



**GUSTAFS** ::  
DESIGNED FOR EYES AND EARS

A photograph of a wooden horse sculpture standing in a sun-dappled forest. The horse is made of light-colored wood with a textured, ribbed surface. It is positioned in the center-right of the frame, facing right. The background is a dense forest with tall trees and sunlight filtering through the leaves, creating a bokeh effect. The overall mood is serene and natural.

## *THE FEELING OF GREAT ARCHITECTURE*

We have come a long way since our humble beginnings, 1913; the company has changed it's name and its direction over the years. The understanding of wood and the environment however and our ability to tailor carpentry solutions has been with us along the way.

### **TRADITION**

It is our people, with their fine feeling for wood and hand-craft tradition that is Gustafs. The factory encapsulates one hundred years of wood culture. Our roots are in carpentry. Sensitivity and an eye for quality can be found among all our co-workers. We manufacture a valuable high quality wooden product. We are subjected daily to new challenges associated to our customers' expectations. We play our part in an ever changing world. The building process changes, decisions are made faster and we meet the market's high demands for delivery precision. New methods of manufacturing are developed, new surface finishes become popular while safety and environmental demands become more prominent.

### **MADE FOR EYES AND EARS**

Sound affects us all the time, physiologically, psychologically, cognitively and behaviouristic. Gustafs products have excellent acoustic properties that make the architecture and the experience of the room greater.

### **ROOMS WHERE PEOPLE THRIVE**

We work closely with contemporary designers and architects while striving to offer them the greatest possible means to achieve their creative building ambitions. Together with Gustafs as a partner the experience of a large room becomes greater regarding aesthetics, acoustics, and not least fire safety. Together we create attractive and safe rooms where people thrive.

*Great quality shaped by  
the wooden traditions  
of Dalarna in Sweden*

*DESIGNED FOR EYES AND EARS*

## FOR A SUSTAINABLE FUTURE

Living and working as we do in the forest and pastoral landscape around Gustafs we are reminded daily of our responsibility for our environment both locally and in a global perspective. Our factory therefore, has an active and progressive environmental program.



### ENVIRONMENTAL FOOTPRINT

Gustafs panels consist mostly of gypsum and wood totaling 98% natural material. The remaining 2% consist of strictly controlled veneer glues and surface lacquers.

Through studied choices of environmentally friendly material and work methods we reduce our total environmental effect. We produce with no added urea formaldehyde.

### NO ADDED CHEMICALS

By using a high density fibre gypsum core our panels achieve the highest possible A2-s1,d0 reaction to fire classification, including the wooden surface and edges. That's why we don't need to use extra chemicals for impregnation to achieve our fire classification.

### 100% GREEN POWER

All power used in the production process comes from 100% green renewable energy sources (hydro and wind energy).

### RECYCLED CONTENT

All our products based on fibre gypsum boards have a recycled content of at least 94%. 17% of the final panel is post consumer recycled.

### A LONG LIFE-CYCLE

Gustafs products are manufactured with precision and to the highest quality using natural materials. Whether chosen for fire retardant or acoustical purposes our product will perform with unreduced performance throughout their entire lifetime.

### SUSTAINABLE WORKPLACE

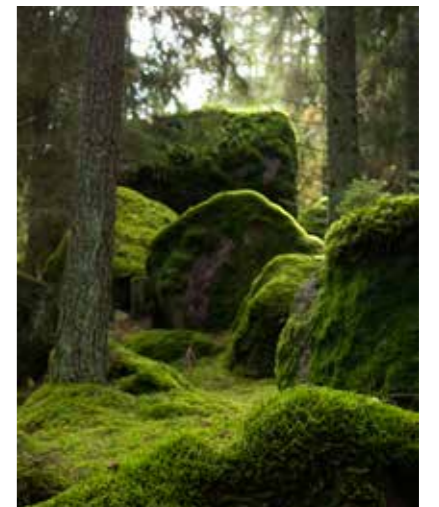
Our workplace and products are controlled by environmental laws and statutes which we comply to. Wherever practically and economically possible however, Gustafs environmental goals strive to exceed these levels.



FSC® C123849

The mark of responsible forestry

Ask for our FSC® classified veneers.





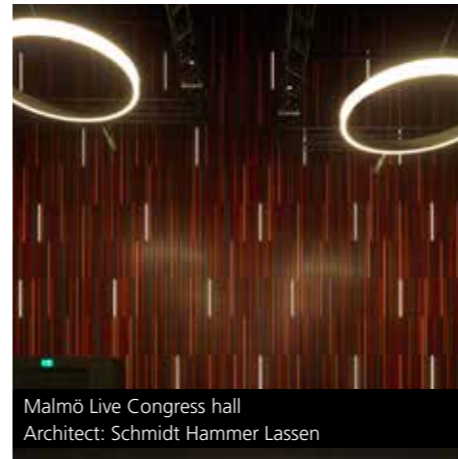
Royal Holloway, London, UK.  
Architect: Associated Architects



Biocentrum, Uppsala, Sweden  
Architect: Bjurström & Brodin



Swedish Parliament, Stockholm.  
Architect: White



Malmö Live Congress hall  
Architect: Schmidt Hammer Lassen



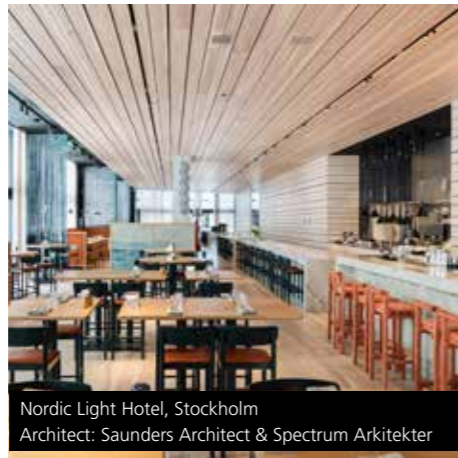
SPIRA, Performing arts center, Jönköping  
Architect: Wingårdh Architects



Bedfordshire University, Luton, UK  
Architect: Moses Cameron Williams Architects



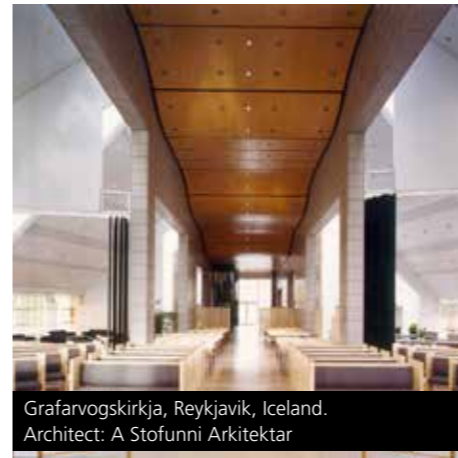
UWS Lanarkshire EcoCampus, Scotland.  
Architect: Mosaic Architecture + Design



Nordic Light Hotel, Stockholm  
Architect: Saunders Architect & Spectrum Arkitekter



Stockholm University, Auditorium  
Architect: Nyréns Arkitektkontor



Grafarvogskirkja, Reykjavik, Iceland.  
Architect: A Stofunni Arkitektar



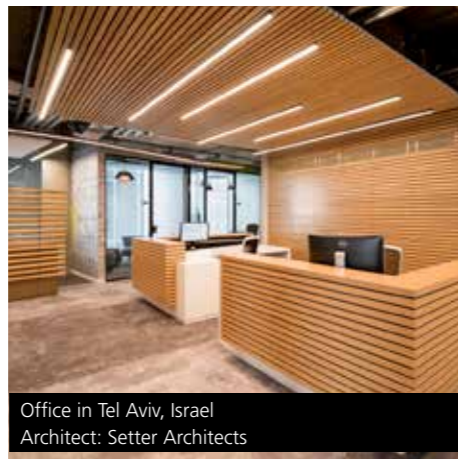
IBM Office Entrance, Stockholm  
Architect: Studio Stockholm



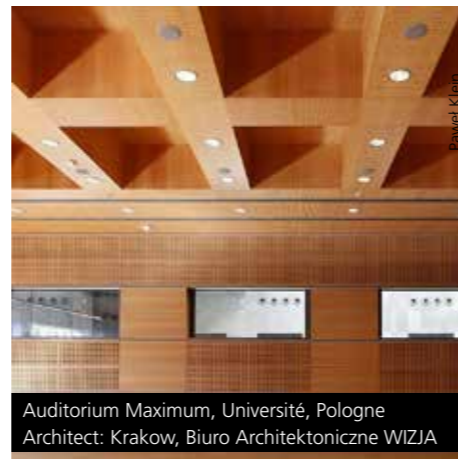
Länsförsäkringar Head Office, Umeå, Sweden  
Architect: LINK Arkitektur



House of Sweden, Washington.  
Architects: Gert Wingårdh and Tomas Hansen



Office in Tel Aviv, Israel  
Architect: Setter Architects



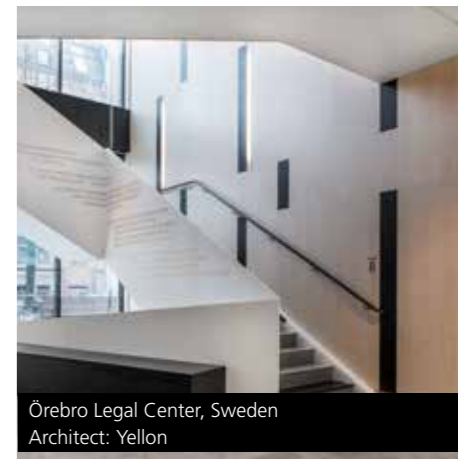
Auditorium Maximum, Université, Pologne  
Architect: Krakow, Biuro Architektoniczne WIZJA



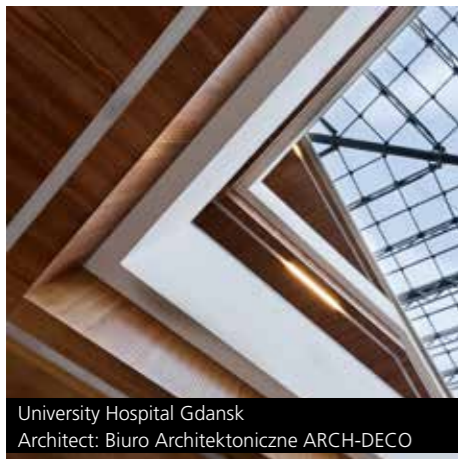
GN Store Nord, Denmark  
Architect: Nobel Arkitekter



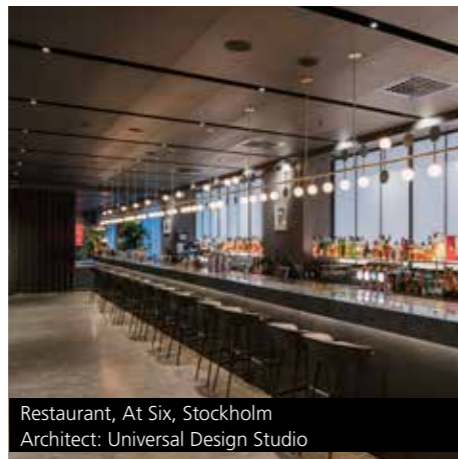
Octapharma, Stockholm, Panels with real copper  
Architect: Joliark



Örebro Legal Center, Sweden  
Architect: Yellon



University Hospital Gdansk  
Architect: Biuro Architektoniczne ARCH-DECO



Restaurant, At Six, Stockholm  
Architect: Universal Design Studio



Radisson Blu Plaza Oslo, Norway  
Architect: Living design



Weir Group, Head Office, Scotland  
Architect: Pracownia Projektowa MACKÓW



The academy of music in Poznan. Architect:  
Pracownia Autorska Jerzego Gurawskiego



Mall of Scandinavia, Solna, Sweden  
Architect: Wingårdhs Arkitektkontor

## *KNOWLEDGE IS A GUSTAFS PRODUCT*

Our product groups are GUSTAFS PANEL SYSTEM and GUSTAFS LINEAR SYSTEM.

We can offer both standard solutions and customized interiors according to the client's wishes. We bring an in-depth knowledge of a room's design, construction and performance so that every detail will make the experience of the room even greater.

*"Customized is  
our standard"*

## GUSTAFS PANEL SYSTEM

Gustafs Panel System® comprises of acoustic panels for wall and ceiling coverings, suited for public buildings such as conference rooms, concert halls and auditoria. For schools and other similar high trafficked rooms we have special high impact resistant panel solutions. There is a wide range of options when it comes to surfaces and finishes, so there are many possibilities to vary the look and feel of the finished room. With Gustafs Panel System® we have combined unique design with flexible installation.



## GUSTAFS LINEAR SYSTEM

GUSTAFS LINEAR SYSTEM® is an innovative range of ribs and planks for cladding of walls and ceilings. With Gustafs Linear System you achieve a reliable, labour saving and exclusive interior finish.

### GUSTAFS LINEAR RIBS

The Ribs are made with real wood veneer and use a Quick-Up installation system. Naturally, Gustafs Linear offers a design attribute which incorporates the best fire rating, optimal sound absorption and diffusion properties. Our high impact resistant rib (HIR) has been specially designed for tough environments.



### GUSTAFS LINEAR PLANK

Gustafs Linear Planks lets you combine a beautiful linear design with the best possible fire rating. Using the famous Gustafs Capax installation system a perfect end result will be guaranteed as well as the option to fully integrate the Planks with Gustafs Panels and Ribs. Every Plank comes with one unique and full crown veneer flitch for the most exclusive experience.



### GUSTAFS LINEAR MODULE

The Gustafs Modules come fully assembled and ready to use, including the acoustic felt. The Module system provides a quick, user friendly and concealed installation and a modern linear look in solid wood. A look that can be adapted to your request when it comes to the rib dimension and the spacing in between them, but also the type of wood and wood treatment.

