INNOVATIVE PRODUCTS
MAKE INNOVATIVE PROJECTS



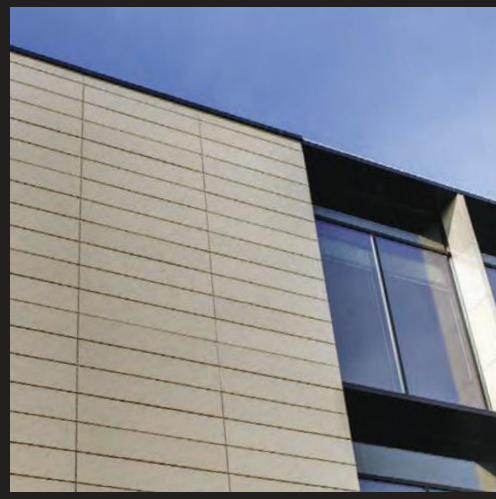
CEILING



FACADE



SUN CONTROL



ARCHITECTURAL TERRACOTTA

ENERGY SAVINGS

THERMAL CONTROL

PRECISION ENGINEERING

ZERO WASTE

HunterDouglas Architectural


Hunter Douglas North America,
Upper Saddle River (NJ), U.S.A.


Hunter Douglas Fabrication,
Pinellas Park (FL), U.S.A.


Hunter Douglas Fabrication,
Cumberland (MD), U.S.A.


Hunter Douglas Fabrication, Sacramento (CA), USA


HCI 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.


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


Schellekens & Schellekens, Beuningen,
The Netherlands


Luxaflex France, Tourcoing


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



Hunter Douglas India, Sri city


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




Helioscreen, 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


Gardinia, Isny, Germany


Shade-O-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

All rights reserved, ® Registered trademark, A HunterDouglas® product, © Copyright HunterDouglas® 2008.

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.

<u>Ceilings</u>

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

<u>Facades</u>

Ventilated Facades
Quadroclad
NBK Architectural Terracotta
Multiple Panel Facades
Miniwave
Screen Facade
Custom Facade
Sandwich wall cladding

<u>Sun Control Systems</u>

Aerobrise
Aeroscreen
Motorisation
Linear 84R
Linear 70S/132S
Shutters

LUXALON® LINEAR CEILINGS (75C/150C/225C)

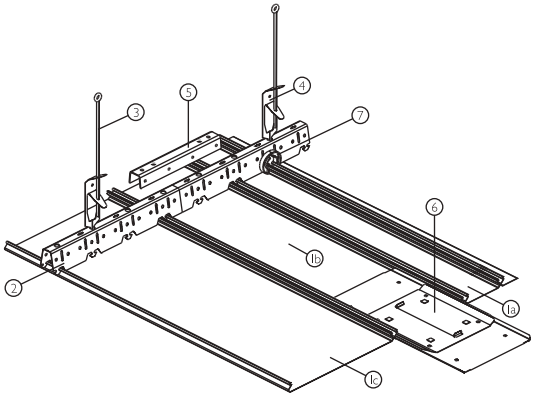
SHORT SYSTEM DESCRIPTION

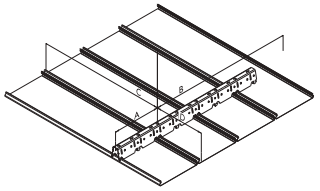
The Luxalon® closed ceiling system combines three widths of panels which are distinguished from other Luxalon® systems by their bevelled edges, and when installed produces a closed smooth appearance. All three widths can be clipped to a universal carrier thus providing the designer with unlimited possibilities.
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

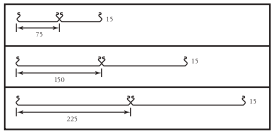




1a	=	panel 75C
1b	=	panel 150C
1c	=	panel 225C
2	=	carrier
3	=	rod hanger
4	=	support clip
5	=	carrier splice
6	=	panel splice
7	=	adaptor clip

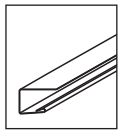
Panel type	Carrier span A	B	Panel span C	D
75C	300	1700	1250	150
150C	300	1700	1000	150
225C	300	1700	1000	150

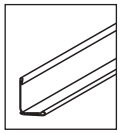
DIMENSIONS

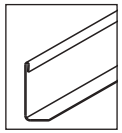


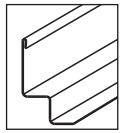
Panel HxW	Module	Material	Weight m²
15,5 x 75	75	0.5 Alu	2.13 kg
15,5 x 150	150	0.5 Alu	1.96 kg
15,5 x 225	225	0.6 Alu	2.19 kg

EDGE PROFILES


Clip-on U-profile 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.

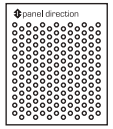
MATERIAL REQUIREMENTS PER M²

	Unit	75C	150C	225C
Panels	lm	13.33	6.67	4.44
Carriers	lm	0.80	1.0	1.0
Suspension	pcs	0.5	0.6	0.6

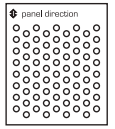
Edge profiles and other accessories depend on individual project requirements.

PERFORATION OPTIONS:

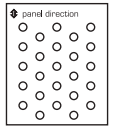
	75C	150C	225C
• Ø 1,0 mm and Δ 2mm with 23% open area	•	NA	NA
• Ø 1,5 mm and Δ 3mm with 23% open area	NA	NA	•
• Ø 2,0 mm and Δ 5mm with 16% open area	NA	•	•



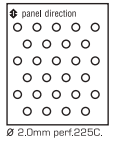
Ø 1.0mm perf.
⇕ 2 ⇔ 3.46



Ø 1.5mm perf.
⇕ 3 ⇔ 5.2



Ø 2.0mm perf.150C.
⇕ 8.66 ⇔ 5



Ø 2.0mm perf.225C.
⇕ 5 ⇔ 8.66

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/m³, plenum depth 200 mm. The sound absorption curve has been taken from test report no.823.066 of TNO Delft.

- CURVE 4 (225C):

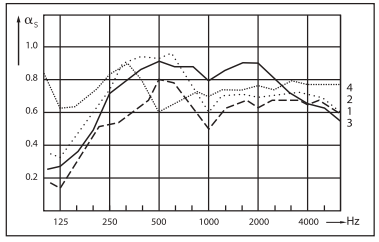
255C panels with Ø 1,5mm holes. The reverse side of the panels is provided with black non-woven tissue glued over the whole perforated area. Plenum depth is 400 mm. The sound absorption curve has been taken from test report nr. TPD-HAG-RPT-94-0037 of TNO Delft.
The sound absorption curve for 225C panels with Ø 1,5 mm holes and non-woven tissue will resemble curve 4.

PLENUM ACCESSEBILITY

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 palet knife.

ACOUSTIC PERFORMANCE

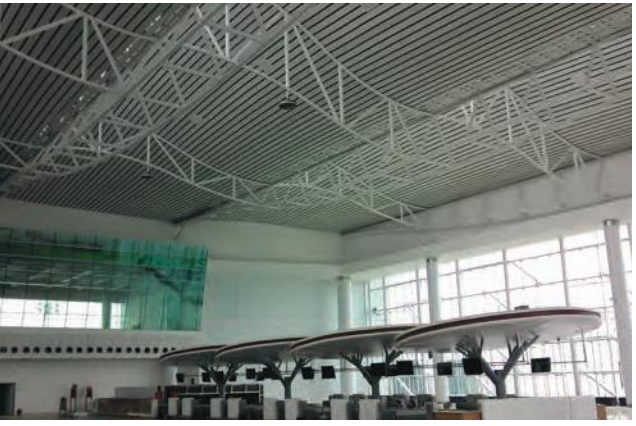
In order to improve interior sound control, the Luxalon® multi-panel closed ceiling panels can be perforated and also fitted with non-woven acoustic tissue.



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)

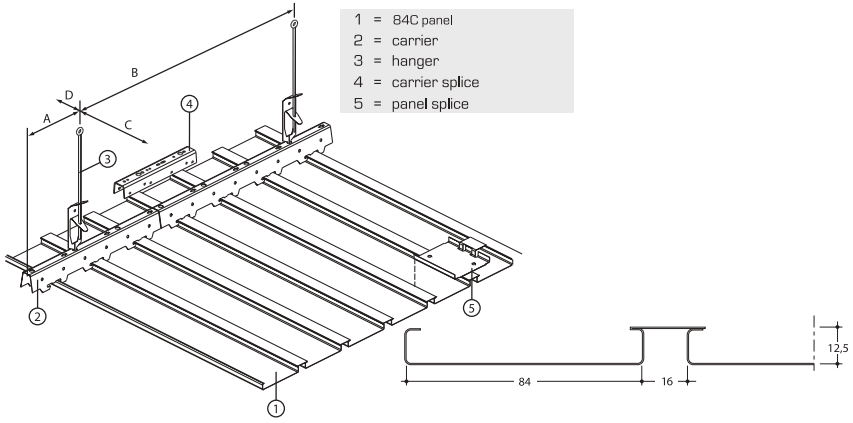
SHORT SYSTEM DESCRIPTION

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 of from the plenum. The stove enamelled aluminium panels are recycable, 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 cerificate 5080/2846/ Co/0 and Lloyd's Register type approval certificate SAS F970009.
- The join-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) on 2 carriers		Panel span (mm) on 3 or more carriers	
	A	B	C*	D	C*	D
84C	300	1300	1600	150	1800	150

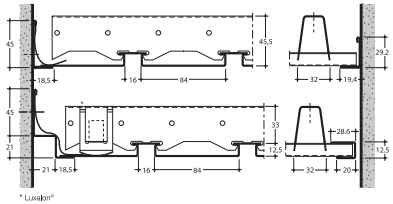
*Minus 200 mm in case of acoustic pads.

DIMENSIONS & WEIGHTS

Panel	Width (mm)	Module (mm)	Min length (mm)	Max length (mm)	Weight panels & carriers/m²*	
					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 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 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

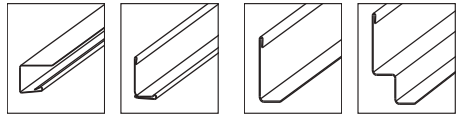
Luxalon® metal suspended ceilings are classified incombustible and will therefore not contribute to possible fires. When ceilings however need to protect the structural integrity of the building, Luxalon® ceilings offer a range of practical and tested solutions with regards to fire stability. Further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

MATERIAL REQUIREMENTS PER M²

	Unit	Linear 84C system
Panels	lm	10
Carriers	lm	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/m³

- 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/m³

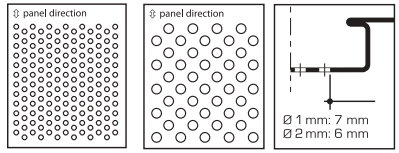
These 84C ceilings were tested by TNO Delft (The Netherlands), an independent official testing institute.
Report no: TPD-HAG-RPT -920039/920038.

