



# Luxalon®

Metal Ceilings

INNOVATIVE PRODUCTS  
MAKE INNOVATIVE PROJECTS



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Architectural



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Hunter Douglas Fabrication, Sacramento (CA), USA



HCl Holland Coatings Industries, Hoogeveen, The Netherlands



Hunter Douglas Leek, The Netherlands



Luxaflex Nederland, Hardinxveld, The Netherlands



Artex, Aarle-Rixtel, The Netherlands



Hunter Douglas Designer Shades, Bessemer City (NC), U.S.A.



Hunter Douglas Fabrication, Renton (WA), U.S.A.



Hunter Douglas Fabrication, Poway (CA), U.S.A.



Hunter Douglas Fabrication, Willow Grove (PA), U.S.A.



World Headquarters and European Operations, Hunter Douglas Europe, Rotterdam, The Netherlands



Hunter Douglas Europe, Oudenbosch, The Netherlands



Mado, Eindhoven, The Netherlands



Hunter Douglas Plastics and Castings, Owensboro (KY), U.S.A.



Hunter Douglas Specialty Products, Thornton (CO), U.S.A.



Hunter Douglas Metals and Distribution, Tupelo (MS), U.S.A.



Carolis Fabrics, Augusta (GA), U.S.A.



Hunter Douglas Fabrication, Salt Lake City (UT), U.S.A.



Hunter Douglas India, Sri city



Hunter Douglas Shutters, Gilbert (AZ), U.S.A.

**HunterDouglas**

- 169 companies
- 68 manufacturing and 101 assembly operations
- More than 16,000 employees
- Sales offices in more than 100 countries



Schollekens & Schollekens, Beuningen, The Netherlands



Luxaflex France, Tourcoing



Heloscreen, Lokeren, Belgium



Sunflex Distribution Centre, Cannock, United Kingdom



Luxaflex United Kingdom, Birmingham



Mermet, France



Hunter Douglas Canada, Brampton



3form, Salt Lake City (UT), U.S.A.



Hunter Douglas Chile, Santiago



Hunter Douglas Malaysia, Kuala Lumpur



Hunter Douglas Manufacturing, Guangzhou, China



Hunter Douglas, Shanghai, China



TM Blinds, Newcastle, Ireland



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Shade-C-Matic, Toronto, Canada



Hunter Douglas do Brasil, Campinas



Hunter Douglas Window Fashions, Broomfield (CO), U.S.A.



Hunter Douglas Japan, Ibaraki, Japan



Hunter Douglas Building Products, Beijing, China



Hunter Douglas Construction Elements, Xiamen, China



Hunter Douglas Window Fashions, Hornum, Denmark



NBK, Emmerich, Germany



Hunter Douglas, Sydney, Australia



Hunter Douglas de Colombia, Bogotá



Hunter Douglas Argentina, Buenos Aires



Hunter Douglas, Ho Chi Minh City, Vietnam



Hunter Douglas Korea, Seoul



Hunter Douglas India, Silvassa



Hunter Douglas Kadan, Czechia



Hunter Douglas Schweiz, Root

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## Hunter Douglas Group

Hunter Douglas is the world market leader in window coverings and a major manufacturer of ceilings, sun control and façade systems.

Our strength is our ability of develop innovative, high quality, proprietary products that can be found in millions of homes and commercial buildings around the globe. We operate as a highly decentralized, global federation of small and medium-sized companies that manufacture and market similar products.

From our founding in 1919, Hunter Douglas has been a home for innovators. Established by entrepreneurs, our culture is one of innovation and advancement that attracts the best and the brightest people. Our leadership position flows directly from continuous innovation within our business. These innovations come from a team of over 16,000 talented people working in over 100 countries. We consider their talents and skills to be the true strength of our organization.

## Ceilings

Linear

Tile Ceilings

Cell Ceilings

Screen Ceilings

Wide panel (300C) ceiling

XL panel ceilings

Techstyle

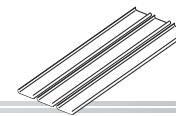
U-Baffle ceilings

Torsion Spring

Hook-on Ceiling

Custom Ceilings

# LUXALON® LINEAR CEILING (75C/150C/225C)



## SHORT SYSTEM DESCRIPTION

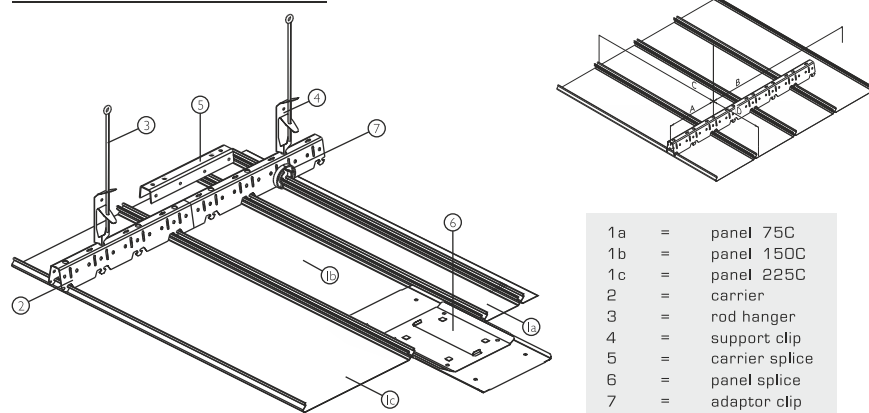
The Luxalon® closed ceiling system combines three widths of panels which are distinguished from other Luxalon® systems by their bevelled edges, and when installed produces a closed smooth appearance. All three widths can be clipped to a universal carrier thus providing the designer with unlimited possibilities. The panels are made from 0.5 and 0.6 mm aluminium and can be supplied in any length, the carriers are 5000 mm long as standard.

The panels are joined together using a panel splice whilst the carriers use the standard carrier connector. Our standard range of edge profiles can be used at perimeters and panels cut in length to form perimeter infill should be additionally supported using the special adaptor clip as indicated in the system overview.

## PRACTICAL APPLICATIONS:

- Optimal acoustic control for office spaces, meeting rooms etc. can be achieved by using perforated panels with a non-woven textile membrane bonded to the inside face. Alternatively: -sealed mineral wool pads can be overlaid.
- The absence of dust retention and ease of cleaning make the plain bevelled edge closed joint panels ideal for hospitals, kitchens, food preparation areas and anywhere where hygiene is important.
- Likewise, the neat closed joints present a smooth uninterrupted appearance for areas where elegant understatement harmonizes with the rest of the area.
- By combining the narrow and wide panels on one carrier, various dimensional effects are possible. These effects can be enhanced by incorporating colour from our extensive range.
- Each panel can be easily demounted by hand allowing full access to services and equipment in the plenum.
- Panels can be produced up to 6000 mm long thus keeping the necessity for joints to a minimum.
- Panels are lightweight yet strong, made from aluminium which is fully recyclable.
- Panels can also be used for exterior application.

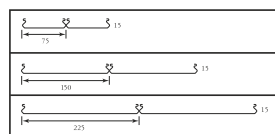
## SYSTEM OVERVIEW 75C-150C-225C



- 1a = panel 75C
- 1b = panel 150C
- 1c = panel 225C
- 2 = carrier
- 3 = rod hanger
- 4 = support clip
- 5 = carrier splice
- 6 = panel splice
- 7 = adaptor clip

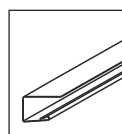
Panel type	Carrier span		Panel span	
	A	B	C	D
75C	300	1700	1250	150
150C	300	1700	1000	150
225C	300	1700	1000	150

## DIMENSIONS

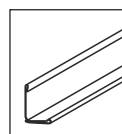


Panel HxW	Module	Material	Weight m <sup>2</sup>
15,5 x 75	75	0,5 Alu	2,13 kg
15,5 x 150	150	0,5 Alu	1,96 kg
15,5 x 225	225	0,6 Alu	2,19 kg

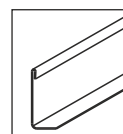
## EDGE PROFILES



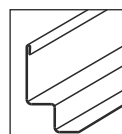
Cli p-cl -prb alu  
(28,6 x 19 x 20)



Wall L-profile alu  
(29,2 x 19,4)



Wall L-profile Fe  
(45 x 18,5)



Wall W-profile Fe  
(45 x 21 x 21 x 18,5)

## MATERIAL SPECIFICATION

### - BASE MATERIAL

Luxalon® multi-panel closed ceiling panels are produced from 0,5 or 0,6 mm thick pre-painted stove enamelled aluminium strip, alloy HD5050 or equivalent (according to EN 1396, and ECCA standards).

### - COATING

The tough and durable 2-layer polyester coilcoating finish in a nominal thickness of 20 microns, is stove enamelled in a continuous coil-coating process ensuring uniform coating thickness and absolute adhesion.

### - LUXALON® COLOUR RANGE

The standard Luxalon® colour range includes a large choice of colours and finishes. See Luxalon® colour chart. Any other (RAL or NCS) colour is available on request.

### - FIRE BEHAVIOUR

Luxalon® metal suspended ceilings are classified incombustible and will therefore not contribute to possible fires.

When ceilings however need to protect the structural integrity of a building, Luxalon® ceilings offer a range of practical and tested solutions with regards to fire resistance and fire stability. Further information is available on request.

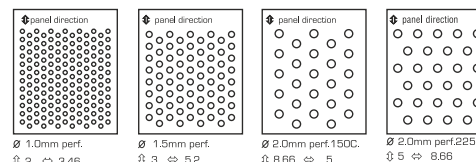
## MATERIAL REQUIREMENTS PER M<sup>2</sup>

Unit	75C	150C	225C
Panels	1m 13,33	6,67	4,44
Carriers	1m 0,80	1,0	1,0
Suspension	pcs 0,5	0,6	0,6

Edge profiles and other accessories depend on individual project requirements.

## PERFORATION OPTIONS:

	75C	150C	225C
• Ø 1,0 mm and Δ 2mm with 23% open area	• NA	• NA	• NA
• Ø 1,5 mm and Δ 3mm with 23% open area	• NA	• NA	• NA
• Ø 2,0 mm and Δ 5mm with 16% open area	• NA	• NA	• NA



## SOUND ABSORPTION

### - CURVE 1 (75C):

75C panels with Ø 1mm holes. The reverse side of the panels is provided with black non-woven tissue glued over the whole perforated area.

Plenum depth is 200 mm. The sound absorption curve has been taken from test report nr.124.022 of TNO Delft.

### - CURVE 2 (150C/225C):

150C panels with Ø 2 mm holes. The reverse side of the panels is provided with black non-woven tissue glued over the whole perforated area. Plenum depth is 200 mm. The sound absorption curve has been taken from test report nr.124.022 of TNO Delft.

The sound absorption curve for 225C panels with Ø 2 mm holes and non-woven tissue will resemble curve 2.

### - CURVE 3 (75C):

Perforated 75C panels with Ø 1mm holes. Between the carriers a 25mm thick mineral wool pad with a density of approx. 22 kg/m<sup>3</sup>, plenum depth 200 mm. The sound absorption curve has been taken from test report no.823.066 of TNO Delft.

### - CURVE 4 (225C):

225C panels with Ø 1,5mm holes. The reverse side of the panels is provided with black non-woven tissue glued over the whole perforated area. Plenum depth is 400 mm. The sound absorption curve has been taken from test report nr. TPD-HAG-RPT-94-0037 of TNO Delft.

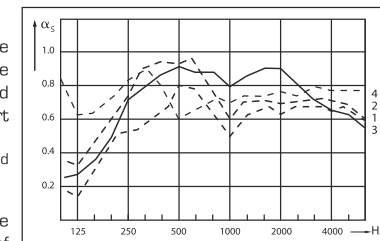
The sound absorption curve for 225C panels with Ø 1,5 mm holes and non-woven tissue will resemble curve 4.

## PLENUM ACCESSIBILITY

Although installed on a concealed carrier system, each individual panel can easily be demounted by clipping the edge of the panel from the prongs of the carrier, using e.g. a pallet knife.

## ACOUSTIC PERFORMANCE

In order to improve interior sound control, the Luxalon® multi-panel closed ceiling panels can be perforated and also fitted with non-woven acoustic tissue.



Freq. Hz.	125	250	500	1000	2000	4000
Curve 1 (75C)	0,17	0,52	0,81	0,49	0,65	0,66
Curve 2 (150C/225C)	0,30	0,74	0,88	0,58	0,71	0,70
Curve 3 (75C)	0,30	0,70	0,90	0,80	0,90	0,65
Curve 4 (225C)	0,62	0,82	0,60	0,70	0,78	0,77



Johor Premium, Malaysia  
75C Ceiling



Sepinggan Airport Balikpapan, Indonesia  
150C Ceiling



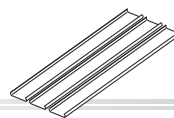
M10 Office Building@Bkt Kamuning Malaysia  
75C and 150C ceiling



InBev Brewery, Belgium  
150C ceiling



# LUXALON® LINEAR CEILINGS (84C/184C)



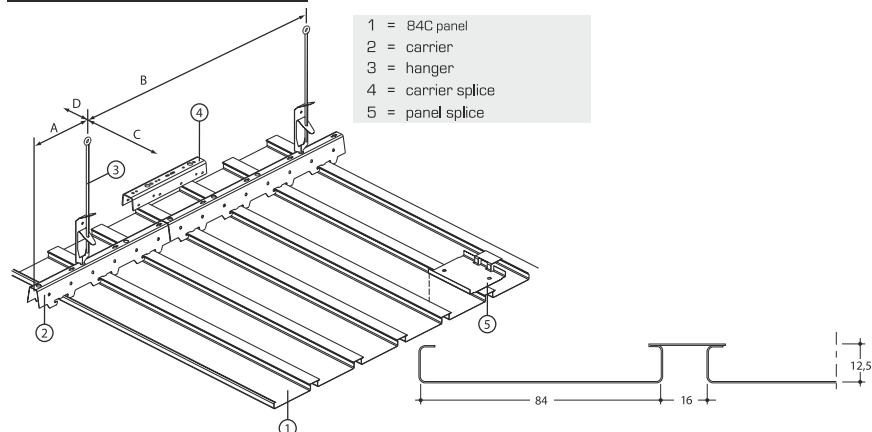
## SHORT SYSTEM DESCRIPTION

The Luxalon® 84C/184C closed ceiling system consists of box shaped panels [1] which can be easily clipped on a 84C/184C carrier [2]. The 84mm/184mm wide panels feature a 24 mm wide flange that closes off the 16 mm joint between the panels (module 100/200mm). The 12,5 mm deep recessed joint gives a linear direction to the ceiling plane whilst being closed off from the plenum. The stove enamelled aluminium panels are recyclable, lightweight and strong. The panels are made to measure and can be supplied in any length up to 6000 mm. Panels can be joined by using the panel splice [5]. The panel carrier [2] is black, made of 0.5 mm thick stove enamelled steel or 0.95 mm thick stove enamelled aluminium and is provided with prongs to accommodate the panels in a module of 100/200mm. Carriers have a standard length of 5000 mm and are connected by using the carrier splice [4]. The Luxalon® standard range of edge profiles can be used as perimeters.

