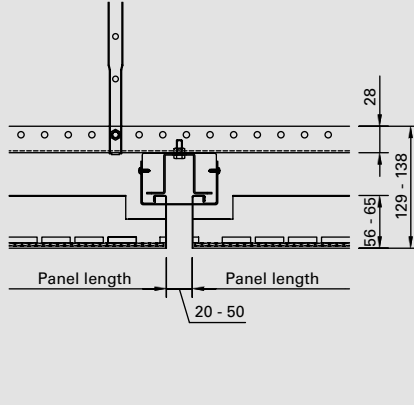
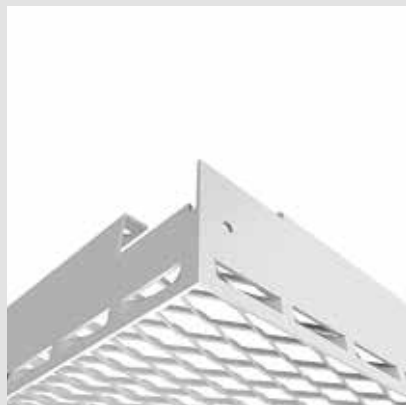
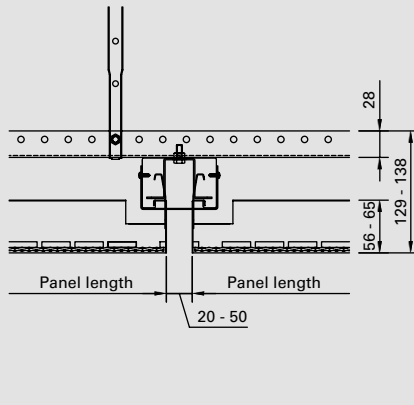
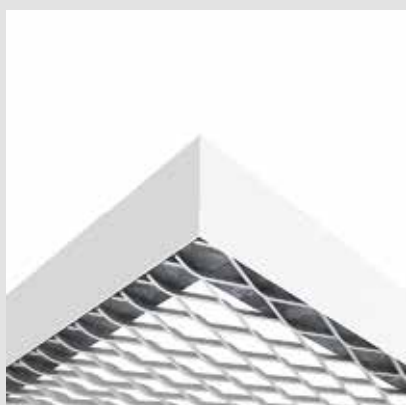
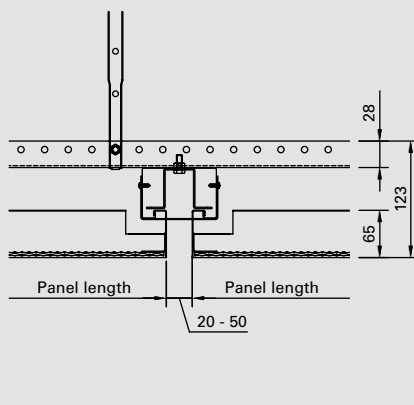


The system LMD-St 213 BWS with accentuated joints is fixed by means of hold-down clips.

The expanded metal ceiling with ball-impact resistance class 1A / 2A / 3A is available with different meshes.

Standard requirements

System	Detail	Installation detail
<p>LMD-St 213 BWS Type 3 Hook-On expanded metal turned up Length up to 3,000 mm Width up to 1,400 mm</p>		
<p>LMD-St 213 BWS Type 6 Hook-On / Swing-Down expanded metal turned up Length up to 3,000 mm Width up to 1,400 mm</p>		

System	Detail	Installation detail
<p>LMD-St 213 BWS Type 4 Hook-On expanded metal bordered Length up to 3,000 mm Width up to 1,400 mm</p>		
<p>LMD-St 213 BWS Type 5 Hook-On / Swing-Down expanded metal bordered Length up to 3,000 mm Width up to 1,400 mm</p>		
<p>LMD-St 213 BWS Type 7 Hook-On expanded metal bordered with opposite angle Length up to 3,000 mm Width up to 1,400 mm</p>		

LMD-St 214

Hook-On with open joints – Concealed supporting profiles, removable ceiling panels and optional Swing-Down function