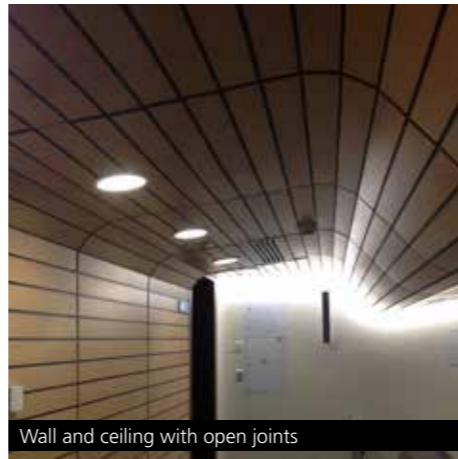




Intarsia Inlay



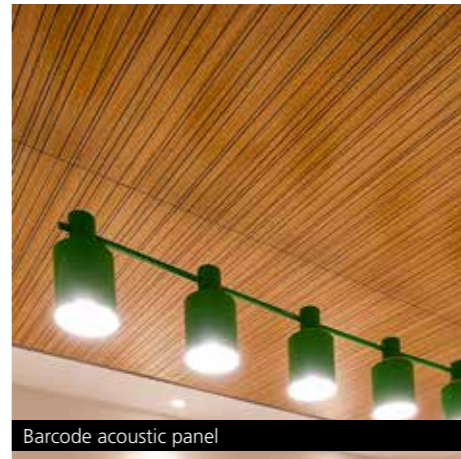
Ribs with different depths



Wall and ceiling with open joints



Bespoke rib installation



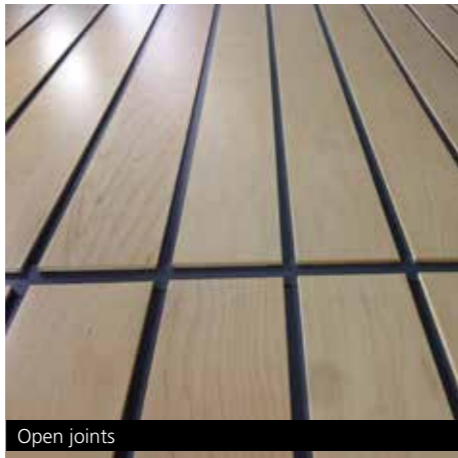
Barcode acoustic panel



Bespoke panels, painted, veneered and metal



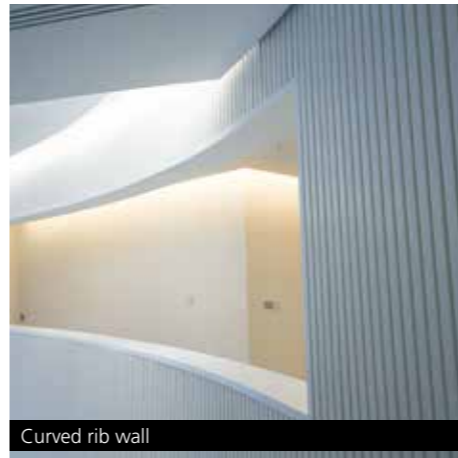
CNC routed panels with color inlays



Open joints



Curved panels with open joints



Curved rib wall



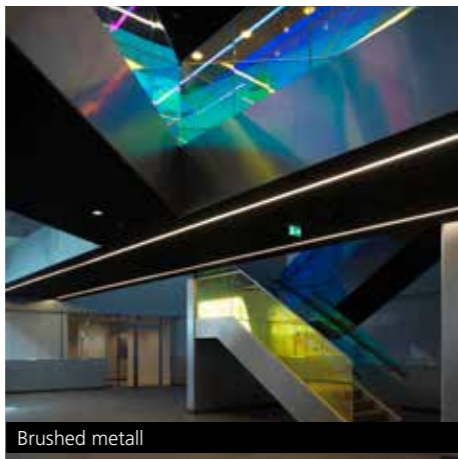
Bespoke Gustafs Linear Plank



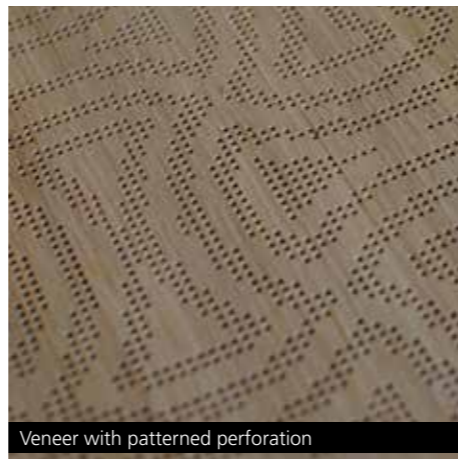
Curved wall panel



Panels with copper



Brushed metal



Veneer with patterned perforation



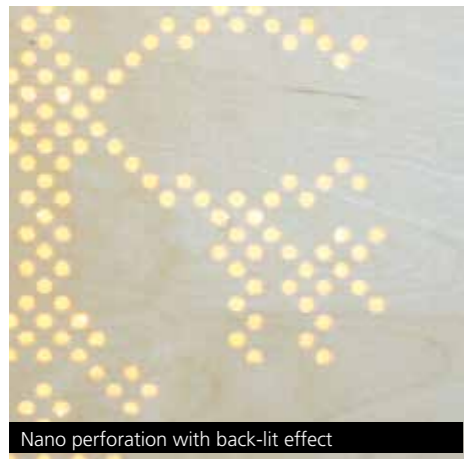
Gradient printed ash panel



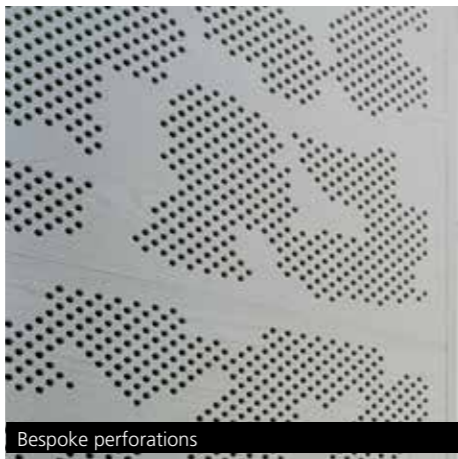
Curved rib ceiling



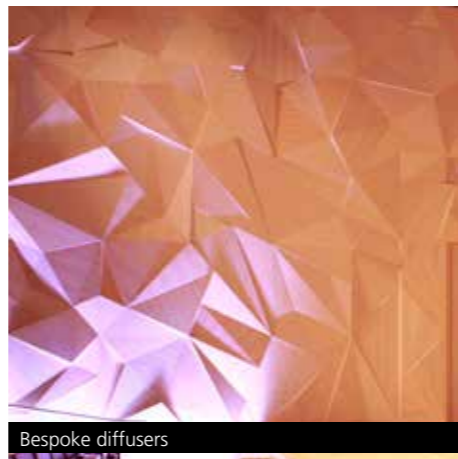
Green stained panels



Nano perforation with back-lit effect



Bespoke perforations



Bespoke diffusers



Triangular panels with LED inlays



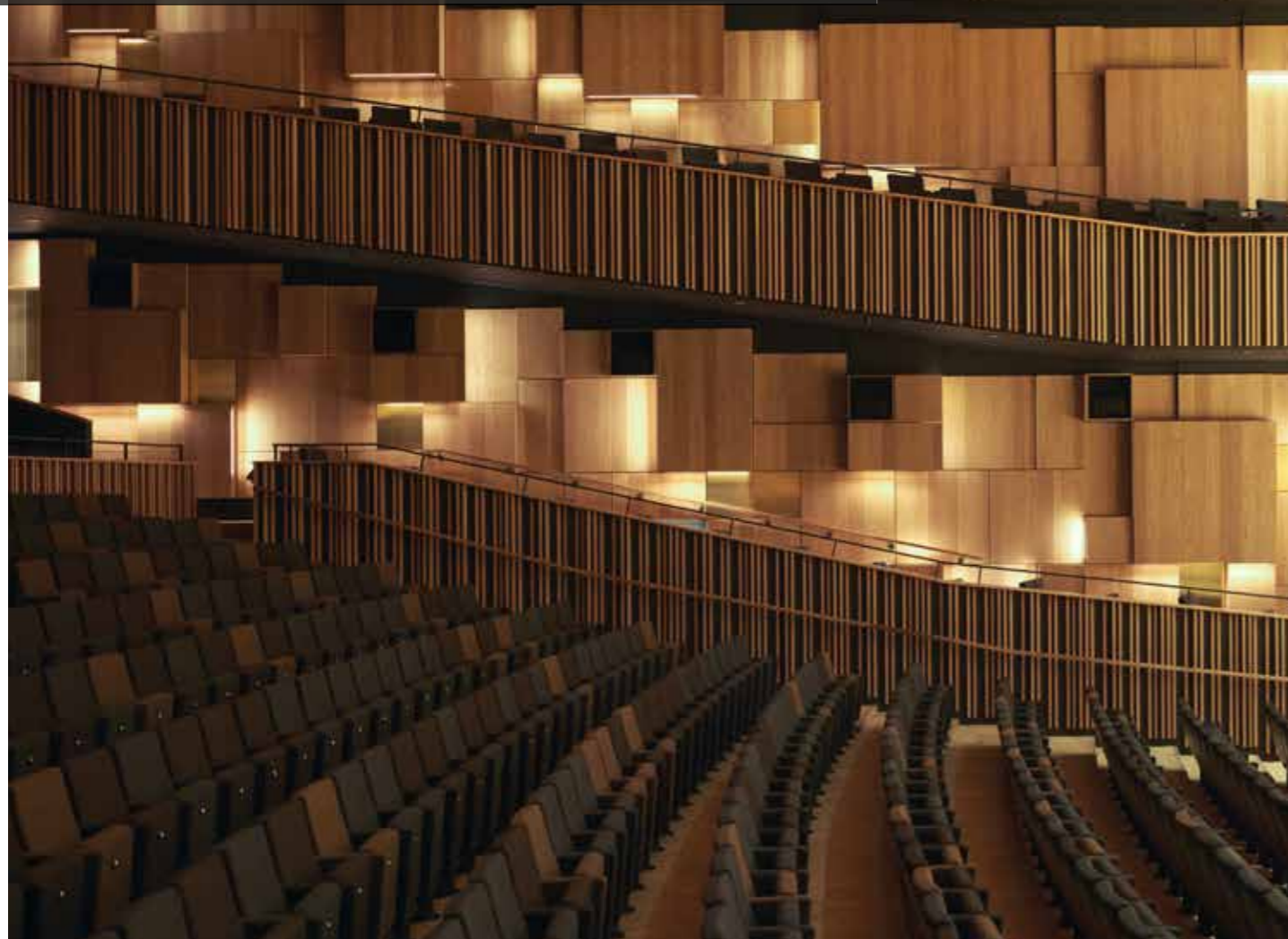
LED line Capax



Linear LED Lighting - Gustafs D-Line

# GUSTAFS PANEL SYSTEM

We are experts in acoustic and fire retardant panels for wall and ceiling coverings. Gustafs Panel System® is a well-documented panel system that draws on our experience from a wide variety of world wide realized projects. Thanks to the development of our Capax profile system we can provide simple and secure installations in tune with today's rapid building processes.



## DESIGN

Form and function go hand in hand. We collaborate closely with architects and designers and are attentive to what lies in the future. Our design is constantly evolving as we develop different surfaces, such as veneer, laminates, textiles, metals, and colours. You can combine Gustafs Panel System® with Gustafs Linear System.

## ACOUSTICS

The acoustic environment in a room is very important; especially when it comes to, for example, lecture halls, airport terminals or concert halls. Some frequencies should be amplified, and others must be attenuated or removed. Gustafs panels affect and regulate the acoustics without sacrificing beautiful design – truly designed for eyes and ears!

## 100% FIRE SAFE

Our panels and the system as whole, have unique characteristics in fire safety. For our veneered and painted panels, we have achieved the extremely high Euro classification A2-s1,d0.

## INSTALLATION

Capax is the name of our unique aluminum profile installation system. The Capax system provides a safe and quick installation, well adapted to the rapid construction process of today. Our Capax installation system, in combination with the very true stable fibre gypsum panels, guarantees a durable and seamless installation, also for large formatted panels and over its full life cycle.

## GREEN

Regarding content and production methods Gustafs Panels keep the highest standards as required by today's building projects. Something that would not have been possible without the fibre gypsum core and a production located in Sweden.



## DESIGN

Gustafs Panel System® offers many possibilities to create environments with the highest demands for design and appearance. Form and function go hand in hand. We collaborate closely with architects and designers and are attentive to what lies in the future. Our design is constantly evolving as we develop different surfaces, such as veneer, laminates, textiles, metals, and colours.



## PLAIN PANELS

Plain panels are anything but plain. It is when we are commissioned to create a wooden clad interior that our true expertise is called on. A wall or ceiling solution covered in natural wood is a challenge involving craftsmanship and experience. Our veneering experts can offer many alternative choices of veneering techniques from the finest choice of materials. Depending on the wood species, the veneer cut, the colour tone and ultimately the installation precision, a plain wooden panel becomes one of nature's strongest interior expressions. The passage of time and light exposure will continue to affect the natural maturing process of the material until it achieves a life-long classic appearance. There is nothing plain about a Gustafs panel.



## ACOUSTIC PANELS

Gustafs Panel System® can help create an aesthetically satisfying and acoustically adjusted environment. Sound absorption, for example, is attained by using perforated or slotted panels in combination with mineral wool and air space to achieve the correct acoustic profile. Our various acoustic standard patterns are tested and documented to achieve known sound absorption coefficients for both walls and ceilings. We also give the possibility to create your own perforation pattern. Contact us and we will tell you more.



## CURVED PANELS & BESPOKE SOLUTIONS

Gustafs has a long history within the joinery industry. We know what it takes to make unique items. Even though many of today's projects involve thousands of square meters we are still able, thanks to our flexible production, to assist you even with specially formed parts. Parts that make a big difference! To curve parts of a wall or a ceiling is a beautiful design possibility that we offer. We can form press panels from a radius of 0,5 meter and larger. Some panels can be curved during installation.



## HIGH IMPACT PANELS

For interiors with an extra high level of traffic, we can offer our high impact panels (EHIP). These panels are also extra scratch resistant and are available with veneered and colored surfaces.

## PRINTED PANELS

You can design every panel in a completely unique way. Design panel by panel or spread your graphics over several panels with a seamless transference. You can get your print directly on the veneer, on laminate or on craft paper.





# SURFACES



## VENEER

Wood has a natural variation in structure and colour tone which ages in harmony with nature. The fact that wood is a natural material is an intrinsic aspect of its charm and attraction. On the following pages we present our standard veneer selection. It goes without saying that we do our utmost to fulfill requests for other veneers. We offer two choices of genuine veneer, NATURE and GEMINI.



## LACQUERED VENEER

Prior to delivery the panels are given a resilient and attractive surface finish. The finish is determined by the customer from a choice of lacquered, oiled, stained, pigmented or painted surface. A clear lacquered finish is by far the most common maintenance-free and durable finish for wooden surfaces. Utilizing a multi-stage UV-lacquering process, our surface finish achieves these demands while aspiring to maintain technical aspects such as our fire retardation and environmental goals. Our lacquer is a multi-layer UV-cured process which is available in a range of gloss finishes. The lowest gloss gives the impression of a subdued oiled surface whereas the highest reaches almost a mirror-like surface.



Grey pigmented drift wood



## STAINED & PIGMENTED

You can also apply pigmented lacquers or stain the veneer to achieve different effects on your wall or ceiling panel. Different veneers react different to certain treatments, so contact us to guarantee that the final result matches your vision.

**A pigment** can be used to change the colour tone of the veneer on Gustafs Panels. We have developed a three stage scale of white pigment for veneers. Since various species react differently to the process we recommend a consultation before proceeding with surface finishing.



## SOLID PAINT

Some surfaces are very highly demanding. Among the many advantages of a Gustafs panel is its plane and even surface. This enables us to create a painted surface finish which otherwise is extremely difficult to achieve on site. Utilizing our production technology we can produce painted surfaces in a multitude of colors in accordance with for example NCS or RAL codes up to a gloss rate up to 50.



## ART

With Gustafs Art there are many options to decorate the panel surface, route out your logo or create a printed pattern over the entire surface come to us with your idea.

**BF-PRINT**  
Gustafs can now offer new design opportunities with Gustafs BF-Print. You can design every panel in a completely unique way. Design panel by panel or spread your graphics over several panels with a seamless transference. You can have your print directly on the veneer, laminate or craft paper.

**ROUTED PATTERNS**  
On our plain panels we can rout out text or patterns. This gives you the opportunity to get for example a logo or maybe directions routed out directly on the panel surface.

**INTARSIA**  
Design your panels with classic wood inlays.



## LAMINATE

Many interiors utilize the beauty, simplicity and resistance to impact of laminated surfaces. You choose what laminate\* we should use. With laminates you can design beautiful surfaces that are durable, impact resistant and easy to clean. Of course we can supply these laminated panels with acoustic perforations and a fire classification that meets the high standards for public rooms.

We also offer a standard collection of metal laminates including, among others, aluminium, brushed steel and bronze, but you can also choose other laminates. Contact us for more information regarding laminates.

\* HPL, High Pressure Laminate

# VENEERS NATURE

**NATURE VENEER** As wood ages its colour tone matures typically for the species. Variations in colour tone and structure is a part of woods appeal. This too, is the case with veneer. Nature veneer is available in a wide variety of species and matures in colour tone with time and exposure to light. Most nature veneers can on request be purchased with FSC® certification. Large areas permit a certain amount of variation where as smaller areas demand a more exacting match.

## NATURE GUSTAFS STANDARD VENEER COLLECTION



Oak



Birch



Rotary cut Birch



Maple



Ash



Beech



Pear



Mahogany



Oregon Pine



Elm



Cherry



Teak



Walnut

# VENEERS GEMINI

**GEMINI** - The major advantage with Gemini® reconstituted veneers is their colour and pattern consistency irrespective of quantity. The veneers are less photosensitive and do not mature in the same way as natural veneers. The colour tone is therefore more stable over time. The collection consists of a number of chosen patterns which are inspired by their natural counterparts. The Gemini® collection even offers a selection of exotic wooden species patterns which have no negative environmental effect and come with FSC® certification. Gemini® panels can be produced in lengths up to 2400mm.

## GEMINI GUSTAFS STANDARD VENEER COLLECTION



Gemini - Pale Maple\*



Gemini - Sandy Maple



Gemini - Wavy Maple



Gemini - Birds Eye Maple



Gemini - Birch



Gemini - Ash



Gemini - Oak



Gemini - Beech



Gemini - Pear\*



Gemini - Cherry\*



Gemini - Teak



Gemini - Mahogany



Gemini - Walnut



Gemini - Wenge

# PAIN, PRINT & SOLID

There are many different surface treatments to choose from to achieve your desired result. Utilizing our unique production technology we can produce painted surfaces in a multitude of colours in accordance with for example NCS or RAL codes

EXAMPLES OF SURFACE FINISHES You can find all our surface possibilities on [gustafs.com](http://gustafs.com)

PIGMENTED VENEER



Stained ash veneer

PRINT

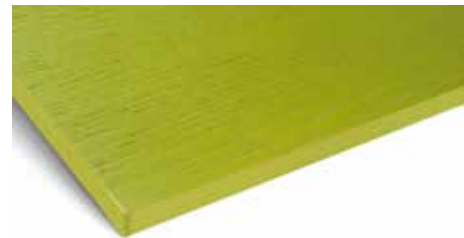


Print on maple veneer

SOLID COLORS



Laminate bronze



Pigmented lacquer on ash veneer



Print on Paper substrate



Laminate Aluminium



Painted ash veneer



Print on HPL- substrate



Paint Gustafs Silver Metallic

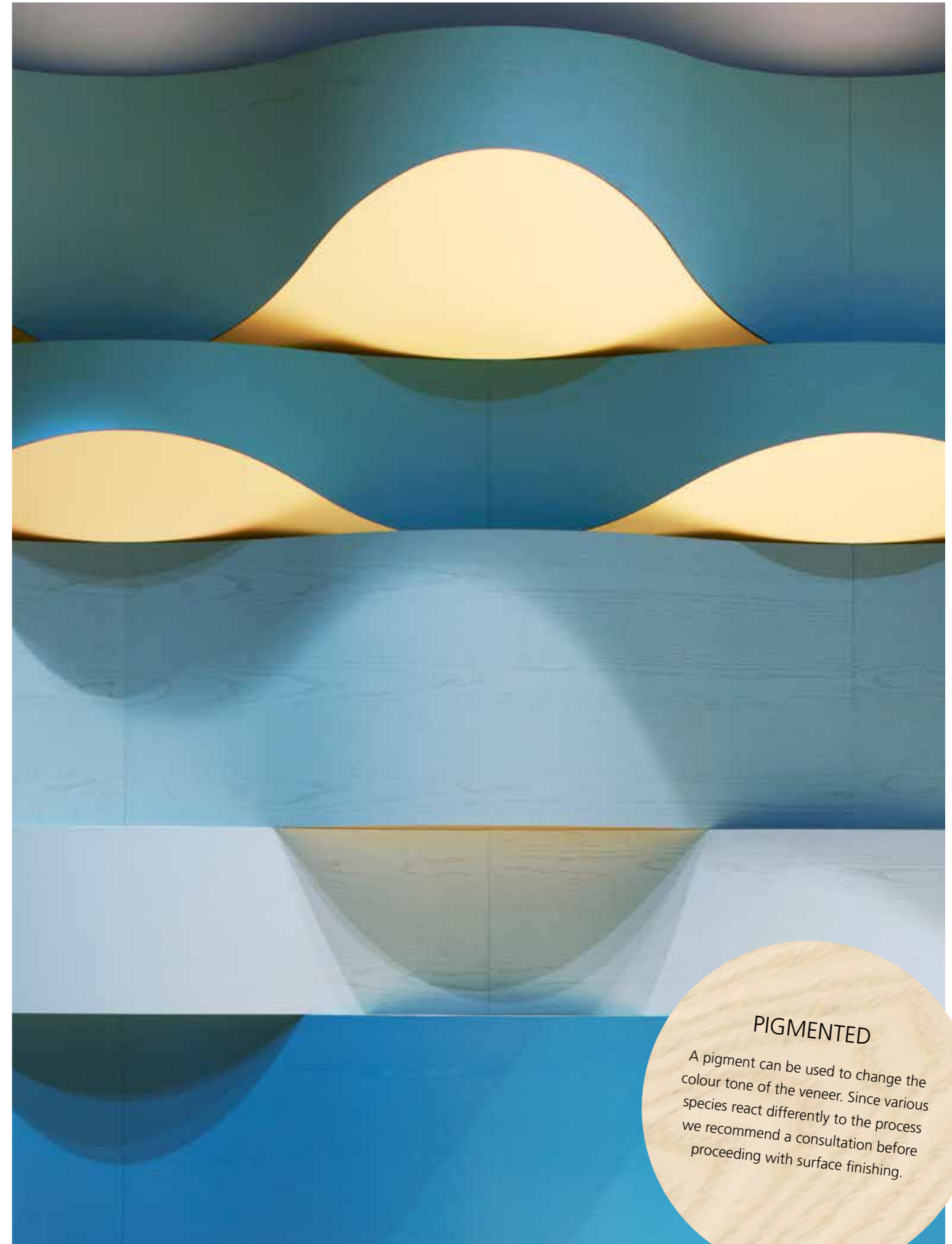


Nature Ash  
no pigment

Nature ash veneer with white pigmented lacquer



Paint Gustafs Champagne Metallic



## PIGMENTED

A pigment can be used to change the colour tone of the veneer. Since various species react differently to the process we recommend a consultation before proceeding with surface finishing.

# ACOUSTICS

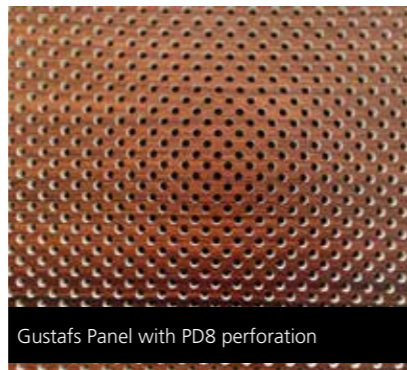
How we experience sound in a room is as important as how we perceive the designers choice of materials and furnishing. Our customers and the challenges they confront are what we as a company thrive on when developing our solutions and innovations. We offer both standard and bespoke acoustic solutions to our customers.