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

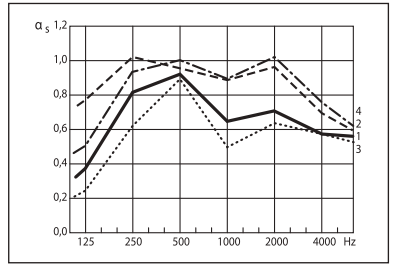
84C panels are available in 2 standard perforation patterns:



Ø 1.0 mm
⇕ 2 ⇔ 3.46
Ø 2.0 mm
⇕ 8.66 ⇔ 5

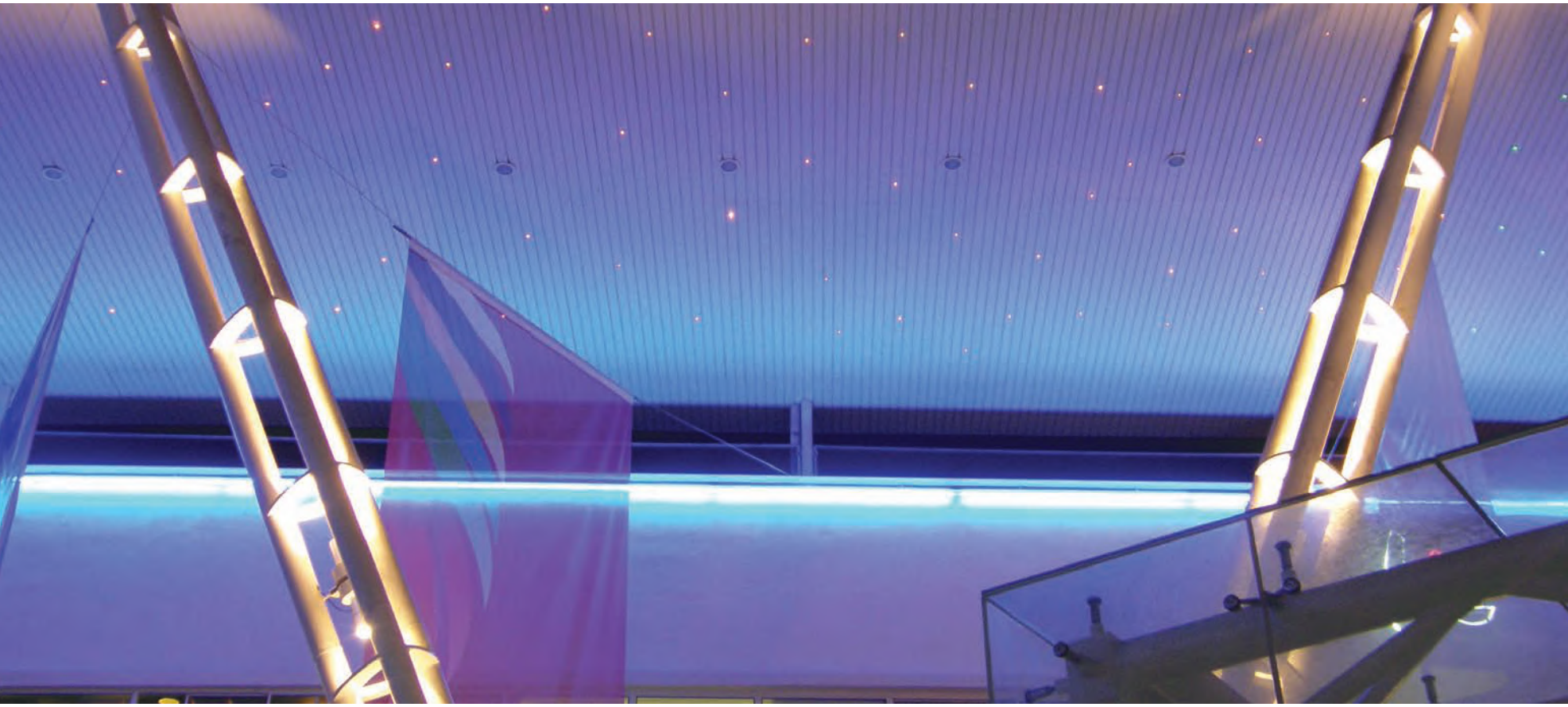
Note: panels have a nominal plain border along the longitudinal panel direction in order to assure maximum flatness and product stability: 7 mm for Ø 1 mm and 6 mm for Ø 2 mm.

SOUND ABSORPTION DATA



αs = 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

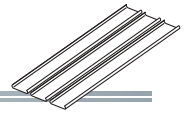


Dewan Tuanku Syed Putra, USM, Malaysia
184C (perforated/non-perforated) ceiling



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 recycable, 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.

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.

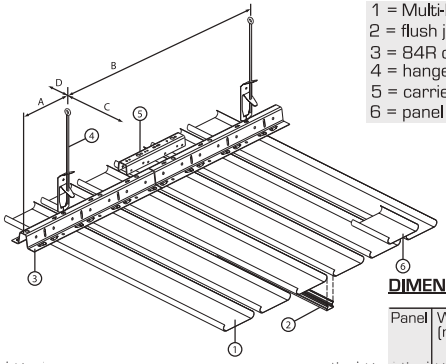
The panel carrier (3) is black, made of 0.5 mm thick stove enamelled steel or 0.95mm thick stove enamelled aluminium and is provided with prongs to accommodate the panels in a standard module of 100 mm onwards. All carriers have a standard length of 5000 mm and are connected by using the carrier splice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

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

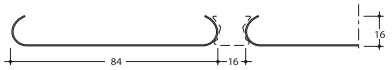
PRACTICAL APPLICATIONS

- Panel length made to measure allowing for swift installation and reducing the need for joining the panels to a minimum.
- The panels can be easliy 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

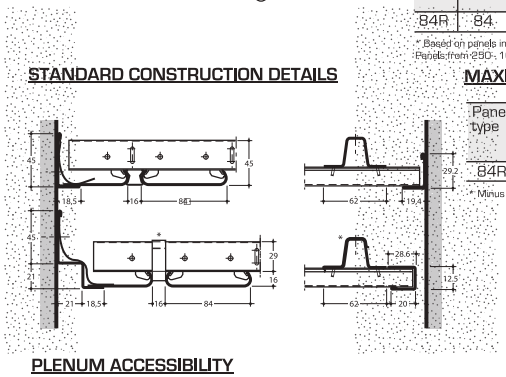


DIMENSIONS & WEIGHTS

Panel	Width (mm)	Module (mm)	Min length (mm)	Max length (mm)	Weight panels & carriers/m²			
					Steel carrier		Alu. carrier	
					Excl.joins	Incl.joins	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.

STANDARD CONSTRUCTION DETAILS



MAXIMUM SPANS

Panel type	Carrier span .(mm)		Panel span (mm) on 2 carriers		Panel span (mm) 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.

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

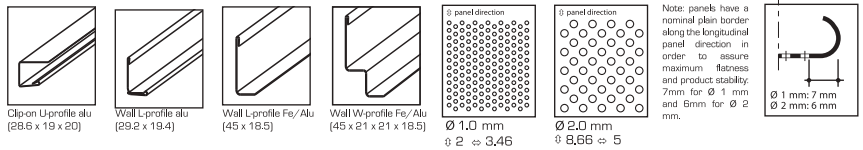
Luxalon® metal suspended ceilings are classified incombustible and will therefore not contribute to possible fires. When ceilings however need to protect the structural integrity of the building, Luxalon® ceilings offer a range of practical and tested solutions with regards to fire resistance and fire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

MATERIAL REQUIREMENTS PER M²

	Unit	Linear 84R system
Panels	lm	10
Join profiles	lm	10
Carriers	lm	059
Carrier splice	pc	012
Suspension	pc	035

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

EDGE PROFILES



Clip-on U-profile alu (28.6 x 19 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)
Ø 1.0 mm ⇕ 2 ⇔ 3.46
Ø 2.0 mm ⇕ 8.66 ⇔ 5

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:

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

- CURVE 3.

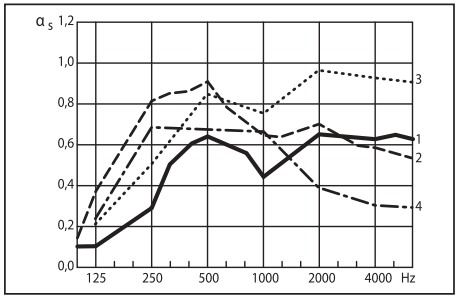
Perforated panels, perforated Ø 1 mm or Ø 2 mm, open joints 16 mm, module 100 mm, plenum depth 160 mm, plus additional 20 mm thick mineral wool pads with a density of approx. 22 kg/m³.

- 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.

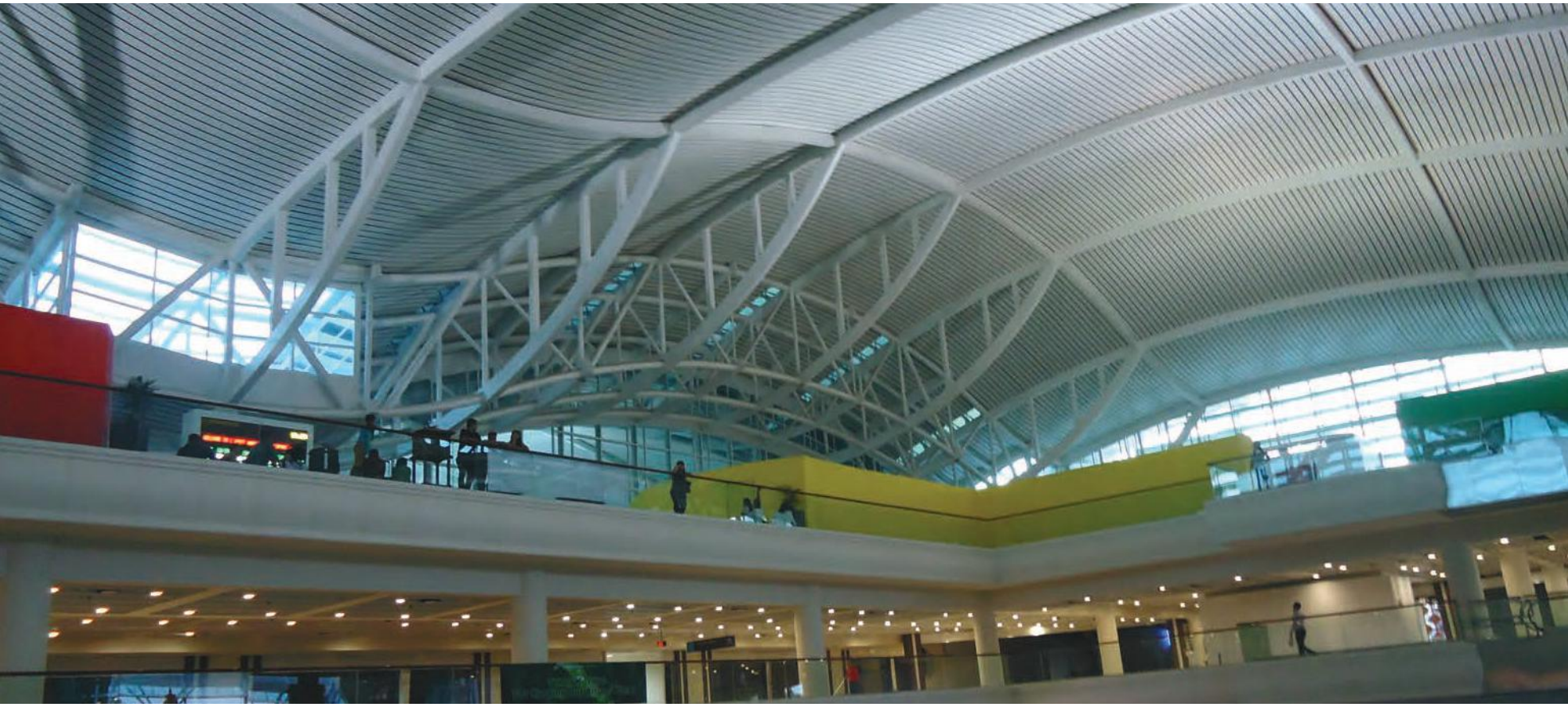
These figures are partly based on the 80B testresults which can be assumed as being equal for 84R. 80B ceilings were tested by TNO Delft (The Netherlands), an independent official testing institute. Report no: 806.469, TPD-HAG-RPT-920038/920039/007293.

- SOUND ABSORPTION DATA



Freq.Hz	125	250	500	1000	2000	4000
Curve1	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
Curve3	0.21	0.51	0.85	0.76	0.96	0.92
Curve4	0.24	0.68	0.67	0.66	0.39	0.32

αs = 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 recycable, 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) on 2 carriers		Panel span (mm) on 3 or more carriers	
	A	B	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

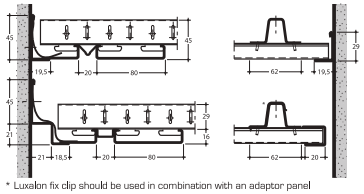
* Minus 200 mm in case of acoustic pads

DIMENSIONS & WEIGHTS

Panels 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. lenght*	6000	6000	6000	6000	6000
Weight/m^2:					
-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

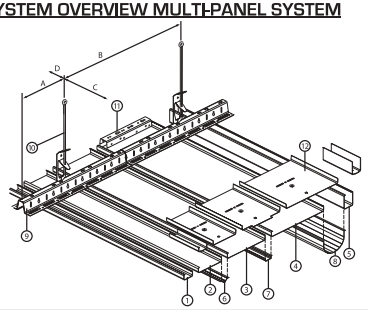
* Paneis > 6000 mm available on request
* Based on panels installed on 3 or more carriers

STANDARD CONSTRUCTION DETAILS



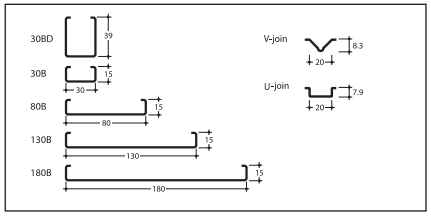
* Luxalon fix clip should be used in combination with an adaptor panel

SYSTEM OVERVIEW MULTI-PANEL SYSTEM



1	= 30B panel	7	= Recessed U-join 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-join profile	12	= Panel splice

DIMENSIONS



PLENUM ACCESSIBILITY

The Luxalon® Multi-Panel System allows total acces 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.

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 prepainted 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.