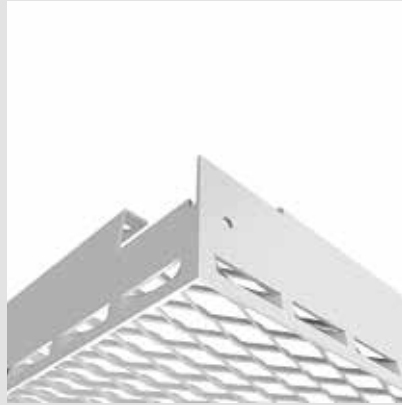
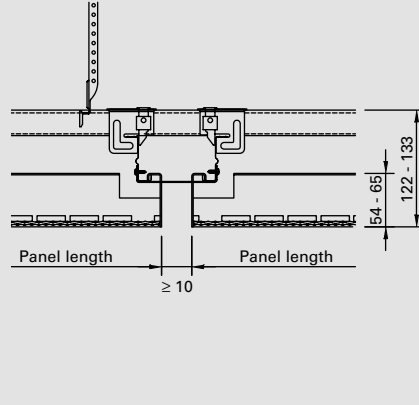
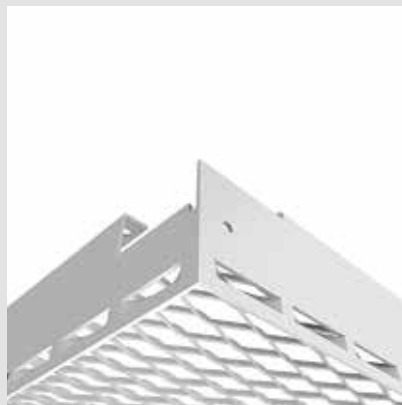
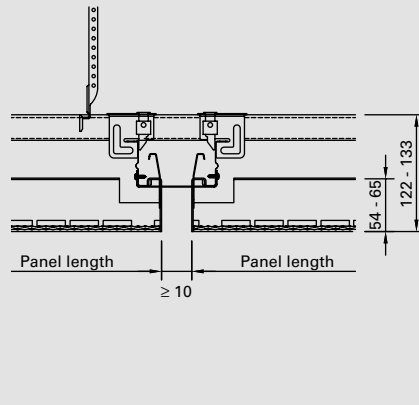
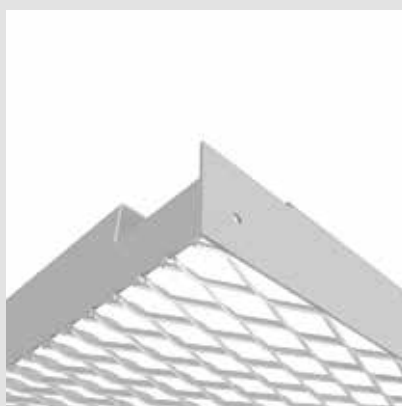
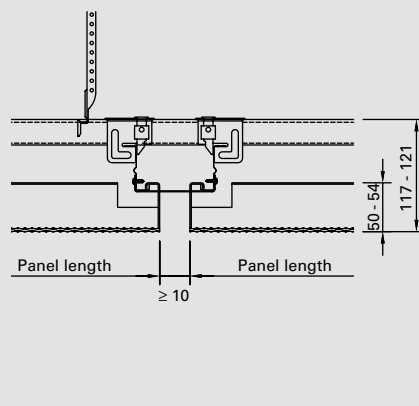
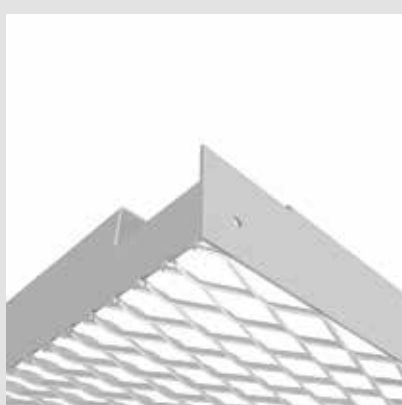
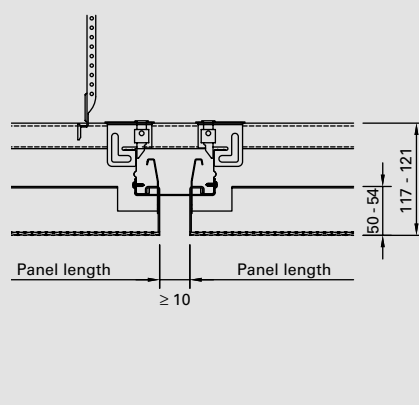


The Hook-On ceiling panels which make up the LMD-St 214 system can be optionally combined with Swing-Down function. Joint width is optional,

but must be 10 mm as a minimum. This economical design is characterised by easy assembly and flexibility.

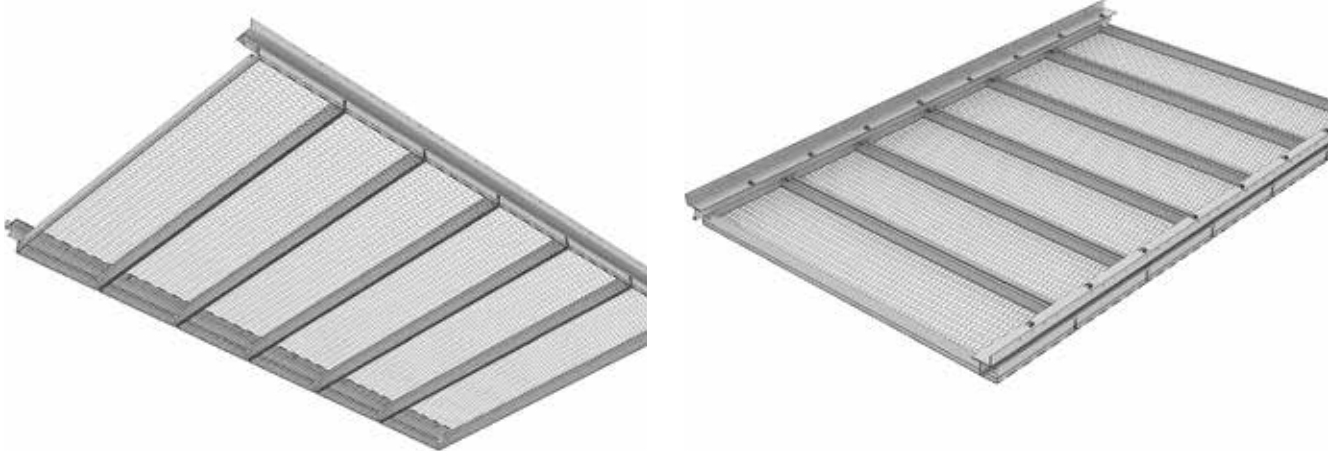
Standard requirements

System	Detail	Installation detail
<p>LMD-St 214 Type 3 Hook-On expanded metal turned up Length up to 3,000 mm Width up to 1,200 mm</p>		
<p>LMD-St 214 Type 6 Hook-On / Swing-Down expanded metal turned up Length up to 3,000 mm Width up to 1,200 mm</p>		