University of Technology, Gdansk, Poland  
Architect: Andrzej Prusiewicz

## REFLECTION

Gustafs Panel System, with plain panels, is often used to reflect sound. The hard and high density surfaces of a room are a decisive factor in the room's total acoustic profile. For amplification of sound, stable and non-vibrating reflective surface are essential in a room to help carry the sound waves to the audience. To achieve a balanced acoustic profile in a room however other acoustic devises must be introduced. Designers are recommended to consult with an acoustician in order to achieve the required results with our panels.



Gustafs Panel with PD8 perforation

## ABSORPTION

Sound absorption, is attained by using perforated or slotted panels in combination with mineral wool and air ap. Gustafs Panel System is used as absorber with the purpose to reduce the total energy of the sound source. Sound absorption is achieved by creating an amount of open area on a panel surface. The absorbing surface takes away unwanted sound and consequently contributes to a lesser intensity of sound. The challenge is to find a balance between the absorbing area and the reflective areas of a room to achieve a comfortable and purposeful acoustic depending on its use.

### MICRO PERFORATION

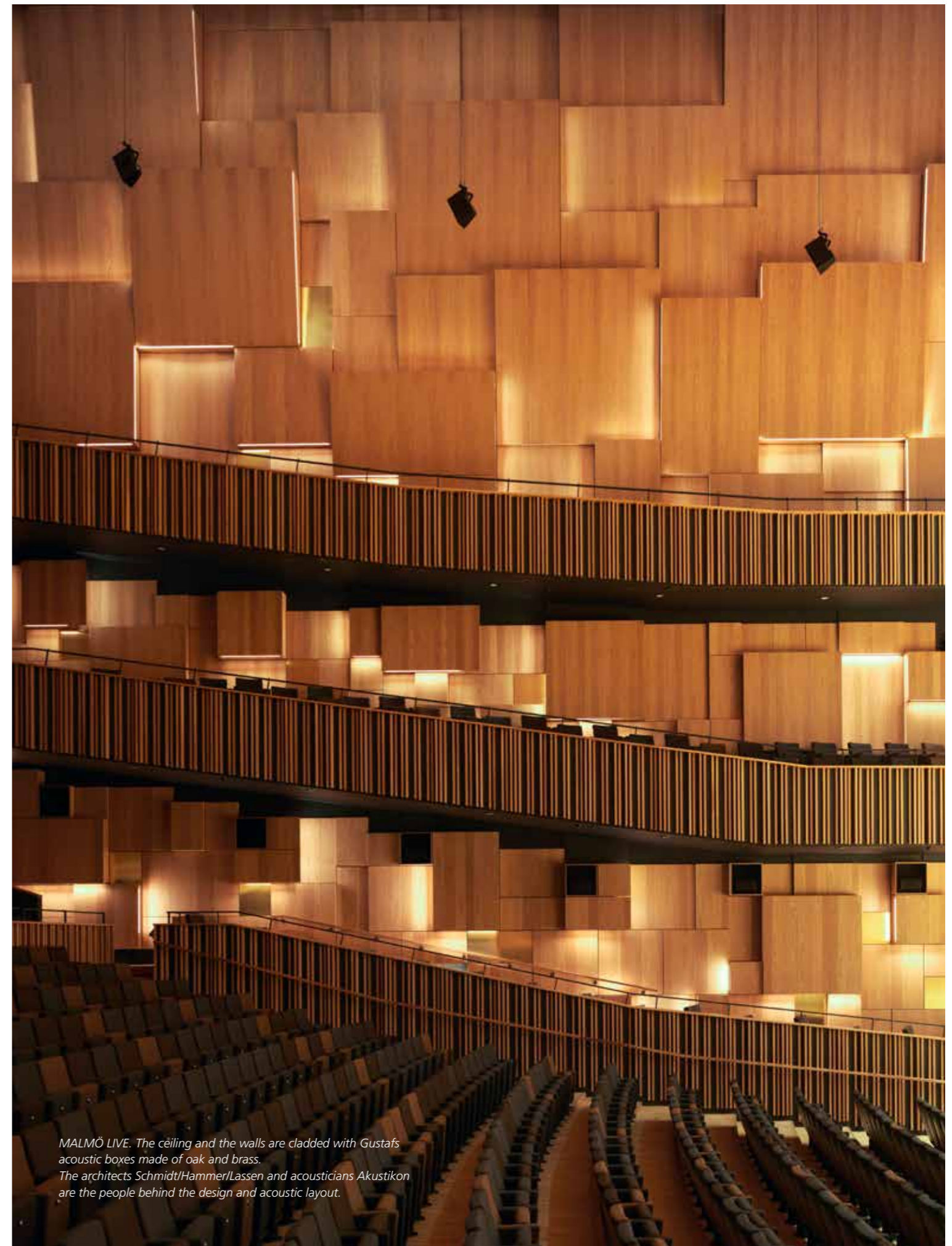
Gustafs Nano solution combines a acoustic chamber mechanism with the sound absorption created by a microperforation. The result is a panel with fantastic coefficients.



Qatar Convention Center

## DIFFUSION

A diffuser is an element which purposely reflects and spreads a sound source. Placed properly, the diffuser will improve the overall sound quality in the room while avoiding added sound effects such as echo or reverberation. An optimal diffuser must be designed based on mathematical principles and avoid regular patterns in the surface structure. Diffusers are used to create "depth" in the sound and improve the sound experience of the room, the room feels bigger than it really is.



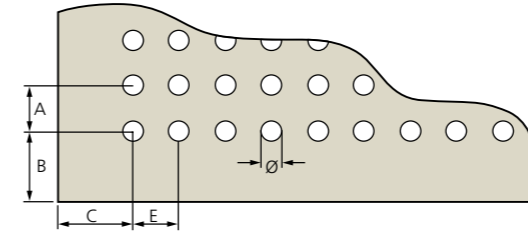
MALMÖ LIVE. The ceiling and the walls are clad with Gustafs acoustic boxes made of oak and brass. The architects Schmidt/Hammer/Lassen and acousticians Akustikon are the people behind the design and acoustic layout.



Octapharma office Stockholm  
 Gustafs acoustic panels with PD5 perforation  
 Gustafs Panel with copper  
 Architect: White / Joliark

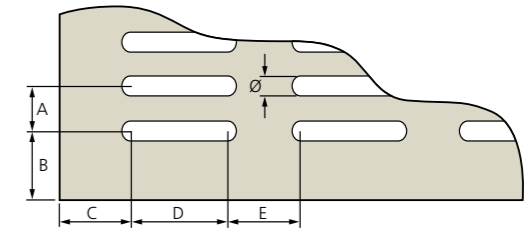
# ACOUSTIC PANELS

Our various acoustic standard patterns are tested and documented to achieve known sound absorption coefficients for both walls and ceilings. Certain sounds need to be directionally steered and others reduced or eliminated. We therefore recommend designers to consult with a professional acoustician in order to achieve the required results.



GENERAL BEZEL CONDITIONS FOR WALL PANELS  
 B and C = 30 mm. Variations may occur.

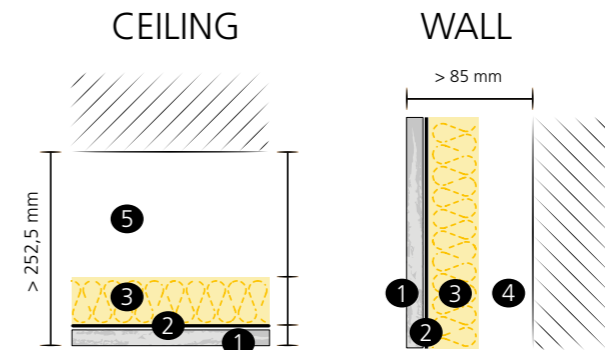
GENERAL BEZEL CONDITIONS FOR CEILING PANELS  
 B and C = 40 mm. Variations may occur.



GENERAL BEZEL CONDITIONS FOR WALL PANELS  
 B = 30. Variations may occur.

GENERAL BEZEL CONDITIONS FOR CEILING PANELS  
 B = 35. Variations may occur.

- 1 Panel
- 2 Acoustic felt
- 3 Mineral wool
- 4 Air gap 30 mm
- 5 Air gap 200 mm



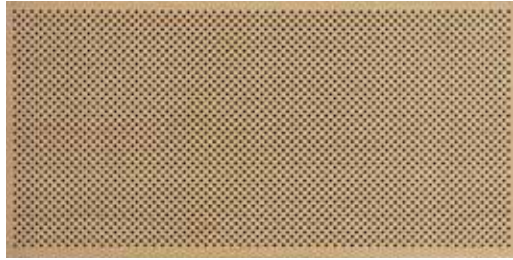
## GUSTAFS STANDARD ACOUSTIC PATTERNS

		Gustafs Acoustic Values																			
ACOUSTICS	Typ	Ø or Spacing	Slott (D)	cc (A/E)	Open area	WALL: 45 mm insulation + 30 mm air void (Hz/ap)						CEILING: 45 mm insulation + 200 mm air void (Hz/ap)									
						α <sub>w</sub>	NRC	125	250	500	1000	2000	4000	α <sub>w</sub>	NRC	125	250	500	1000	2000	4000
	Plain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	Nano	0,5 mm	-	1,75/2	5,9%	<b>0,80-B</b>	<b>0,90</b>	0,35	0,90	1,00	0,90	0,75	0,65	<b>0,85-B</b>	<b>0,90</b>	0,45	0,95	0,90	0,90	0,80	0,70
	Nano*	0,5 mm	-	1,75/2	5,9%	-	-	-	-	-	-	-	-	<b>0,70-C</b>	<b>0,75</b>	0,40	0,80	0,85	0,65	0,65	0,60
	PH5	5 mm	-	20/20	5%	<b>0,30-D</b>	<b>0,50</b>	0,50	0,70	0,65	0,45	0,25	0,20	<b>0,35-D</b>	<b>0,50</b>	0,50	0,65	0,55	0,45	0,30	0,20
	PH8	8 mm	-	20/20	12%	<b>0,55-D</b>	<b>0,80</b>	0,35	0,85	1,00	0,75	0,55	0,40	<b>0,55-D</b>	<b>0,80</b>	0,65	0,95	0,85	0,80	0,55	0,40
	PH8-F	8 mm	-	20/20	12%	<b>0,60-C</b>	<b>0,85</b>	0,35	0,85	0,95	1,00	0,50	0,35	<b>0,60-C</b>	<b>0,85</b>	0,55	0,90	0,95	1,00	0,60	0,35
	PH10	10 mm	-	20/20	18%	<b>0,70-C</b>	<b>0,85</b>	0,35	0,85	1,00	0,90	0,70	0,55	<b>0,75-C</b>	<b>0,90</b>	0,65	1,00	0,90	0,85	0,75	0,60
	PG5	5 mm	-	20/20	3%	<b>0,25-E</b>	<b>0,40</b>	0,40	0,50	0,45	0,35	0,20	0,15	<b>0,30-D</b>	<b>0,40</b>	0,45	0,45	0,40	0,40	0,25	0,15
	PG8	8 mm	-	20/20	8%	<b>0,45-D</b>	<b>0,65</b>	0,40	0,85	0,80	0,60	0,40	0,30	<b>0,50-D</b>	<b>0,65</b>	0,55	0,75	0,70	0,65	0,40	0,35
	PS2	3 mm	-	20/20	2%	<b>0,20-E</b>	<b>0,50</b>	0,30	0,85	0,70	0,30	0,15	0,05	<b>0,25-E</b>	<b>0,45</b>	0,55	0,70	0,55	0,35	0,20	0,10
	PD8	8 mm	-	10/10	24%	<b>0,80-B</b>	<b>0,90</b>	0,30	0,80	1,00	0,95	0,75	0,65	<b>0,85-B</b>	<b>0,90</b>	0,65	1,00	0,95	0,90	0,80	0,70
	SM5	5 mm	20 mm	20/20	15%	<b>0,65-C</b>	<b>0,80</b>	0,30	0,75	1,00	0,80	0,60	0,50	<b>0,65-C</b>	<b>0,75</b>	0,50	0,75	0,80	0,75	0,65	0,50
	SM8	8 mm	20 mm	20/20	26%	<b>0,85-B</b>	<b>0,85</b>	0,30	0,75	1,00	0,90	0,80	0,70	<b>0,85-B</b>	<b>0,85</b>	0,50	0,80	0,90	0,85	0,85	0,75
	SH5	5 mm	40 mm	20/30	15%	<b>0,60-C</b>	<b>0,80</b>	0,35	0,80	1,00	0,80	0,60	0,40	<b>0,60-C</b>	<b>0,80</b>	0,65	0,95	0,85	0,80	0,60	0,45
	SH8	8 mm	40 mm	20/30	26%	<b>0,75-C</b>	<b>0,85</b>	0,35	0,80	1,00	0,95	0,70	0,60	<b>0,75-C</b>	<b>0,90</b>	0,65	1,00	0,95	0,90	0,75	0,60
	SG5	5 mm	55 mm	20/30	12%	<b>0,50-D</b>	<b>0,75</b>	0,35	0,90	0,95	0,70	0,50	0,35	<b>0,55-D</b>	<b>0,70</b>	0,55	0,85	0,80	0,70	0,50	0,40
	SG8	8 mm	55 mm	20/30	20%	<b>0,65-C</b>	<b>0,85</b>	0,35	0,90	1,05	0,85	0,55	0,50	<b>0,65-C</b>	<b>0,85</b>	0,55	1,00	0,90	0,85	0,60	0,55
	SX5	5 mm	140 mm	20/60	18%	<b>0,70-C</b>	<b>0,80</b>	0,35	0,75	0,95	0,80	0,65	0,55	<b>0,70-C</b>	<b>0,75</b>	0,50	0,80	0,80	0,75	0,65	0,55
	SX8	8 mm	140 mm	20/60	29%	<b>0,80-B</b>	<b>0,85</b>	0,30	0,75	1,00	0,90	0,75	0,70	<b>0,85-B</b>	<b>0,85</b>	0,50	0,80	0,90	0,85	0,80	0,70
	RS5	5 mm	40 mm	20/30	16%	<b>0,65-C</b>	<b>0,80</b>	0,35	0,70	0,95	0,80	0,65	0,50	<b>0,65-C</b>	<b>0,75</b>	0,50	0,75	0,80	0,75	0,65	0,50
	RS8	8 mm	40 mm	40/30	13%	<b>0,60-C</b>	<b>0,70</b>	0,35	0,70	0,85	0,70	0,55	0,45	<b>0,60-C</b>	<b>0,65</b>	0,45	0,70	0,70	0,65	0,55	0,45
	QS	20 mm	190 mm	40/140	28%	<b>0,5-D</b>	<b>0,65</b>	0,35	0,70	0,85	0,50	0,45	0,40	<b>0,75-C</b>	<b>0,75</b>	0,40	0,75	0,75	0,80	0,75	0,65
	RP8-C10	8 mm	∞	10/40	2,8%	<b>0,65-C</b>	<b>0,70</b>	0,40	0,75	0,80	0,65	0,60	0,60	<b>0,75-C</b>	<b>0,75</b>	0,40	0,75	0,80	0,80	0,70	0,65
	RP8-C20	8 mm	∞	20/40	1,7%	<b>0,60-C</b>	<b>0,70</b>	0,35	0,80	0,80	0,70	0,55	0,45	<b>0,65-C</b>	<b>0,70</b>	0,40	0,75	0,70	0,70	0,60	0,50
	RP8-Bar	8 mm	∞	Barcode	1,6%	<b>0,50-D</b>	<b>0,60</b>	0,40	0,70	0,70	0,60	0,45	0,35	<b>0,55-D</b>	<b>0,60</b>	0,40	0,70	0,65	0,60	0,50	0,40
	Linear	12 mm	∞	50	24%	<b>0,70-C</b>	<b>0,80</b>	0,30	0,90	1,00	0,75	0,60	0,65	<b>0,70-C</b>	<b>0,80</b>	0,50	0,95	0,85	0,75	0,60	0,65
	Linear	62 mm	∞	100	62%	-	-	-	-	-	-	-	-	<b>0,95-A</b>	<b>1,00</b>	0,35	0,95	1,00	1,00	0,95	0,75

\* Tested with 200 mm allgap only, no insulation.

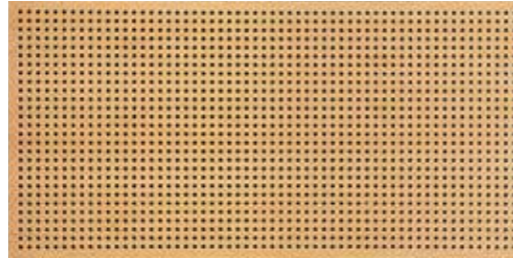
ACOUSTIC PATTERNS, STANDARD PERFORATIONS

PD8 DOMINO PERFORATION 8 MM, OPEN AREA 24%



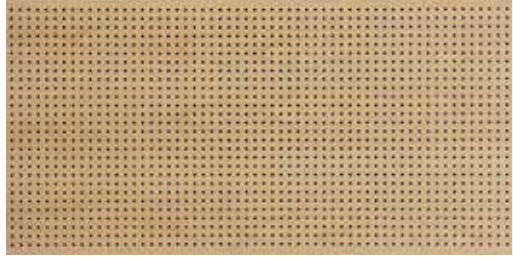
A=20 mm  
E=10 mm  
Diameter=8 mm  
Absorption class B  
Open area 24%

PH10 PERFORATION 10 MM, OPEN AREA 18%



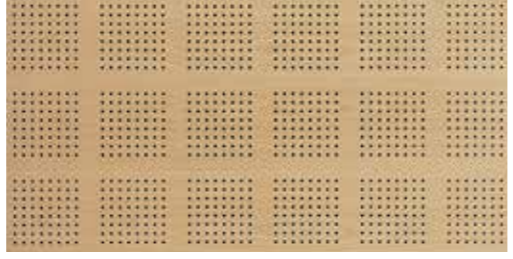
A=20 mm  
E=20 mm  
Diameter=10 mm  
Absorption class C  
Open area 18%

PH8 PERFORATION 8 MM, OPEN AREA 12%



A=20 mm  
E=20 mm  
Diameter = 8 mm  
Absorption class D  
Open area 12%

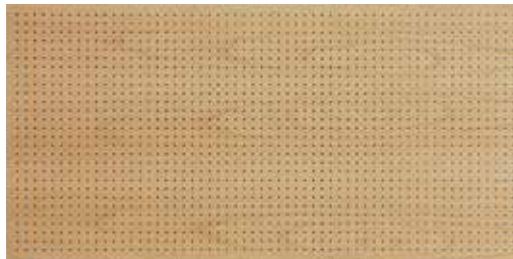
PG8 GROUP PERFORATION 8% OPEN AREA



A=20 mm  
E=20 mm  
Diameter=8 mm  
Absorption class D  
Open area 8%

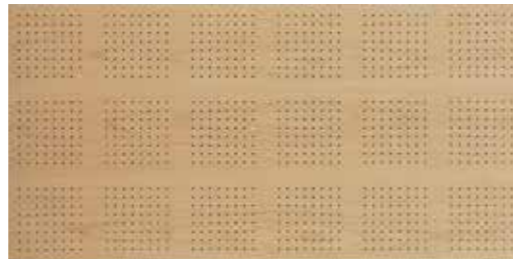
Group measurement 200 mm x 200 mm.