- FRIE BEHAVIOUR

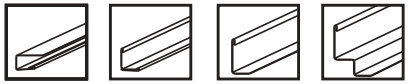
Luxalon® metal suspended ceilings are classified incombustible and will therefore not contribute to possible fires. When ceilings however need to protect the structural integrity of the building, Luxalon® ceilings offer a range of practical and tested solutions with regards to fire resistance and fire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

MATERIAL REQUIREMENT PER M2

	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



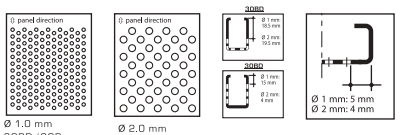
Clip-on U-profile alu (26.6 x 16 x 20) | Wall L-profile alu (29.2 x 19.4) | Wall L-profile Fe/Alu (45 x 18.5) | Wall W-profile Fe/Alu (45 x 21 x 21 x 18.5)

ACCOUSTIC 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
• Ø 2.0 mm and Δ 5mm with 16% open area	•	NA	•	•	•



Ø 1.0 mm
30BD/80B
⇕2 ⇔ 3.46

Ø 2.0 mm
30BD/80B/130B/180B
⇕ 8.66 ⇔ 5

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

- CURVE 1 (Ø 2.0 MM)

2.0 mm perforated panels, provided with 0.2 mm thick, black non-woven acoustic tissue, open joins 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 joins 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^3 open joins 20 mm, module 100 mm. Plenum depth is 160 mm.

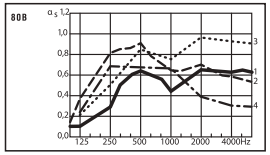
- CURVE 4 (PLAIN)

Plain panels, provided with 25 mm thick mineral wool pad with a density of 22kg/m^3, open joins 20 mm, module 100 mm. Plenum depth is 160 mm.

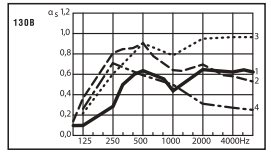
These Multi-Panel ceilings were tested by TNO Delft (The Netherlands).

An independent official testing institute, reports: 806.469, TPD-HA6-RPT-920038/920039.

- SOUND ABSORPTION DATA

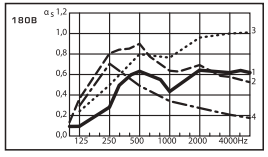


Freq.Hz	125	250	500	1000	2000	4000
Curve 1	0.09	0.28	0.64	0.43	0.65	0.62
Curve 2	0.37	0.81	0.91	0.65	0.70	0.58
Curve 3	0.21	0.51	0.85	0.76	0.96	0.92
Curve 4	0.24	0.68	0.67	0.66	0.39	0.32

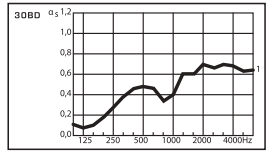


Freq.Hz	125	250	500	1000	2000	4000
Curve 1	0.09	0.28	0.64	0.43	0.68	0.62
Curve 2	0.37	0.81	0.91	0.65	0.70	0.58
Curve 3	0.21	0.60	0.90	0.78	0.96	0.97
Curve 4	0.24	0.71	0.59	0.48	0.32	0.26

αs = soundabsorption degree: an absorption of 1.0 i ndicates 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	0.07	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

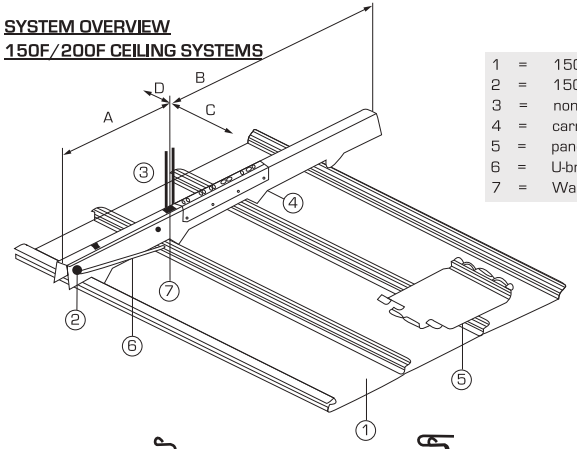
The Luxalon® 150F/200F ceiling system consists of 150 mm and 200 mm wide aluminium panels (1) which can simply be clipped into the prongs of a 150F or a 200F carrier (2). The stove enamelled aluminium panels are recycable, lightweight and strong. The panels are made to measure and can be supplied in 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.

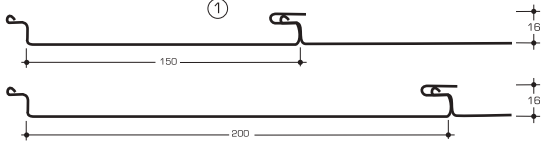
PRACTICAL APPLICATIONS

- 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/m²).
- 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



1 = 150F/200F panel
2 = 150F or 200F carrier
3 = non Luxalon® rigid suspension
4 = carrier splice
5 = panel splice
6 = U-bracket
7 = Washer set

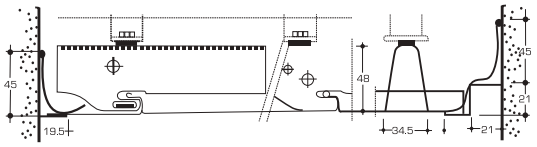


DIMENSIONS & WEIGHTS

Panel	Width	Modul	Min. Length	Max. Length	Weight panels & carrier/m²*
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/m²
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

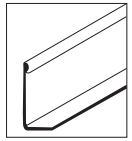
The standard Luxalon® colour range for 150F/200F exterior ceilings includes different colours and finishes. See Luxalon® exterior colour chart. Any other (RAL or NCS) colour is available on request.

MATERIAL REQUIREMENTS PER M²

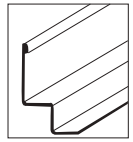
	Unit	150F system	200F system
Panels	lm	6.67	5
Carriers	lm	0.85	0.85
Carrier splice	pcs	0.17	0.17
Suspension	pcs	2.14	2.14

* 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 M/m²

EDGE PROFILES



Wall L-profile Alu (45 x 18.5)



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

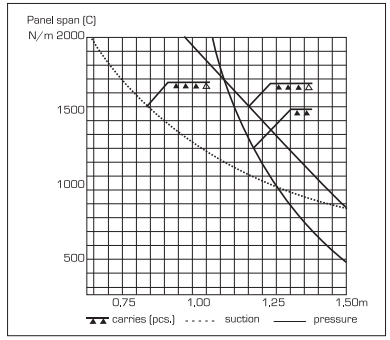
FACADE CLADDING APPLICATION

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

MAXIMUM SPAN

- PANEL SPAN (C)

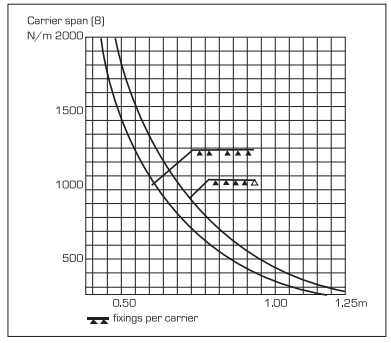
The panel spans, in relation to the wind load (pressure or suction). Can be calculated from the graph adiacent. At 1500 N/m² the maximum panel span for 150F is 1.18 m on 3 or more carriers.



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/m² (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



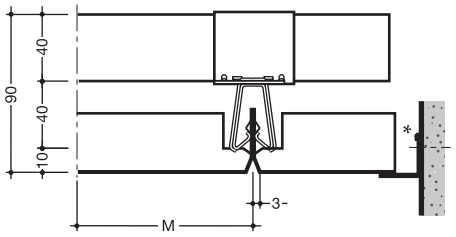
Methodist Church Port Dickson, Malaysia
200F ceiling

LUXALON® TILE CEILINGS

CLIP-IN TILE

Characteristics

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

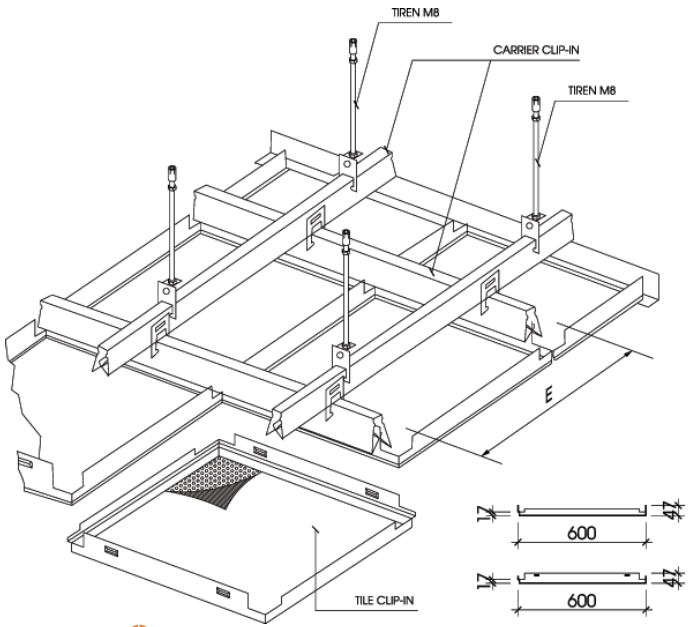


- Tiles are standard available in steel or aluminium alloy while other materials are available on request

Tile Options

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

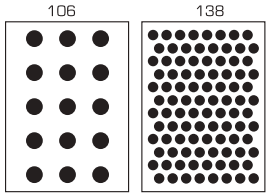
- Optimal acoustic control by using perforated tiles with a non-woven textile membrane bonded to the inside face.
- Easy demountable tiles, which allows full access to services and equipment in plenum.
- Self levelling tiles resulting in a smooth ceiling surface.
- Swingdown tiles for enhanced access 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) 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

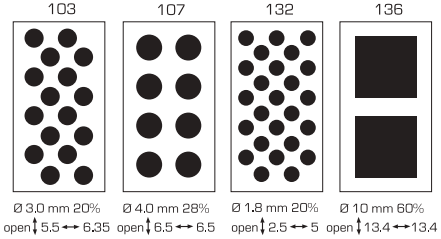


Sound absorption

Perforation

PERFORATION OPTIONS:

ALTERNATIVE PERFORATIONS



ACOUSTIC PERFORMANCE

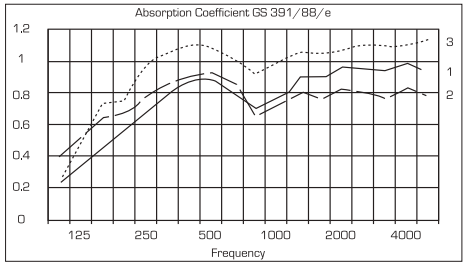
In order to improve interior sound control, the Luxalon® Tiles can be perforated and also fitted with non-woven acoustic tissue.

TYPICAL SOUND ATTENUATION

	Normalised level Difference					
Fregency (Hz)	125	250	500	1000	2000	3150
Plain + Acoustipanel	35.0	37.7	45.9	50.8	48.7	61.3 dB
Microperformated Tile + Mineral Wool	23.2	25.1	44.7	55.5	62.7	67.3 dB
80 kg/m³(40 mm thick) + Backing plate						

SOUND ABSORTION

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 wiht 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 af practical solutions with regards to fire resistance and fire stability. Further information is available on request.



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.

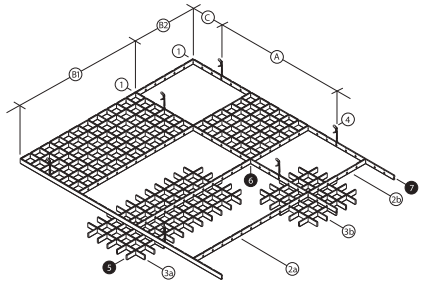
The Cell 50E tiles are easily mounted and demounted by the use of sliding clips whilst half-blind U- profile run ners, L-shaped wall profiles or cover profiles act as perimeter trims.

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 inte grated into the cell structure

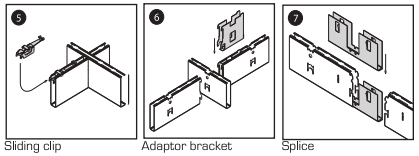
SYSTEM OVERVIEW CELL 50E





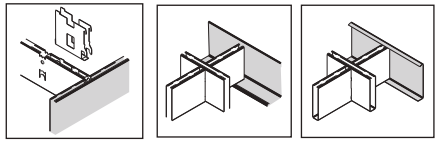
1 = Main runner
2a = Cross runner 1200
2b = Cross runner 600
3a = Cell tile 1200 x 600
3b = Cell tile 600 x 600
4 = Cell hanger

A = 1200 mm (max.)
B1 = Tile length (standard 1200)
B2 = Tile length (standard 600)
C = 300 mm (max.)