## PRACTICAL APPLICATIONS

- Panel length made to measure allowing for swift installation and reducing the need for joining the panels to a minimum.
- The panels can be easily removed and replaced by using a hooked-shaped tool, allowing easy and full access to the plenum.
- Optimal acoustic control for offices, meeting rooms etc. can be achieved by using perforated panels with a non-woven textile membrane bonded to the inside face.
- Aluminium panels in combination with aluminium carriers, can be used to create an exterior ceiling.
- Ceilings for marine applications can be created by using steel 84C panels in combination with steel carriers and suitable thermal insulating pads. Bureau Veritas certificate 5080/2846/ Co/O and Lloyd's Register type approval certificate SAS F970009.
- The joint-flange can be executed with a rectangular perforation for ventilation purposes.
- Absence of dust retention and ease of cleaning make this ceiling (when having plain panels) ideal for anywhere where hygiene is important.

## SYSTEM OVERVIEW 84C SYSTEM



## MAXIMUM SPANS

locking clip necessary when no edge-profile springs are used

Panel type	Carrier span (mm)		Panel span (mm)			
	A	B	on 2 carriers		on 3 or more carriers	
	C*	D	C*	D	C*	D
84C	300	1300	1600	150	1800	150

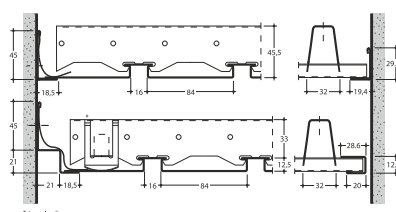
\*Minus 200 mm in case of acoustic pads.

## DIMENSIONS & WEIGHTS

Panel	Width (mm)	Module (mm)	Min length (mm)	Max length (mm)	Weight panels & carriers/m <sup>2</sup> *	
					Steel carrier	Alu. carrier
84C	84	100	1000	6000	2,2 kg	2,1 kg
184C	184	200	800	6000	2,4 kg	2,3 kg

\* Based on panels installed on 3 or more carriers  
Panels from 250 - 1000 mm and >6000 mm are available on request.

## STANDARD CONSTRUCTION DETAILS



## PLENUM ACCESSIBILITY

The Luxalon® 84C/184C system allows for easy demounting of the panels. Installed on a visually hidden suspension system, each panel can be easily removed and replaced by using a hooked-shaped tool allowing easy and full access to services and installations in the plenum.

## MATERIAL SPECIFICATIONS

### - BASE MATERIAL

Luxalon® 84C/184C panels are rollformed from 0.5/0.6mm thick preprepared stove enamelled aluminium strip. All aluminium products can be recycled for the full 100% requiring very little energy.

### - COATING

The tough and durable polyester finish in a nominal thickness of approximately 20 microns, is stove enamelled in a continuous coil-coating process ensuring uniform coating thickness and absolute adhesion.

### - LUXALON® COLOUR RANGE

The standard Luxalon® colour range for 84C/184C includes a wide range of colours and finishes. See Luxalon® colour chart. Any other (RAL or NCS) colour is available on request.

### - FIRE BEHAVIOUR

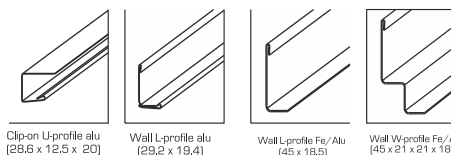
Luxalon® metal suspended ceilings are classified incombustible and will therefore not contribute to possible fires. When ceilings however need to protect the structural integrity of the building, Luxalon® ceilings offer a range of practical and tested solutions with regards to fire stability. Further information is available on request.

## MATERIAL REQUIREMENTS PER M<sup>2</sup>

	Unit	Linear 84C system
Panels	1m	10
Carriers	1m	0.56
Carrier splice	pc	0.11
Suspension	pc	0.43

The required number of components depend on individual project requirements  
Figures are based on maximum spans

## EDGE PROFILES



### - CURVE 1

Acoustic panels, perforated Ø 2 mm, with non-woven acoustic tissue glued in, closed joints, module 100 mm, plenum depth 200 mm.

### - CURVE 2

Perforated panels, perforated Ø 2 mm, closed joints, module 100 mm, plenum depth 200 mm, plus additional 25 mm thick mineral wool pads with a density of approx. 12 kg/m<sup>3</sup>

### - CURVE 3

Perforated panels, perforated Ø 1 mm, with non-woven acoustic tissue glued in, closed joints, module 100 mm, plenum depth 200 mm.

### - CURVE 4

Perforated panels, perforated Ø 1 mm, closed joints, module 100 mm, plenum depth 200 mm, plus additional 25 mm thick mineral wool pads with a density of approx. 12 kg/m<sup>3</sup>

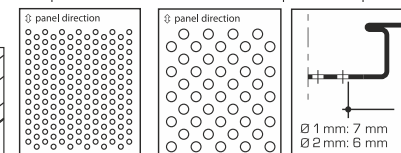
These 84C ceilings were tested by TNO Delft (The Netherlands), an independent official testing institute. Report no: TPD-HAG-RPT -920039/920038.

## ACOUSTIC PERFORMANCE

In order to improve interior sound control, the Luxalon® 84C panels can be perforated. As a standard feature, perforated panels can be supplied with a soundabsorbing non-woven tissue glued into the panel for enhanced acoustical performance.

## PERFORATION OPTIONS

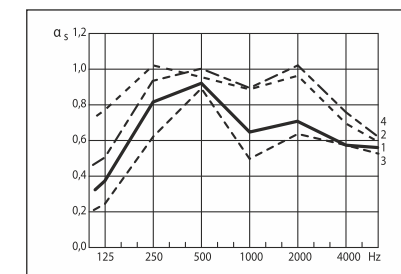
84C panels are available in 2 standard perforation patterns:



Ø 1,0 mm  
Ø 2,0 mm  
Ø 2 ⇔ 3,46  
Ø 8,66 ⇔ 5

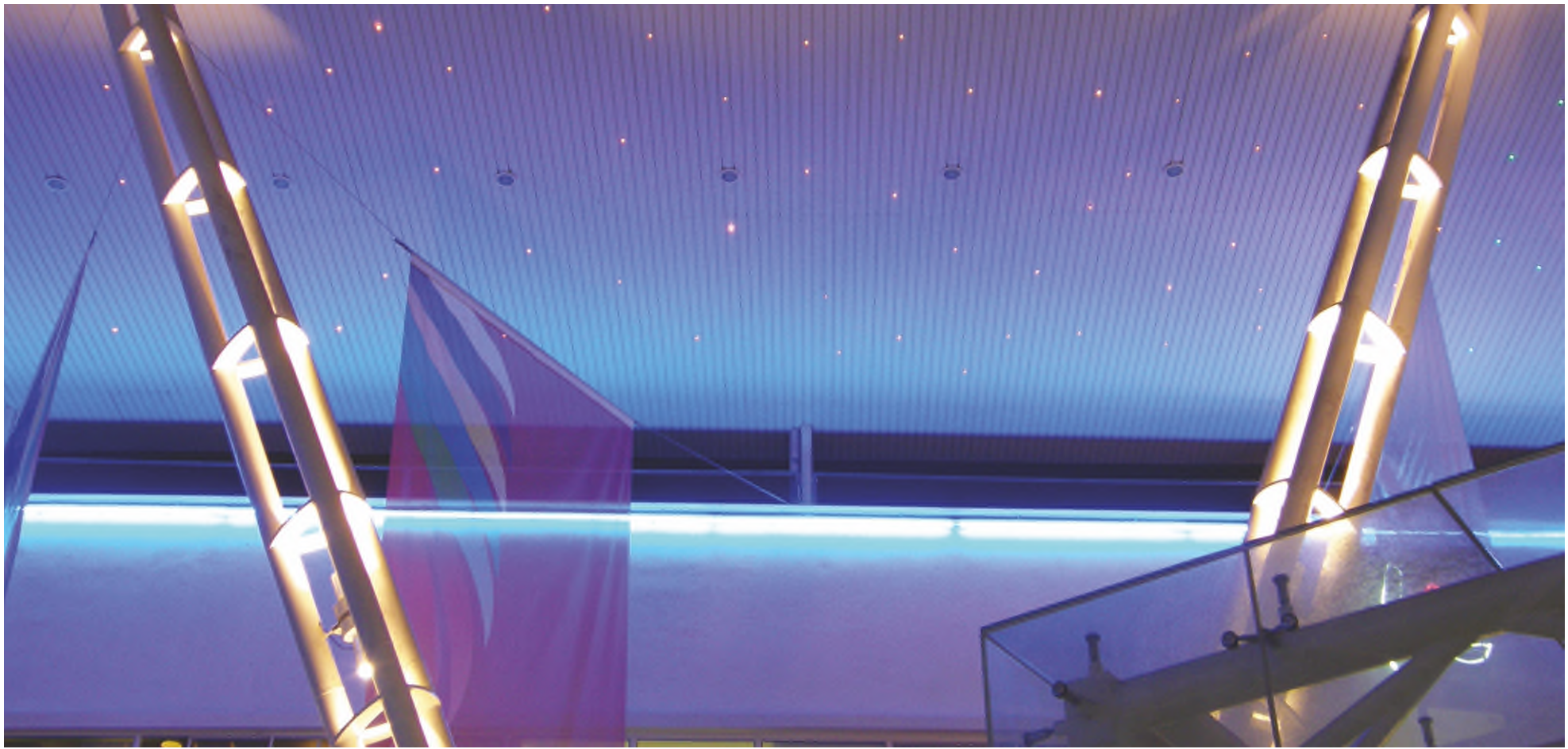
Note: panels have a nominal plain border along the longitudinal panel direction in order to assure maximum flatness and product stability: 7 mm for Ø 1 mm and 6 mm for Ø 2 mm.

## SOUND ABSORPTION DATA



alpha\_s = soundabsorption degree: an absorption of 1.0 indicates a 100% absorption of sound.

Freq. Hz	125	250	500	1000	2000	4000
Curve 1	0,37	0,81	0,91	0,65	0,70	0,58
Curve 2	0,68	1,01	0,94	0,87	0,94	0,69
Curve 3	0,24	0,62	0,87	0,51	0,64	0,57
Curve 4	0,55	0,94	1,00	0,90	1,01	0,78



TTDI Plaza Malaysia  
84C ceiling



KLCC Mosque Malaysia  
84C ceiling



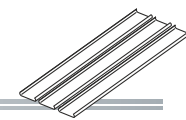
Dewan Tuanku Syed Putra, USM, Malaysia  
184C (perforated/non-perforated) ceiling



KLIA2 Malaysia  
84C ceiling



# LUXALON® LINEAR CEILINGS - 84R



## SHORT SYSTEM DESCRIPTION

The Luxalon® Multi-R ceiling system consists of round edged panels (1) which can be easily clipped on a Multi-R carrier (3). The stove enamelled aluminium panels are recyclable, lightweight and strong. The panels are made to measure and can be supplied in any length up to 6000 mm. Panels can be joined by using the panel splice (2) between the panels there is an open joint of 16 mm, which can be filled with a 16 mm wide flush join profile (2) to form a flush closed ceiling appearance. Join profiles can be simply inserted in the open joint by hand, without using any tools.

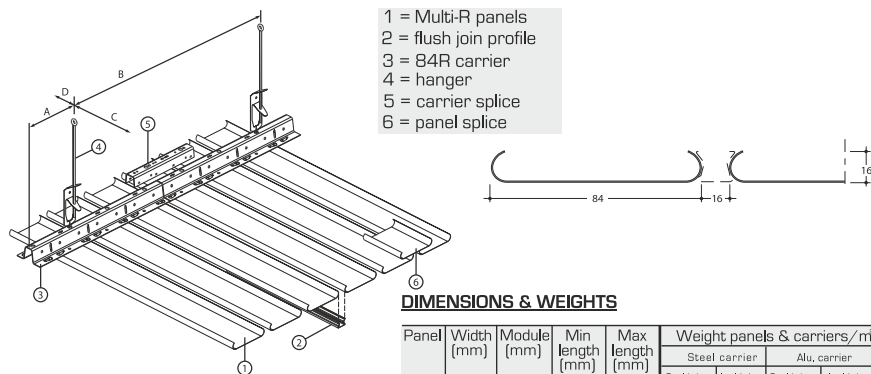
The panel carrier (3) is black, made of 0.5 mm thick stove enamelled steel or 0.95mm thick stove enamelled aluminium and is provided with prongs to accommodate the panels in a standard module of 100 mm onwards. All carriers have a standard length of 5000 mm and are connected by using the carrier splice (5).

The Luxalon® standard range of edge profiles can be used as perimeters.