System	Detail	Installation detail
<p>LMD-St 214 Type 4 Hook-On expanded metal bordered Length up to 3,000 mm Width up to 1,200 mm</p>		
<p>LMD-St 214 Type 5 Hook-On / Swing-Down expanded metal bordered Length up to 3,000 mm Width up to 1,200 mm</p>		
<p>LMD-St 214 Type 8 Hook-On expanded metal placed on frame Length up to 3,000 mm Width up to 1,200 mm</p>		
<p>LMD-St 214 Type 9 Hook-On / Swing-Down expanded metal placed on frame Length up to 3,000 mm Width up to 1,200 mm</p>		

LMD-St 312

Hook-On, free-spanning – Concealed Hook-On construction, removable ceiling panels and optional Swing-Down function

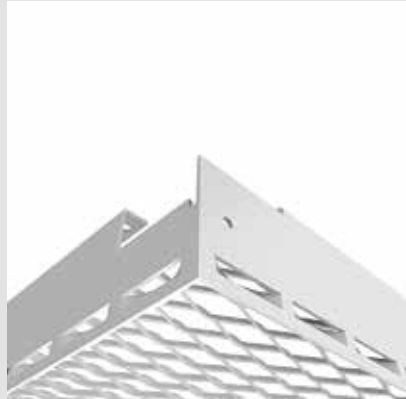
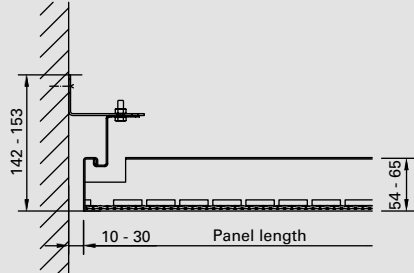
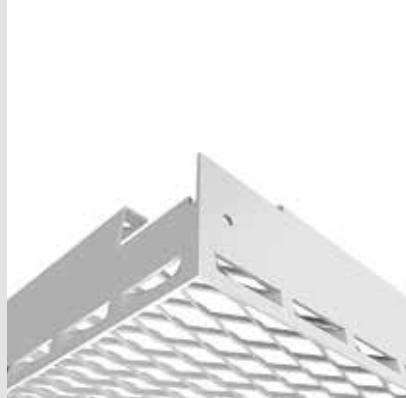
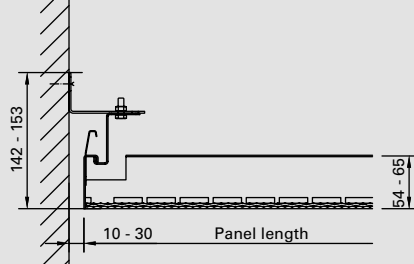
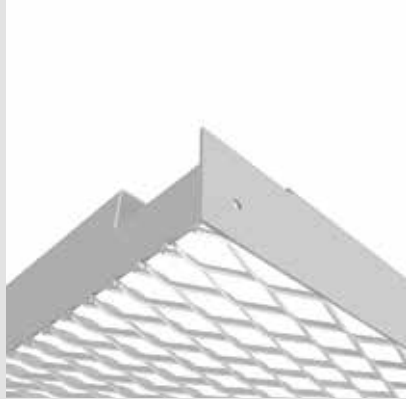
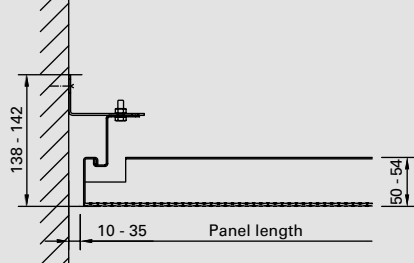
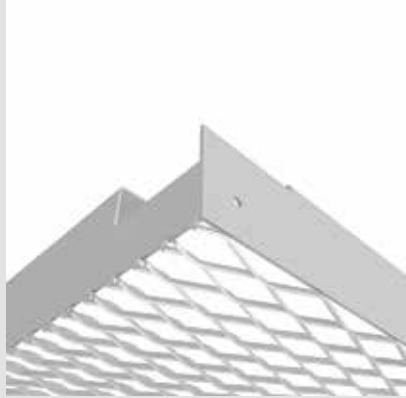
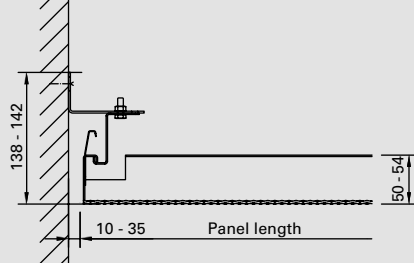