Sliding clip | Adaptor bracket | Splice

STANDARD PERIMETER OPTIONS



Half-blind runner (2400 mm) | L-edge profile (25 x 50 mm) | Cover profile (10 x 50 mm)

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/m²	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 fiexibility to produce alternative Cell modules (rectangular or square) on request. Also tiles in other sizes whilst always retaining the 10 x 50 mm profiles.

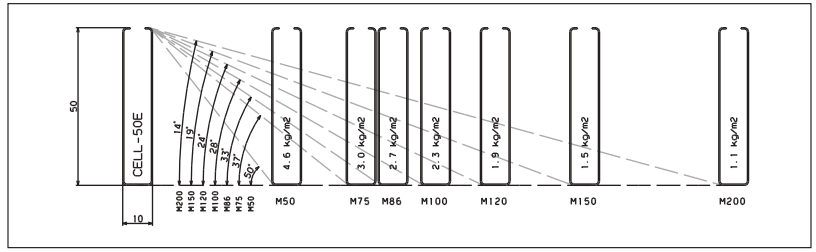
MATERIAL REQUIREMENTS PER M²

	Unit	Cell 50E Tile 1200 x 600	Cell 50E Tile 600 x 600
Cell 50E tiles	pcs.	1.39	2.78
Main Runners (2400)	lm	0.83	1.67
Cross Runners 1200	lm	1.67	
Cross Runners 600	lm		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 quantily 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



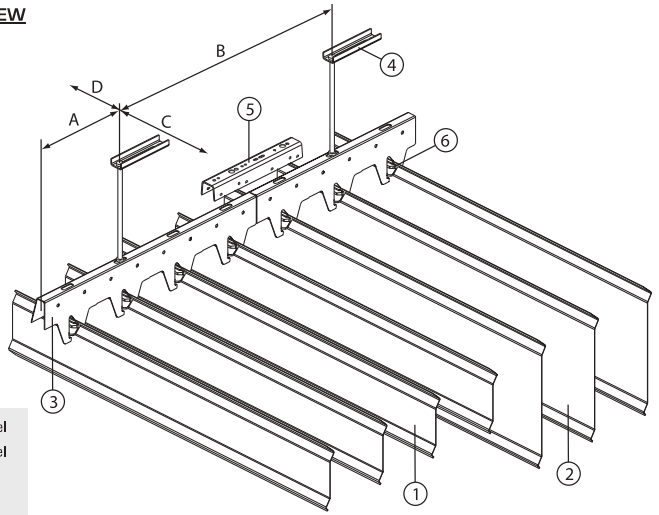
CIDB, Malaysia
Cell 50mm module



CITI Bank, Europe
Cell 50mm module

LUXALON® SCREEN CEILINGS

SYSTEM OVERVIEW

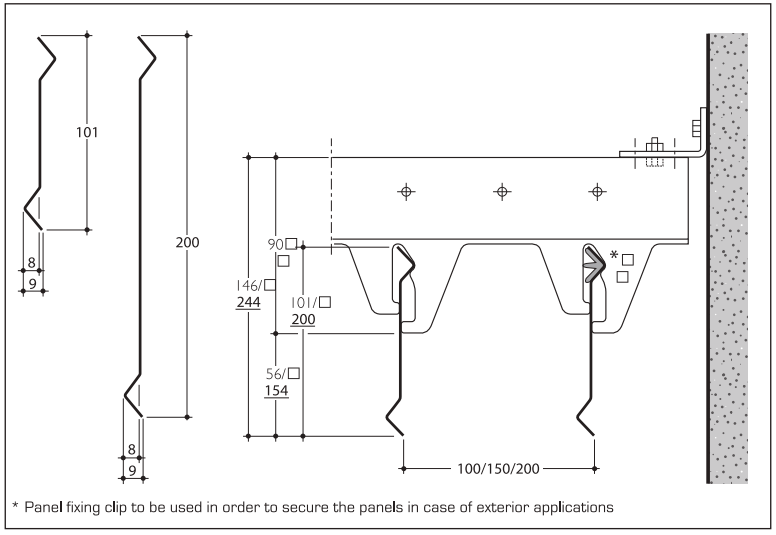


1 = V100 panel
2 = V200 panel
3 = carrier
4 = hanger
5 = carrier splice
6 = fixing clip

	Carrier span (mm)					Panel span (mm)	
		2 fixing points		3 or more fix.points			
	A	B		B		C	D*
Module (mm)		V100	V200	V100	V200		
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	Heigth	Min. length	Max. length screen ceiling	Max.length slicling 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 remended to be use in a slicling 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 carries 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 installated 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 spilce	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

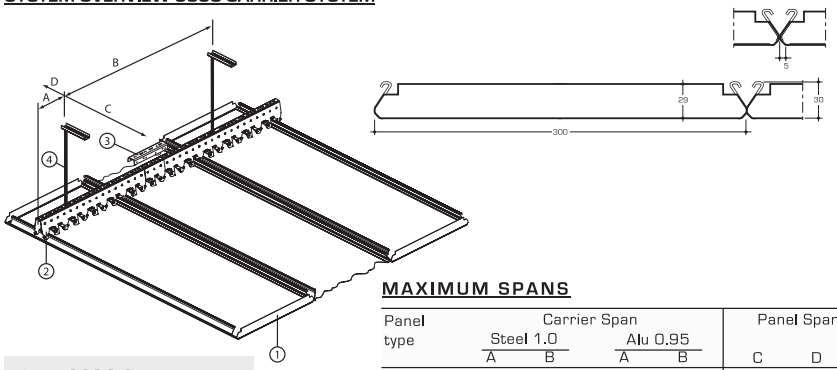
SHORT SYSTEM DESCRIPTION

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 recycable, 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

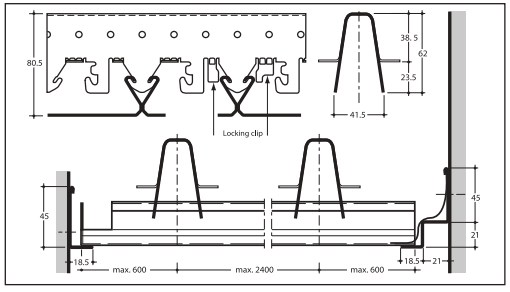
Panel type	Carrier Span				Panel Span	
	Steel 1.0		Alu 0.95			
	A	B	A	B	C	D
Alu 0.7	300	2000	300	1450	2400	600
Steel 0.6	300	1600	N.A.	N.A.	2400	600

DIMENSIONS & WEIGHTS

Panel	Width	Min. length	Max. length	Weight/m²
Alu 0.7	300	1000	6000	2.6 kg
Steel 0.6				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 M²

	Unit	300C Carrier system
Panels	lm	3.33
Carriers	lm	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

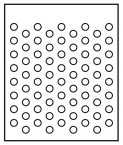
The 300C Carrier System is also suitable for exterior applications. See separate brochure for further details

ACOUSTIC PERFORMANCE

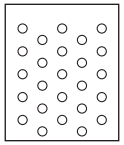
In order to improve interior sound control, the Luxalon® 300C Wide Panel Ceiling panels can be supplied perforated with a Ø of 1.5 or 2.0 mm (open area of 15% and 23%). As a standard feature, perforated panels can be supplied with a sound absorbing non-woven tissue glued into the panel for enhanced acoustical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

PERFORATION OPTIONS

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

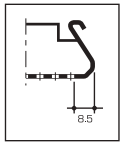


Ø 1.5 mm
23% open area
Δ 3 mm



Ø 2.0 mm
15% open area
Δ 5 mm

Note: Panels have a nominal plain border of 8.5 mm along the longitudinal panel direction in order to assure maximum flatness and product stability.



- 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)

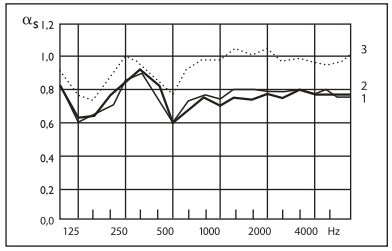
Ø 1.5 mm perforated 300C panels, provided with 0.2 mm thick, black non-woven acoustic tissue glued over the whole perforated area. Plenum depth is 400 mm.

- 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 ABSORBTION DATA



αs = 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

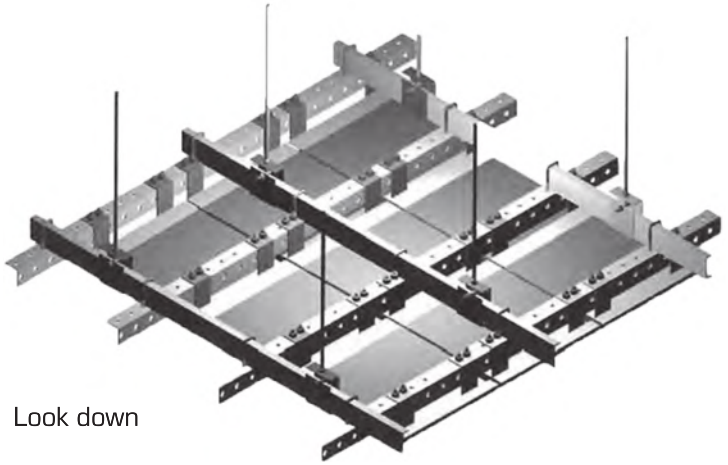
We've borrowed technology from the aircraft industry to create our XL panels, which are extremely flat and light despite their size and which require very few supporting points.

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

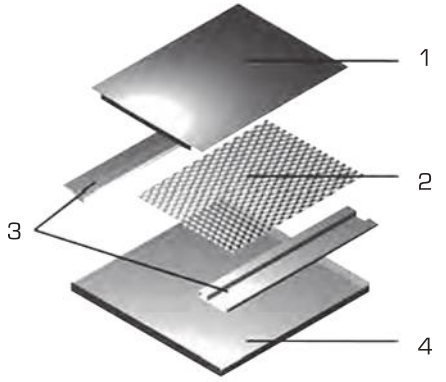
- Hook-on system
- XL sizes - panels up to 1500 mm by 6000 mm
- 3 mm butt joint
- Demountable from below
- Endless colours and finishes; perforations available
- Curved solutions
- Acoustical options



Look down

HIC & HIW Composite Construction

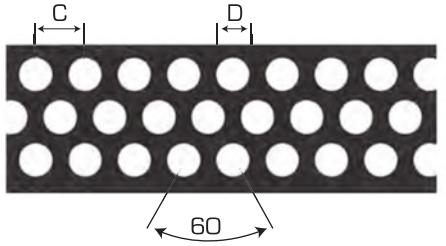
1. Pre-coated and roll-formed inside skin
2. Aluminium / Paper honeycomb
3. Aluminium extrusion
4. Pre-coated and roll-formed outside skin