## PRACTICAL APPLICATIONS

- Panel length made to measure allowing for swift installation and reducing the need for joining the panels to a minimum.
- The panels can be easily removed and replaced by hand allowing easy and full access to services and installations in the plenum.
- Between the panels there is an open joint of 16 mm, which can be closed with flush join profiles. The panels combined with join profiles, provide a visually closed ceiling.
- Open joint systems for all applications can achieve up to 16% open area (for ventilation, acoustics etc.).
- Enhanced acoustic control for offices, meeting rooms etc. can be achieved by using perforated panels with a non-woven textile membrane bonded to the inside face.
- To achieve modules between 93 onwards (with joints of 9 up till 66 mm), non-standard carriers are available (steel or aluminium).
- 84R system is suited for creating radial ceilings by using unpronged carriers and special panel clips.
- Curved ceilings can be achieved by using the 84R flexible carrier, or by curving the 84R panels. See separate brochure for curved 84R panels.

## SYSTEM OVERVIEW MULTI-R SYSTEM



- 1 = Multi-R panels
- 2 = flush join profile
- 3 = 84R carrier
- 4 = hanger
- 5 = carrier splice
- 6 = panel splice

## DIMENSIONS & WEIGHTS

Panel	Width (mm)	Module (mm)	Min length (mm)	Max length (mm)	Weight panels & carriers/m²			
					Steel carrier	Alu. carrier	Excl.joins	Incl.joins
84R	84	100	1000	6000	1.8 kg	2.3 kg	1.7 kg	2.2 kg

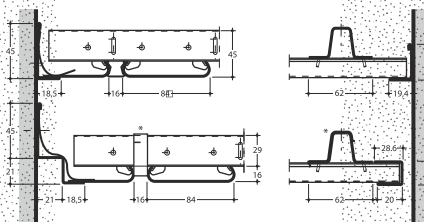
\* Based on panels installed on 3 or more carriers  
 † Panels from 250, 1000 mm and >6000 mm are available on request.

## MAXIMUM SPANS

Panel type	Carrier span (mm)	Panel span (mm) ***				
		on 2 carriers		on 3 or more carriers		
	A	B	C*	D	C*	D
84R	300	1700	1500	150	1700	150

\* Minus 200 mm in case of acoustic pads.

## STANDARD CONSTRUCTION DETAILS



## PLENUM ACCESSIBILITY

The Luxalon® Multi-R system allows for easy demounting of the panels and flush joins. Installed on a visually hidden suspension system, each panel can be easily removed and replaced by hand allowing easy and full access to services and installations in the plenum.

## EXTERIOR APPLICATION

The Luxalon® Multi-R ceiling is also available for exterior applications. See separate brochure for further details.

## MATERIAL SPECIFICATIONS

### - BASE MATERIAL

Luxalon® Multi-R panels are rollformed from 0.5/0.6mm thick prepainted stove enamelled aluminium strip. All aluminium products can be recycled for the full 100% requiring very little energy.

### - COATING

The tough and durable polyester finish in a nominal thickness of approximately 20 microns, is stove enamelled in a continuous coil-coating process ensuring uniform coating thickness and absolute adhesion.

### - LUXALON® COLOUR RANGE

The standard Luxalon® colour range for Multi-R includes a wide range of colours and finishes. See Luxalon® colour chart. Any other (RAL or NCS) colour is available on request.

### - FIRE BEHAVIOUR

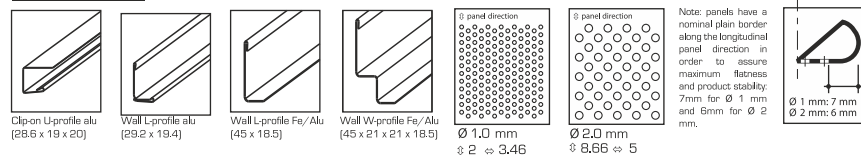
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## MATERIAL REQUIREMENTS PER M²

	Unit	Linear 84R system
Panels	1m	10
Join profiles	1m	10
Carriers	1m	0.59
Carrier splice	pc	0.12
Suspension	pc	0.35

The required number of components depend on individual project requirements  
 Figures are based on maximum spans

## EDGE PROFILES



### - CURVE 1

Acoustic panels, perforated Ø 2 mm, with non-woven acoustic tissue glued in, open joints 16mm, module 100mm, plenum depth 160 mm.

### - CURVE 2

Acoustic panels, perforated Ø 2 mm, with non-woven acoustic tissue glued in, closed with join profiles, module 100mm, plenum depth 160mm.

### - CURVE 3.

Perforated panels, perforated Ø 1 mm or Ø 2 mm, open joints 16 mm, module 100 mm, plenum depth 160 mm, plus additional 20 mm thick mineral wool pads with a density of approx. 22 kg/m³.

### - CURVE 4

Plain panels, open joints 16 mm, module 100 mm, plenum depth 160mm, plus additional 20 mm thick mineral wool pads with a density of approx. 22 kg/m³.

These figures are partly based on the 80B test results which can be assumed as being equal for 84R. 80B ceilings were tested by TNO Delft (The Netherlands), an independent official testing institute. Report no: 806.469, TPD-HAG-RPT-920038/920039/007293.

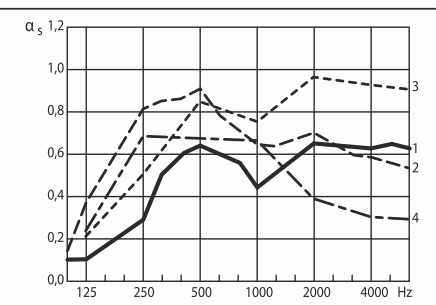
## ACOUSTIC PERFORMANCE

In order to improve interior sound control, the Luxalon® 84R panels can be perforated. As a standard feature, perforated panels can be supplied with a soundabsorbing non-woven tissue glued into the enhanced acoustical performance.

### - PERFORATION OPTIONS

- Flush join profile is available with ventilation holes dimensions 3 x 7 mm, c.o.c. 10.5
- 84R panels are available in 2 standard perforation patterns:

## - SOUND ABSORPTION DATA



Freq. Hz	125	250	500	1000	2000	4000
Curve 1	0.09	0.28	0.64	0.43	0.65	0.62
Curve 2	0.37	0.81	0.91	0.65	0.70	0.58
Curve 3	0.21	0.51	0.85	0.76	0.96	0.92
Curve 4	0.24	0.68	0.67	0.66	0.39	0.32

α<sub>s</sub> = soundabsorption degree: an absorption of 1.0 indicates a 100% absorption of sound





Ngurah Rai International Terminal Airport, Bali, Indonesia  
300R Ceiling



Sasana Kriya Convention Hall, Jakarta Indonesia  
84R ceiling



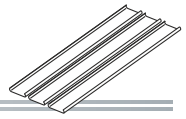
Mobifone Office Building, Ha Noi, Vietnam  
84R Ceiling



Taylor College, Malaysia  
84R curve ceiling



# LUXALON® LINEAR CEILINGS (MULTI B:30B/30BD/80B/130B/180B)



## SHORT SYSTEM DESCRIPTION

The Luxalon® Multi-Panel Ceiling System consists of box-shaped panels in 5 varying widths (30 mm up to 180 mm).

All panels (1 to 5) can be clipped to a universal multi-panel carrier, creating the opportunity to use panels with different widths and heights (15 mm and 39 mm) in one ceiling. The stove enamelled aluminium panels and joins are recyclable, lightweight and strong. The panels are made to measure and can be supplied in any length up to 6000 mm. Panels can be joined by using a panel splice (12).

Between the panels there is an open joint of 20 mm, which can be filled with a recessed V-shaped (6), U-shaped join (7) or with a 70 mm wide Softwave panel (8). Join profiles can be simply inserted in the open joint by hand, without additional tools.

The panel carrier (9) is black, made of 0.5 mm thick stove enamelled steel or 0.95 mm thick stove enamelled aluminium and is provided with prongs to accommodate the panels in a module of 50 mm or a multiple of this module. Carriers have a standard length of 5000 mm and are joined by using the carrier splice (11).

The Luxalon® standard range of edge profiles can be used for perimeters.

## PRACTICAL APPLICATIONS

- Panel length made to measure allowing for swift installation and reducing the need for joining the panels to a minimum.
- Between the panels there is an open joint of 20 mm, which can be closed with recessed V- or U- shaped join profiles. The panels combined with join profiles provide a visually closed ceiling.
- Open joint systems for all applications requiring up to 20% open area (for ventilation, acoustic, etc.)
- Optimal acoustic control for office spaces, meeting rooms etc. can be achieved by using perforated panels with a non-woven textile membrane bonded to the inside face.
- By combining the narrow and wide panels on one carrier, various dimensional effects are possible. These effects can be enhanced by incorporating different colours from our extensive standard range.
- Flexible carriers are available in order to create curved ceilings
- The Multi-Panel system is suited for creating radial ceilings by using unpronged carriers and special panel clips.

## MAXIMUM SPANS

Panel type	Carrier span (mm)		Panel span (mm)			
	A	B	on 2 carriers		on 3 or more carriers	
			C*	D	C*	D
30BD	300	1700	2500	150	2500	150
30B/80B	300	1700	1550	150	1850	150
130B	300	1700	1450	150	1550	150
180B	300	1700	1350	150	1450	150

\* Minus 200 mm in case of acoustic pads

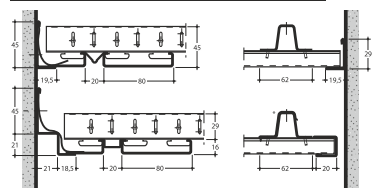
## DIMENSIONS & WEIGHTS

Panel type	30BD	30B	80B	130B	180B
Thickness	0.5	0.35	0.5	0.5	0.6
Width	30	30	80	130	180
Module	50	50	100	150	200
Depth	39	15	15	15	15
Min. length	800	800	800	800	800
Max. length*	6000	6000	6000	6000	6000
Weight/m <sup>2</sup> :					
-excl. join profiles, incl. steel carrier**	3.2 kg	1.5 kg	1.8 kg	1.8 kg	2.1 kg
-incl. join profiles, incl. steel carrier**	3.8 kg	2.1 kg	2.1 kg	2.0 kg	2.2 kg

\* Panels > 6000 mm available on request

\*\* Based on panels installed on 3 or more carriers

## STANDARD CONSTRUCTION DETAILS

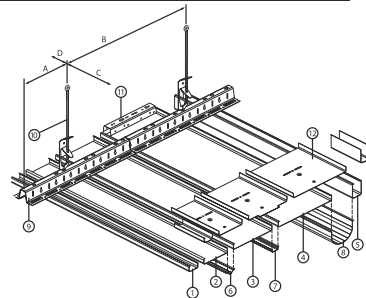


\* Luxalon fix clip should be used in combination with an adaptor panel

## PLENUM ACCESSIBILITY

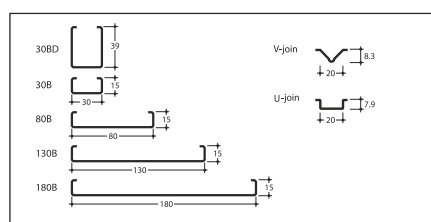
The Luxalon® Multi-Panel System allows total access to the ceiling void. Installed on a visually hidden suspension system, each individual panel can easily be demounted by unclipping the edge of the carrier. This is done by hand, without the use of additional tools. In case of recessed U-shaped or Softwave join profiles, these first need to be removed. In case of recessed V-shaped join profiles, these can remain in place.

## SYSTEM OVERVIEW MULTI-PANEL SYSTEM



- |                              |                              |
|------------------------------|------------------------------|
| 1 = 30B panel                | 7 = Recessed U-joint profile |
| 2 = 80B panel                | 8 = Softwave 70              |
| 3 = 130B panel               | 9 = Multi-Panel Carrier      |
| 4 = 180B panel               | 10 = Hanger                  |
| 5 = 30BD panel               | 11 = Carrier splice          |
| 6 = Recessed V-joint profile | 12 = Panel splice            |

## DIMENSIONS



## EXTERIOR APPLICATION

The Luxalon® 80B ceiling is also available for exterior applications. See separate brochure for further details.

## MATERIAL SPECIFICATIONS

### - BASE MATERIAL

Luxalon® Multi-Panel ceiling panels are rollformed from 0.35 mm (30B), 0.5 mm (30BD / 80B / 130B) or 0.6 mm (180B) thick pre-painted stove enamelled aluminium strip. All aluminium products can be recycled for the full 100%, requiring very little energy.

Flexalum® multi B: 30B/80B/130B/180B panels are produced from pre-painted zinc-aluminium coated steel

### - COATING

The tough and durable 2-layer polyester coilcoating finish in a nominal thickness of 20 microns, is stove enamelled in a continuous coil-coating process ensuring uniform coating thickness and absolute adhesion.

### - LUXALON® COLOUR RANGE

The standard Luxalon® colour range for Multi-Panel includes different colours and finishes. See Luxalon® colour chart. Any other (RAL or NCS) colour is available on request.

### - FIRE BEHAVIOUR

Luxalon® metal suspended ceilings are classified incombustible and will therefore not contribute to possible fires. When ceilings however need to protect the structural integrity of the building, Luxalon® ceilings offer a range of practical and tested solutions with regards to fire resistance and fire stability. Further information is available on request.

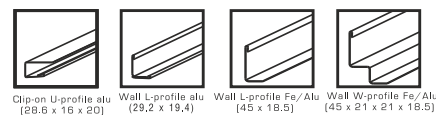
## MATERIAL REQUIREMENT PER M<sup>2</sup>

	Unit	30BD	30B	80B	130B	180B
Panels	lm	20	20	10	6.67	5
Join profiles	lm	20	20	10	6.67	5
Carriers	lm	0.4	0.55	0.55	0.65	0.69
Carrier splice	pcs	0.08	0.11	0.11	0.13	0.14
Suspension	pcs	0.24	0.32	0.32	0.38	0.41

Edge profiles and other accessories depend on individual project requirements.

Figures are based on maximum spans.