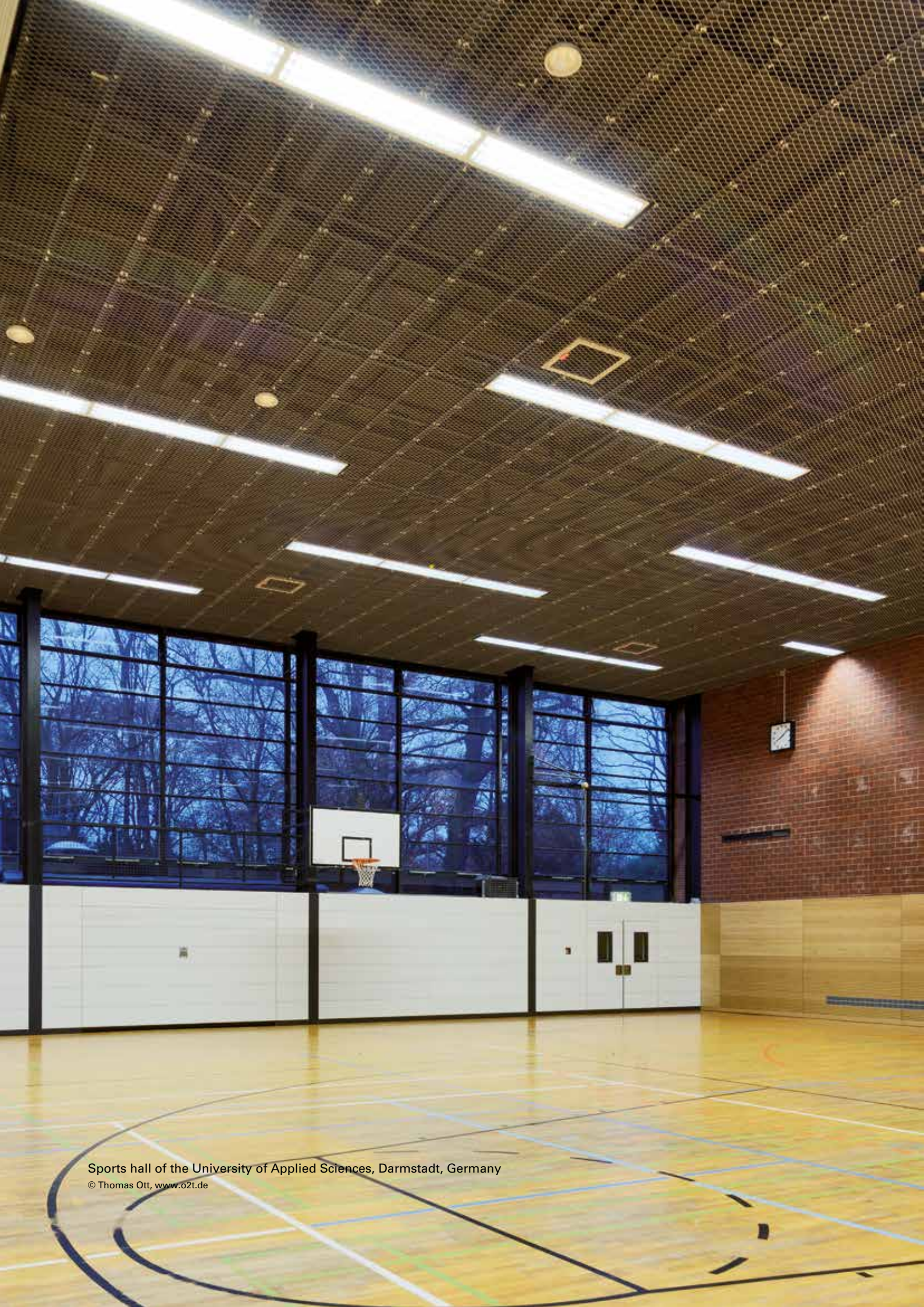
The LMD-St 312 corridor system is made up of a concealed Hook-On design with shadow joints. As with all Lindner Hook-On ceilings this system can

also combine Hook-On and Swing-Down ceiling panels.

Standard requirements

System	Detail	Installation detail
<p>LMD-St 312 Type 3 Hook-On expanded metal turned up Length up to 3,000 mm Width up to 1,200 mm</p>		
<p>LMD-St 312 Type 6 Hook-On / Swing-Down expanded metal turned up Length up to 3,000 mm Width up to 1,200 mm</p>		

System	Detail	Installation detail
<p>LMD-St 312 Type 4 Hook-On expanded metal bordered Length up to 3,000 mm Width up to 1,200 mm</p>		
<p>LMD-St 312 Type 5 Hook-On / Swing-Down expanded metal bordered Length up to 3,000 mm Width up to 1,200 mm</p>		
<p>LMD-St 312 Type 8 Hook-On expanded metal placed on frame Length up to 3,000 mm Width up to 1,200 mm</p>		
<p>LMD-St 312 Type 9 Hook-On / Swing-Down expanded metal placed on frame Length up to 3,000 mm Width up to 1,200 mm</p>		