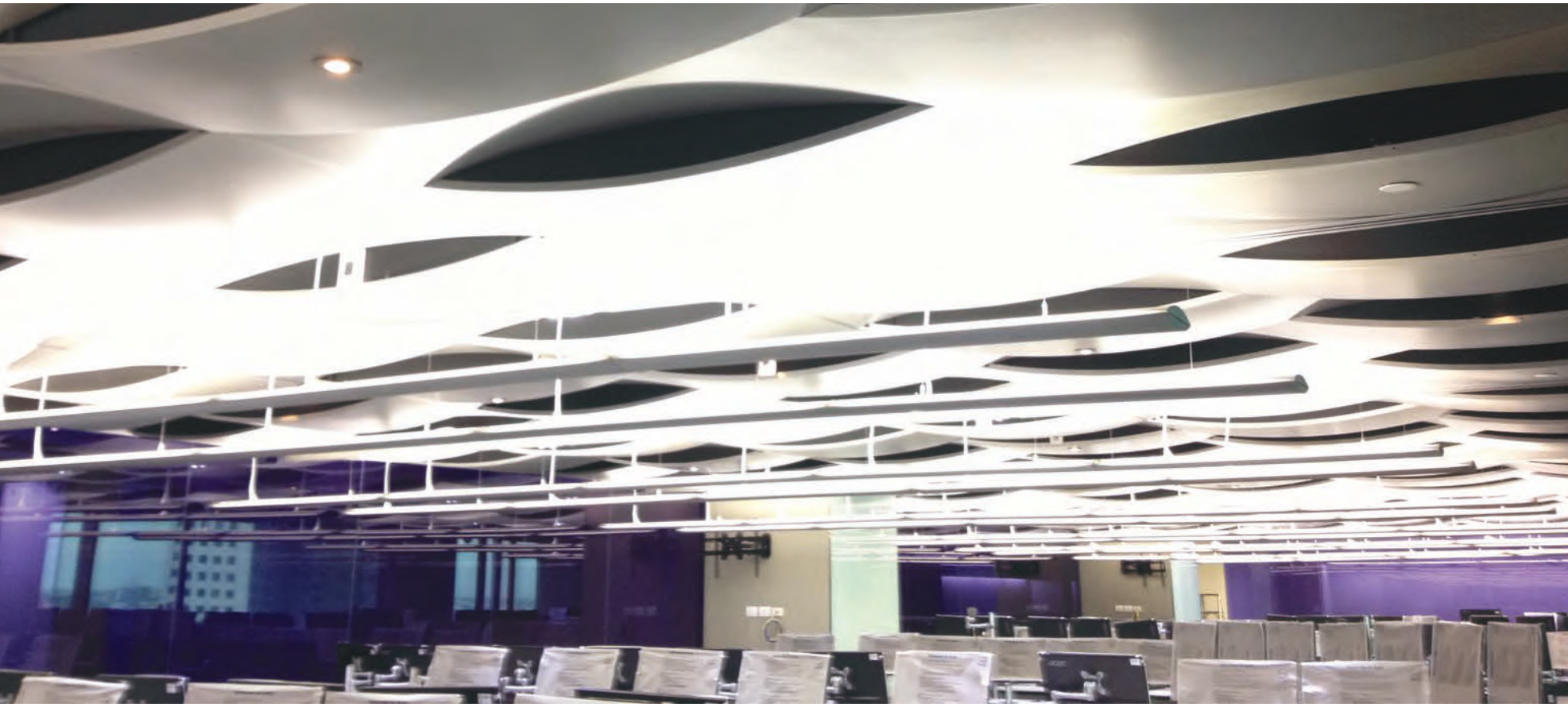


Standard Perforation Patterns

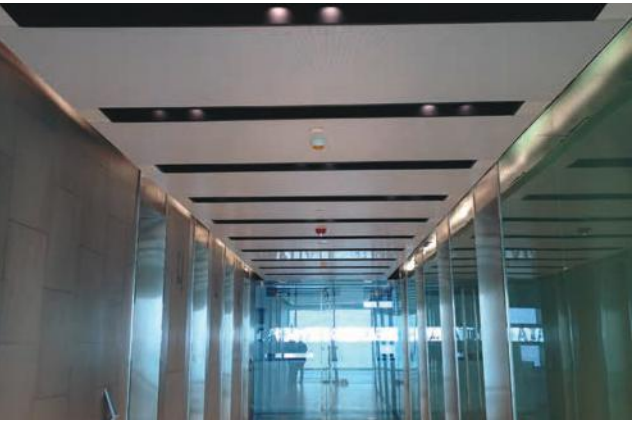
D: Diameter (mm)	C: Pitch (mm)	O.A. (%)
2.0	3.5	29.61
3.0	5.0	32.65
3.97	8.3	20.75
Centers at 60 staggered		

Three standrad 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



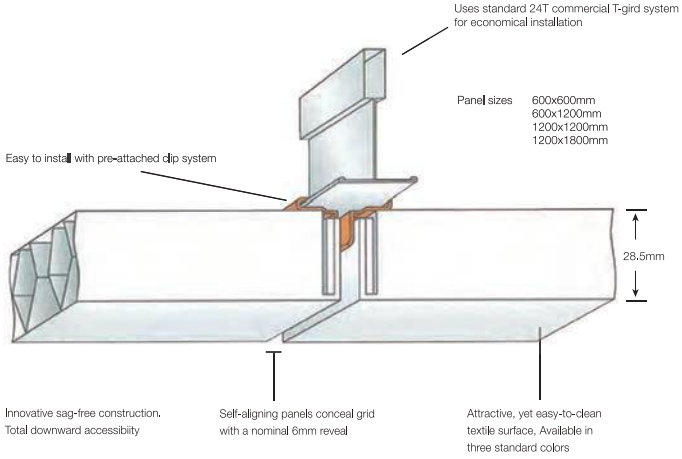
China Tobacco, Zhejiang China

Techstyle® ACOUSTICAL CEILING

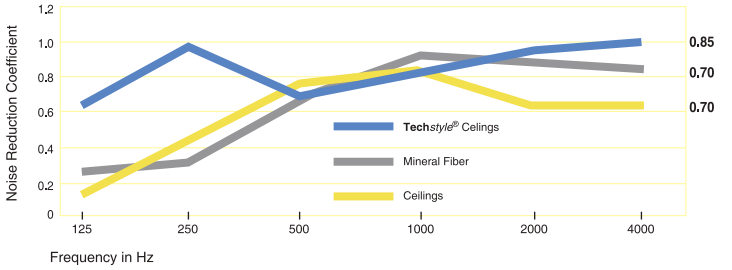
Bridging the gap between function and form, Techstyle® panels represent a new way of looking at ceilings. The cellular construction provides exceptional acoustical performance in a variety of sizes. Panels that come in white (standard) off-white and black (optional) offer a multitude of design possibilities.



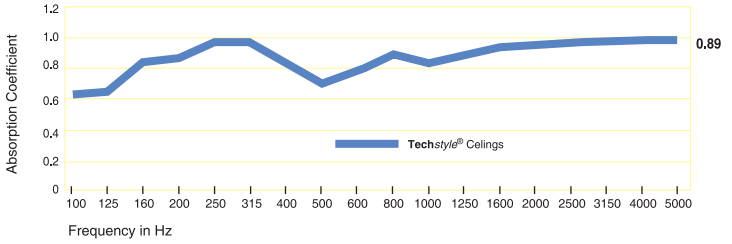
NO VCOs
10% recycled content



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 SPCIFICATIONS

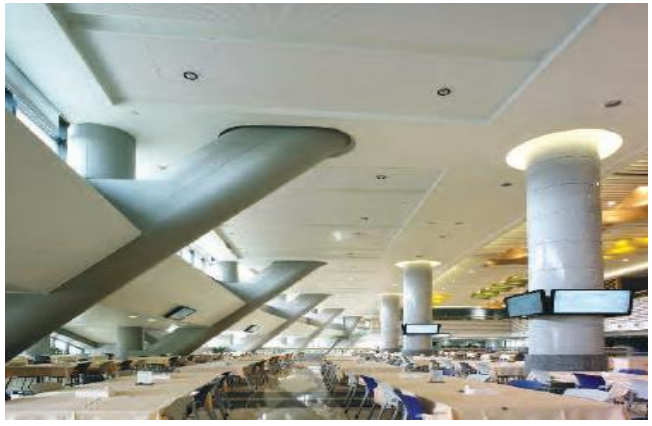
Substrate		Acoustical mat
Color		White, off-white and Black
Surface Finish		Polyester Non-woven
Panel Sizes		
	Sizes	600X600mm 600X1200mm 1200X1200mm 1200x1800mm
Acoustical Ratings	**NRC**	0.85(ASTM C 423)
	SAA	0.89(ASTM C 423)
	CAC	17 w/no backer (ASTM 1414)
Light Reflectance (white only)		
Surface Buruing		Class A (1) (ASTM E84) (ASTM E 1264)
	Flame	<25
	Smoke	<50
Moisture Resistance		Resistant to 95% humidity in 1040 F temperature
Thermal Resistance		0.33 M² K / W
Fungal Resistance		Resistant (ASTM C 1338)
Weight of Panel		1.3kg / M²
Warranty		10 year limited
MEA		Acceptance (376-02-M)
ICC		Approval (ER-6138)
CHPS		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.

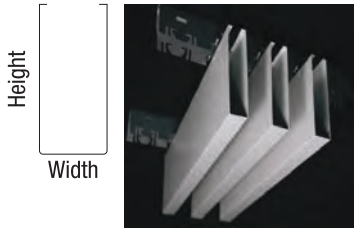
- Many die-formed products of standard specifications are available
- Many specifications are available for the pressesd panel of width 25mm-50mm and height upto 200mm
- Maximum panel length upto 4000mm
- Many panel forms are available such as U-shaped and the custom-made round-shapped and others
- Various 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

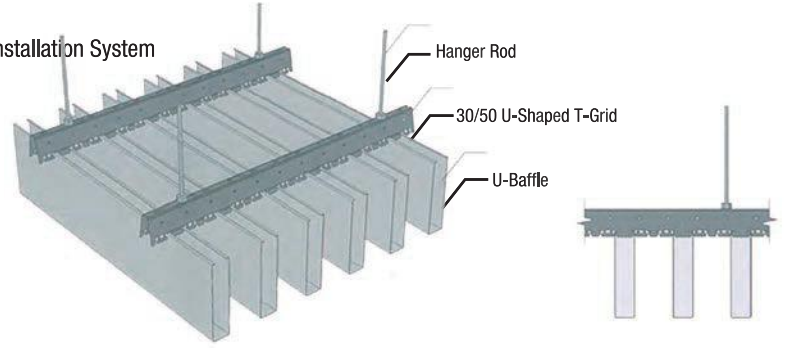
Unit: mm

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

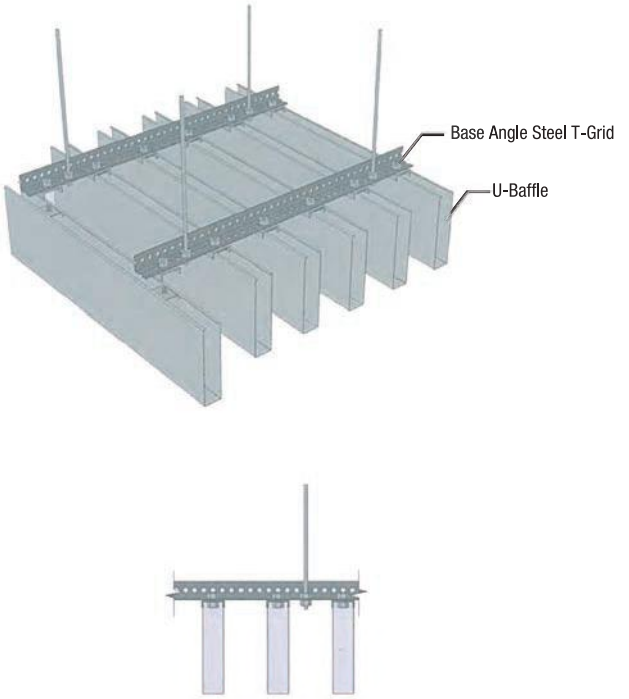
*Flexible height with in 50mm - 200mm can be achieved if required on request