## EDGE PROFILES



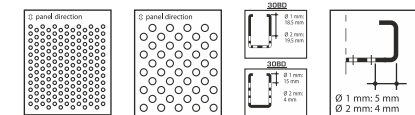
Clip-on U-profile alu (28.6 x 16 x 20) | Wall L-profile alu (29.2 x 19.4) | Wall L-profile Fe/Alu (45 x 18.5) | Wall W-profile Fe/Alu (45 x 21 x 21 x 18.5)

## ACOUSTIC PERFORMANCE

In order to improve interior sound control, the Luxalon® panels can be supplied perforated. As a standard feature, perforated panels can be supplied with a soundabsorbing non-woven tissue glued into the panel for enhanced acoustical performance.

### - PERFORATION OPTIONS:

Panel type	30BD	30B	80B	130B	180B
• Ø 1.0 mm and Δ 2mm with 23% open area	• NA	• NA	• NA	• NA	• NA
• Ø 2.0 mm and Δ 5mm with 16% open area	• NA	• NA	• NA	• NA	• NA



Ø 1.0 mm 30BD/80B Δ 2 → 3.46 | Ø 2.0 mm 30BD/80B/130B/180B Δ 5 → 5

Note: Panels have a nominal plain border along the longitudinal panel direction in order to assure maximum flatness and product stability: 5 mm for 80B panel Ø 1 mm and 4 mm for 80B/130B/180B, Ø 2 mm

## - SOUND ABSORPTION DATA

### - CURVE 1 (Ø 2.0 MM)

2.0 mm perforated panels, provided with 0.2 mm thick, black non-woven acoustic tissue, open joints 20 mm, all modules. Plenum depth is 160 mm.

### - CURVE 2 (Ø 2.0 MM)

2.0 mm perforated panels, provided with 0.2 mm thick, black non-woven acoustic tissue, closed joints 20 mm, all modules. Plenum depth is 160 mm.

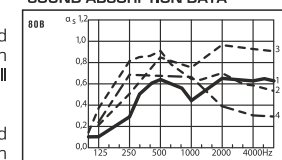
### - CURVE 3 (Ø 1.0 MM OR Ø 2.0 MM)

1.0 mm or 2.0 mm perforated panels, provided with 25 mm thick mineral wool pad with a density of 22 kg/m<sup>3</sup> open joints 20 mm, module 100 mm. Plenum depth is 160 mm.

### - CURVE 4 (PLAIN)

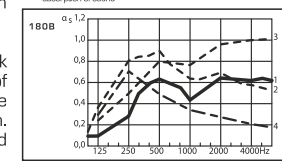
Plain panels, provided with 25 mm thick mineral wool pad with a density of 22kg/m<sup>3</sup>, open joints 20 mm, module 100 mm. Plenum depth is 160 mm. These Multi-Panel ceilings were tested by TNO Delft (The Netherlands).

An independent official testing institute, reports: 806.469, TPD-HAG-RPT-920038/920039.

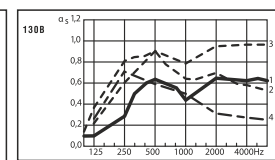


Freq.Hz	125	250	500	1000	2000	4000
Curve 1	0.09	0.28	0.64	0.43	0.65	0.62
Curve 2	0.37	0.81	0.91	0.65	0.70	0.58
Curve 3	0.21	0.51	0.85	0.76	0.96	0.92
Curve 4	0.24	0.68	0.67	0.66	0.39	0.32

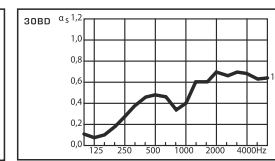
α<sub>s</sub> = soundabsorption degree; an absorption of 1.0 indicates a 100% absorption of sound



Freq.Hz	125	250	500	1000	2000	4000
Curve 1	0.09	0.28	0.64	0.43	0.65	0.62
Curve 2	0.37	0.81	0.91	0.65	0.70	0.58
Curve 3	0.23	0.50	0.80	0.77	0.96	1.00
Curve 4	0.29	0.71	0.47	0.34	0.27	0.21



Freq.Hz	125	250	500	1000	2000	4000
Curve 1	0.09	0.28	0.64	0.43	0.66	0.62
Curve 2	0.37	0.81	0.91	0.65	0.70	0.58
Curve 3	0.21	0.60	0.90	0.78	0.96	0.97
Curve 4	0.24	0.71	0.59	0.48	0.32	0.26



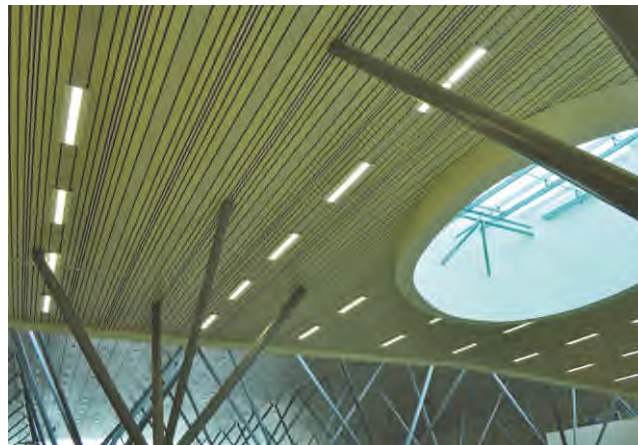
Freq.Hz	125	250	500	1000	2000	4000
Curve 1	0.07	0.26	0.46	0.40	0.69	0.67



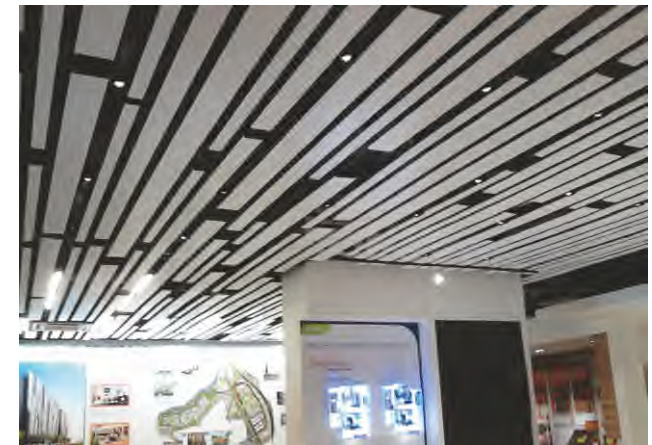
KLIA2 Malaysia  
Multi B ceiling



Hangzhou Xiaoshan Airport, China  
180B Ceiling



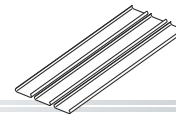
Kualanamu Train Station Airport Medan Indonesia  
Multi B ceiling



Sales Gallery at Novel Hotel, Malaysia  
Multi B ceiling



# LUXALON® LINEAR CEILINGS (150F/200F)



## SHORT SYSTEM DESCRIPTION

The Luxalon® 150F/200F ceiling system consists of 150 mm and 200 mm wide aluminium panels (1) which can simply be clipped into the prongs of a 150F or a 200F carrier (2). The stove enamelled aluminium panels are recyclable, lightweight and strong. The panels are made to measure and can be supplied in any length up to 6000 mm. Panels can be joined by using the panel splice (5)

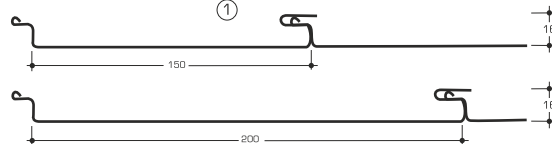
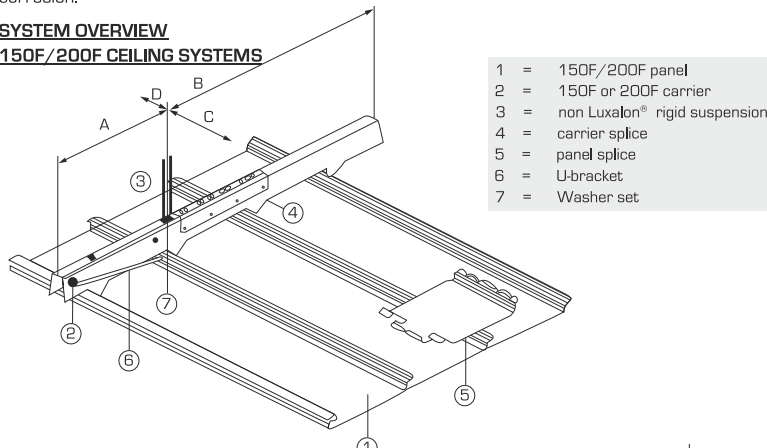
The carrier (2) is black, made of 0.95 mm thick (for 150F/200F) stove enamelled aluminium and is provided with prongs to accommodate the panels. Carriers have a standard length of 5000 mm and are connected by using the carrier splice (4) (200F) or by sliding the ends of the carriers into each other (150F). The carriers can be suspended at centres determined by the wind loading graphs (see opposite page) using a rigid levelled suspension system. Utilising the washer set to isolate different metals.

## PRACTICAL APPLICATIONS

- The neat closed joints present a smooth uninterrupted appearance.
- Panel length made to measure up to 6000 mm, allowing swift installation and reducing the need for panel joints.
- Panels can be secured to the carrier by using U-brackets, providing a very rigid system which is able to withstand extreme wind suction (over 2000 N/m<sup>2</sup>).
- Panels are made from a corrosion resistant aluminium alloy, which makes the panels strong and resistant to corrosion.
- For installations requiring combinations of 150F and 200F panels a screw clamp is available.
- Curved ceilings can be achieved by using screw clamps.
- The patented Luxacote® coating, guarantees colour stability and high resistance against scratches and corrosion.

## SYSTEM OVERVIEW

### 150F/200F CEILING SYSTEMS

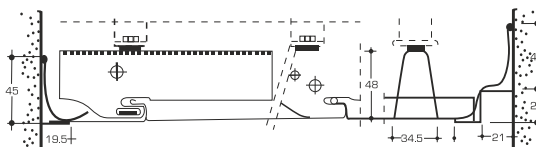


## DIMENSIONS & WEIGHTS

Panel	Width	Modul	Min. Length	Max. Length	Weight panels & carrier/m <sup>2</sup>
150F	150	150	1000	6000	2.8 kg
200F	200	200	1000	6000	3.1 kg

\* Based on panels installed on 3 or more carriers with a windload [pressure] of 1500 N/m<sup>2</sup>  
Panels from 250-1000 mm and > 6000 mm are available on request.

## STANDARD CONSTRUCTION DETAILS



## MATERIAL SPECIFICATIONS

### - BASE MATERIAL

Luxalon® 150F and 200F ceiling panels are rollformed from 0.6 mm (for 150F) or 0.7 mm (for 200F) thick prepainted stove enamelled aluminium strip. All aluminium products can be recycled for the full 100% requiring very little energy.

### - COATING

The tough and durable Luxacote® finish in a nominal thickness of approximately 20 microns, is stove enamelled in a continuous coil-coating process ensuring colour stability.

The Luxacote® finish guarantees optimum adhesion and excellent resistance to weathering.

### - LUXALON® COLOUR RANGE

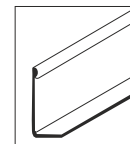
The standard Luxalon® colour range for 150F/200F exterior ceilings includes different colours and finishes. See Luxalon® exterior colour chart. Any other (RAL or NCS) colour is available on request.

## MATERIAL REQUIREMENTS PER M<sup>2</sup>

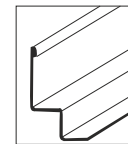
	Unit	150F system	200F system
Panels	lm	6.67	5
Carriers	lm	0.85	0.85
Carrier splice	pcs	0.17	0.17
Suspension	pcs	2.14	2.14

\* The required number of components depend on individual project requirements  
Figures are based on ceiling installed on 3 or more carriers and submitted to a windload [pressure] of 1500 N/m<sup>2</sup>

## EDGE PROFILES



Wall L-profile Alu  
(45 x 18.5)



Wall W-profile Alu  
(45 x 21 x 21 x 18.5)

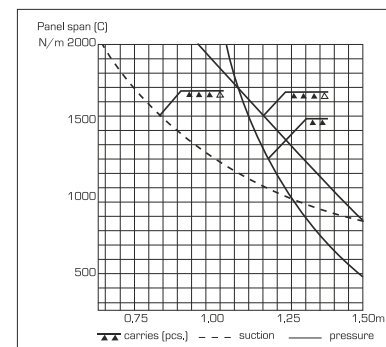
## FACADE CLADDING APPLICATION

The Luxalon® 150/200F system can also be used as facade cladding. See separate brochure for further details.

## MAXIMUM SPAN

### - PANEL SPAN (C)

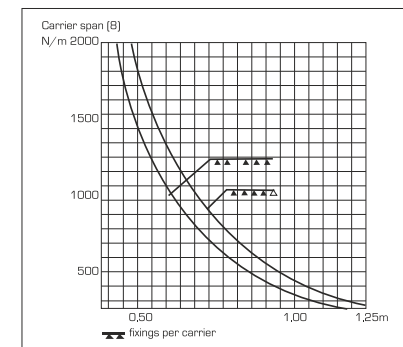
The panel spans, in relation to the wind load (pressure or suction). Can be calculated from the graph adjacent. At 1500 N/m<sup>2</sup> the maximum panel span for 150F is 1.18 m on 3 or more carriers.