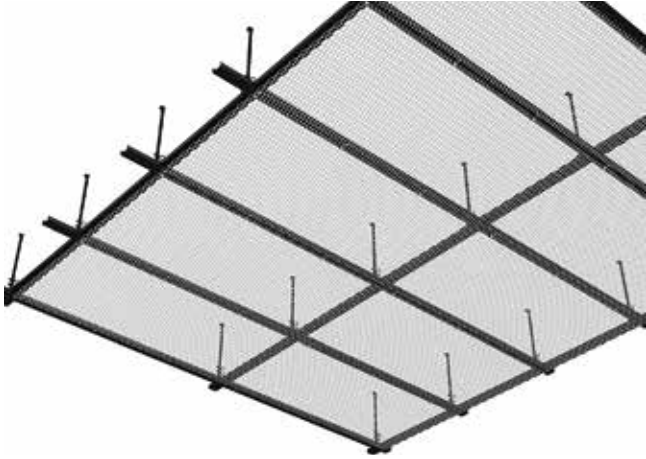


Sports hall of the University of Applied Sciences, Darmstadt, Germany

© Thomas Ott, www.o2t.de

LMD-St 700 BWS

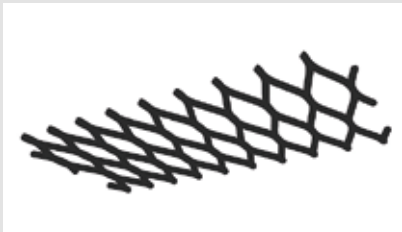
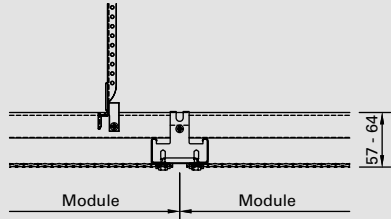
Directly fixed, ball-impact resistant – Screwed ceiling panels



The system LMD-St 700 BWS complies with the ball-impact resistance class 1A / 2A / 3A. The expanded metal is directly screwed to the suspension channels.

When installed, the expanded metal sheets create an almost seamless appearance.

Standard requirements

System	Detail	Installation detail
<p>LMD-St 700 BWS Type 1 expanded metal screwed Length up to 2,990 mm Width up to 1,490 mm</p>		

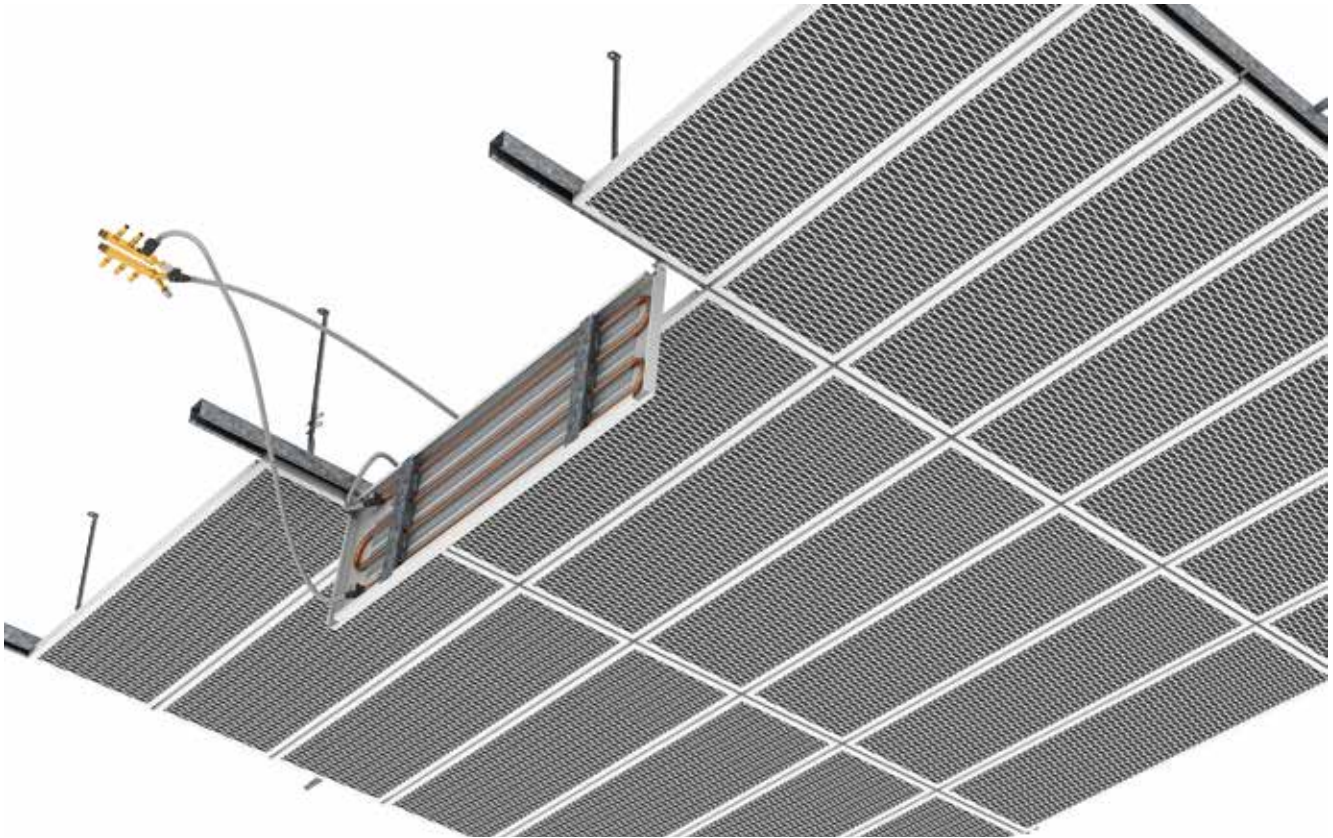


 **Anschlussflüge**
Connecting flights ↑

 **Gepäckausgabe**
Baggage claim ↑

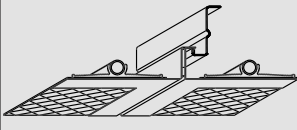
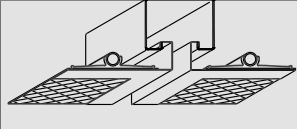
 **Bahnhöfe**  **Ausgang**
Train stations | *Exit*

Plafotherm® Expanded Metal Heated and Chilled Ceilings



The integrated Heating and Cooling Technology, which makes up the Plafotherm® St system, offers an efficient “feel-good atmosphere” to satisfy your needs. All Plafotherm® St systems are durable and safe to handle. We will be glad to give your metal ceiling a distinctive look by applying one of our many eye-catching colour options.