PH5 PERFORATION, 5 % OPEN AREA



A=20 mm  
E=20 mm  
Diameter = 5 mm  
Absorption class D  
Open area 5%

PG5 GROUP PERFORATION 5 MM, 3% OPEN AREA



A=20 mm  
E=20 mm  
Diameter=5 mm  
Absorption class E/D  
Open area 3%

Group measurement 200 mm x 200 mm.

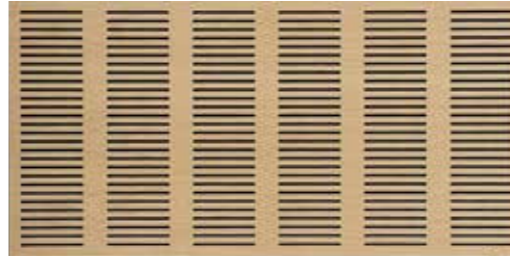
PS2 DOUBLE SIDED PERFORATION 3/10 MM



A=20 mm  
E=20 mm  
Diameter visible perforation = 3 mm  
Diameter2 =10 mm  
Absorption class E  
Open area 2%

ACOUSTIC PATTERNS, SLOT PERFORATIONS

SX8 MAXI SLOTTED, 29% OPEN AREA



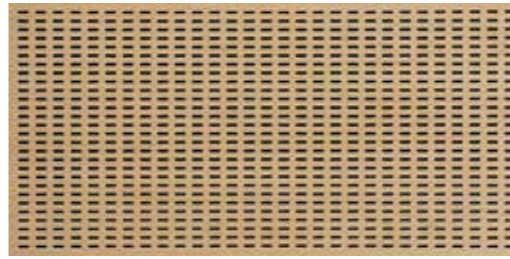
A=20 mm  
D=140 mm  
E=60 mm  
Diameter=8 mm  
Absorption class B  
Open area 29%

QS SLOTTED 20 MM, 28% OPEN AREA



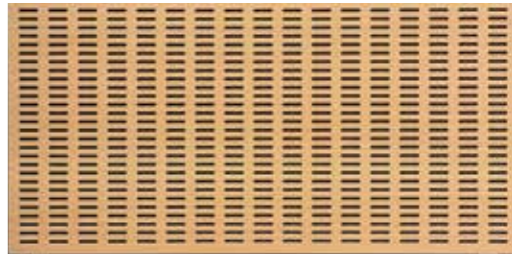
A=20 mm  
D=190 mm  
E=140 mm  
Diameter=20 mm  
Absorption class C  
Open area 28%

SM8 MINI SLOTTED 8 MM, OPEN AREA 26%



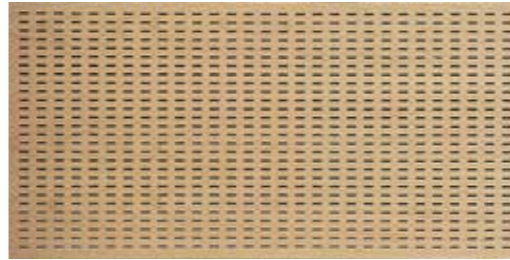
A=20 mm  
D= 20 mm  
E=20 mm  
Diameter=8 mm  
Absorption class B  
Open area 26%

SH8 SLOTTED 8 MM, 26 % OPEN AREA



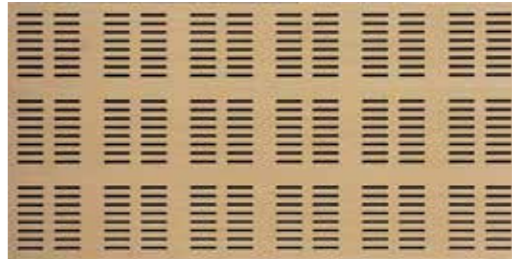
A=20 mm  
D= 40 mm  
E=30 mm  
Diameter=8 mm  
Absorption class C  
Open area 26%

SM5 MINI SLOTTED 5 MM, OPEN AREA 15%



A=20 mm  
D= 40 mm  
E=30 mm  
Diameter=5 mm  
Absorption class C  
Open area 15%

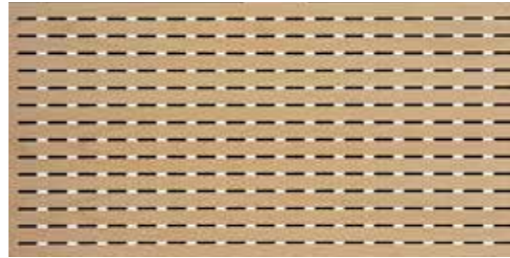
SG8 GROUP SLOTTED 8 MM, OPEN AREA 20%



A=20 mm  
D= 55 mm  
E=30 mm  
Diameter=8 mm  
Absorption class C  
Open area 20%

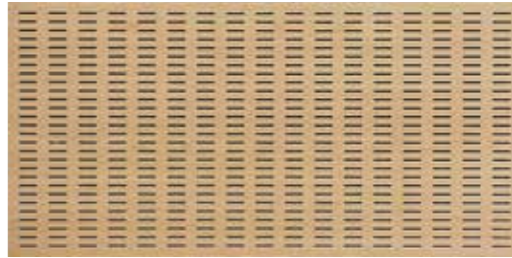
Group measurement 200 mm x 200 mm.

RS8-C40 RIB SLOTTED 8 MM, OPENAREA 13%



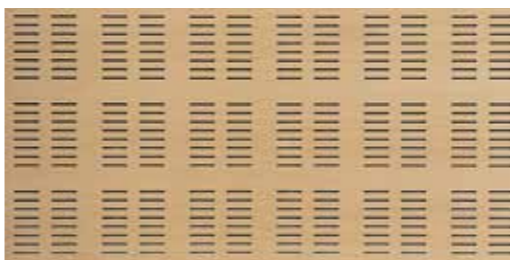
A=40 mm  
D= 40 mm  
E=30 mm  
Diameter = 8 mm  
Absorption class C  
Open area 13%

SH5 SLOTTED 5 MM, OPEN AREA 15%



A=20 mm  
D= 40 mm  
E=30 mm  
Diameter=5 mm  
Absorption class C  
Open area 15%

SG5 GROUP SLOTTED 5 MM, OPEN AREA 12%



A=20 mm  
D=55 mm  
E=30 mm  
Diameter=5 mm  
Absorption class D  
Open area 12%

Group measurement 200 mm x 200 mm.

NANO 0,5 MM, OPEN AREA 5,9%



A = 1,75 mm  
B = - mm  
C = - mm  
E = 2,0 mm

Absorption class B  
Diameter = 0,5 mm

## GUSTAFS NANO

### INVISIBLE NANO PERFORATION WITH UNIQUE ACOUSTICS

From a normal viewing distance, the Nano perforation is invisible, but the acoustic qualities are excellent with absorption class B (  $\alpha$  0,85). The secret is the combination of two acoustic mechanisms, the Nano holes in the surface and thousands of larger sound chambers in the core. Gustafs Nano is less depending on insulation and air gaps behind the panel, so in general thinner walls can be achieved, saving valuable space.

### MAKING THE MOST OUT OF YOUR ROOM

When dressed with Gustafs Nano panels, a room reduces not only the disturbing noise of conversations and other human sounds, it also absorbs the noise of machines and other mechanical equipment and thereby reducing the reverberation time to a very comfortable level.

### CONTINEOUS PATTERN

Gustaf Panels are produced with "over veneered" wooden edges. That is why the Nano perforation pattern really reaches all the way out to the edges of a panel, without any bezel. Due to this the installation will appear very homogeneous.

### MAINTENANCE

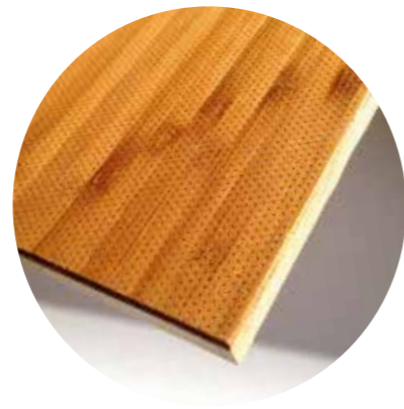
The 0,5 mm small Nano holes stop dust collection. This results in a maintenance free installation and acoustic qualities that remain the same over time.

### HIGHLIGHTS

Gustafs Panels with NANO veneer are well suited for sectional light transmission when back-lit. In this way logotypes and other illustrations can be highlighted with a beautiful real wood lustre, while being undetectable when the light is switched off.

### THE CORE

Of course Gustafs NANO's standard core is made of fibre gypsum, allowing a 100% closed joint installation. This core also contributes to the highest possible fire classification for Nano perforation: B-s1,d0 including the veneer.



Gustafs Nano Ceiling  
AtSix, Stockholm



Gustafs Nano,  
PKSSK Joensuu, Finland



Nano perforated oak veneer



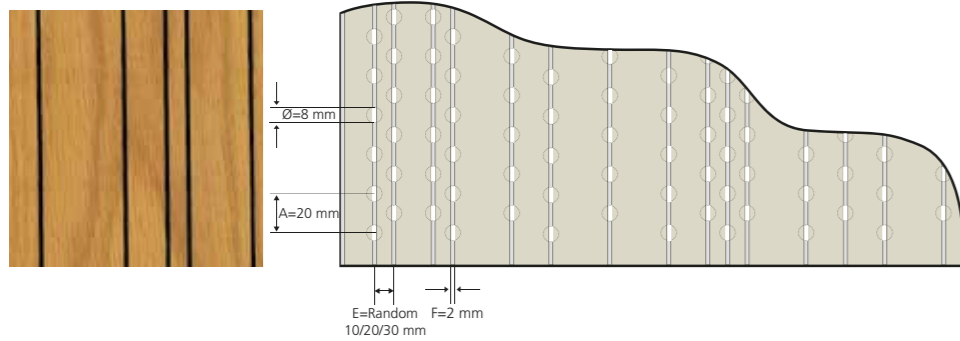
Nano perforated Ceiling  
AtSix, Stockholm

# GUSTAFS STRIPE PERFORATION

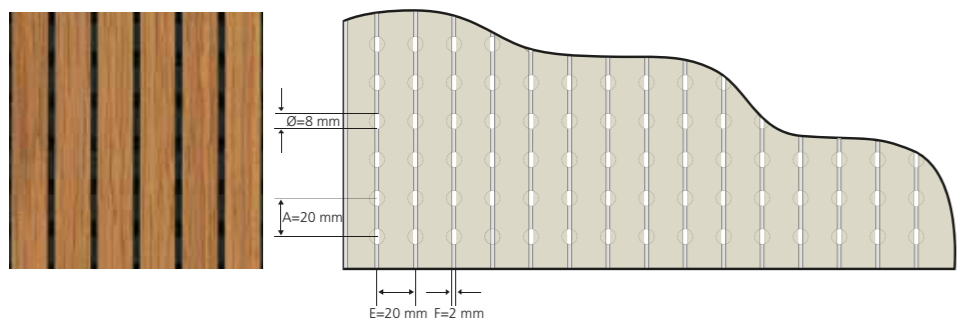
## STRIPE DESIGN WITH CONTINUOUS PATTERN

The Gustafs stripe perforation shows a less open area compared to hole or slot perforations, still giving comparable acoustic absorptions. The Gustafs Stripe pattern always ends with 1 stripe on the very edge of the panel, which will hide the joint between two panels, resulting in a "bezel free" continuous acoustic design. The panels can be produced with or without a solid wood edge.

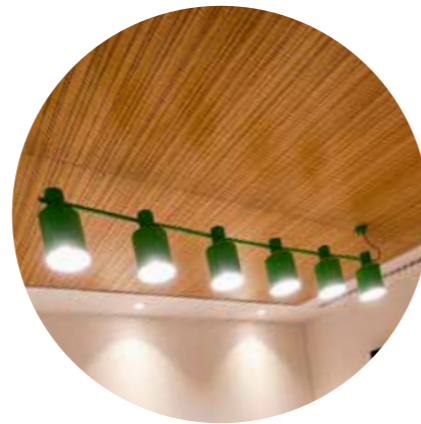
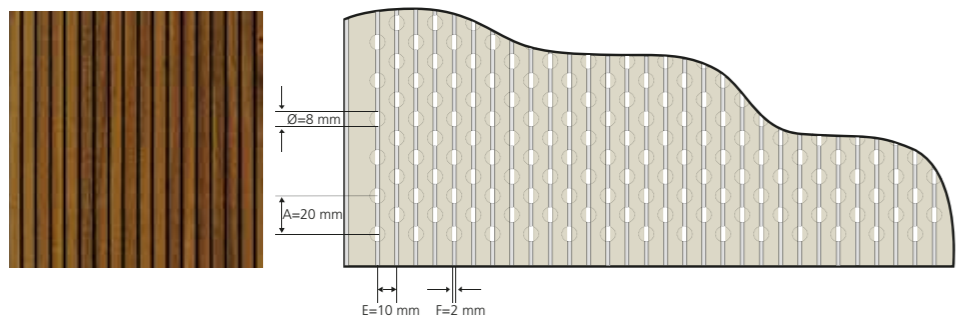
RP8 BARCODE PERFORATION 8 MM - ABSORPTION CLASS C - OPEN AREA 1,6%



RP8-C20 PERFORATION 8 MM - ABSORPTION CLASS D - OPEN AREA 1,7%



RP8-C10 PERFORATION 8 MM - ABSORPTION CLASS C - OPEN AREA 2,8%



Stripe Perforated Ceiling  
Office in Tel Aviv, Israel



Stripe Perforated Ceiling  
Office in Tel Aviv, Israel



RP8 C10 Perforation  
Oak Veneer



# 100% FIRE SAFE

Gustafs Panel System® including a veneered or painted surface, achieves resistance to fire classification A2-s1,d0. To meet the market demands for all kind of rooms it is necessary to be in the absolute front line regarding fire safety.

Both for walls and ceilings, Gustafs products meet the fire regulations and the highest demands for escape routes, high buildings, public localities such as schools, meeting rooms, concert halls, hotels, airport terminals and other similar public meeting places. The system has been tested and certified according to the latest European standards. For regions such as Asia and the United States, we have been certified at a national level as well.

## 100%

The fire retardant properties of the Gustafs Panel System® are not reliant on chemical treatment, instead it is the mechanical composition of all the details which create the end result. Compared to other solutions, using with chemicals impregnated core materials or protecting top coatings, Gustafs fibre gypsum solutions are protected truly homogeneously and will always remain 100% fire safe even including their acoustic perforations or when cut on site. Gustafs reaction to fire classifications are always including the surface material and it's finish.

## PROTECT THE UNDERLYING CONSTRUCTIONS

It is of little help however if the non-combustible outer wall or ceiling cladding conveys heat to structures and facilities behind the surfaces. Claddings with a K110/K210 class protect the underlying constructions in the event of fire.

Consequently approval of cladding materials is always associated with an installation system or method. The Gustafs Panels System® employs Capax as an integral part of its installation and is approved to classification K110/K210.



### REAL A2-s1,d0 INCLUDING THE VENEER OF CHOICE

#### REACTION TO FIRE, EN13501-1

The Euroclass-system is divided into various classes in accordance to the following:

- A1 Nonflammable materials  
No contribution to fire
- A2 **Nonflammable materials**  
**No noticeable contribution to fire**
- B Flammable  
Little or no contribution to fire
- C Flammable  
Limited contribution to fire
- D Flammable  
Contributes to fire
- E Flammable  
Major contribution to fire
- F Flammable  
Not within classes A1-E

- s1 The panels contribute little or insignificantly to the development of smoke.
- d0 The panels do not create flaming particles or droplets when subjected to fire.

#### RESISTANCE TO FIRE, EN13501-2

K<sub>1,10</sub>/K<sub>2,10</sub> Gustafs Panel System® protect the underlying constructions in the event of fire.