Note: For corners, roof edges, special designs etc. wind pressure/suction shall be determined with due consideration to the relevant local country's Standard Codes of Building Practice

### - CARRIER SPAN (B)

Before establishing the fixing distance of the carriers, the load per lineal meter carrier is to be determined by applying the formulas in the table under the carrier span graph



Panels installed on : Calculation of load per lineal meter carrier\*

2 carriers	0.5	q	x	panel span [C] in m
3 carriers	1.25	q	x	panel span [C] in m
4 or more carriers	1.15	q	x	panel span [C] in m

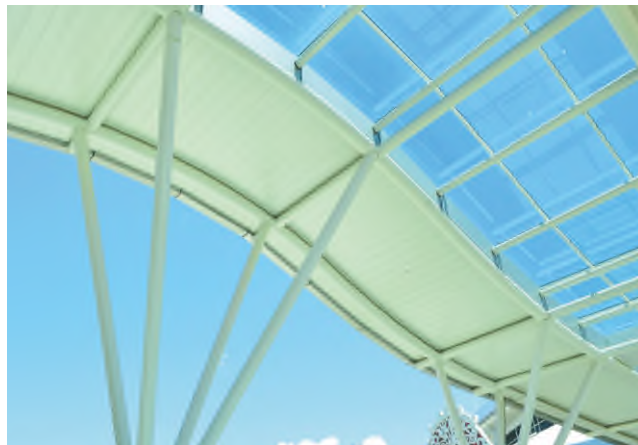
q = windload in N/m<sup>2</sup> (uniformly distributed loads)  
The carrier span [screw distance] (B) can be read from the graph adjacent in the same way as the panel span



BP R&R Pagoh, Malaysia  
150F exterior



Thanh Hoa Church, Vietnam  
200F ceiling



Ngurah Rai International Terminal Airport, Bali, Indonesia  
200F ceiling



Methodist Church Port Dickson, Malaysia  
200F ceiling

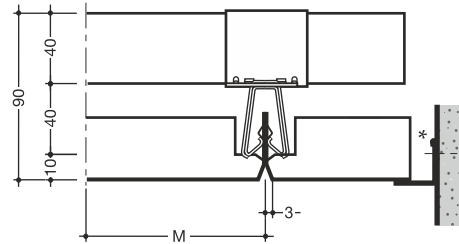


# LUXALON® TILE CEILINGS

## CLIP-IN TILE

### Characteristics

- Square/ rectangular tiles clipped in non-visible supports for a smooth monolithic look

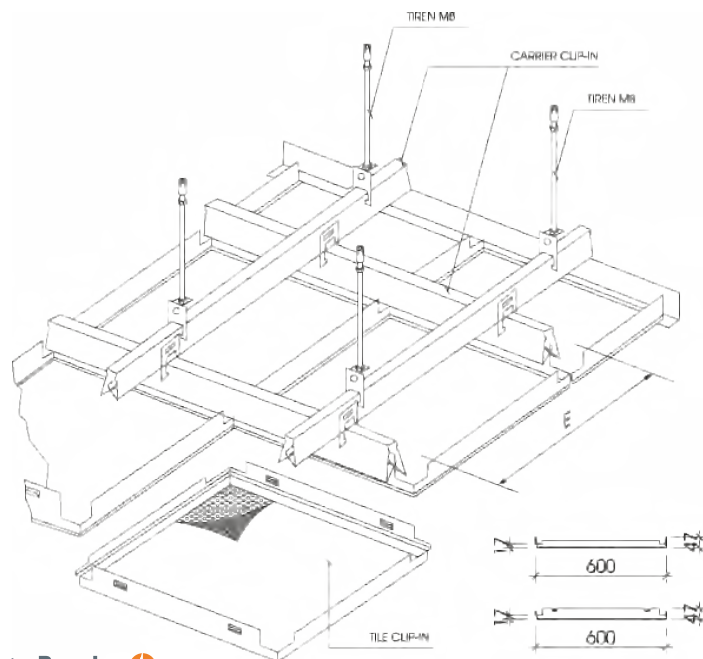


- Tiles are standard available in steel or aluminium alloy while other materials are available on request

### Tile Options

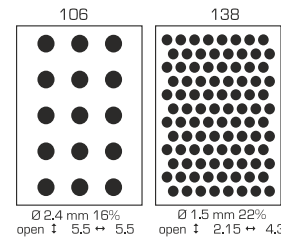
Module	GI	Aluminium
600 x 600	0.50 mm	0.70 mm
600 x 1200	0.60 mm	0.90 mm

- Optimal acoustic control by using perforated tiles with a non-woven textile membrane bonded to the inside face.
- Easy demountable tiles, which allows full access to services and equipment in plenum.
- Self levelling tiles resulting in a smooth ceiling surface.
- Swingdown tiles for enhanced access into the plenum are standard available.
- Base Material: Luxalon® Clip-In tiles are available in: 1) Galvanised Steel with 120 GSM galvanisation meeting IS 277- 2003 code. 2) Aluminium alloy with AA 3105. 3) Stainless Steel alternatives are also possible, when required.
- Coating: the tough and durable polyester powdercoating finish in a minimal thickness of 60 microns, is electrostatically applied ensuring uniform coating thickness, absolute adhesion, maximum resistance to abrasion. Because Luxalon® coatings are applied after perforation and bending process, exposed edges are protected. Standard gloss rate is 15 - 20% at 60° angle of incidence.
- Tolerances: as a member of the Technical Association of Industrial Metal Ceiling Manufacturers (TAIM), Hunter Douglas complies with tolerance criteria as specified in chapter 4 of the TAIM Quality standards for metal. The TAIM standards are available on request.



## Perforation PERFORATION OPTIONS:

### STAND PERFORATION



Ø 2.4 mm 16% open ↓ 5.5 ↔ 5.5  
Ø 1.5 mm 22% open ↓ 2.15 ↔ 4.3

### Sound absorption

## ACOUSTIC PERFORMANCE

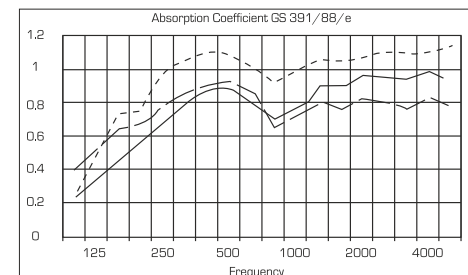
In order to improve interior sound control, the Luxalon® Tiles can be perforated and also fitted with non-woven acoustic tissue.

## TYPICAL SOUND ATTENUATION

Frequency (Hz)	Normalised level Difference					
	125	250	500	1000	2000	3150
Plain + Acoustipanel	35.0	37.7	45.9	50.8	48.7	61.3 dB
Microperforated Tile + Mineral Wool 80 kg/m <sup>2</sup> (40 mm thick) + Backing plate	23.2	25.1	44.7	55.5	62.7	67.3 dB

## SOUND ABSORPTION

Freq.Hz.	125	250	500	1000	2000	4000
Curve 1	0.31	0.68	0.87	0.74	0.95	0.96
Curve 2	0.51	0.77	0.92	0.72	0.80	0.80
Curve 3	0.48	0.97	1.07	0.97	1.06	1.06



- **CURVE 1**  
2.5 mm Ø perforated tiles, 20 mm thick mineral wool pad with a density of approx. 20 kg/m, plenum depth 200 mm.
- **CURVE 2**  
2.5 mm Ø perforated tiles, non-woven acoustic felt, plenum depth 200 mm
- **CURVE 3**  
1.5 mm Ø perforated tiles, 40 mm thick mineral wool pad with a density of approx. 20 kg/m, plenum depth 200 mm.

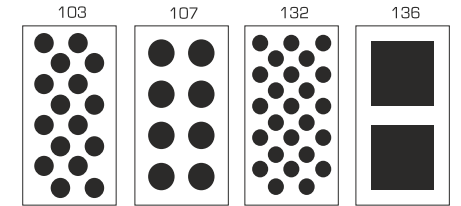
All curves tested according to DIN 52215, BS 3638 and ISO 354.

### Fire behaviour

Suspended Luxalon® metal ceilings are classified incombustible, and will therefore not contribute to possible fires. When ceilings however need to protect the structural integrity of a building, Luxalon® ceiling offer a wide range of practical solutions with regards to fire resistance and fire stability. Further information is available on request.

## Perforation PERFORATION OPTIONS:

### ALTERNATIVE PERFORATIONS



Ø 3.0 mm 20% open ↓ 5.5 ↔ 6.35  
Ø 4.0 mm 28% open ↓ 6.5 ↔ 6.5  
Ø 1.8 mm 20% open ↓ 2.5 ↔ 5  
Ø 10 mm 60% open ↓ 13.4 ↔ 13.4



**Dnata Airline, Dubai**  
Lay In Tile Ceiling



**LRT station@Sri Rampai, Kuala Lumpur, Malaysia**  
Clip-in Tile ceiling



**PNB Refurbishment, Malaysia**  
Lay In Tile Perf 584mm



**Changi Airport Terminal 1 Extension**  
Clip-in Tile Ceiling



# LUXALON® CELL CEILINGS

## SHORT SYSTEM DESCRIPTION

Luxalon® Cell 50E Open Ceilings are assembled from aluminium U-profiles with a width of 10 mm and a height of 50 mm. This economic Cell type features an integrated suspension system, with main and cross runners made from the same profiles as the Cell Tile.

Luxalon® Cell 50E can be classified as a superior Cell Ceiling due to perfect detailing of the connecting U-profiles that are designed not to show uncoated edges.

The U-profiles feature return top flanges for good rigidity and to accommodate the sliding clips. All profiles can be cut to length; sliding clips and adaptor brackets allow for standard perimeter finishing of the ceiling.

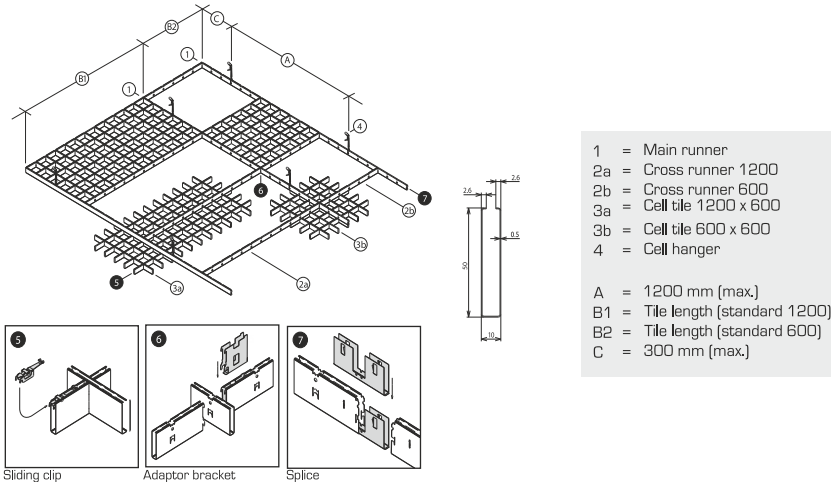
The Cell 50E tiles are easily mounted and demounted by the use of sliding clips whilst half-blind U-profile runners, L-shaped wall profiles or cover profiles act as perimeter trims.

## PRACTICAL APPLICATION AREAS

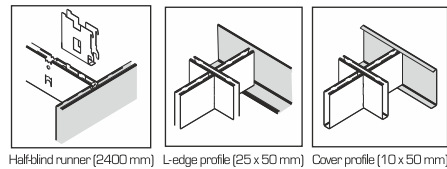
Luxalon® Cell 50E is used in all areas where suspended ceilings are required, but especially in situations where:

- The original room volume needs to be retained. For optimal air-conditioning or fire-safety
- The services in the plenum require regular maintenance and therefore easy access is needed
- Limited ceiling void space requires direct downward tile removal
- The monolithic appearance of the ceiling is to be retained by installing lighting, air-conditioning grills, sprinklers or other services above the open cell. Similarly they can be integrated into the cell structure

## SYSTEM OVERVIEW CELL 50E



## STANDARD PERIMETER OPTIONS



## DIMENSIONS

Luxalon® Cell 50E sizes

Modular Tile Size	Profile Height	Profile Width
1200 x 600	50 mm	10 mm
600 x 600	50 mm	10 mm

## MODULES, WEIGHTS AND VIEWING ANGLES

Luxalon® Cell 50

Standard modules	Kg/m <sup>2</sup>	Viewing angle
50 x 50	4.6	50°
75 x 75	3.0	37°
86 x 86	2.7	33°
100 x 100	2.3	28°
120 x 120	1.9	24°
150 x 150	1.5	19°
200 x 200	1.1	14°

## FIRE BEHAVIOUR

Luxalon® metal suspended ceilings are classified incombustible and will therefore not contribute to possible fires. Luxalon® Open Cell creates a ceiling through which large amounts of air and or smoke can be extracted, a distinct advantage in escape routes where the clearest visibility is required.

## MATERIAL SPECIFICATIONS

### - BASE MATERIAL

Luxalon® Cell 50E is manufactured from 0.40 mm thick pre-painted stove enamelled aluminium strip, alloy AA5050 or equal (according to EN 1396, and ECCA standards).

### - COATING

The tough and durable 2-layer polyester coilcoating finish in a nominal thickness of 20 microns, is applied in a continuous coil-coating process ensuring uniform coating thickness and absolute adhesion.

### - STANDARD LUXALON COLOUR RANGE

The standard Colour Range includes two whites and a metallic silver finish, being 0280 (RAL9010), 0181 (RAL9003) and 7163 (≈RAL9006). See Luxalon® Colour Chart. Any other (RAL or NCS) colour is available on request.

Computerised production facilities provide the flexibility to produce alternative Cell modules (rectangular or square) on request. Also tiles in other sizes whilst always retaining the 10 x 50 mm profiles.

## MATERIAL REQUIREMENTS PER M<sup>2</sup>

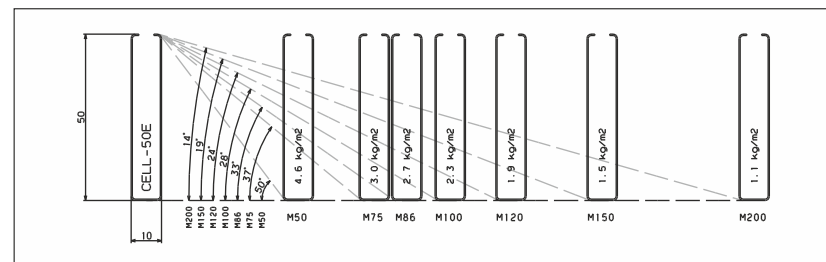
	Unit	Cell 50E Tile 1200 x 600	Cell 50E Tile 600 x 600
Cell 50E tiles	pcs.	1.39	2.78
Main Runners (2400)	1m	0.83	1.67
Cross Runners 1200	1m	1.67	
Cross Runners 600	1m		1.67
Sliding Clips	pcs	5.56	11.12
Splices	pcs	0.83	0.70
Cell Hangers	pcs	0.69	1.39

Luxalon® Edge Profiles type and quantity is subject to individual project requirements

## ACCESSIBILITY

Removal or replacement of Cell 50E tiles for maintenance purposes is easy and straight forward. The relatively large tiles can individually be removed in either an upward or a downward direction. The sliding clip, allowing easy and direct downward removal, offers great advantages (also providing the perfect solution in cases where space above the ceiling is limited).