Programme

System		
Plafotherm® St 200		Expanded Metal Hook-On Heated/Chilled ceiling Concealed supporting profiles, removable ceiling panel
Plafotherm® St 213		Expanded Metal Hook-On Heated/Chilled ceiling Concealed Hook-On construction with accentuated joints, removable ceiling panels and optional Swing-Down function

Tested quality



Building material class A2-s2, d0
tested to EN 13501-1



Durability
exposure class A
tested to EN 13964, table 8 and 9



Sound absorption
up to sound absorption class D
tested to EN ISO 354



Nominal cooling capacity up to 89.9 W/m²
tested to DIN EN 14240 (10 K)
Nominal heating capacity up to 107 W/m²
tested to DIN EN 14037 (15 K)



Environmental product declarations
validated to ISO 14025

Certification / Regulations



Execution of the system ceilings
tested to EN 13964



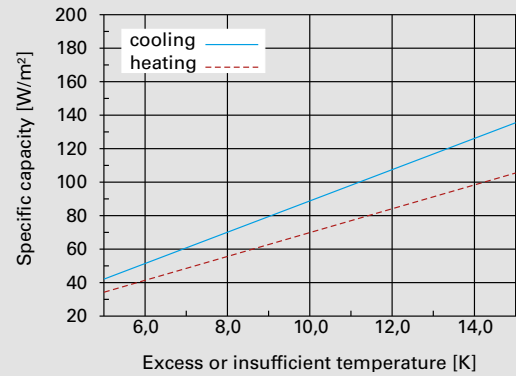
Quality standard according to the technical
regulations of TAIM (Association of Industrial
Metal Ceiling Manufacturers TAIM e.V.)



Heating and Cooling

Heat conducting profile with Cu-pipe fret

Heating/Cooling technology	Made of aluminium heat conducting profile with copper tubing, integrated into ceiling panel for thermal conductivity.
Heat conducting profile	Extruded aluminium profile in standard widths 80 and 120 mm
Pipe fret	Copper coil, 12 x 0.5 mm or 12 x 0.75 mm
Water volume	Approx. 1 l/m ²
Tube distance	From 90 mm - 150 mm
Nominal cooling capacity acc. to DIN EN 14240 (10K)	89.9 W/m ²
Nominal heating capacity acc. to DIN EN 14037 (15K)	107 W/m ²



Determination of excess or insufficient temperature

$$\Delta T_K = \vartheta_R - \frac{\vartheta_{VL} + \vartheta_{RL}}{2}$$

$$\Delta T_H = \frac{\vartheta_{VL} + \vartheta_{RL}}{2} - \vartheta_R$$

ΔT_K = insufficient temperature (cooling) [K]

ΔT_H = excess temperature (heating) [K]

ϑ_R = room temperature [°C]

ϑ_{VL} = flow temperature [°C]

ϑ_{RL} = return-flow temperature [°C]

Recommended operating data

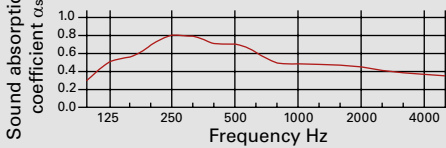
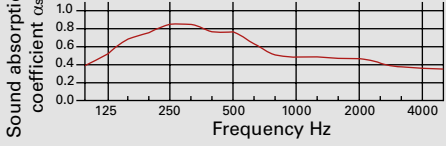
Flow temperature (cooling)	15 - 17 °C
Temperature spread	2 - 4 K
Flow temperature (heating)	30 - 35 °C
Temperature spread	3 - 6 K
Recommended pressure drop	25 - 30 kPa