## TECHNICAL DATA GUSTAFS PANEL SYSTEM

GUSTAFS															Technical Data Sheet										Doc				
Gustafs Panel System															Rev		Page												
CORE		SURFACE			DESIGN					THICKNESS, mm			WIDTH		LENGTH			TDS-GPS-V-P											
Fiber Gypsum		Coated Wood Veneer			Acoustic Perforations: holes/slots/stripes					13,2 mm			Wall 300 - 1200 Ceiling 300 - 600		300 - 3000			2018-02-02											
ESTETICS & MAINTENANCE																													
Colour, pattern & finish					Wood is a natural product and each veneer is unique. Colour, pattern and structural differences are considered as normal and a part of the décor. Wood changes over time when exposed to UV-light. When painted, please supply RAL or NCS numbers.																								
Maintenance					Only for indoor use. Use and installation at 18-50 °C and 25-60% humidity. Cleanings is done by dry mop or vacuum, approved for 70% alcohol products. Use synthetic cleaning fluid without ammonia for greasy stains, fruit, wine and coffee. Blood is removed with cold water.																								
TOLERANCES					PERFORMANCE					COMMENTS					STANDARD														
Thickness					±0,5 mm					/ panel					SS-EN 13986/324-1/324-2														
Length and width					+0,2 mm / - 0,5 mm					/ panel					SS-EN 13986/324-1/324-2														
Diagonal size					+0,5 mm / - 0,5 mm					/ panel					SS-EN 13986/324-1/324-2														
Flatness					±2,0 mm					/meter					SS-EN 13986/324-1/324-2														
PHYSICALS					PERFORMANCE					COMMENTS					STANDARD														
CE declaration					Yes										EN 14190:2014														
Weight					15,7 kg/m²										SS-EN 13986/324-1/324-2														
Flexural tensile strength					Class 1 / A / no load										EN 14190:2014														
Service load bearing					450 N					for ceiling use					EN 14190:2014														
Falling load bearing					3520 N					for ceiling use					EN 14190:2014														
Thermal conductivity					NPD																								
EVIRONMENT					PERFORMANCE					COMMENTS					STANDARD														
Release of asbestos					NPD																								
Formaldehyde					0,016 mg/m³					E1 ≤ 0,05 mg/m³					EN 717-1														
TVOC					0,023 mg/m²h					total emission					SS-EN ISO 16000-9														
Recycled content, pre-cons.					77%					industrial gypsum																			
Recycled content, post-cons.					17%					cellulosa fibers																			
FSC® wood					Yes										FSC®														
Durability					> 50 years					expected life time																			
Energy for production					99% water, 1% wind energy																								
Possible LEED points					EA C1, MR C1.2, MR C2, MR C3, MR C4, MR C5, MR C6, MR C7, IEQ C3.1, IEQ C3.2, IEQ C4.1, IEQ C4.4. Schools: EQ C4, option 6, EQ C9					sustainable buildings					LEED for New Construction and Major Renovations, LEED for Schools														
Possible BREEAM points										sustainable buildings																			
FIRE					PERFORMANCE					COMMENTS					STANDARD														
Reaction to fire					A2-s1,d0					For panel including surfaces					EN 13501-1														
Resistance to fire					K1-10/K2-10					For panel including surfaces					EN 13501-2														
ACOUSTICS																													
Typ		Spacing		Slott (D)		cc (A/E)		Open area		WALL: 45 mm insulation + 30 mm air void (Hz/ap)										CEILING: 45 mm insulation + 200 mm air void (Hz/ap)									
										αw					NRC					αw					NRC				
Plain		-		-		-		-		0,10 0,05 0,05 0,05 0,05 0,05					-					-					0,20 0,10 0,05 0,05 0,05 0,05				
Nano		0,5 mm		-		1,75/2		5,9%		0,80-B 0,90 0,35 0,90 1,00 0,90 0,75 0,65 0,85-B 0,90					0,45 0,95 0,90 0,90 0,80 0,70					0,45 0,95 0,90 0,90 0,85 0,65 0,60									
Nano*		0,5 mm		-		1,75/2		5,9%		-					-					-					-				
PH5		5 mm		-		20/20		5%		0,30-D 0,50 0,50 0,70 0,65 0,45 0,25 0,20 0,35-D 0,50					0,50 0,50 0,65 0,55 0,45 0,30 0,20					0,50 0,50 0,65 0,55 0,45 0,30 0,20									
PH8		8 mm		-		20/20		12%		0,55-D 0,80 0,35 0,85 1,00 0,75 0,55 0,40 0,55-D 0,80					0,65 0,95 0,85 0,80 0,55 0,40					0,80 0,65 0,95 0,85 0,80 0,55 0,40									
PH8-F		8 mm		-		20/20		12%		0,60-C 0,85 0,35 0,85 0,95 1,00 0,50 0,35 0,60-C 0,85					0,55 0,90 0,95 1,00 0,60 0,35					0,55 0,90 0,95 1,00 0,60 0,35									
PH10		10 mm		-		20/20		18%		0,70-C 0,85 0,35 0,85 1,00 0,90 0,70 0,55 0,75-C 0,90					0,65 1,00 0,90 0,85 0,75 0,60					0,65 1,00 0,90 0,85 0,75 0,60									
PG5		5 mm		-		20/20		3%		0,25-E 0,40 0,40 0,50 0,45 0,35 0,20 0,15 0,30-D 0,40					0,45 0,45 0,45 0,40 0,40 0,25 0,15					0,40 0,45 0,45 0,40 0,40 0,25 0,15									
PG8		8 mm		-		20/20		8%		0,45-D 0,65 0,40 0,85 0,80 0,60 0,40 0,30 0,50-D 0,65					0,55 0,75 0,70 0,65 0,40 0,35					0,65 0,55 0,75 0,70 0,65 0,40 0,35									
PS2		3 mm		-		20/20		2%		0,20-E 0,50 0,30 0,85 0,70 0,30 0,15 0,05 0,25-E 0,45					0,55 0,70 0,55 0,35 0,20 0,10					0,45 0,55 0,75 0,55 0,35 0,20 0,10									
PD8		8 mm		-		10/10		24%		0,80-B 0,90 0,30 0,80 1,00 0,95 0,75 0,65 0,85-B 0,90					0,65 1,00 0,95 0,90 0,80 0,70					0,65 1,00 0,95 0,90 0,80 0,70									
SM5		5 mm		20 mm		20/20		15%		0,65-C 0,80 0,30 0,75 1,00 0,80 0,60 0,50 0,65-C 0,75					0,50 0,75 0,80 0,75 0,80 0,75 0,65 0,50					0,75 0,50 0,75 0,80 0,75 0,65 0,50									
SM8		8 mm		20 mm		20/20		26%		0,85-B 0,85 0,30 0,75 1,00 0,90 0,80 0,70 0,85-B 0,85					0,50 0,80 0,90 0,85 0,85 0,75					0,85 0,50 0,80 0,90 0,85 0,85 0,75									
SH5		5 mm		40 mm		20/30		15%		0,60-C 0,80 0,35 0,80 1,00 0,80 0,60 0,45 0,60-C 0,80					0,65 0,95 0,95 0,85 0,80 0,60 0,45					0,60-C 0,80 0,65 0,95 0,85 0,80 0,60 0,45									
SH8		8 mm		40 mm		20/30		26%		0,75-C 0,85 0,35 0,80 1,00 0,95 0,70 0,60 0,75-C 0,90					0,65 1,00 0,95 0,90 0,85 0,75 0,60					0,90 0,65 1,00 0,95 0,90 0,60 0,60									
SG5		5 mm		55 mm		20/30		12%		0,50-D 0,75 0,35 0,90 0,95 0,70 0,50 0,35 0,55-D 0,70					0,55 0,85 0,80 0,70 0,50 0,40					0,70 0,55 0,85 0,80 0,70 0,50 0,40									
SG8		8 mm		55 mm		20/30		20%		0,65-C 0,85 0,35 0,90 1,05 0,85 0,55 0,50 0,65-C 0,85					0,55 1,00 0,90 0,85 0,65 0,55					0,85 0,55 1,00 0,90 0,85 0,60 0,55									
SX5		5 mm		140 mm		20/60		18%		0,70-C 0,80 0,35 0,75 0,95 0,80 0,65 0,55 0,70-C 0,75					0,50 0,80 0,80 0,65 0,55 0,40 0,35					0,75 0,50 0,80 0,80 0,75 0,65 0,55									
SX8		8 mm		140 mm		20/60		29%		0,80-B 0,85 0,30 0,75 1,00 0,90 0,75 0,70 0,85-B 0,85					0,50 0,80 0,90 0,85 0,80 0,70					0,85 0,50 0,80 0,90 0,85 0,80 0,70									
RS5		5 mm		40 mm		20/30		16%		0,65-C 0,80 0,35 0,70 0,95 0,80 0,65 0,50 0,65-C 0,75					0,50 0,75 0,80 0,75 0,80 0,75 0,65 0,50					0,75 0,50 0,75 0,80 0,75 0,65 0,50									
RS8		8 mm		40 mm		40/30		13%		0,60-C 0,70 0,35 0,70 0,85 0,70 0,55 0,45 0,60-C 0,65					0,45 0,70 0,70 0,65 0,55 0,45 0,35					0,65 0,45 0,70 0,70 0,65 0,55 0,45									
QS		20 mm		190 mm		40/140		28%		0,5-D 0,65 0,35 0,70 0,85 0,50 0,45 0,40 0,75-C 0,75					0,40 0,75 0,80 0,75 0,80 0,75 0,65					0,75 0,40 0,75 0,80 0,75 0,65 0,65									
RP8-C10		8 mm		∞		10/40		2,8%		0,65-C 0,70 0,40 0,75 0,80 0,65 0,60 0,60 0,75-C 0,75					0,40 0,75 0,80 0,75 0,80 0,70 0,65					0,75 0,40 0,75 0,80 0,70 0,65 0,65									
RP8-C20		8 mm		∞		20/40		1,7%		0,60-C 0,70 0,35 0,80 0,80 0,70 0,55 0,45 0,65-C 0,70					0,40 0,75 0,70 0,70 0,70 0,60 0,50					0,70 0,40 0,75 0,70 0,70 0,60 0,50									
RP8-Bar		8 mm		∞		Barcode		1,6%		0,50-D 0,60 0,40 0,70 0,70 0,60 0,45 0,35 0,55-D 0,60					0,40 0,70 0,65 0,60 0,45 0,35 0,55-D 0,60					0,40 0,40 0,70 0,65 0,60 0,50 0,40									
Linear		12 mm		∞		50		24%		0,70-C 0,80 0,30 0,90 1,00 0,75 0,60 0,65 0,70-C 0,80					0,50 0,90 0,85 0,75 0,85 0,75 0,60 0,65					0,80 0,50 0,90 0,85 0,75 0,60 0,65									
Linear		62 mm		∞		100		62%		-					-					0,95-A 1,00					0,35 0,95 1,00 1,00 0,95 0,75				

\* Tested with 200 mm airgap only, no insulation.

## GUSTAFS BF PANEL

### A PANEL WITH MANY UNIQUE BENIFITS

Most of our products are based on a fibre gypsum board which has very good properties regarding both fire safety and acoustics. The panel is less sensitive to changes in temperature and humidity which in turn maintains the panels' linearity over time. All together, this unique combination contributes to a panel suited for applications not only in large areas but also in a wide variety of demanding situations.



#### FIBRE GYPSUM BOARD

When constructing a cladding panel there are many requirements that steer the choice of component materials. Among our first demands were; a strictly plane surface, dimensional stability, fire retardation and acoustic characteristics. These demands effectively eliminate most traditional wood-based choices. However, a panel constructed of highly compressed fibre gypsum incorporates the properties needed to meet fire prevention demands and offers good acoustic characteristics while at the same time offers versatility and aesthetic charm.



#### SOLID WOOD EDGING

Prior to veneering, a solid wood edging is integrated around the panel, disguising the core material. When the veneer is then applied it covers the wooden edge and effectively gives the panel the appearance of being entirely of wood. This process contributes to the total strength of the panel making it more robust and ensures its dimensional characteristics.



#### DARK CORE

Using a dark core, the holes or slots in an acoustic panel will be less visible in combination with dark veneers or paints. Unless the perforation pattern is a very important part of the design, "hiding" the holes is a great new aesthetic benefit that Gustafs can offer. Gustafs recommends the use of a Dark Core for perforated acoustic panels with dark veneers like Walnut, Wenge, Mahogany, Teak or painted in dark colours. For the lighter range of both veneers and paints we still recommend using the standard white core substrate.

Comparative technical data Fiber Gypsum Board/MDF Board		
Properties of the core	Gypsum cellulose fibre	MDF
Density	1 250 kg/m <sup>3</sup>	780 kg/m <sup>3</sup>
Weight	15,7 kg/m <sup>2</sup>	9,3 kg/m <sup>2</sup>
Moisture content on delivery 65% RH +20°C	2%	5-8%
Moisture difference 40-65% RH	2%	5-7%
Linear expansion 30-80% RH	0,08%	0,4%
Thermal conductivity	0,24 W/Km	0,14 W/Km
Specific heat capacity	1 320 J/kg °C	1 851 J/kg °C
Properties of Gustafs Panel System®		
	Type BF-panel	Type DF-panel
Fire Euroclass	A2-s1,d0	D-s2,d0
Reaction to fire Resistance to fire	K <sub>1</sub> 10, K <sub>2</sub> 10	-

#### STABILITY

Wood based panels will show bulging or shrinkage when humidity and temperature change. A fiber gypsum board is considerably less susceptible to these effects. Over time this will result in a planer and more linear surface.

#### SUSTAINABILITY

Using a fiber gypsum core naturally results in extremely low emissions and a very high rate of recycled content. Being located in Sweden gives us the opportunity to produce with renewable power sources only.

#### FIRE

The high density nonflammable core and the surface veneer's strongly bound adhesion to the fiber gypsum board makes our panels "non-flammable". Reaction to fire A2-s1,d0, resistance to fire K<sub>1</sub>10/K<sub>2</sub>10.

#### ENERGY SAVING

Due to the panel's high density and its low level of thermal conductivity, the material helps to maintain room temperatures at a constant and reduces the need for cooling or heating.

#### ACOUSTICS

Acoustically, the use of innately heavy wall cladding is often favourable compared to lighter materials. Gustafs panels weighing 15 kg/m<sup>2</sup> is roughly twice as heavy as most wood-based panel materials.

# INSTALLATION

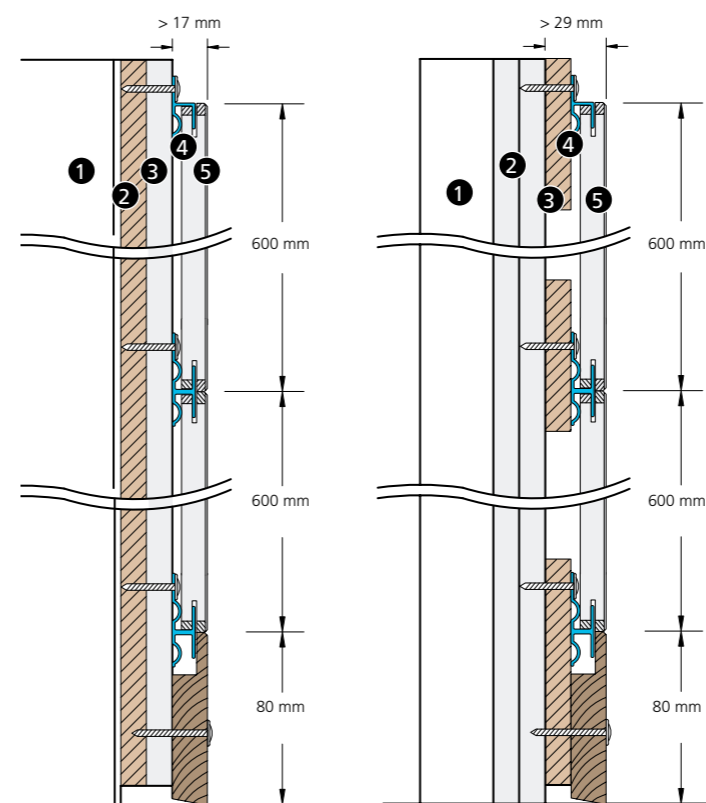
## SIMPLE, FAST & PRECISE

Capax is the name of our unique installation system of aluminum profiles for walls and ceilings. The profiles are strong and their torsional rigidity ensures the outmost lineal accuracy. The range of Capax profiles accommodates both aesthetic and functional demands. There are a variety of joints and connections to choose from. Special profile types disguise cut edges and allow for panel cutting on site. Thus, panels can be ordered in standard sizes and then adjusted on site to meet the actual dimensions, allowing for a more cost-effective installation.



### WALL INSTALLATION

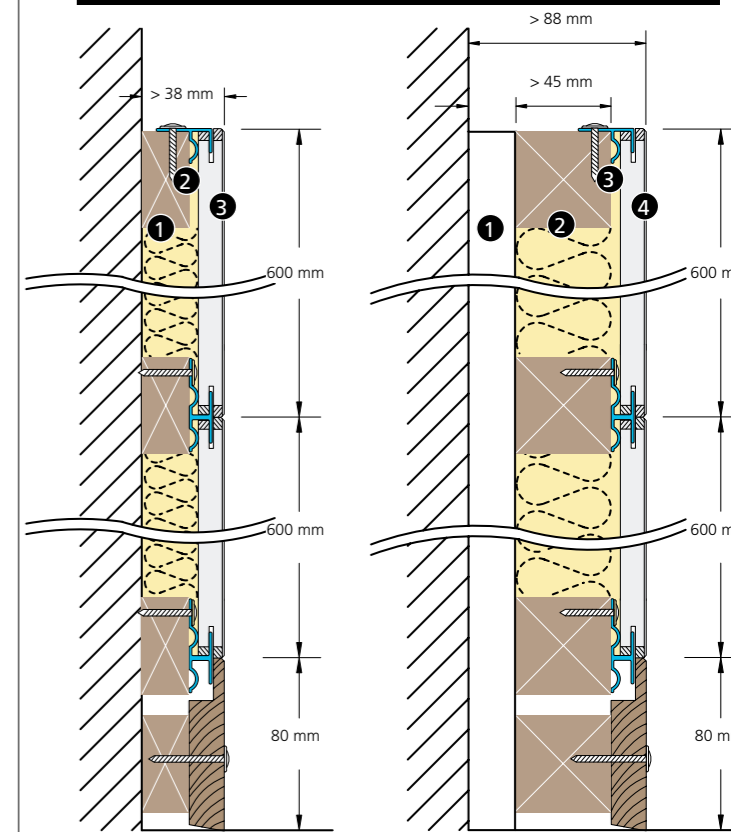
#### EXAMPLE WALL ASSEMBLY



- 1 Metal batten
- 2 12 mm Plywood n.b. board
- 3 12 mm Gypsum board
- 4 Capax profile
- 5 Gustafs panel

- 1 Metal batten
- 2 2x12 mm Gypsum board
- 3 12 mm Plywood strips
- 4 Capax profile
- 5 Gustafs panel

#### EXAMPLE ACOUSTIC SECTION



- 1 Battens and insulation
- 2 Capax profile
- 3 Gustafs panel

- 1 Battens and air space
- 2 Battens and insulation
- 3 Capax profile
- 4 Gustafs panel

### WALL PANEL EDGES



#### A SOLID WOOD EDGING

There are a variety of choices in terms of joints and edges on the panel, depending on how you want the final result to look and whether the panel should be demountable or fixed. On the following pages you will find our various mounting options. Our panels are equipped with a solid wood edging around the panel, this edging disguises the core material. When the veneer or laminate is applied it is bonded with the wooden edge. This process also contributes to the total strength of the panel, giving it a box construction making it more robust and ensures its dimensional characteristics.