## CELL 50E MODULES, WEIGHTS AND VIEWING ANGLES







Bus Terminal Salak South, Malaysia  
Cell 50mm module



Plantion Ede, The Netherlands  
Cell 50Emm module



CIDB, Malaysia  
Cell 50mm module

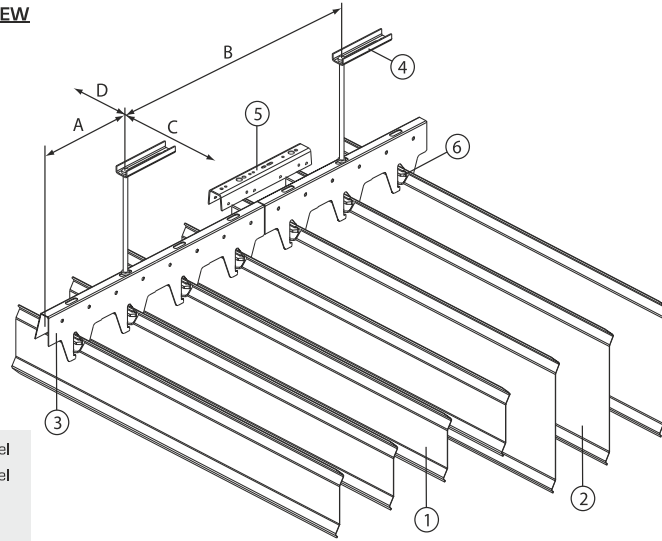


CITI Bank, Europe  
Cell 50mm module



# LUXALON® SCREEN CEILINGS

## SYSTEM OVERVIEW

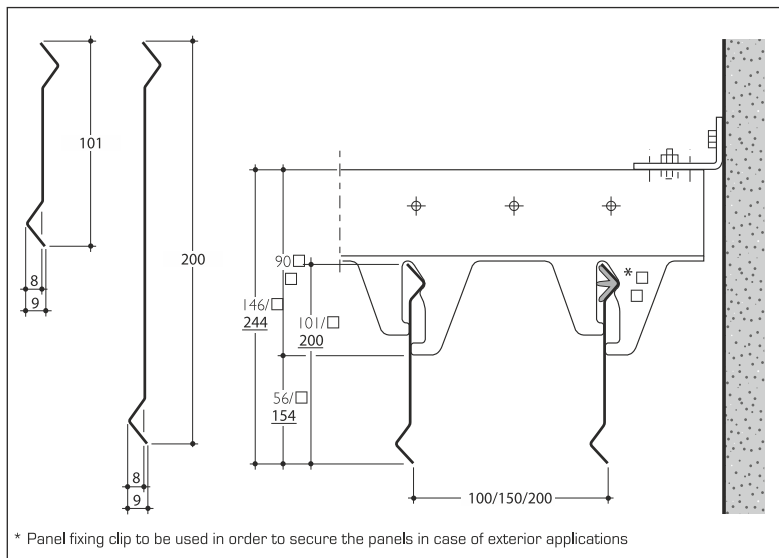


- 1 = V100 panel
- 2 = V200 panel
- 3 = carrier
- 4 = hanger
- 5 = carrier splice
- 6 = fixing clip

	Carrier span (mm)				Panel span (mm)		
	A	2 fixing points		3 or more fix.points		C	D*
		V100	V200	V100	V200		
Module (mm)							
100	500	1700	1450	2000	1700	2100	600
200	500	1850	1650	2200	1900	2100	600
200	500	2000	1750	2350	2050	2100	600

\* Min 100mm

## CONSTRUCTION DETAILS



\* Panel fixing clip to be used in order to secure the panels in case of exterior applications

## CHARACTERISTICS

- Vertically installed panels in 100, 150 or 200mm module
- Panel can be supplied in any length up to 6000 mm (as standard)

Panel	Height	Min. length	Max. length screen ceiling	Max.length slicing screen
V100	101	1000	6000	4000
V200	200	1000	6000	4000

Panels from 250-1000mm and > 6000mm available and request.  
Panels Larger than 1000 mm are not recommended to be used in a slicing screen ceiling.

- Ideal system for visually reducing the room height whilst retaining the original room volume
- Designed to conceal installations such as pipes, airconditioning and similar overhead installations
- Easy access to the plenum through the open system
- Fixing clips fitted on the carriers between the panels provide a secure locking of the panels and make the system suitable for exterior applications (only V100)

Module in mm	V100 panels incl. aluminium carrier	V200 panels incl. aluminium carrier
100	2.1	3.9
150	1.5	2.6
200	1.1	2.0

Weight are based on a system installed on 3 or more fixing point

- Panels are lightweight yet strong, made from aluminium which can be recycled for the full 100%, requiring very little energy.
- If required, panel and fixing clips are easily demountable by hand, which allows full access to services and equipment in plenum.
- Sliding screen version is available for those applications that require regular access into the plenum.
- Base Material: Luxalon® V100-V200 panels are rollformed from 0.6 mm thick prepainted stove enamelled aluminium strip, alloy HD5050 or equivalent (according to EN 1396, and ECCA standards) Flexalum® V100/V200 panels are produced from pre-painted zinc-aluminium coated steel.
- Coating the tough and durable 2-layered polyester finish in a nominal thickness of approximately 20 microns, is stove enamelled in a continuous coil-coating process ensuring uniform coating thickness and excellent adhesion.

## MATERIAL PER SQM

	M100	M150	M200
Panels	10 lm	6,67 lm	5 lm
Carriers	0.48 lm	0.48 lm	0.48 lm
Carrier splice	0.10 pcs	0.10 pcs	0.10 pcs
Suspension V100	0.24 pcs	0.22 pcs	0.20 pcs
Suspension V200	0.28 pcs	0.25 pcs	0.23 pcs
Panel fixing clip	4.8 pcs	3.2 pcs	2.4 pcs

Other accessories depend on individual project requirement  
Figures are based on maximum spans and on using 3 or more fixing point.



India Bulls, India  
V100 screen



Corporativo Siemens, Mexico  
V100 screen



KLIA 2 Malaysia  
V200 Deco



Lex @Empire Subang Mall, Malaysia  
V100 screen



# LUXALON® WIDE PANEL (300C) CEILING

## SHORT SYSTEM DESCRIPTION

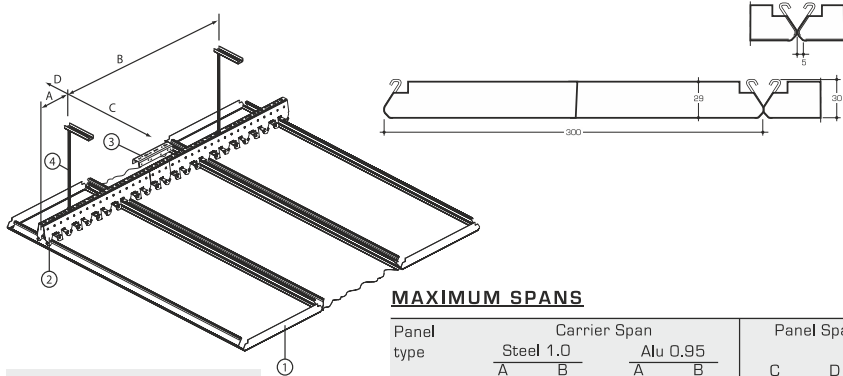
The 300 mm wide panels (1) are made to measure to a maximum standard length of 6000 mm. They can simply be fixed on the carrier (2) by hanging one side of the panel on the prongs of the carrier and by then pressing the other side home with an upward movement. The aluminium panels are recyclable, lightweight and strong. The panel carrier is black, made of 1.0 mm thick galvanised steel or 0.95 mm thick aluminium and is provided with prongs to accommodate the panels. Integrated locking clips onto the carrier (also on curved carriers) can be used to lock the panels if desired. Carriers have a standard length of 5000 mm and are connected by using the carrier splice (3).

The standard range of Luxalon® edge profiles can be used as perimeters.

## PRACTICAL APPLICATIONS

- Panel length made to measure up to 6000 mm, allowing for swift installation and reducing the need for joints to a minimum.
- 300 mm wide panels have a maximum standard length of 6000 mm and provides an extremely cost effective ceiling solution, especially in all larger areas.
- An uncluttered monolithic ceiling appearance is achieved using the concealed Luxalon® carrier suspension system.
- The panels can be easily demounted by hand allowing easy and full access to services and installations in the plenum.
- The ceiling can also be used as a fire resistant ceiling (in steel).
- The Carrier system is ideally suited for exterior applications.
- Carriers can be adapted to create curved ceilings.
- Absence of dust retention and ease of cleaning make this closed ceiling (when having plain panels) ideal for hospitals, kitchens, food preparation areas and anywhere where hygiene is important.

## SYSTEM OVERVIEW 300C CARRIER SYSTEM



- 1 = 300C General panel
- 2 = carrier
- 3 = carrier splice
- 4 = hanger

## MAXIMUM SPANS

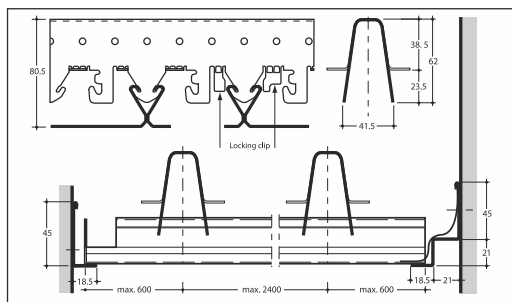
Panel type	Carrier Span				Panel Span	
	Steel 1.0		Alu 0.95		C	D
	A	B	A	B		
Alu 0.7	300	2000	300	1450	2400	600
Steel 0.6	300	1600	N.A.	N.A.	2400	600

## DIMENSIONS & WEIGHTS

Panel	Width	Min. length	Max. length	Weight/m <sup>2</sup>
Alu 0.7	300	1000	6000	2,6 kg
Steel 0.6	300	1000	6000	6,4 kg

Panels from 250-1000 mm and > 6000 mm available on request.

## STANDARD CONSTRUCTION DETAILS



## MATERIAL SPECIFICATIONS

### - BASE MATERIAL

Luxalon® 300C panels are rollformed from 0.7 mm thick pre-painted stove enamelled aluminium strip or from 0.6 mm thick stove enamelled galvanised steel strip.

The tough and durable 2-layer polyester finish in a nominal thickness of 20 microns, is stove enamelled in a continuous coil-coating process ensuring uniform coating thickness and absolute adhesion.

### - LUXALON® COLOUR RANGE

The standard Luxalon® colour range for 300C includes several different colours and finishes. See Luxalon® colour chart. Any other (RAL or NCS) colour is available on request.

### - FIRE BEHAVIOUR

A fire resistant ceiling can be constructed utilizing steel panels and steel carriers. The 300C ceiling has been tested on fire resistancy in accordance to British standard, BS476: part 23: 1987: clause 5, resulting in a fire resistance of 132 minutes and to the German DIN 4102, part 2 rating F30 AB. Test results are available on request.

For information on the system construction, please contact your Luxalon® supplier.

### MATERIAL REQUIREMENTS PER M<sup>2</sup>

	Unit	300C Carrier system
Panels	1m	3.33
Carriers	1m	0.42
Carrier splice	pcs	0.08
Suspension	pcs	variable: 0.21 - 0.37 *

\* The required number of suspension points depends on the type of carrier and the panel material. Edge profiles depend on individual project requirements.

### PLENUM ACCESSIBILITY

The 300C Carrier System allows for easy demounting of the panels. The panels are fixed to a carrier which allows for all panels to be removed individually. Panels can be removed by applying upward pressure to the sides of two panels or by using a basic flat bladed tool.

### EXTERIOR APPLICATION

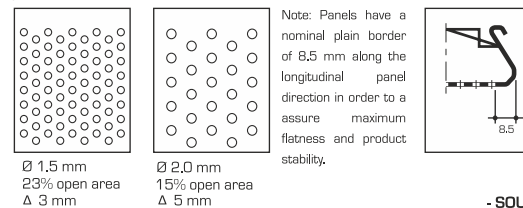
The 300C Carrier System is also suitable for exterior applications. See separate brochure for further details

### ACOUSTIC PERFORMANCE

In order to improve interior sound control, the Luxalon® 300C Wide Panel Ceiling panels can be supplied perforated with a Ø of 1.5 or 2.0 mm (open area of 15% and 23%). As a standard feature, perforated panels can be supplied with a sound absorbing non-woven tissue glued into the panel for enhanced acoustical performance.

### PERFORATION OPTIONS

300C Carrier panels are available in 2 standard perforation patterns:



- Ø 1.5 mm  
23% open area  
Δ 3 mm
- Ø 2.0 mm  
15% open area  
Δ 5 mm

### - CURE 1 (Ø 2.0 MM)

Ø 2.0 mm perforated 300C panels, provided with 0.2mm thick, black non-woven acoustic tissue glued over the whole perforated area. Plenum depth is 400 mm.

### - CURE 2 (Ø 1.5 MM)

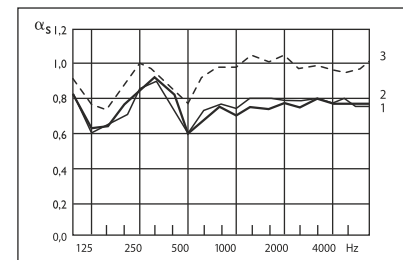
Ø 1.5 mm perforated 300C panels, provided with 0.2 mm thick, black non-woven acoustic tissue glued over the whole perforated area. Plenum depth is 400 mm.