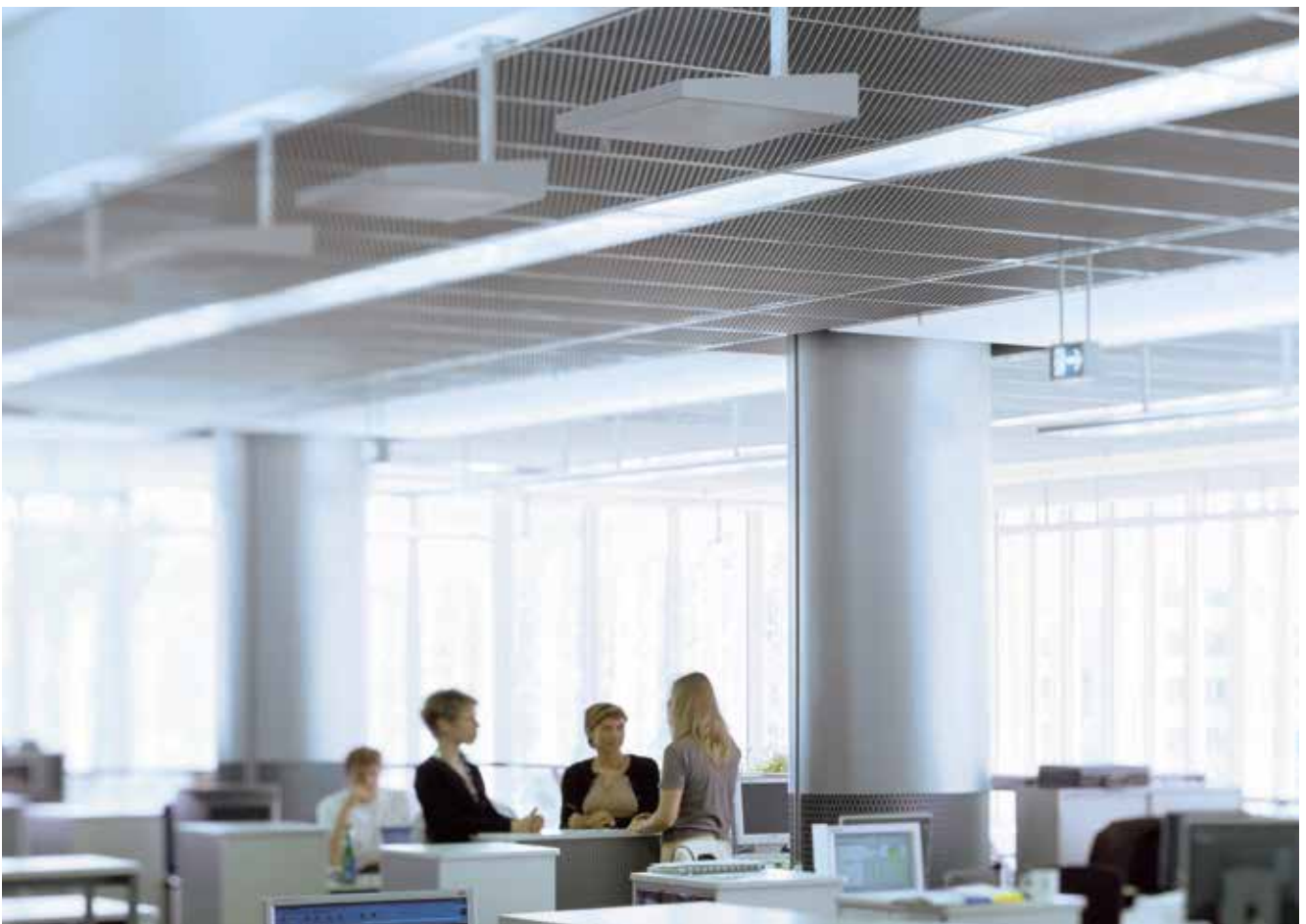


Sound absorption

Of course we can also supply your heated and chilled ceiling with acoustic properties and perfect its look with our extensive range of expanded metal mesh. We measure sound absorption at maximum occupancy with heat-conducting profiles.

Perforated ceilings with Heating and Cooling Technology, measured at full occupancy.

Acoustic tissue	$\alpha_w = 0.45$ (LM) $SAA / \alpha_{s,m} = 0.59$ NRC = 0.60	 <table border="1"><caption>Sound absorption coefficient α_s vs Frequency Hz (Acoustic tissue)</caption><thead><tr><th>Frequency Hz</th><th>Sound absorption coefficient α_s</th></tr></thead><tbody><tr><td>125</td><td>0.4</td></tr><tr><td>250</td><td>0.8</td></tr><tr><td>500</td><td>0.7</td></tr><tr><td>1000</td><td>0.5</td></tr><tr><td>2000</td><td>0.45</td></tr><tr><td>4000</td><td>0.4</td></tr></tbody></table>	Frequency Hz	Sound absorption coefficient α_s	125	0.4	250	0.8	500	0.7	1000	0.5	2000	0.45	4000	0.4
Frequency Hz	Sound absorption coefficient α_s															
125	0.4															
250	0.8															
500	0.7															
1000	0.5															
2000	0.45															
4000	0.4															
Acoustic tissue Mineral wool	$\alpha_w = 0.50$ (L) $SAA / \alpha_{s,m} = 0.63$ NRC = 0.65	 <table border="1"><caption>Sound absorption coefficient α_s vs Frequency Hz (Acoustic tissue with mineral wool)</caption><thead><tr><th>Frequency Hz</th><th>Sound absorption coefficient α_s</th></tr></thead><tbody><tr><td>125</td><td>0.4</td></tr><tr><td>250</td><td>0.85</td></tr><tr><td>500</td><td>0.75</td></tr><tr><td>1000</td><td>0.5</td></tr><tr><td>2000</td><td>0.45</td></tr><tr><td>4000</td><td>0.4</td></tr></tbody></table>	Frequency Hz	Sound absorption coefficient α_s	125	0.4	250	0.85	500	0.75	1000	0.5	2000	0.45	4000	0.4
Frequency Hz	Sound absorption coefficient α_s															
125	0.4															
250	0.85															
500	0.75															
1000	0.5															
2000	0.45															
4000	0.4															



Hydraulic Components

For perfect connections.

For perfect heating and cooling connections, Lindner provides a great number of hydraulic components and accessory parts.

Advantages:

- Tested system
- One-stop solutions
- Ideal for heating/cooling systems
- Maintained independently from other building trades

Connection hoses and fittings

High-grade steel hoses are oxygen impermeable, tested to DIN 4726, and are used as connection hoses. These hoses are perfectly suited to accept a large number of fittings. The quick plug connector MultiQuickConnect does without retaining claws which unnecessarily damage the meanders. Thus, a quick and user-friendly installation and removal is ensured. A locking button that clearly sticks out checks the correct installation and guarantees a positive connection and a secure hold. A system distributor with three outgoing lines completes the system.