WALL INSTALLATION

EXAMPLES OF JOINT POSSIBILITIES

CLOSED JOINTS



Capax profile 3201



Capax profile 3217



Capax profile 3208

OPEN JOINTS - 10, 13 and 15 mm

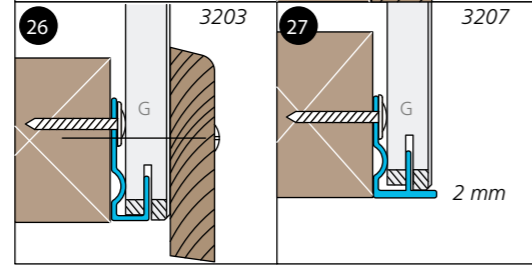
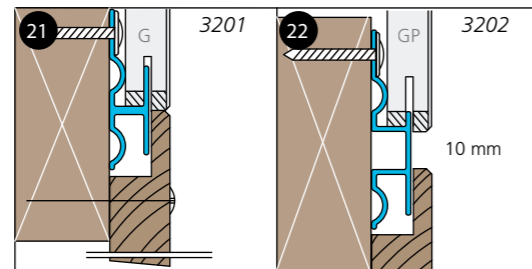
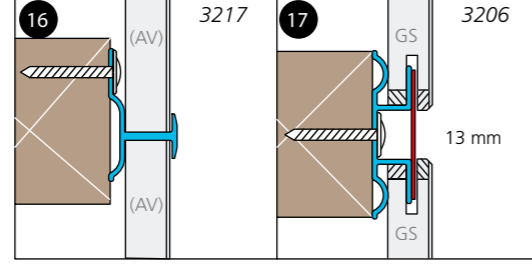
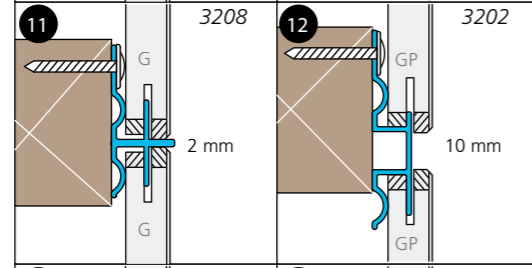
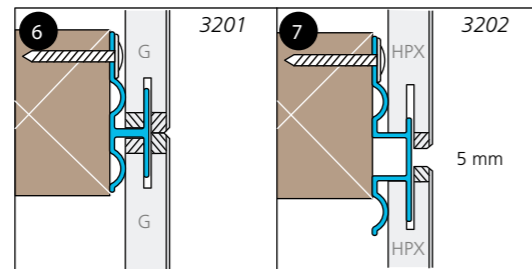
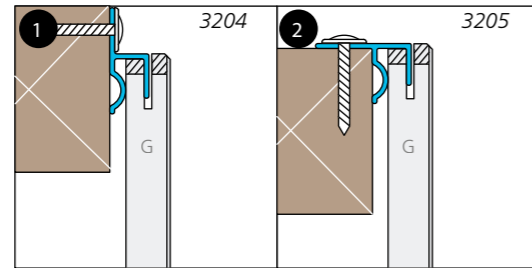


Capax profile 3202, 3212, 3211

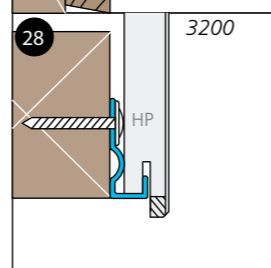
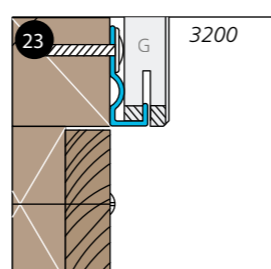
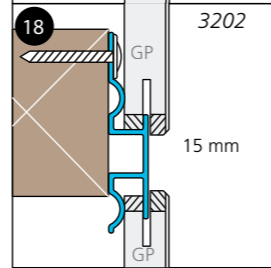
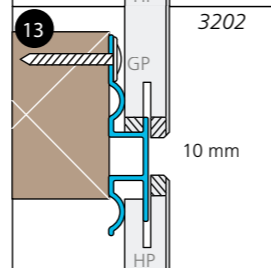
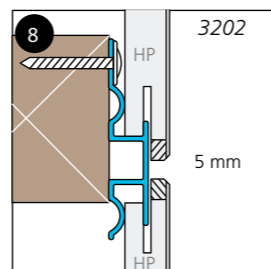
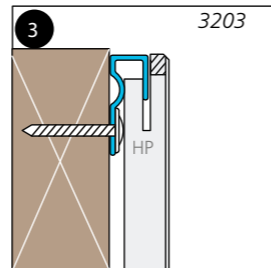


Capax profile 3206 with LED-line, diffuser lens and power supply

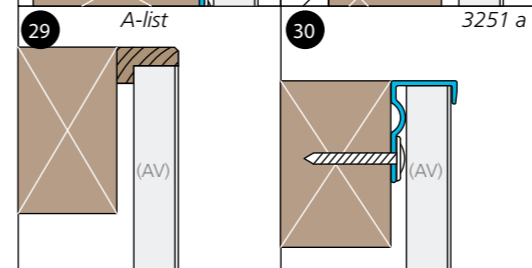
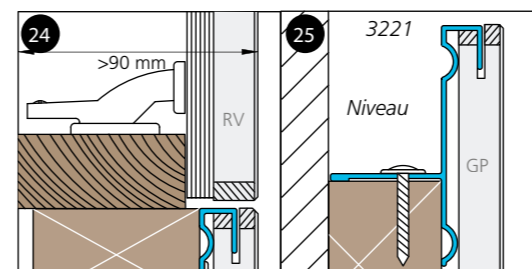
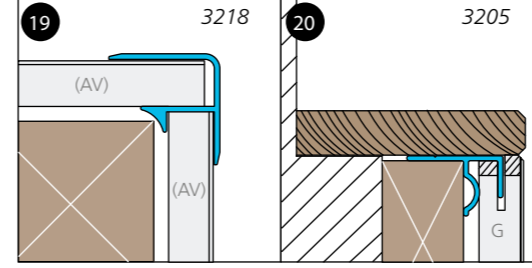
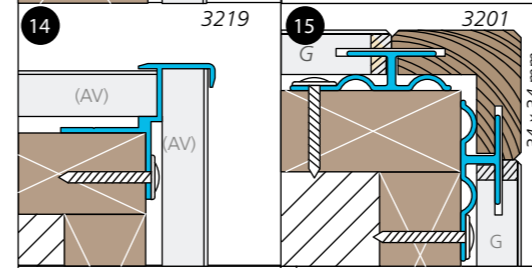
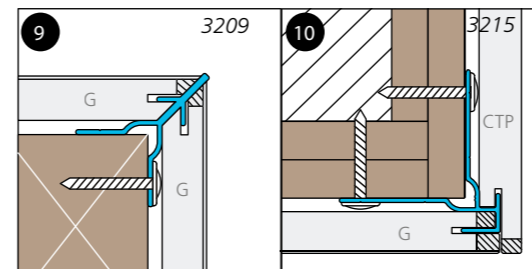
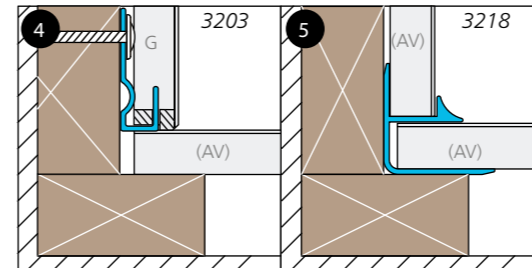
FIXED PANELS



DEMOUNTABLE PANELS



CORNERS AND EDGES



EXAMPLES OF JOINT POSSIBILITIES

CORNERS



Capax profile 3209



Capax profile 3219



Capax profile 3218

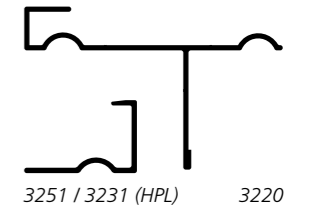
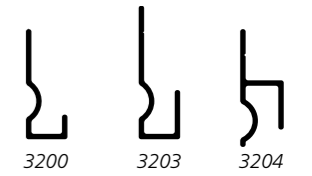


Capax profile 3201

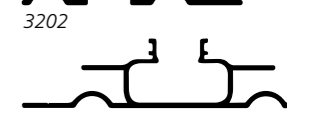
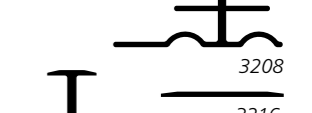
WALL INSTALLATION

CAPAX WALL

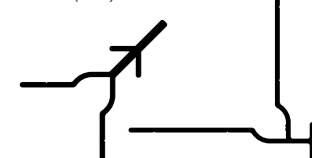
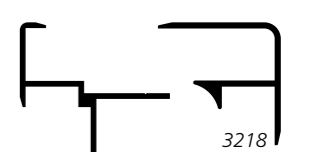
CAPAX WALL START & END



CAPAX WALL JOINTS



CAPAX WALL CORNERS



Edges = G, GP GF, GS, HP, HPX, RV, AV.

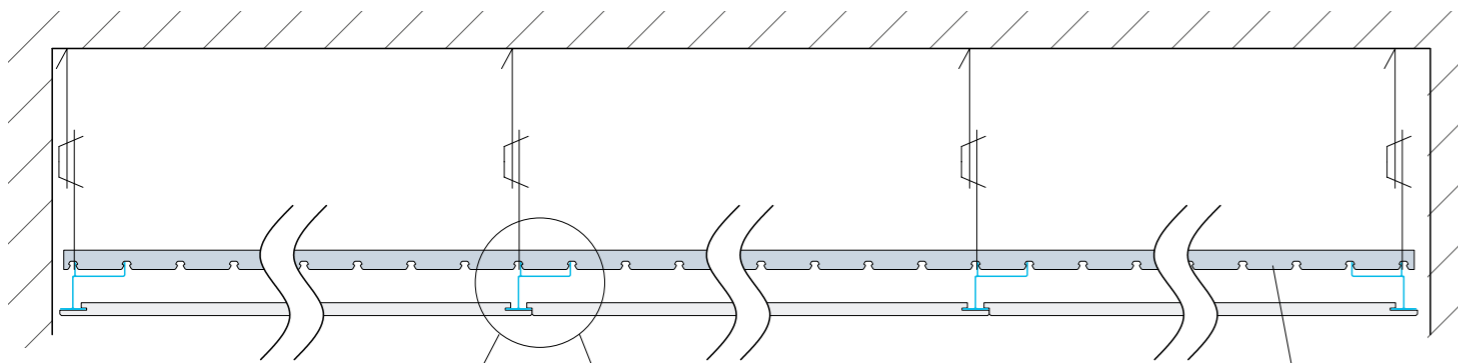
⊗ Solution number for order

## CEILING INSTALLATION

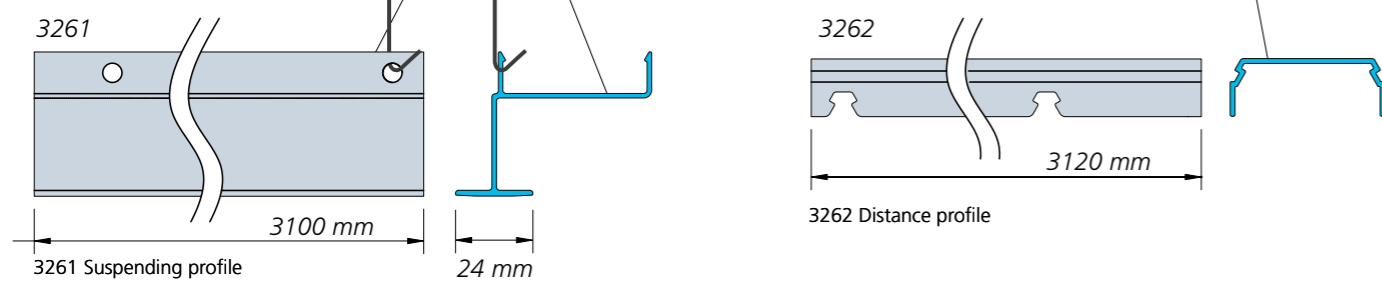
- The construction is torsionally rigid and self-bearing, lacking the need to fix onto adjacent walls.
- The system offers full panel demountability and thereby access to overlying technical installations while maintaining its overall stability and strength.
- Capax ceiling profile system is aesthetically appealing because totally concealed.
- The system is constructed for a panel width of 600 mm but even allows for a 50 mm variation between 300 and 800 mm.
- Capax suspended ceiling system consists of a robust T-profile main runner which

supports the panel's length. The broad side of the panels meet each other end to end with precision. The main runner profile is locked in place by means of a distance profile, thus creating a very stable grid system.

### THE SYSTEM - CAPAX CEILING SUSPENSION

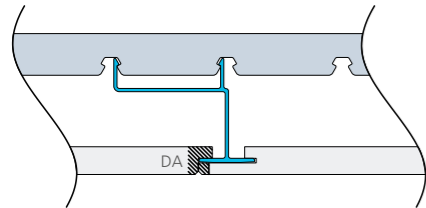


### THE PROFILES

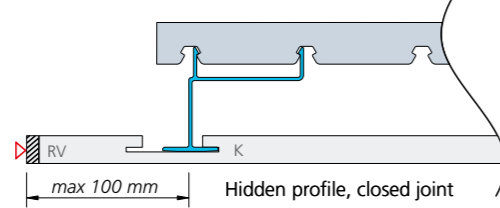


### EDGES & JOINTS

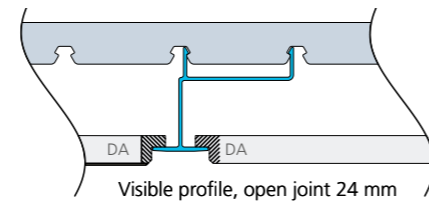
#### DEMOUNTABLE AND INVISIBLE



#### DEMOUNTABLE AND INVISIBLE

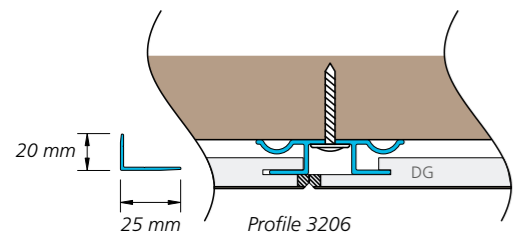


#### DEMOUNTABLE AND VISIBLE

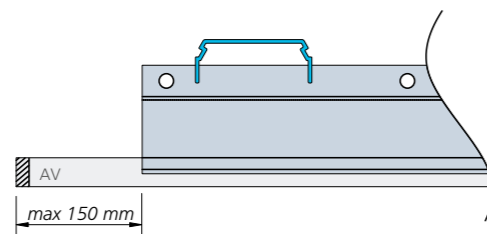


### SPECIAL

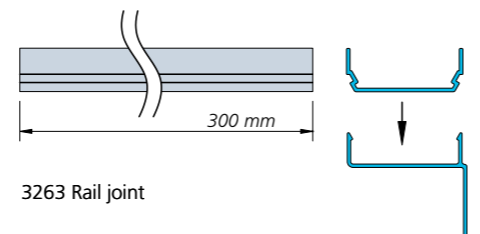
#### FIXED INSTALLATION



#### MAXIMUM OVERHANG



#### IN-LINE CONNECTOR FOR 3261



# ACCESSORIES

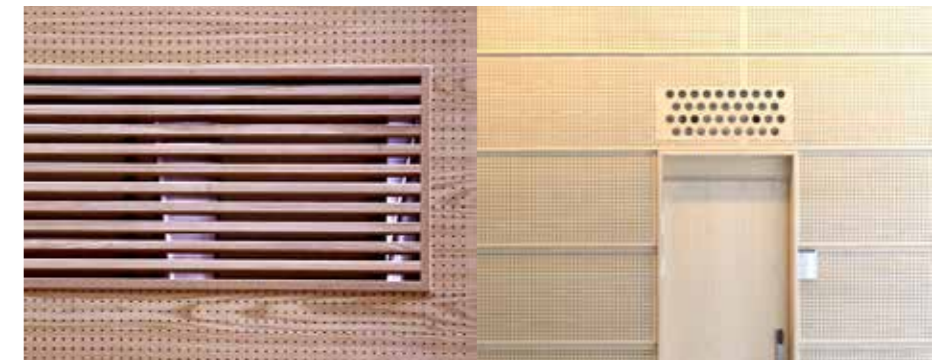
## HATCHES

The need of having access to the ancillary system cannot be avoided. Gustafs offer real integral hatches, of course with a fully matched veneer and a handle free "push-open" mechanism to make them almost invisible. The hatches have the same fire class as the rest of our panel system. Different models of hatches are available, for reliable every day use or in simpler designs for occasional use.



## GRILLES

Grilles to cover heating and ventilation systems are a natural part of our cladding system. To make the grilles sturdy they are made of solid wood and supported by a clever construction. As a one stop supplier, we will match the visual appearance of the grill with the rest of the interior for an optimal result.



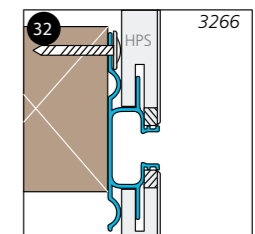
## LIGHT – LED LINE

Integral LED illumination system for Gustafs Panels. The 12V plug and play system provides an easy and time saving installation. The result is a brilliant light line in between the panels, either vertically or horizontally. The slim power supply system is easily hidden behind the panels by using standard components.



## SLAT WALL

Open up a world of opportunities by integrating our Slat-Wall profile to your wall. The profile 3266 provides a visible open joint of 15 mm and can be used everywhere and directly in-between our panels. Slat-Wall is a universal World standard and the number of accessories is infinite, like the suspensions of shelves, hooks, lamps, art, office tools, meeting room tools etc.





# GUSTAFS LINEAR SYSTEM

Gustafs Linear System is an innovative range of ribs and planks for cladding of walls and ceilings. With Gustafs Linear System you achieve a reliable, labour saving and exclusive interior finish. Naturally, Gustafs Linear System offers a design attribute that comes with the best fire rating, optimal sound absorption and sound diffusion.



## LINEAR RIB

A premium system and the best choice when it comes to fire safety, form stability, curved installation possibilities and environmental friendliness.



## LINEAR PLANK

For classic plank designs with whole crown veneers combined with the fire rating and form stability of a fiber gypsum core. This manufacturing method makes Gustaf Linear Plank a very good environmental choice.



## LINEAR MODULE

Our most simple solution to install, using solid wood. Gustaf Linear Module consists of cassettes with pre-assembled massive wooden and acoustic felt included. Can easily be customized.



# FEATURES



## DESIGN

Gustafs Linear System provides designers the possibility to create exciting and appealing rooms while at the same time ensuring the highest possible well-being for their occupants. Gustafs Linear Ribs, Planks and Modules can be used in curved or straight installations and is easily combined with the Gustafs Panel System. We can assist you with your design wishes and help provide a solution with your own personal touch.

## ACOUSTICS

Our linear system automatically gives a relatively large open area of 24% which warrants for a good sound absorption over a wide band of frequencies. The three dimensional shape will also act like a sound diffuser. The diffusion can be tuned by working with varying depths and widths for the Ribs.

## FLEXIBILITY IS STANDARD

To offer maximum design and installation flexibility, Gustafs Linear System comprises a range of cores, veneers, colours, dimensions and spacing between the Ribs or planks.

## INSTALLATION

All Gustafs Linear solutions are installed with an extremely user-friendliness provided by the Capax Quick-Up concept. From interlocking components, eliminating the need for tools and offering demountable installations, to the comprehensive range of solutions, solving every on-site situation, regardless if it is a joint, corner, wall or ceiling. Compared to similar systems, Gustafs Linear system is a considerable time saver when it comes to the installation and will deliver a beautiful and long lasting end result.

## FIRE

Gustafs Linear System, has in accordance with the Euroclass system, achieved classification B-s1,d0.

- B** the rib contributes little or insignificantly to fire.
- s1** the rib contributes little or insignificantly to the development of smoke.
- d0** the rib does not create flaming particles or droplets when subjected to fire.

## GREEN CONTENT

Gustafs Linear Ribs and Planks contain 97% natural materials, 94% recycled materials of which 17% are post consumer recycled. We can offer certified wood and products without added urea-formaldehyde and extremely low emissions.



## LEED & BREEAM

Gustafs Linear Solutions can contribute to many points in the LEED and BREEAM certifications of buildings. For more detailed information see our website.

## 100% RENEWABLE

With our production located in Sweden 84% of our energy consumption comes from hydro power 14% from wind power and 2% from solar energy.



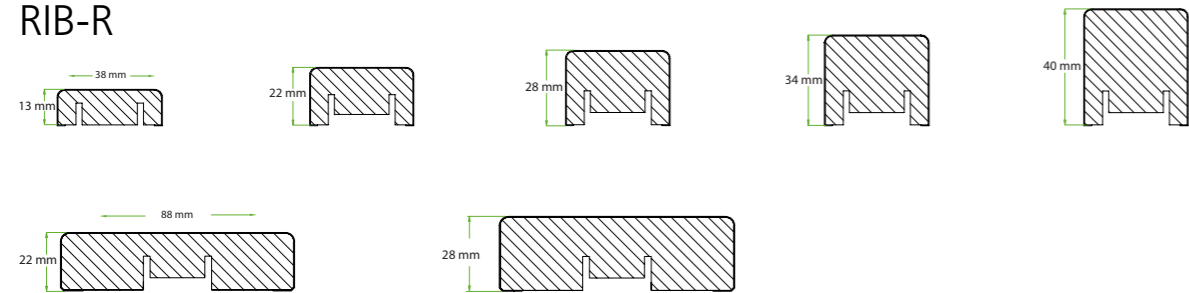
# RIB

Utilizing real wood veneer Gustafs Linear Rib System integrates the Quick-Up installation system to achieve a reliable, labour saving and exclusive interior finish. Naturally, Gustafs Linear Rib offers a design attribute which comes with the best fire rating, optimal sound absorption and sound diffusion.