### - CURE 3 (Ø 1.5 MM)

Ø 1.5 mm perforated 300C panels, provided with 0.2mm thick, black non-woven acoustic tissue glued over the whole perforated area plus 25 mm thick mineral wool pad with a density of 16 kg/m Plenum depth is

These 300C Wide Panel ceilings were tested by TNO Delft (The Netherlands), an independent official testing institute. Report no.: TPD-HAG-RPT-94-0037.

### - SOUND ABSORPTION DATA



α<sub>s</sub> = sound absorption coefficient  
an absorption of 1.0 indicates a 100% absorption of sound.

Freq.Hz	125	250	500	1000	2000	4000
Curve 1	0.61	0.85	0.59	0.75	0.78	0.76
Curve 2	0.62	0.82	0.60	0.70	0.78	0.77
Curve 3	0.76	0.99	0.75	0.97	1.05	0.95



Dalian Light Rail Transit Line 3, China  
300C ceiling



Biotect Centre, Batu Kawan, Penang, Malaysia  
300C ceiling



RMIT International University, HCMC, Vietnam  
300C ceiling



Budha Tzuchi, Jakarta, Indonesia  
curved 300C Perforated Ceiling



# LUXALON® XL PANEL CEILINGS

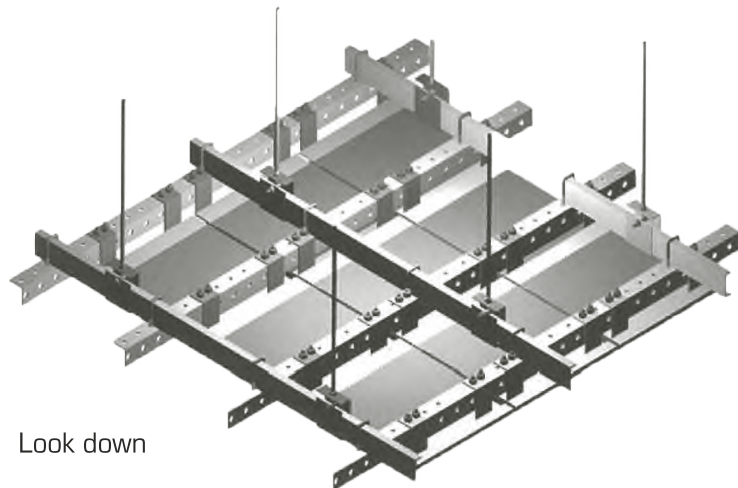
We've borrowed technology from the aircraft industry to create our XL panels, which are extremely flat and light despite their size and which require very few supporting points.

Our XL panels provide a smooth appearance and are available in a variety of finishes. XL ceilings are the addition to our line of big ideas.

XL panels have a small butt joint of 3 mm.

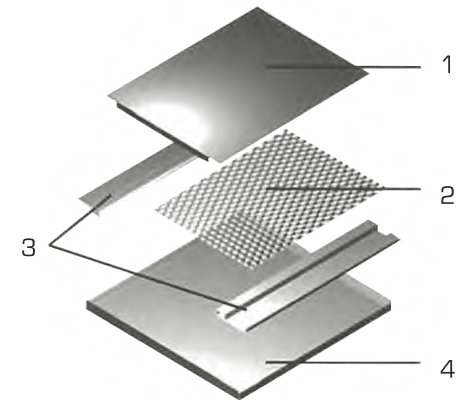
This small joint, together with the flat, large panels, create a smooth and uniform ceiling design. XL sizes establish a strong design statement

- Hook-on system
- XL sizes - panels up to 1500 mm by 6000 mm
- 3 mm butt joint
- Demountable from below
- Endless colours and finishes; perforations available
- Curved solutions
- Acoustical options



## HIC & HIW Composite Construction

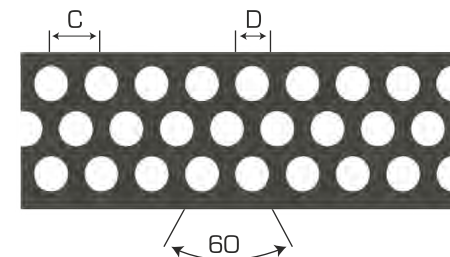
1. Pre-coated and roll-formed inside skin
2. Aluminium / Paper honeycomb
3. Aluminium extrusion
4. Pre-coated and roll-formed outside skin



## Standard Perforation Patterns

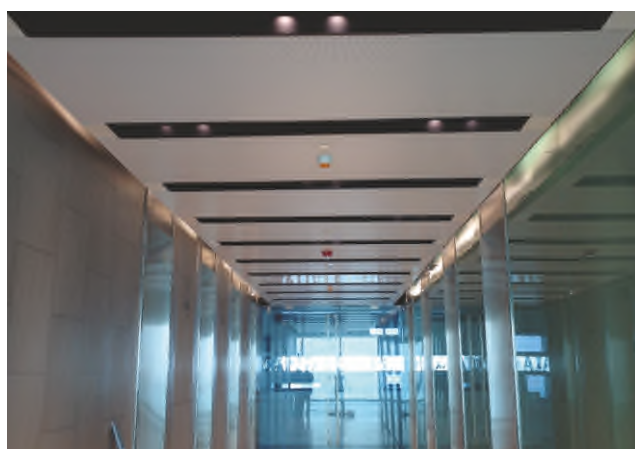
D: Diameter (mm)	C: Pitch (mm)	O.A. (%)
2.0	3.5	29.61
3.0	5.0	32.65
3.97	8.3	20.75
Centers at 60 staggered		

Three standard perforation patterns can be supplied to satisfy acoustic applications. Other special panels are available on request.





**SCB Office, Thailand**  
Honeycomb internal ceiling



**AIA, Thailand**  
Honeycomb internal ceiling



**HSBC Data Centre, China Hong Kong**



**China Tobacco, Zhejiang China**

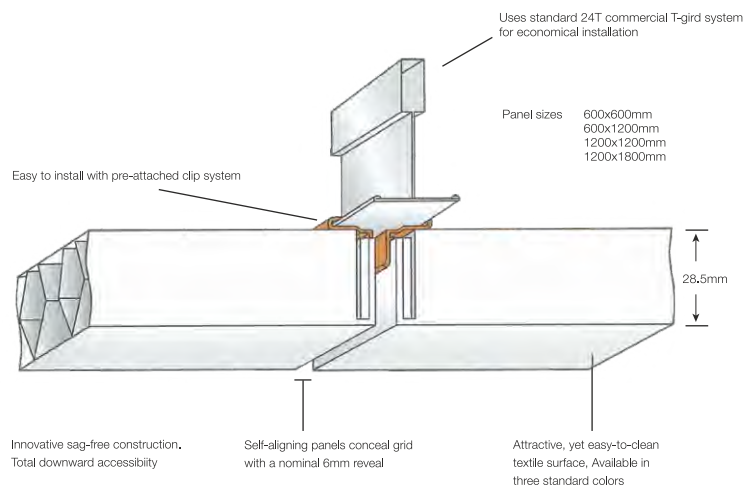


# Techstyle® ACOUSTICAL CEILING

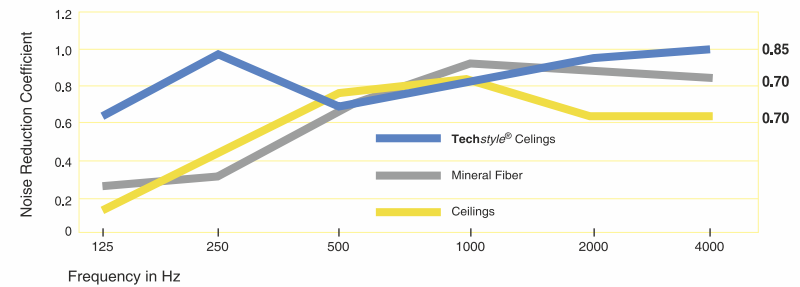
Bridging the gap between function and form, Techstyle® panels represent a new way of looking at ceilings. The cellular construction provides exceptional acoustical performance in a variety of sizes. Panels that come in white (standard) off-white and black (optional) offer a multitude of design possibilities.



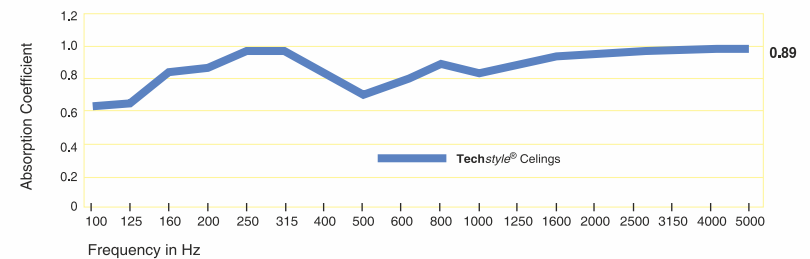
NO VOCs  
10% recycled content



## COMPARATIVE NOISE REDUCTION COEFFICIENT (NRC)



## SOUND ABSORPTION AVERAGE (SAA)



**Sound Absorption Average (SAA)** is calculated over a wide range of frequencies from 100-5000Hz. This broad band average is a more accurate measure of the total sound absorption characteristics of the ceiling panel.

## PRODUCT SPECIFICATIONS

<b>Substrate</b>	Acoustical mat
<b>Color</b>	White, off-white and Black
<b>Surface Finish</b>	Polyester Non-woven
<b>Panel Sizes</b>	
	<b>Sizes</b>
	600X600mm
	600X1200mm
	1200X1200mm
	1200X1800mm
<b>Acoustical Ratings</b>	
	<b>NRC</b>
	0.85(ASTM C 423)
	<b>SAA</b>
	0.89(ASTM C 423)
	<b>CAC</b>
	17 w/ no backer (ASTM 1414)
<b>Light Reflectance</b> (white only)	
<b>Surface Burning</b>	
	<b>Flame</b>
	Class A (1) (ASTM E84) (ASTM E 1264)
	<b>Smoke</b>
	<25
	<50
<b>Moisture Resistance</b>	Resistant to 95% humidity in 1040 F temperature
<b>Thermal Resistance</b>	0.33 M <sup>2</sup> K / W
<b>Fungal Resistance</b>	Resistant (ASTM C 1338)
<b>Weight of Panel</b>	1.3kg / M <sup>2</sup>
<b>Warranty</b>	10 year limited
<b>MEA</b>	Acceptance (376-02-M)
<b>ICC</b>	Approval (ER-6138)
<b>CHPS</b>	Passed







Stockbridge Mohican Casio, United States  
Techstyle Ceiling



Noorderdok Almere - The Netherlands  
Techstyle Ceiling



Tobacco Office Zhejiang, China  
Techstyle Ceiling



Kappeli AG Merenschwand, Switzerland  
Techstyle Ceiling



# LUXALON® U-BAFFLE CEILINGS (TECHNICAL INFORMATION)

## U-Baffle

U-Baffle ceiling are ceiling product that evolved from screen ceilings. Unlike screen ceilings, both the height and width can be changed for baffle ceilings. The visual effect of the upper space can be flexibly adjusted and this allows the ceiling to appear even more three-dimensional and impressive.

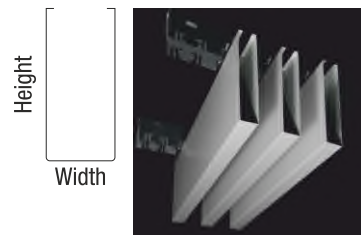
- Many die-formed products of standard specifications are available
- Many specifications are available for the pressed panel of width 25mm-50mm and height upto 200mm
- Maximum panel length upto 4000mm
- Many panel forms are available such as U-shaped and the custom-made round-shaped and others
- Various installation systems such as 30/50 U-shaped carrier, primary angle with inner & outer bracket will be used as per the design intent

## Product Specifications

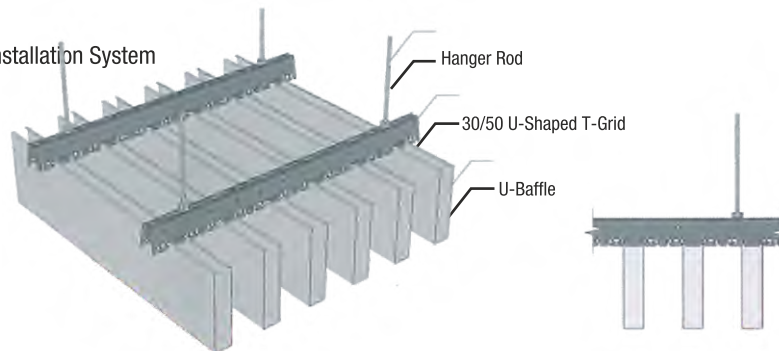
Unit: mm

		Height*					
		50	65	100	125	150	200
Width	25mm	X	✓	✓	✓	✓	✓
	30mm	X	✓	✓	✓	✓	✓
	50mm	✓	✓	✓	✓	✓	✓

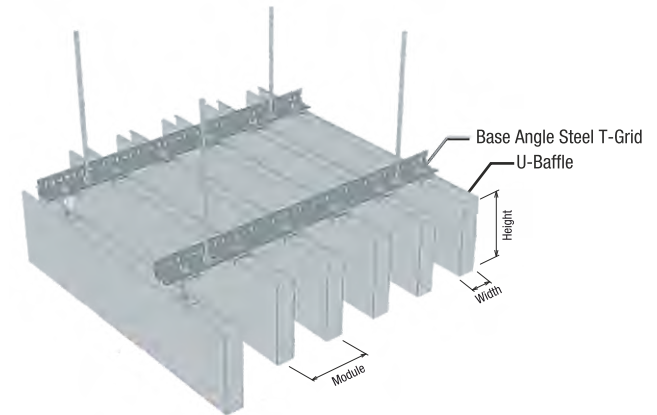
\*Flexible height with in 50mm - 200mm can be achieved if required on request