Chiemgau High School, Traunstein, Germany

Wall connections

The link between ceiling and wall.

The connection to the wall can be carried out in various different ways. We recommend a floating ceiling effect, however other wall connections can be used depending on your requirements.



Free floating edge



Shadow gap joint



L-trim



Shadow gap trim

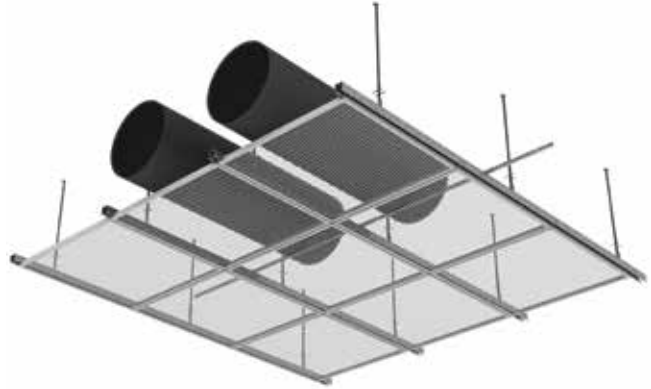


Urban Media Space, Aarhus, Denmark

Acoustics

Come to rest.

The LMD-Absorbers are most suitable for large rooms containing little sound absorbing surface and material. These absorbers are particularly useful in Expanded Metal Ceilings fitted with sprinklers and smoke extractors as they can be installed without restricting the performance of these safety devices within the ceiling cavity.



LMD-Absorber Type 1
combined with LMD-St Expanded Metal ceiling

Various designs



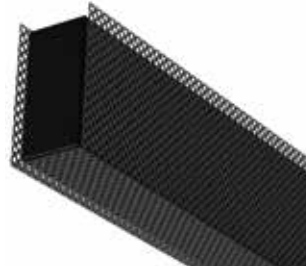
LMD-Absorber Type 1
tested to ISO 354 /
ISO 11654 / ASTM C423



LMD-Absorber Type 4
tested to ISO 354 /
ISO 11654

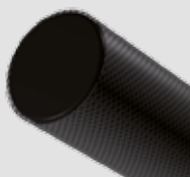


LMD-Absorber Type 3
tested to ISO 354 /
ISO 11654

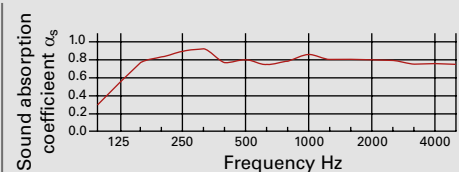


LMD-Absorber Type 5
tested to ISO 354 /
ISO 11654

LMD-Absorber Type 1
Baffle distance: 500 mm
Hole diameter: 2.0 mm
Open area: 20 %
Absorber \varnothing 218 x 1,200 mm length



$\alpha_w = 0.80$ (L)
SAA = 0.82
NRC = 0.85





Oberrheinhalle, Offenburg, Germany



Green Building

A responsible approach to humans and nature is a matter of course for us as a manufacturer of long lasting ceiling systems in premium quality. We are continuously optimizing our wide range with the objective to further reduce their impact on the environment. Every production step is subject to a thorough control of the ambitious energy, material and quality requirements. This ensures that our clients do not only get a sophisticated product but that they can also rely on the ecological suitability.

Validated environmental product declarations according to ISO 14025 are available for the procedure of proof of the environmental performance of Lindner ceiling systems.



Unilever, Hamburg, Germany



Lindner is a founding member of the German Sustainable Building Council (DGNB) and member of the US Green Building Council. We are actively involved in building up awareness for the principles of sustainable construction and the development of relevant standards.

Sustainable construction with Lindner ceiling systems:

- Extremely durable products with best functional characteristics and high economic efficiency
- End-to-end procedure of proof of the ecological material characteristics by environmental product declarations
- Consultancy service with all current building certifications, as for example according to DGNB, LEED, BREEAM

Simply healthier: Lindner ceiling systems.

- High recycling percentage up to 45 %
- VOC values are considerably below the limit according to AgBB / DIBt
- Free from toxicological gases, thus it is toxicologically inoffensive in case of fire according to DIN 53436
- The substances used for pre-cleaning of powder coating are no hazardous substances according to the Ordinance on Hazardous Substances.
- Powder recovery of surface coating of approx. 25 %
- Reference useful life is 70 years according verified EPD
- Up to 30 % of the primary energy demand can be saved with Plafotherm® heated and chilled ceiling systems

We can do it all for you.

Lindner Concepts:

- Airports and Railways
- Clean Rooms and Operating Theatres
- Cruise Liner and Ship Fit-out
- General Contracting
- Hotels and Resorts
- Insulation and Industrial Service
- Interior Fit-out and Furnishings
- Special-Purpose Constructions and Stadiums
- Studios and Concert Halls

Lindner Products:

- Ceiling Systems
- Doors
- Dry Lining Systems
- Facades
- Floor Systems
- Heating and Cooling Technologies
- Lights and Lighting Systems
- Partition Systems
- Roofing Systems
- Steel & Glass

Lindner Service:

- Clearance of Harmful Substances
- Construction Management and Project Development
- Deconstruction and Interior Demolition
- General Planning
- Global Product Supplies
- Green Building
- Industrial Scaffolding
- Installation and Building Services
- Research and Development

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