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

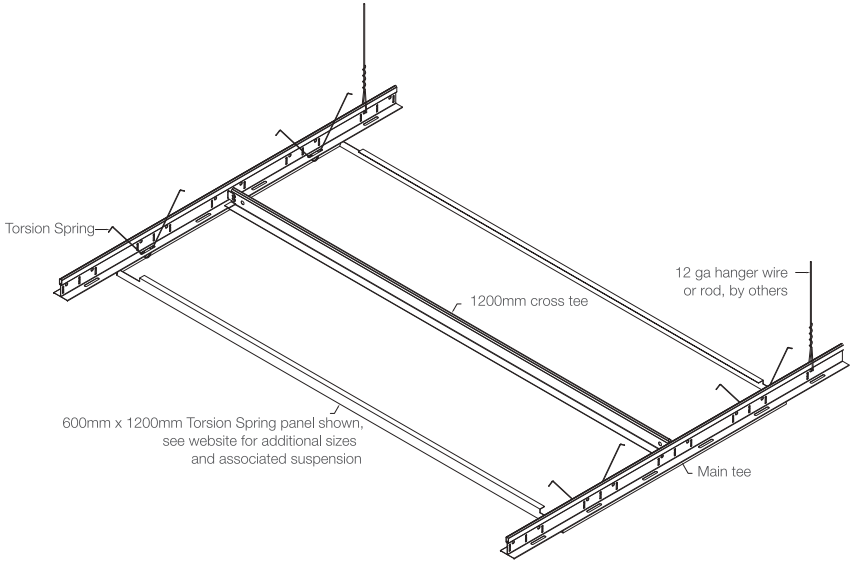
TORSION SPRING

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

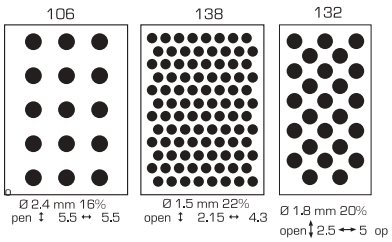
TYPICAL ISOMETRICS



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

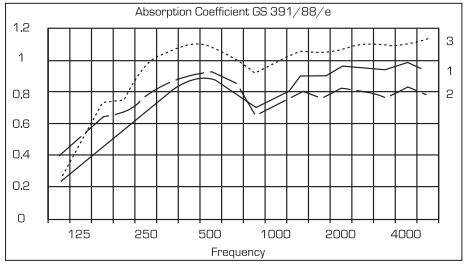
Sound absorption

ACOUSTIC PERFORMANCE

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

SOUND ABSORTION

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

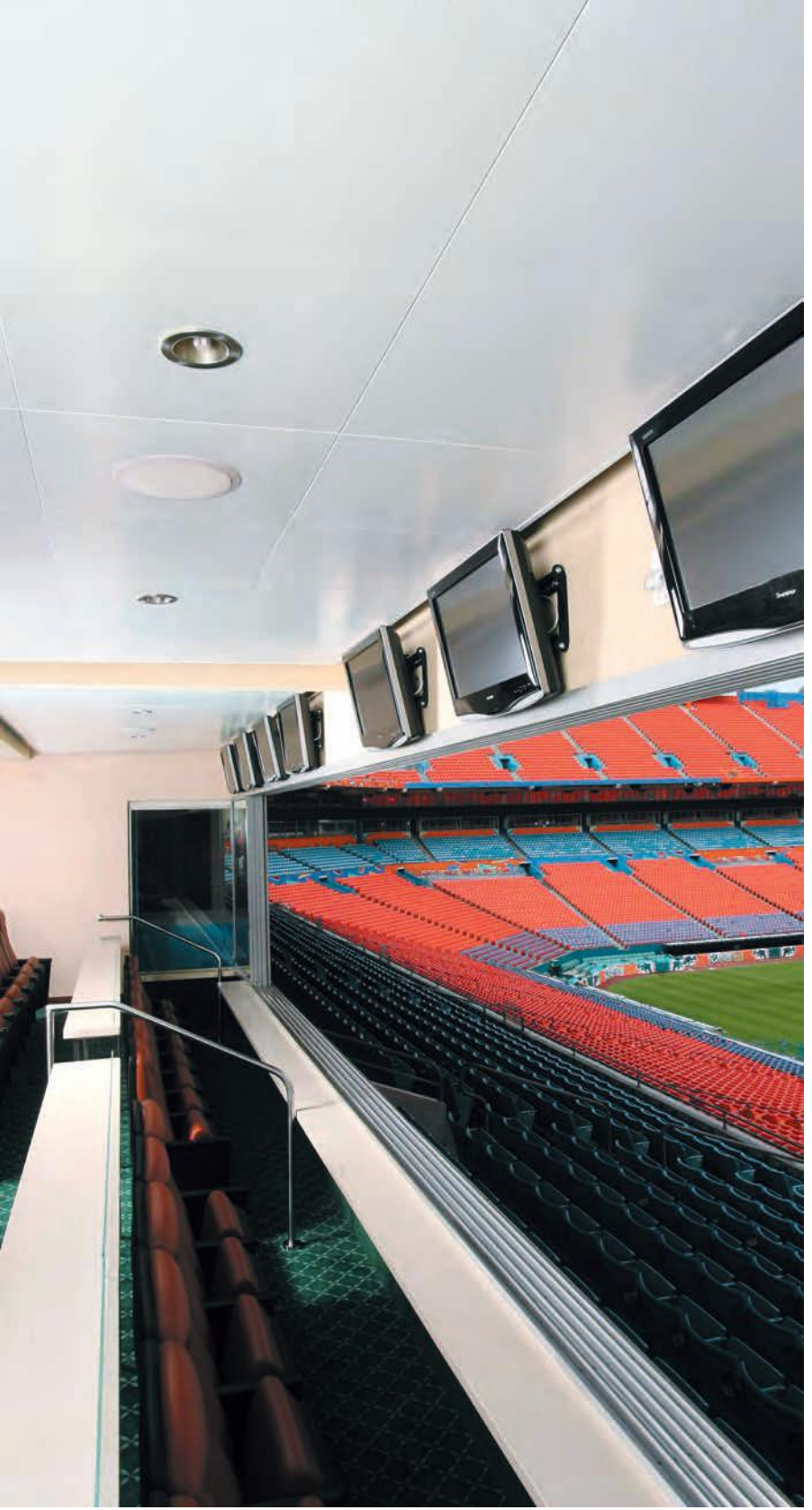


- **CURVE 1**
  2.5 mm Ø perforated tiles, 20 mm thick mineral wool pad with a density of approx. 20 kg/m, plenum depth 200 mm.
- **CURVE 2**
  2.5 mm Ø perforated tiles, non-woven acoustic felt, plenum depth 200 mm
- **CURVE 3**
  1.5 mm Ø perforated tiles, 40 mm thick mineral wool pad wiht a density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



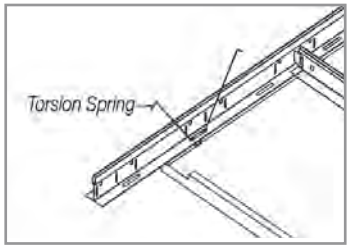
Project: JFK Terminal 4, New York



Project: South West General Hospital, Cleveland



Project: McCamish Pavilion, Georgia Tech, Atlanta



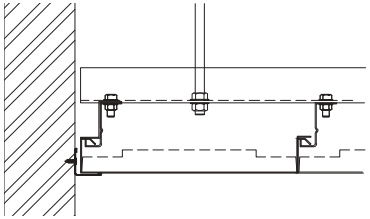
Torsion Spring metal ceiling system allows both flat and curved ceiling panels to swing down from the ceiling plane.

HOOK-ON CEILING

HOOK-ON TILE

Characteristics

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

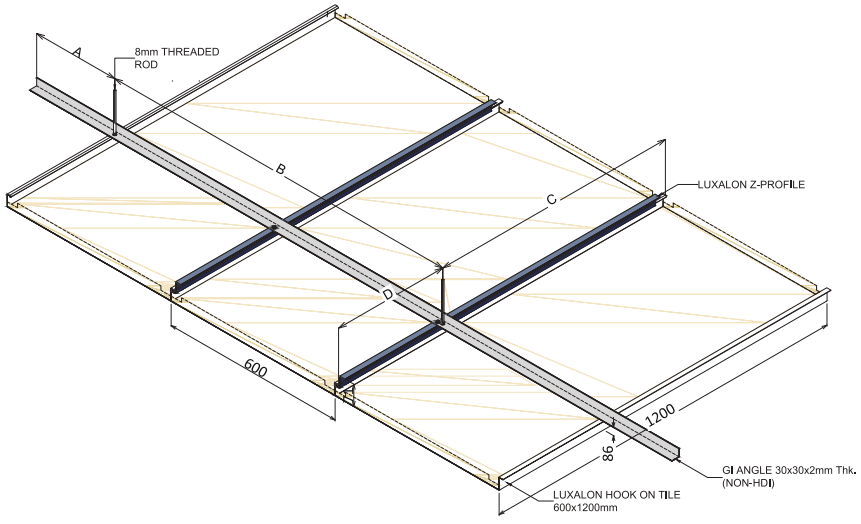


- Tiles are standard available in steel or aluminium alloy while other materials are available on request

Tile Options

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

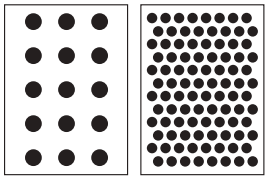
- Optimal acoustic control by using perforated tiles with a non-woven textile membrane bonded to the inside face.
- Easy demountable tiles, which allows full access to services and equipment in plenum.
- Self levelling tiles resulting in a smooth ceiling surface.
- Base Material: Luxalon® Hook-on tiles 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

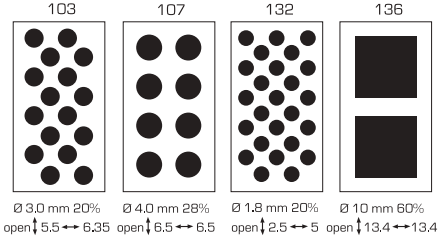


Sound absorption

Perforation

PERFORATION OPTIONS:

ALTERNATIVE PERFORATIONS



ACOUSTIC PERFORMANCE

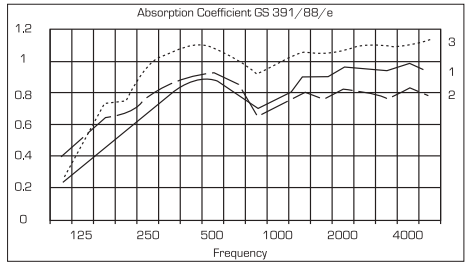
In order to improve interior sound control, the Luxalon® Tiles can be perforated and also fitted with non-woven acoustic tissue.

TYPICAL SOUND ATTENUATION

	Normalised level Difference					
Fregency (Hz)	125	250	500	1000	2000	3150
Plain + Acoustipanel	35.0	37.7	45.9	50.8	48.7	61.3 dB
Microperformated Tile + Mineral Wool	23.2	25.1	44.7	55.5	62.7	67.3 dB
80 kg/m³(40 mm thick) + Backing plate						

SOUND ABSORTION

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 wiht 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 af practical solutions with regards to fire resistance and fire stability. Further information is available on request.

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.





VENTILATED FAÇADES

Ventilated facades have become one of the building envelopes of choice today for architects and specifiers. Not only is it flexible, easy to install and aesthetically pleasing, the installation of ventilated facades can lead to greater energy efficiency.

Leading the world in ventilated facade technology, Hunter Douglas' flagship QuadroClad® Facade System was developed more than two decades ago from technology borrowed from the aerospace industry. Today, the group's key focus is on sustainability-achieved through its concentration on three themes: design, functionality and comfort.