## 30/50 U-Shaped T-Grid Installation System



## Base Angle Steel T-Grid Installation System



Luxalon® U-Baffle ceilings can produce a dimensional and floating effect to give architects considerable design freedom

### Features:

- Monolithic in appearance
- Easy accessibility to the plenum
- Ventilation & smoke extraction to be easily realized through the gaps of baffles
- Wide range of design options
- Extensive range of colours and finishes



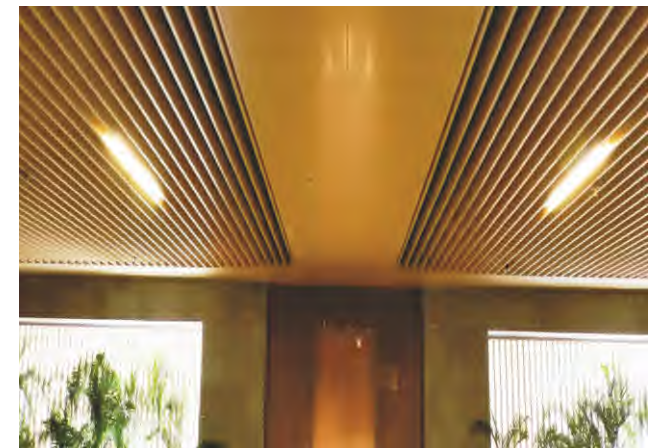
Lodha, Mumbai  
U-Baffle



Shanghai Metro Station Line 1  
U-Baffle



Jaya One Malaysia  
U-Baffle



RWS Aquarius Suites Singapore  
U-Baffle



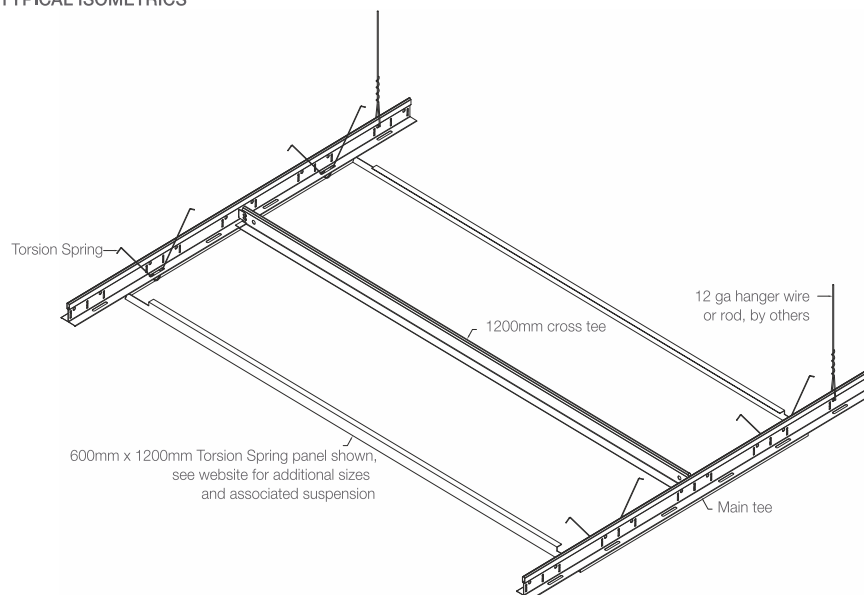
# TORSION SPRING

Torsion-Spring ceilings from Hunter Douglas allow easy and safe downward access for a wide variety of applications from offices to stadiums and beyond. Our versatile carrier system allows the panel to swing down from the plenum, making Torsion-Spring a superb choice when panel removal can be challenging, such as in airports or other areas where ceilings are set high, or in arenas and convention centers, which may have significant foot traffic.

## “One Ultimate Solution for all false ceiling problems”

- Easy access to plenum
- Quick & Straight Installation
- Self aligning system
- Minimum Handling
- 100% Swing down
- Multiple panel sizes & shapes in one system

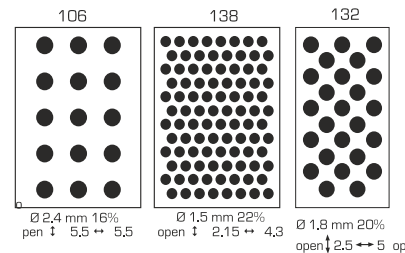
### TYPICAL ISOMETRICS



### Perforation

#### PERFORATION OPTIONS:

#### STAND PERFORATION



#### Standard colors



Natural



Cotton White

#### Custom colors

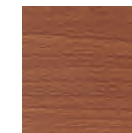


Custom

Woodwright™ finishes include our painted wood-look finish, real wood veneers and laminated wood-look films.



Maple



Cherry



Walnut

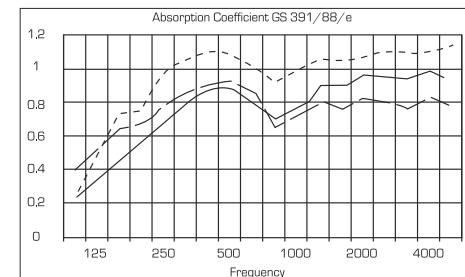
#### Sound absorption

#### ACOUSTIC PERFORMANCE

In order to improve interior sound control, the Luxalon® Tiles can be perforated and also fitted with non-woven acoustic tissue.

#### SOUND ABSORPTION

Freq.Hz.	125	250	500	1000	2000	4000
Curve 1	0.31	0.68	0.87	0.74	0.95	0.96
Curve 2	0.51	0.77	0.92	0.72	0.80	0.80
Curve 3	0.48	0.97	1.07	0.97	1.06	1.06



#### • CURVE 1

2.5 mm  $\varnothing$  perforated tiles, 20 mm thick mineral wool pad with a density of approx. 20 kg/m, plenum depth 200 mm.

#### • CURVE 2

2.5 mm  $\varnothing$  perforated tiles, non-woven acoustic felt, plenum depth 200 mm

#### • CURVE 3

1.5 mm  $\varnothing$  perforated tiles, 40 mm thick mineral wool pad with a density of approx. 20 kg/m, plenum depth 200 mm.

All curves tested according to DIN 52215, BS 3638 and ISO 354.

#### Fire behaviour

Suspended Luxalon® metal ceilings are classified incombustible, and will therefore not contribute to possible fires. When ceilings however need to protect the structural integrity of a building, Luxalon® ceiling offer a wide range of practical solutions with regards to fire resistance and fire stability. Further information is available on request.



Project: Sun Life Stadium (Dolphin Stadium), Miami, FL; Torsion Spring



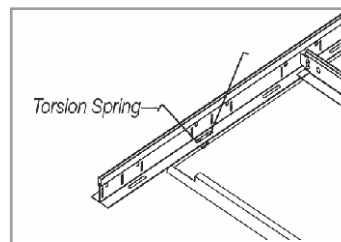
Project: JFK Terminal 4, New York



Project: South West General Hospital, Cleveland



Project: McCamish Pavilion, Georgia Tech, Atlanta



Torsion Spring metal ceiling system allows both flat and curved ceiling panels to swing down from the ceiling plane.

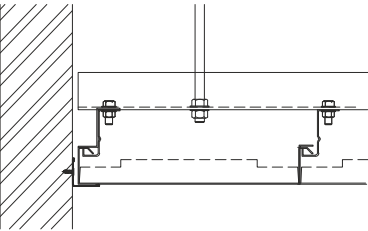


# HOOK-ON CEILING

## HOOK-ON TILE

### Characteristics

- Square/ rectangular tiles clipped in non-visible supports for a smooth monolithic look

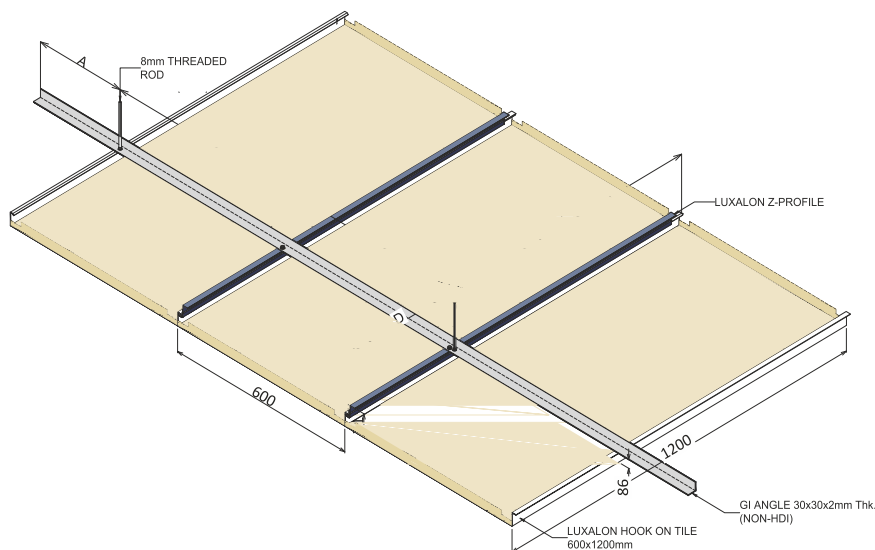


- Tiles are standard available in steel or aluminium alloy while other materials are available on request

### Tile Options

Module	GI	Aluminium
600 x 600	0.50 mm	0.70 mm
600 x 1200	0.60 mm	0.90 mm

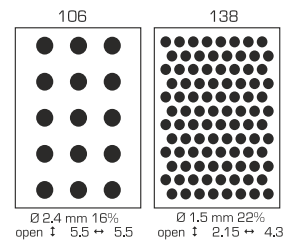
- Optimal acoustic control by using perforated tiles with a non-woven textile membrane bonded to the inside face.
- Easy demountable tiles, which allows full access to services and equipment in plenum.
- Self levelling tiles resulting in a smooth ceiling surface.
- Base Material: Luxalon® Hook-on tiles are available in: 1) Galvanised Steel with 120 GSM galvanisation meeting IS 277- 2003 code. 2) Alluminium alloy with AA 3105. 3) Stainless Steel alternatives are also possible, when required.
- Coating: the tough and durable polyester powdercoating finish in a minimal thickness of 60 microns, is electrostatically applied ensuring uniform coating thickness, absolute adhesion, maximum resistance to abrasion. Because Luxalon® coatings are applied after perforation and bending process, exposed edges are protected. Standard gloss rate is 15 - 20% at 60° angle of incidence.
- Tolerances: as a member of the Technical Association of Industrial Metal Ceiling Manufactures (TAIM), Hunter Douglas complies with tolerance criteria as specified in chapter 4 of the TAIM Quality standards for metal. The TAIM standards are available on request.



### Perforation

#### PERFORATION OPTIONS:

#### STAND PERFORATION



Ø 2.4 mm 16% open ↓ 5.5 ↔ 5.5  
Ø 1.5 mm 22% open ↓ 2.15 ↔ 4.3

#### Sound absorption

### ACOUSTIC PERFORMANCE

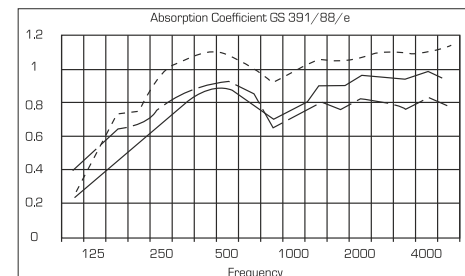
In order to improve interior sound control, the Luxalon® Tiles can be perforated and also fitted with non-woven acoustic tissue.

### TYPICAL SOUND ATTENUATION

Frequency [Hz]	Normalised level Difference					
	125	250	500	1000	2000	3150
Plain + Acoustipanel	35.0	37.7	45.9	50.8	48.7	61.3 dB
Microperforated Tile + Mineral Wool 80 kg/m <sup>3</sup> (40 mm thick) + Backing plate	23.2	25.1	44.7	55.5	62.7	67.3 dB

### SOUND ABSORPTION

Freq.Hz.	125	250	500	1000	2000	4000
Curve 1	0.31	0.68	0.87	0.74	0.95	0.96
Curve 2	0.51	0.77	0.92	0.72	0.80	0.80
Curve 3	0.48	0.97	1.07	0.97	1.06	1.06



- **CURVE 1**  
2.5 mm Ø perforated tiles, 20 mm thick mineral wool pad with a density of approx. 20 kg/m, plenum depth 200 mm.
- **CURVE 2**  
2.5 mm Ø perforated tiles, non-woven acoustic felt, plenum depth 200 mm
- **CURVE 3**  
1.5 mm Ø perforated tiles, 40 mm thick mineral wool pad with a density of approx. 20 kg/m, plenum depth 200 mm.

All curves tested according to DIN 52215, BS 3638 and ISO 354.

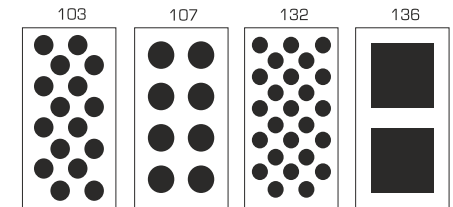
### Fire behaviour

Suspended Luxalon® metal ceilings are classified incombustible, and will therefore not contribute to possible fires. When ceilings however need to protect the structural integrity of a building. Luxalon® ceiling offer a wide range of practical solutions with regards to fire resistance and fire stability. Further information is available on request.

### Perforation

#### PERFORATION OPTIONS:

#### ALTERNATIVE PERFORATIONS



Ø 3.0 mm 20% open ↓ 5.5 ↔ 6.35  
Ø 4.0 mm 28% open ↓ 6.5 ↔ 6.5  
Ø 1.8 mm 20% open ↓ 2.5 ↔ 5  
Ø 10 mm 60% open ↓ 13.4 ↔ 13.4



Project: L.B. Landry High School, New Orleans

## Custom made designer Ceiling

To meet the innovative design concept of the architects, hunter douglas will be able to suport the engineering part with product as a solution provider.





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