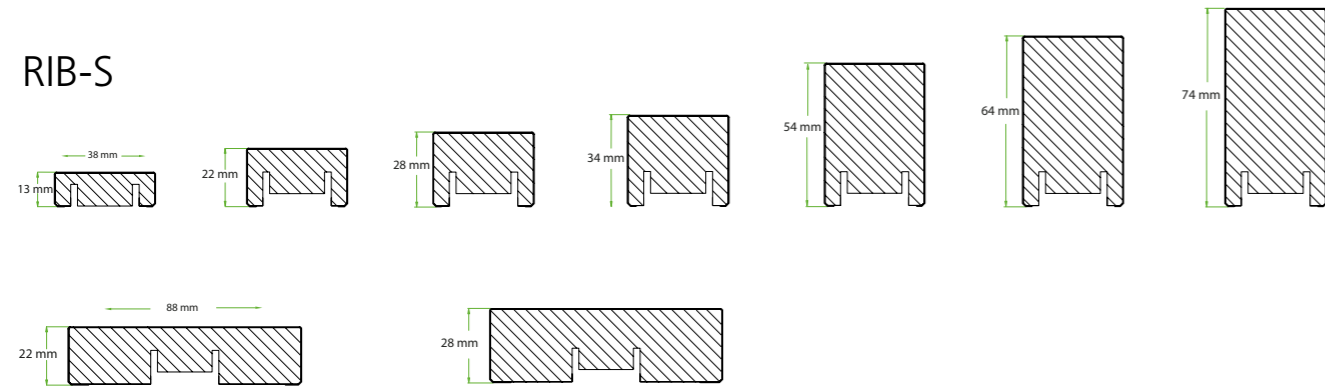
## CUSTOMIZED STANDARD

The Gypsum core ribs are available in a multitude of thicknesses varying from 13 up to 74 mm and can be supplied in R or S design. The standard width is 38 mm. Using our standard installation method, the gap between the ribs is 12 mm. You can also combine different dimensions.

### RIB-R

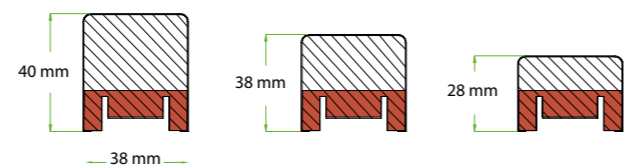


### RIB-S



## HIGH IMPACT RIB'S

For walls in tough environments like for example in schools, restaurants, corridors and entrances, we have designed a particularly sturdy and more impact resistant rib with a unique sandwich core construction. So now you can use ribs on the lower sections of the walls in high traffic areas.

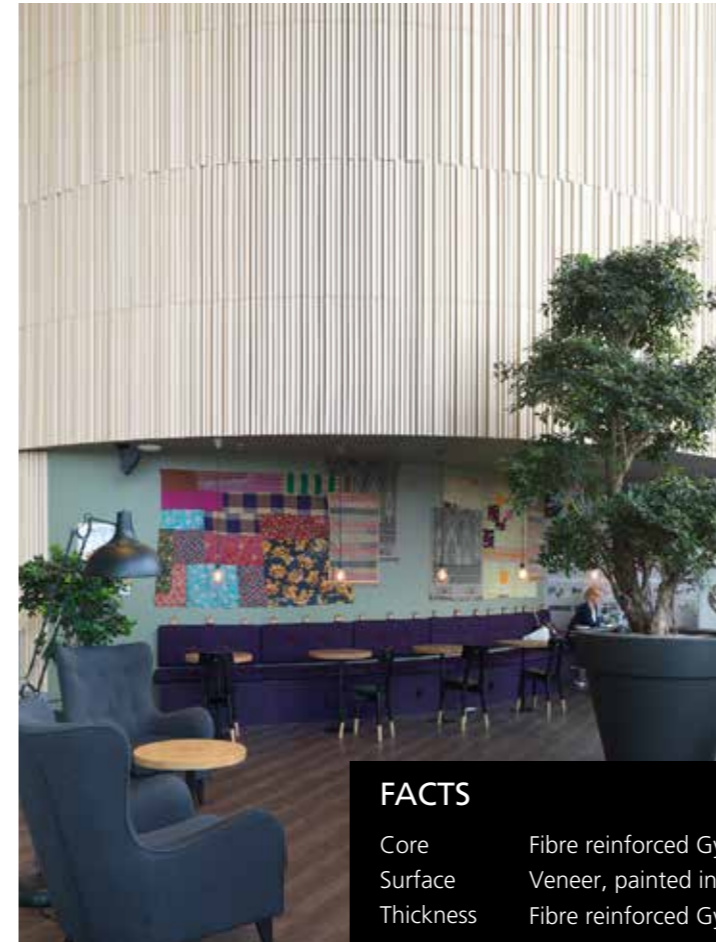


The High impact ribs are available in three thicknesses; 40 mm, 38 mm and 28 mm.

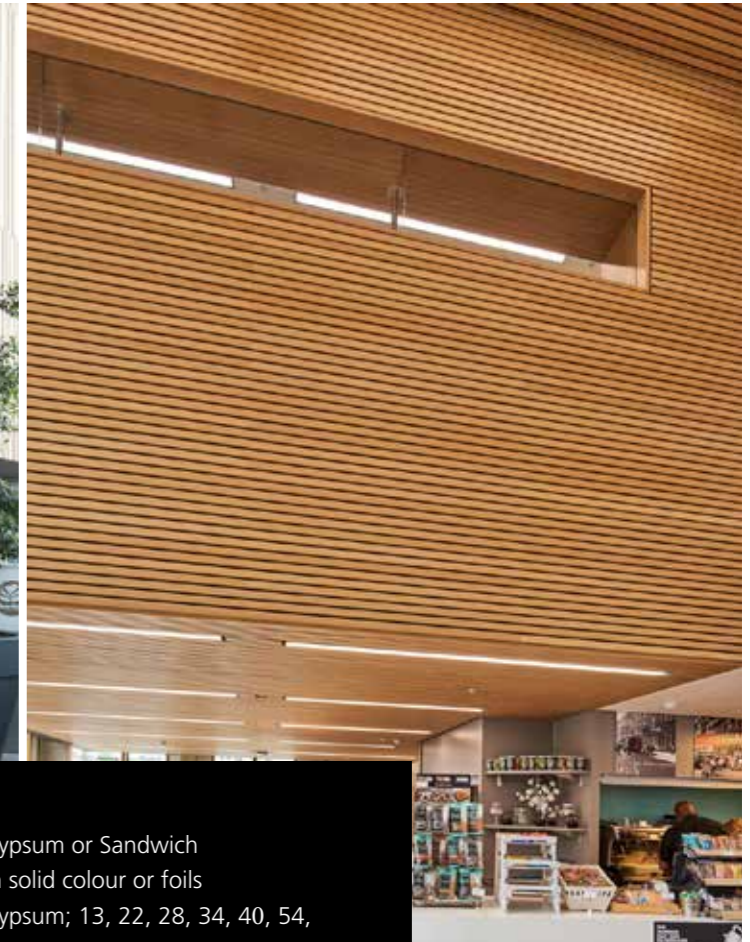
## ACOUSTIC VALUES GUSTAFS LINEAR RIB

ACOUSTICS	Typ	Spacing	Slott (D)	Ribs on cc	Open area	WALL: 45 mm insulation + 30 mm air void (Hz/ap )								CEILING: 45 mm insulation + 200 mm air void (Hz/ap )							
						αw	NRC	125	250	500	1000	2000	4000	αw	NRC	125	250	500	1000	2000	4000
Sound absorption	Linear	12 mm	∞	50 mm	24%	0,70-C	0,80	0,30	0,90	1,00	0,75	0,60	0,65	0,70-C	0,80	0,50	0,95	0,85	0,75	0,60	0,65
	Linear*	12 mm	∞	50 mm	24%	0,65-C	0,70	0,05	0,35	0,90	0,90	0,70	0,65	-	-	-	-	-	-	-	-
	Linear	62 mm	∞	100 mm	62%	-	-	-	-	-	-	-	-	0,95-A	1,00	0,35	0,95	1,00	1,00	0,95	0,75

\* Tested with 17 mm insulation only, no air void



Gustafs Linear Rib  
Ikano Kungens Kurva, Stockholm



Gustafs Linear Rib,  
Bedfordshire University

### FACTS

- Core: Fibre reinforced Gypsum or Sandwich
- Surface: Veneer, painted in solid colour or foils
- Thickness: Fibre reinforced Gypsum; 13, 22, 28, 34, 40, 54, 64, 74 mm  
Sandwich; 28, 38 and 40 mm
- Width: 38 mm
- Length: 2400 mm
- Fire class: B-s1,d0 or A2-s1,d0
- Acoustics: Up to sound absorption class A
- Installation: Quick-Up Assembly Capax

Others specifications on request



Gustafs Linear Rib  
Office in Tel Aviv, Israel



Gustafs Linear Rib  
IBM Entrance Kista+, Stockholm

# RIB INSTALLATION

## FAST AND SIMPLE

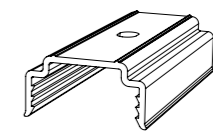
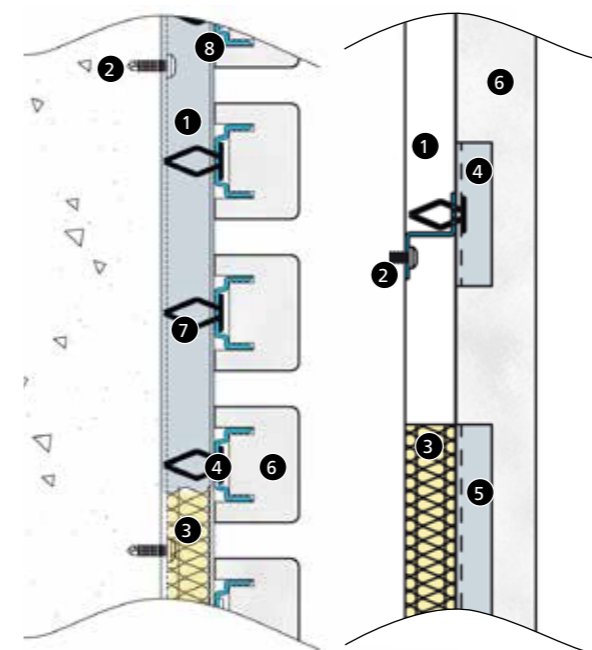
The Quick-Up assembly system is a user friendly aluminum grid offering installation reliability and a perfect visual result. No tools are needed to assemble the interlocking components. A demountable version is available, ideal when access to the ancillary systems is required. Gustafs Ribs save approximately 12% time compared to similar systems when it comes to the installation.



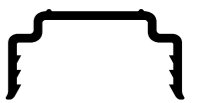
## CAPAX WALL INSTALLATION



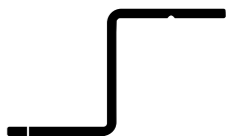
### CAPAX WALL PROFILES



U-FIX-50, Gripper for Ribs, with hole, length 50 mm

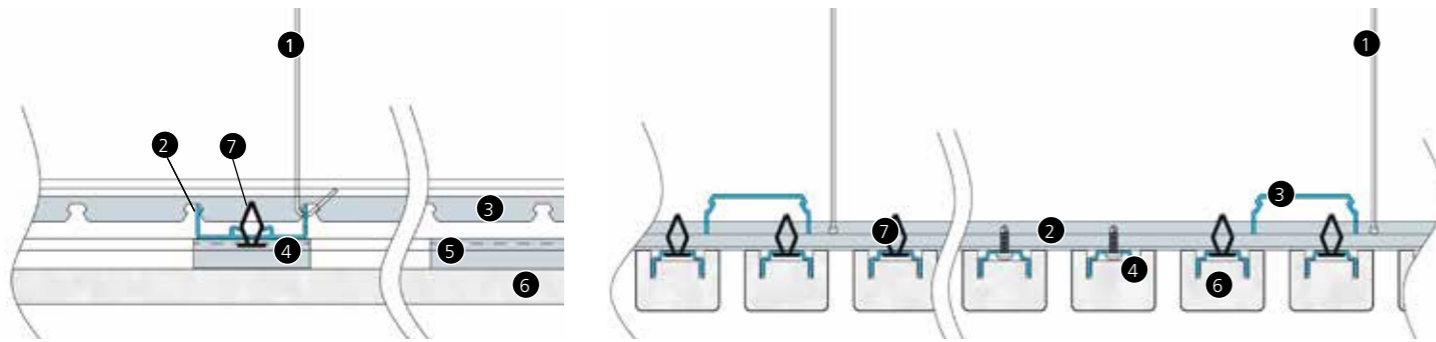


U-FIX 200, In-line connector for Ribs, length 200 mm



BASE-W, Wall batten, length 3000 mm

CAPAX CEILING SUSPENSION



- 1. Ceiling hanger
- 2. Suspending Capax BASE-C
- 3. Distance Capax 3262
- 4. Capax U-FIX-50
- 5. Capax in-line connector
- 6. Gustafs Ribs
- 7. Spring clips
- 8. Acoustex, acoustic felt

CAPAX CEILING PROFILES



BASE-C Ceiling carrier



3262 – Distance profil, with cuts every 50 mm



U-FIX-50, Gripper for Ribs, with hole, length 50 mm

veneers & SURFACES

The Gustafs Linear Rib is available in any of our standard veneer collections, Nature & Gemini, and is therefore very easy to match with Gustafs Panel System and Gustafs Linear Plank. You can find more examples of veneers on [gustafs.com](http://gustafs.com).

EXAMPLE OF VENEERS FROM GUSTAFS NATURE COLLECTION



# PLANK

Gustafs Linear Planks lets you combine a beautiful linear design with the best possible fire rating. Using the famous Gustafs Capax installation system a perfect end result will be guaranteed as well the option to fully integrate the Planks with Gustafs Panels and Ribs. Every Plank comes with one unique and full crown veneer flitch for the most exclusive experience.

## FIRE

The fiber gypsum core in the Planks is not only non combustible and gives the Planks a total rating up to A2,s1,d0 including the veneer, it also gives the Planks an absolute stable form and seamless perfection - for ever!

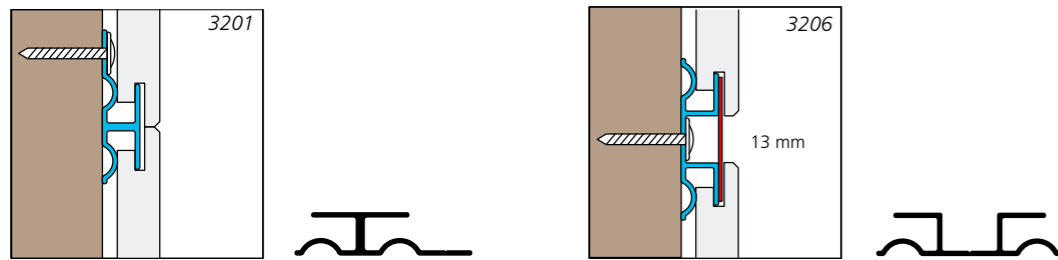
## ACOUSTICS

The Gustafs Linear Planks can also be perforated as a design element or to achieve a higher sound absorption value.

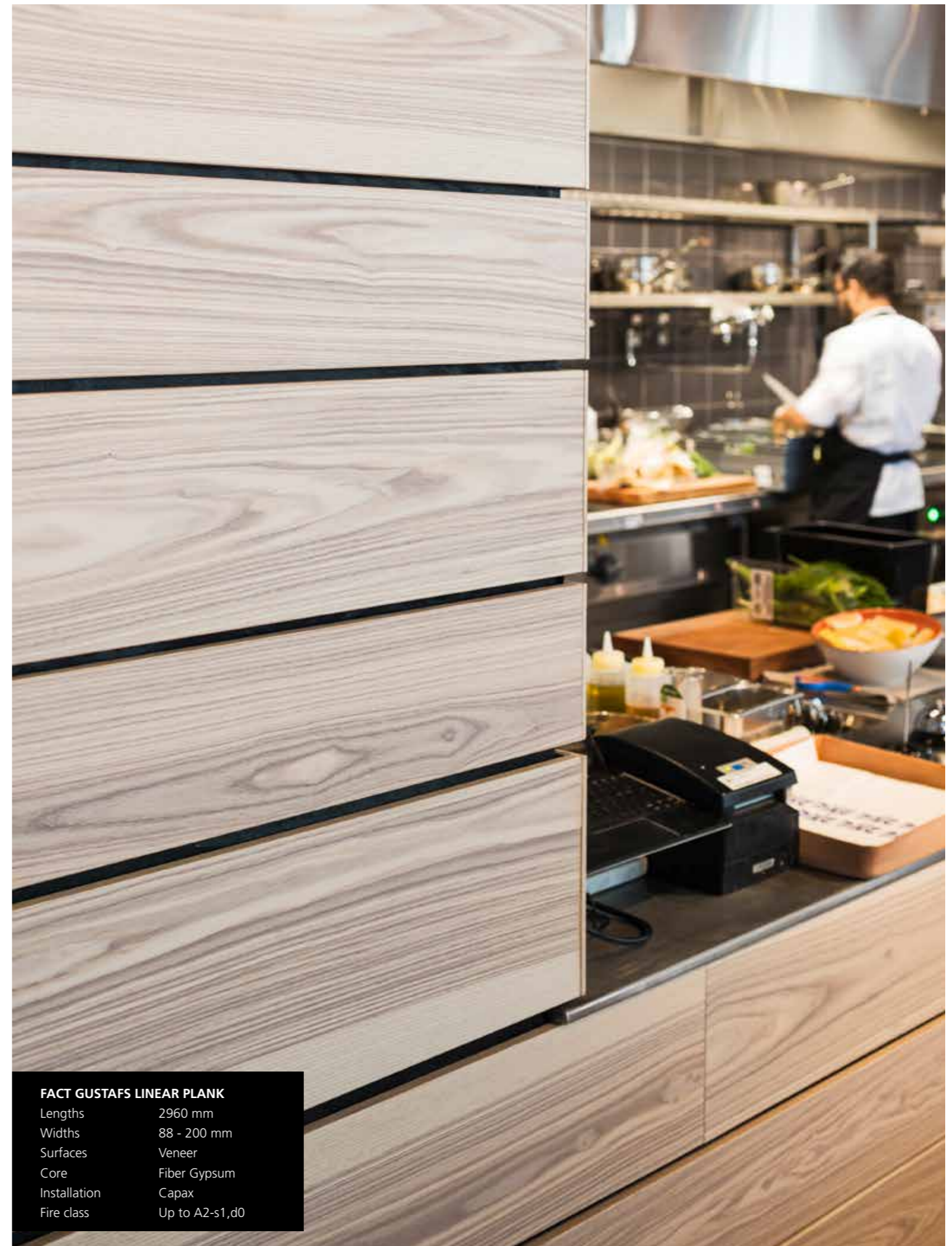
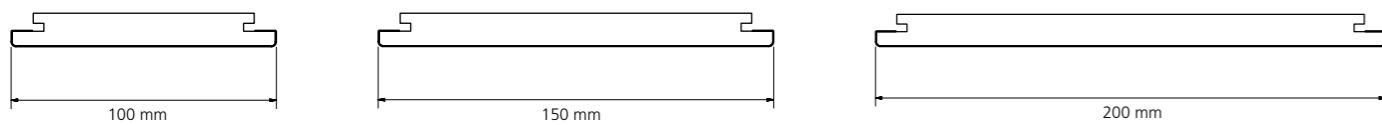
## INSTALLATION

Using Capax profiles or clips, the Planks can be installed vertically, horizontally or diagonal and with closed or more eye catching coloured open joints between the Planks. Linear Planks are the perfect tool to create curved walls and ceilings.