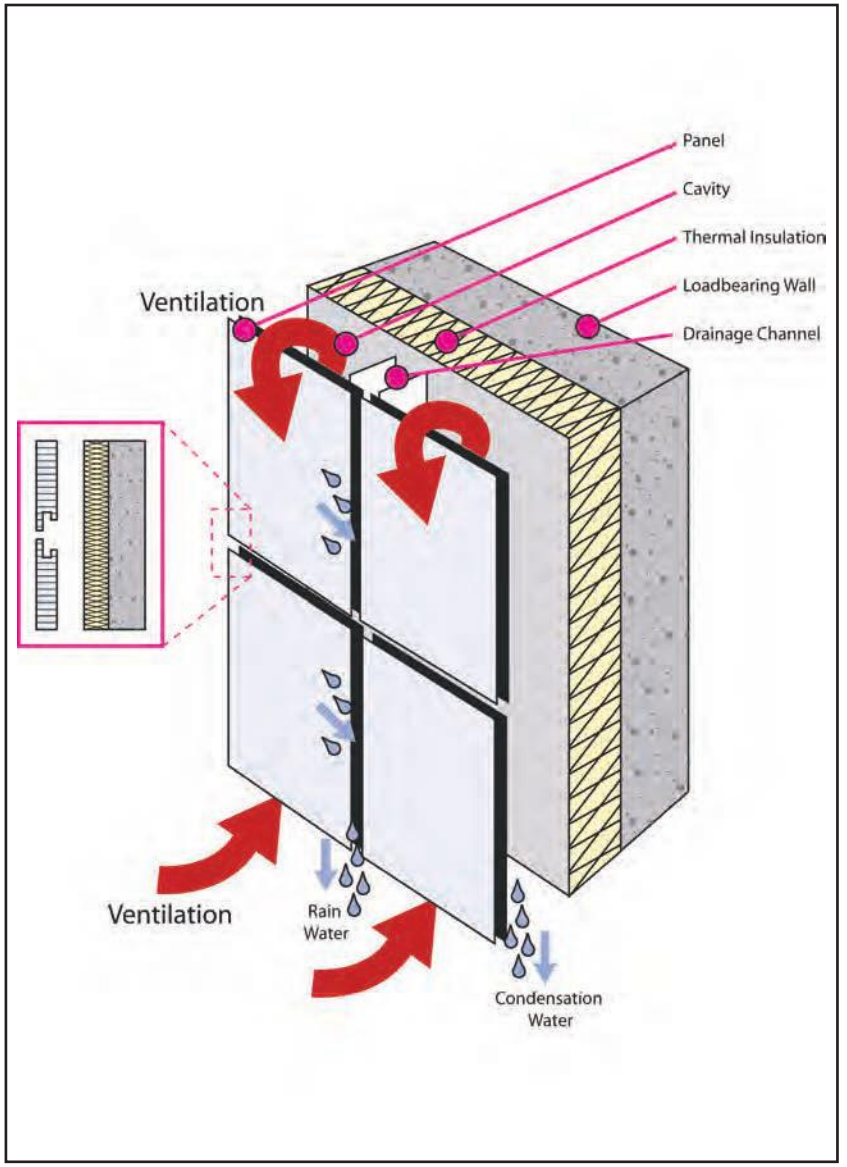
Ventilated facade technology

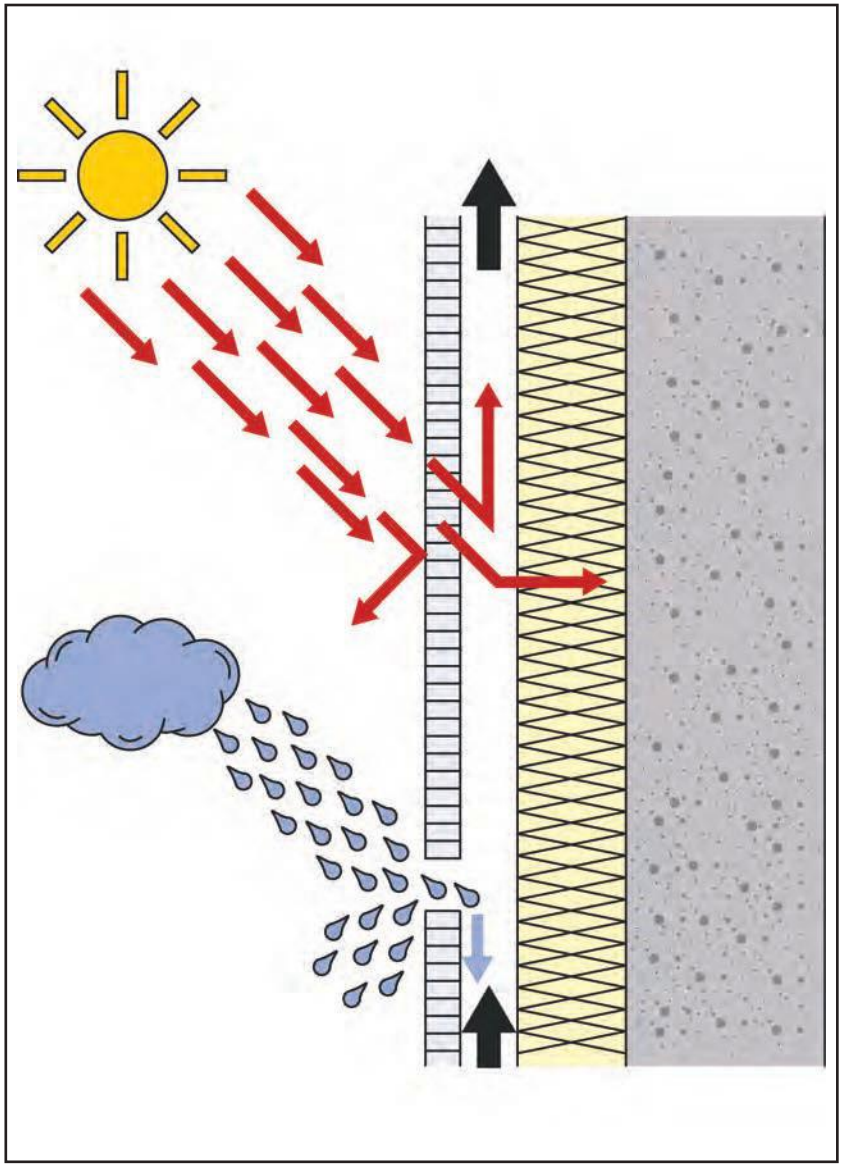
Ventilated facade technology utilises an open-jointed cladding system that is designed to work with nature. The open joints - which are effectively gaps between the cladding panels and other integrated facade elements-provide channels for ventilation as well as allow rain water and condensation to be drained off behind the cladding surface helping to achieve a much cleaner facade.

One of the advantages is that ventilated facades provide reliable heat protection. Air is drawn in at the floor level and at the open joints, and travels up. The building structure will not be directly heated by the sun, instead the cavity will be warmed, allowing any excess heat to escape upwards.

The facades also contribute towards enhancing a building's thermal performance. Firstly, the ventilated facade panels provide a (small) benefit to the U-Value of the wall behind due to the fact that they shield the building from direct wind and sun. Secondly, the large panel format and resulting shielding effect helps to reduce the number of thermal bridges-anything that goes through the wall's outer insulation layer-thus, maximising the performance of the insulation.

A true ventilated facade system provides durable weather resistance-protection from the sun, wind and rain - with moisture either descending by drainage channels or evaporating through the ventilation cavity.


Panel
Cavity
Thermal Insulation
Loadbearing Wall
Drainage Channel
Ventilation
Ventilation
Rain Water
Condensation Water



QuadroClad®

Over 40 years experience façade supplier throughtout the world.

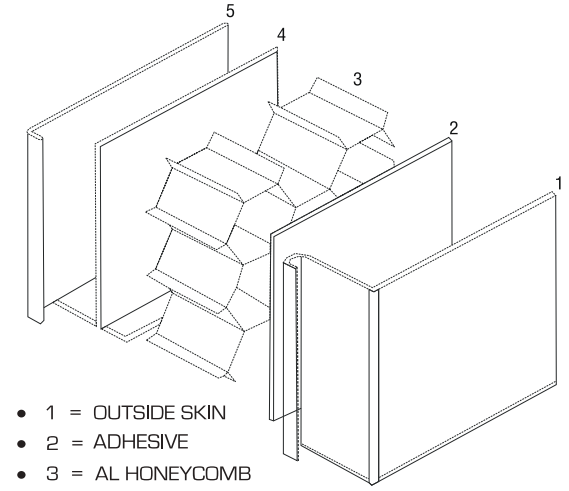
- 4-Sides-closed honeycomb panels
- **Large panel modules (1500mm * 6000mm) – larger panel upon request**
- Wide range of thicknesses available 12/ 25/ 36/ 50mm & others
- **Inherent strength of honeycomb panel requires a limited number of supports and suitable for high rise buildings in high wind load areas**
- Choice of skin materials (zinc, aluminium, stainless steel etc.)
- Choice of coatings, Luxacote, PVDF Anodised, etc.
- Luxacote paint system has high scratch resistance
- **Lightweight, only approx . 6kg/m2**
- Small radius at panel edges
- Only fixed on two sides - cost effective and time efficient installation
- Integrated system of panel and support structure can be fixed to any substructure (concrete, blockwork, brick-work etc)
- **Extremely flat surface, little thermal bow-due to excellent heat conduction between inner and outer panel skins**
- Panels can be curved, cranked, tapered or customized
- **All panels are factory made (no secondary fabrication)**
- Vertical and horizontal panels can be combined
- **Panel erection sequence can be top-bottom, bottom-top, or any sequence to suit the building programme**
- Can also be used on sloping facades or ceilings
- **Open joints ventilated rainscreen technology helping to cool buildings**



Shanghai Auto Museum, China
QuadroClad



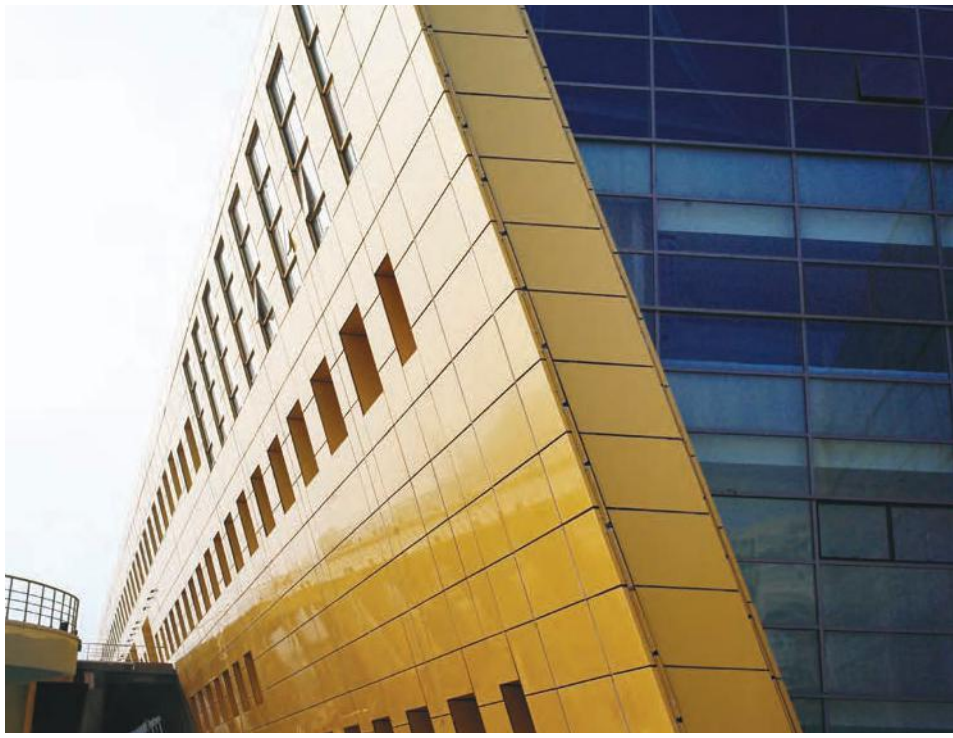
Canopy North Gate Office Building, Romania
QuadroClad