## WALL INSTALLATION



## PLANK WALL MODELS

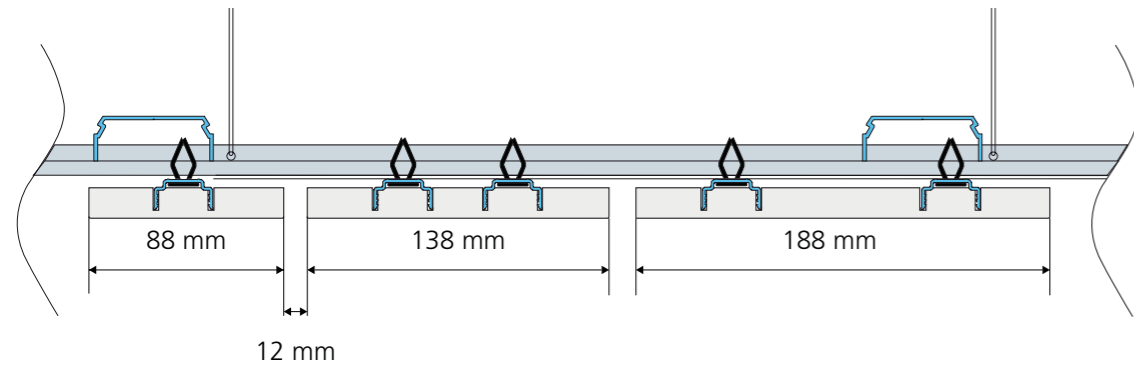


### FACT GUSTAFS LINEAR PLANK

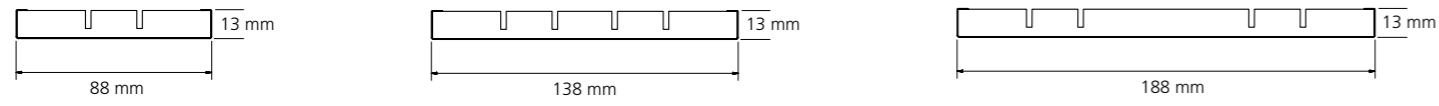
Lengths	2960 mm
Widths	88 - 200 mm
Surfaces	Veneer
Core	Fiber Gypsum
Installation	Capax
Fire class	Up to A2-s1,d0

# GUSTAFS LINEAR PLANK

## CEILING INSTALLATION



## PLANK CEILING MODELS



Linear Plank ceiling installation



Royal Air Force Club, London  
Linear Plank in walnut veneer



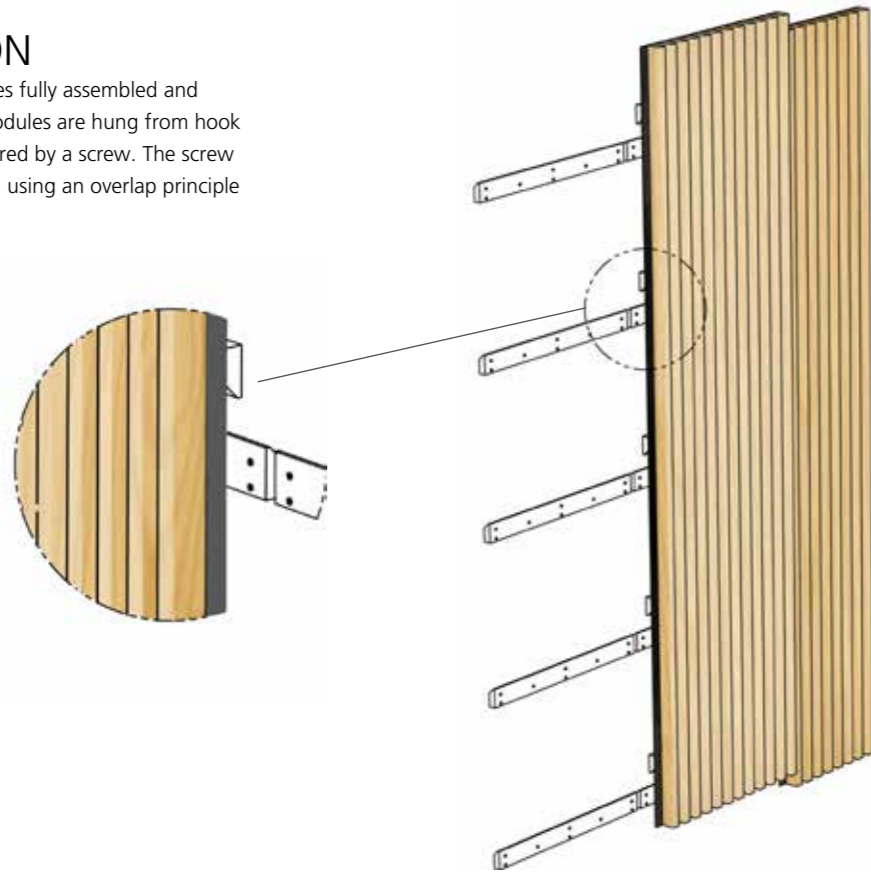
Linear Plank at Nordic Light Hotel,  
Stockholm

# MODULE

The Gustafs Modules comes fully assembled and ready to use, including the acoustic felt. The Module system provides quick, user friendly and concealed installations and a modern linear look in solid wood. A look that can be adapted to your request when it comes to the rib dimension and the spacing in between them, but also the type of wood and wood treatment.

## WALL INSTALLATION

The Linear modules for walls also comes fully assembled and equipped with an acoustic felt. The modules are hung from hook shaped battens and once in place secured by a screw. The screw will be hidden behind the acoustic felt, using an overlap principle for a stylish end result.



## WALL MODELS



### GUSTAFS LINEAR MODULE FACTS

Dimensions	Ceiling modules 600 x 1190 mm, <i>others on request</i> Wall modules 600 x 2400 mm, <i>others on request</i>
Species	All species of wood, solid
Treatments	Lacquer, Stain, Oil or Paint
Acoustics	Open area and sound absorption depends on the design.
Fire class	up to B-s1,d0

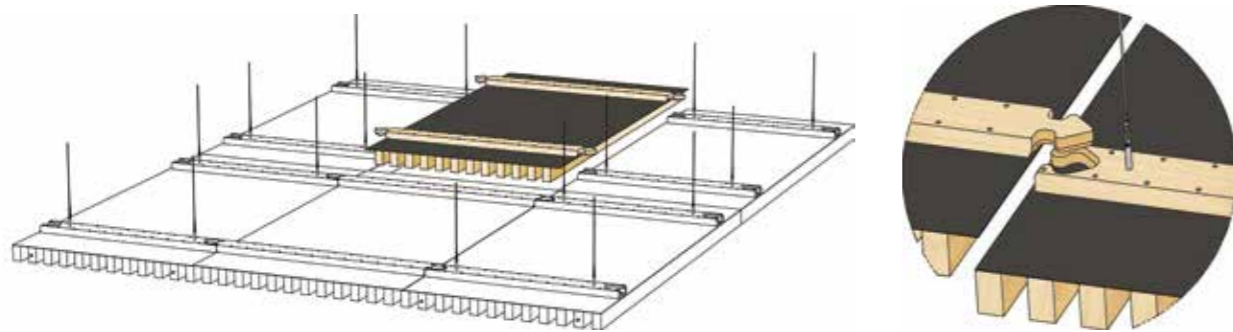


Linear Module at Lund's District Court,  
Architect: Fojab Arkitekter

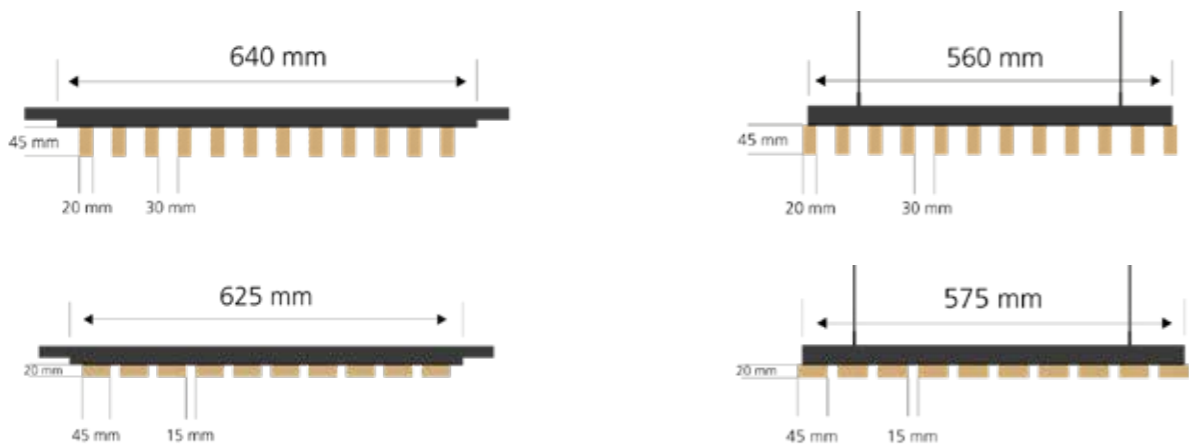
CEILING MODELS & INSTALLATION

FREE SUSPENDED INSTALLATION

The ceiling modules come ready to use including an acoustic felt and are easily suspended from the integral M6 connection points.

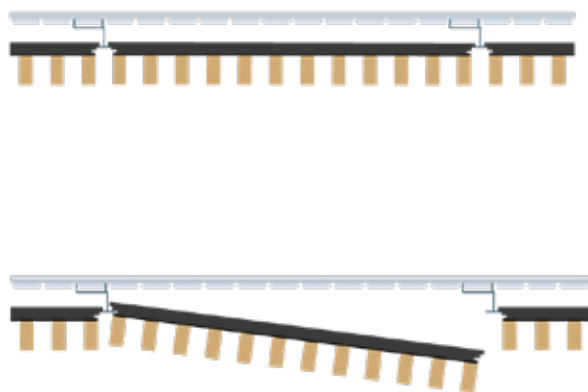


FREE SUSPENDED MODULES

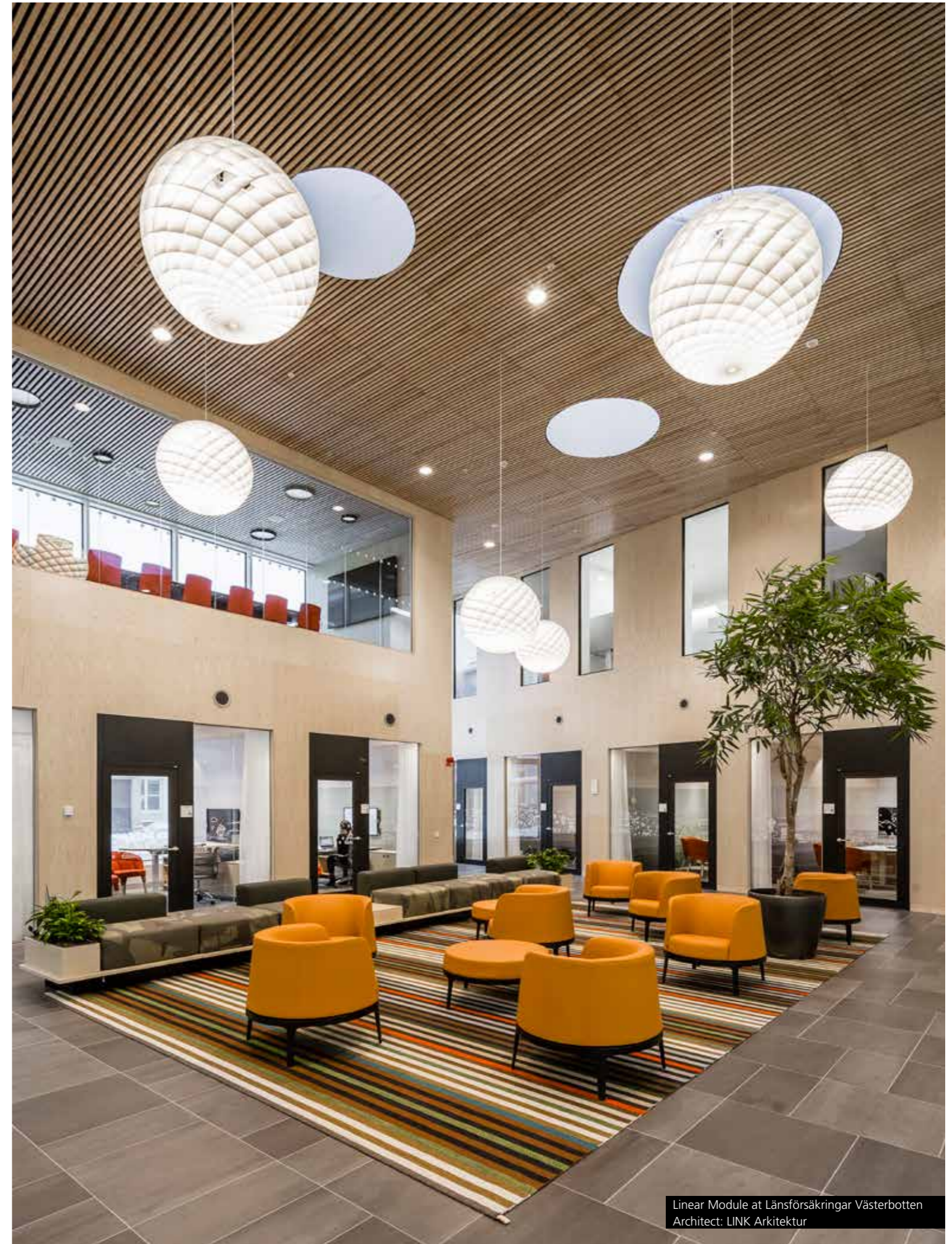
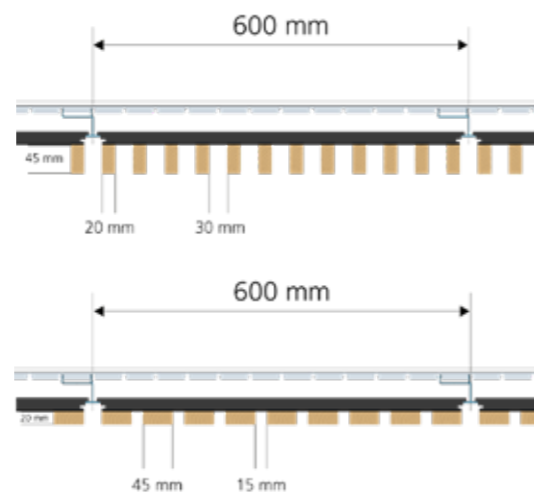


T24 SUSPENSION INSTALLATION

Modules designed for Gustafs Capax T24 Ceiling Grid have a semi concealed and fully demountable installation system!



T24 SUSPENSION MODULES



Linear Module at Länsförsäkringar Västerbotten  
Architect: LINK Arkitektur

# WHY GUSTAFS?



LEADING ACOUSTICS,  
DESIGNED FOR  
EYES & EARS



REAL A2-s1,d0  
INCLUDING THE VENEER  
OF CHOICE



LOOKING GOOD OVER  
TIME, VALUE INCREASING  
OF ASSETS



WORLD WIDE  
REFERENCES



REAL CHAIN  
OF CUSTODY



REAL GREEN,  
94% RECYCLED  
MATERIALS



NO ADDED CHEMICALS



WE HAVE WOOD IN  
OUR ROOTS



PRODUCED WITH  
REAL GREEN POWER



CUSTOMIZED,  
PRE-FABRICATED  
ACCORDING TO YOUR  
DRAWINGS



SAFE BUY  
OVER 100 YEARS  
IN BUSINESS



SMART & QUICK  
INSTALLATIONS

# OUR PROCESS

Our customers have access to a wealth of competence and knowledge when they seek our cooperation. Through years of national and international project experience we know how to support, drive and take care of the whole process, from idea and design to the final installation – contracting Gustafs is a reliable one stop purchase that will make your life easier!



1. DESIGN

In the design phase we inspire with an excellent reference library and solutions and materials that allow customization. We support you in finding a design within the limits of reasonable costs, producibility, durability, safety, sound comfort and fair lead times.



2. DEVELOPMENT  
& CONSTRUCTION

In phase 2 we support you in translating your designs into real and producible constructions with realistic installation methods. We sample and if needed provide full scale mock-ups.



3. PROJECT  
MANAGEMENT

In this phase we prepare and support to make your life simpler. We back-up regarding the final ordering details and plan for a daily follow up and feed back on the dead-line, through out production, delivery and installation.



4. PRODUCTION

Production and wood works has been in our roots since 1913, a core competence we never stop developing. Excellent quality is what we have delivered for more than 100 years.



5. DELIVERY  
& INSTALLATION

Packaging and delivery has already been developed and planned for in early phase 2. We know everything about world wide shipping of bespoke constructions. The installation is in the safe hands of our experienced carpenters and project managers.

# CONTACT US

[info@gustafs.com](mailto:info@gustafs.com)

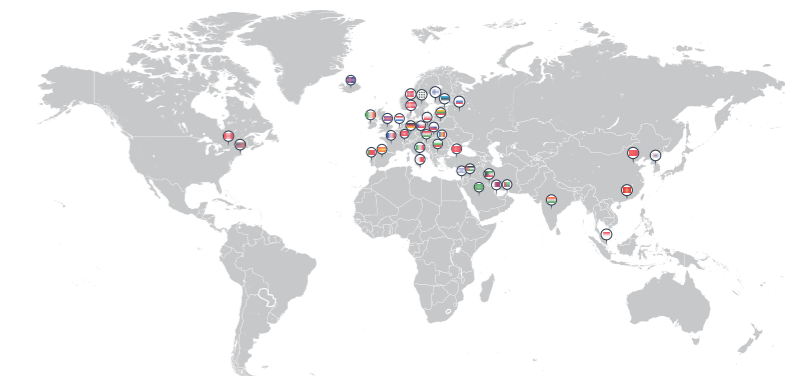
Tel: +46 (0)243 79 20 20

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