- 1 = OUTSIDE SKIN
- 2 = ADHESIVE
- 3 = AL HONEYCOMB
- 4 = ADHESIVE
- 5 = INSIDE SKIN

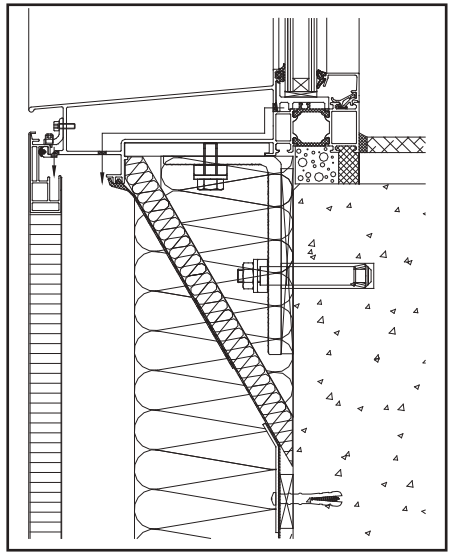


Trafalgar House United Kingdom
QuadroClad

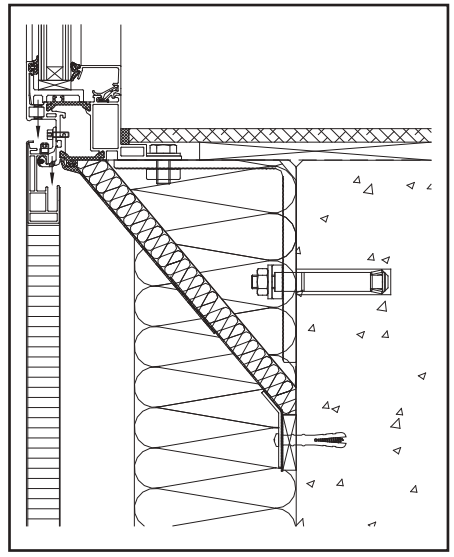


Sanmenxia Cultural & Sports Center, China
QuadroClad

Integrated Windows



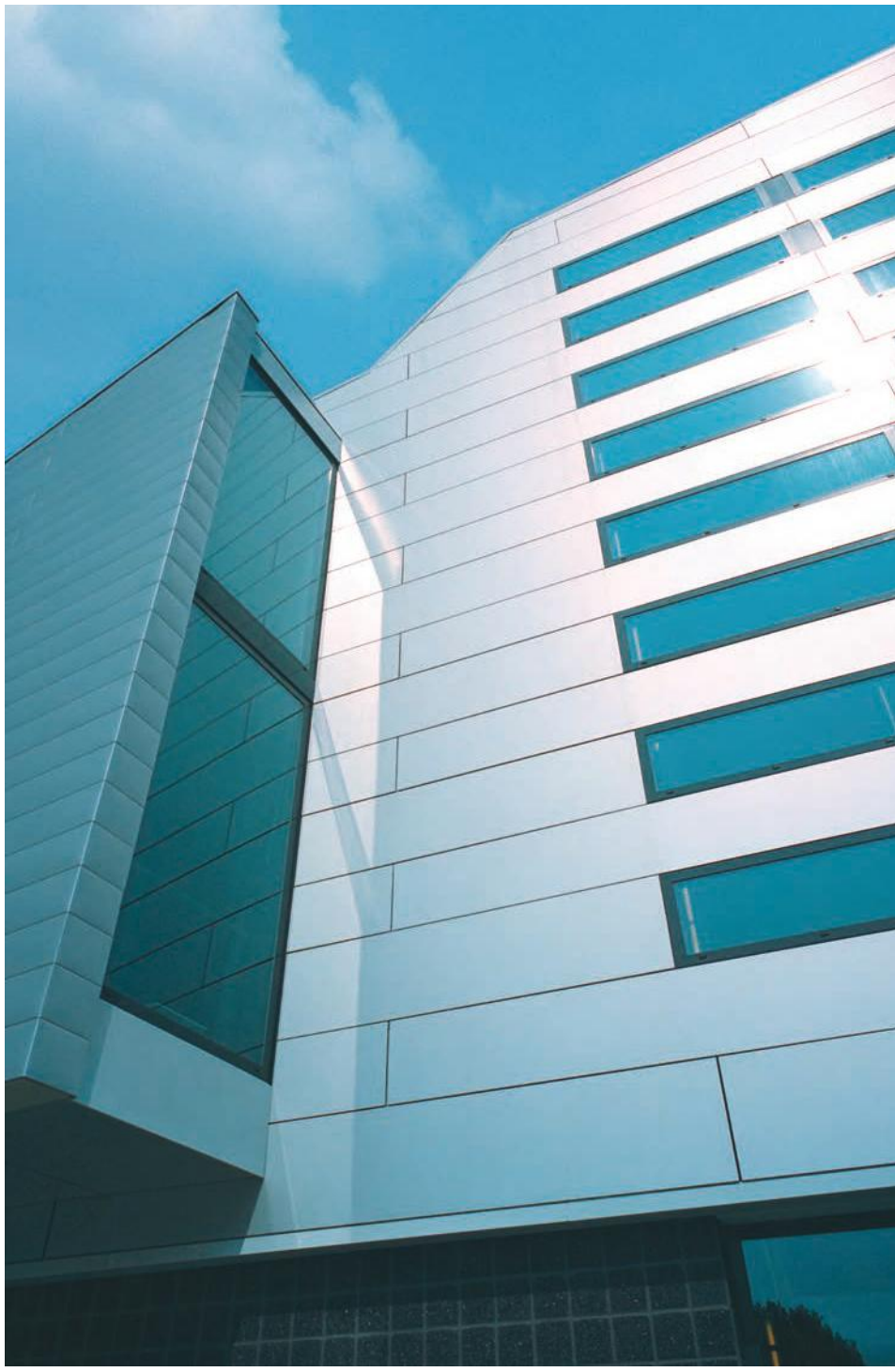
Recessed



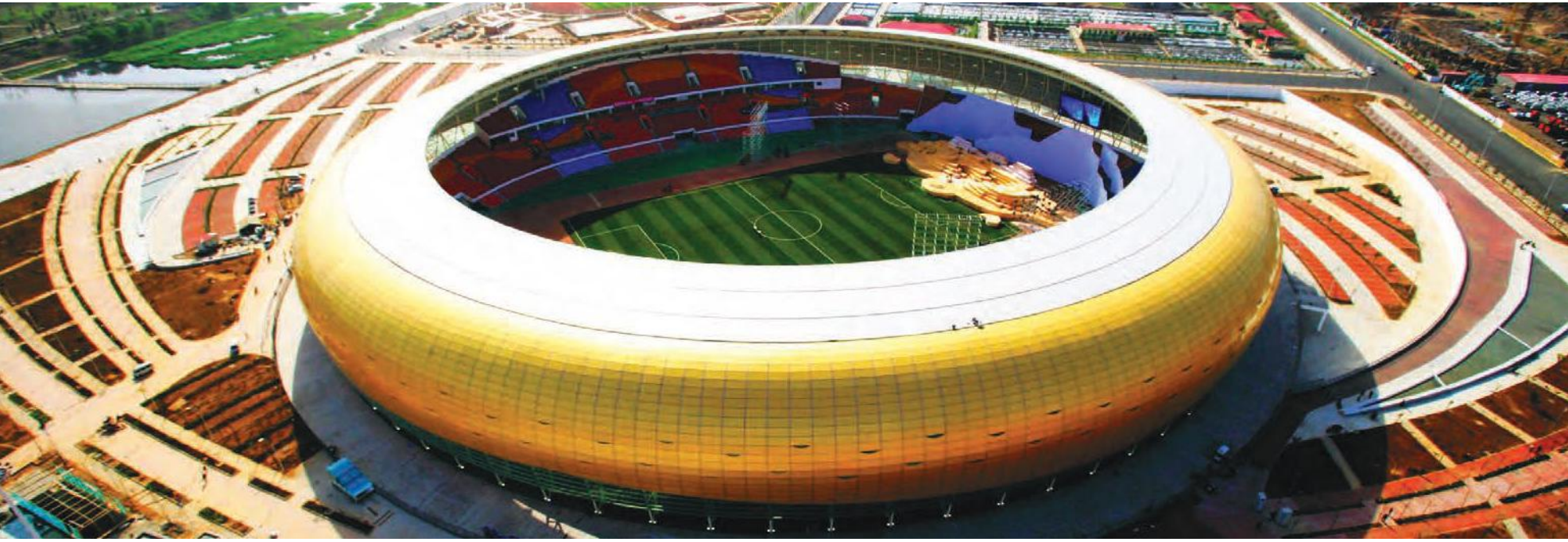
Flush



University of New South Wales, Sydney Australia
QuadroClad



T.I.C The Netherlands
QuadroClad

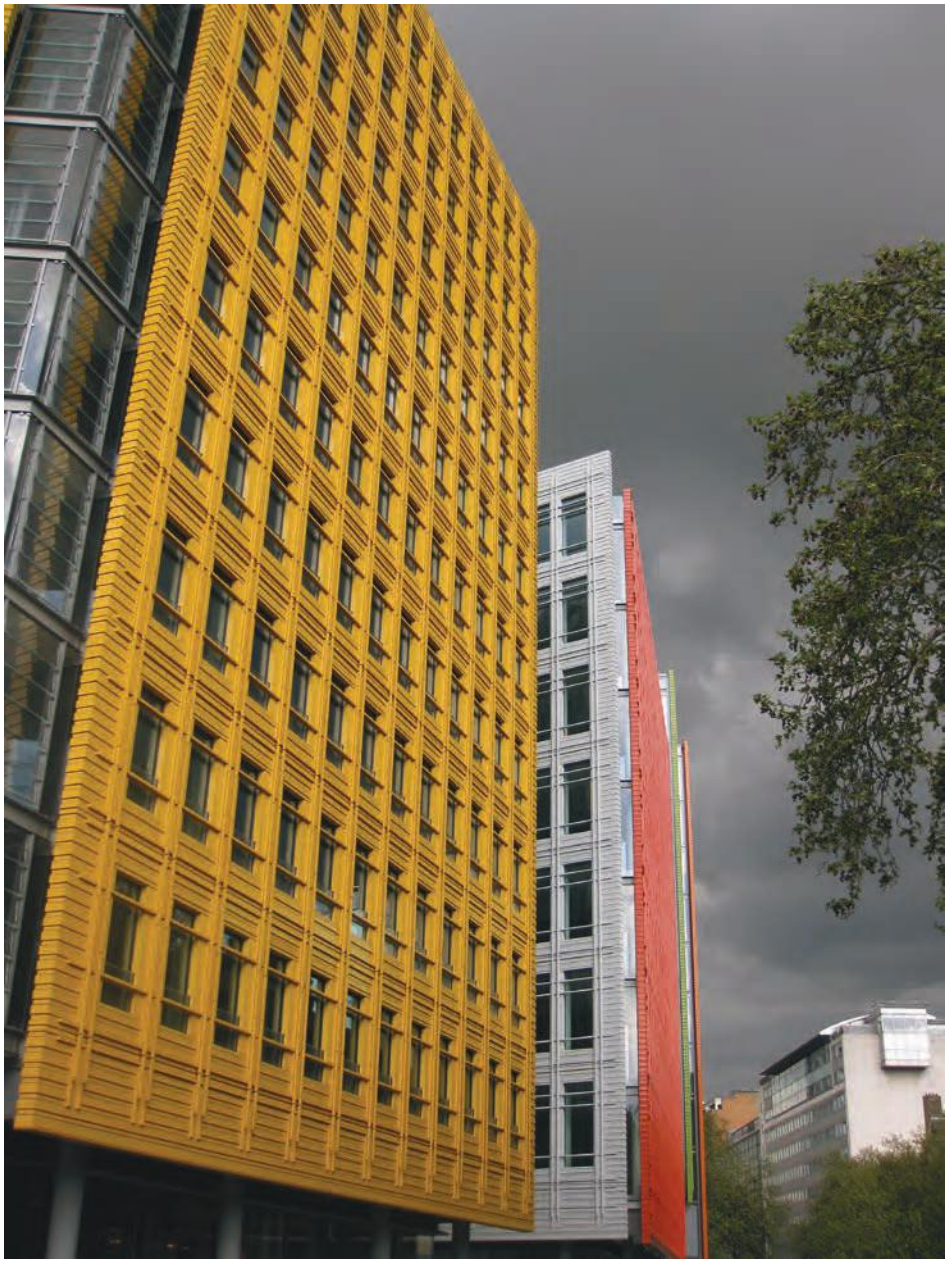


The Sanmenxia Cultural & Sports Center, China
QuadroClad



Shenzhen Poly Grand Theatre, China
QuadroClad

ARCHITECTURAL TERRACOTTA – A Modern Rendering Of The Traditional Elements



Architectural terracotta panel system is a kind of new curtain wall system, adorned with terracotta panels as a decorative surface and functions based on the rainscreen principle.

It's perfect and smart combination of traditional materials and modern architecture, featuring large-format panels, functionality and a complete system solution. The architectural terracotta products can be customized upon request into a huge number of special ceramic shapes and sizes. The surface design also offers a wide variety of options. Additionally, the distinctive elements and versatile surface finishes work together to create an impressive façade for buildings.

CS Central Saint Giles, London
Terrart panel & Baguette

VENTILATED FACADES



Shindong Raemian Apartments, South Korea
NBK Mid 3

Hollow

- Panel thickness : 28mm x 40mm other on request
- Maximum size : 800mm x 1,800mm
- Weight per unit area: approx. 46kg/m2 - 59kg/m2



Solid

- Panel thickness : solid is 20 - 30mm, other on request
- Maximum size : 600mm x 1,200mm
- Weight per unit area : approx. 65 kg/m2

Baguette

- Section sizes:

46mm x 46mm	50mm x 100mm
50mm x 50mm	50mm x 150mm
60mm x 60mm	50mm x 200mm
80mm x 80mm	

- Maximum processing length : up to 1600mm, other on request
- Weight per unit area : approx. 3.2kg per lm for 50 x 50

Architectural Terracotta

- Easy Mounting and maintenance thanks to the advance dry-hang system
- Sound performance for environmental protection: thermal-insulation and acoustical
- Large-format panels and precision engineering
- Rich colors with beautiful natural texture
- A variety of textures, combed, peeled, wire struck, sandblasted, other on request
- Strong development capabilities for customizable product systems.
- High durability - long life time expactancy



Bunkyo Gymnasium, Japan
Custom Shaped Baguette



National Art Museum, Korea
Terrart Special



Metro Station 'Novokosino' Moscow Russia
Terrart Mid



BSU Hamburg, Germany
Terrart Custom



Vrbani III Zagreb Croatia
Terrart Light



Private House in Hongcheon, Korea
NBK 28T

150F / 200F

FREEDOM OF DESIGN



Above : Winmarkt Buzau, Romania
Architect: Arh, Ovidiu Nicolaie
Product : Multiple Panel Façade, type 200F

Right : Optimus office building, Warsaw, Poland
Architect: J. Romiszewska
Product : Multiple Panel Façade, type 150F

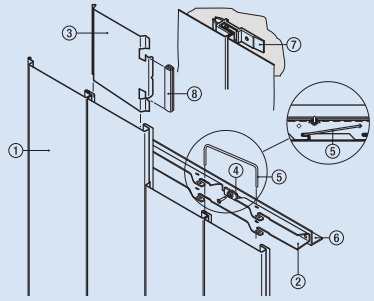


The Hunter Douglas 150F/200F Façade System consists of 150 mm and 200 mm wide roll formed panels with a small butt-joint. The panels are coil-coated with the Hunter Douglas' UV and scratch resistant Luxacote® finish. The panels are made to measure and can be supplied in any length from 800 up to 6000 mm.
The aluminium panels are recyclable, lightweight and strong.
The panels can be mounted with clamps, which allows for an installation with a mixture of panel widths and curved installations, or on a stringer for fast and parallel installation.
The total system has been tested for weather and wind resistance.

PRACTICAL APPLICATIONS

- The neat closed joints present a smooth uninterrupted appearance
- The façades have a concealed fixing system
- Panel length made to measure up to 6000 mm
- Panels can be additionally secured to the stringer by using U-brackets, providing a very rigid system, able to withstand the most severe wind conditions (over 2000 N/m²)
- Panels are made from a corrosion resistant aluminium alloy
- The Luxacote® coating combined with aluminium of the highest category for corrosion resistance guarantees: colour and gloss stability, high scratch resistance and high corrosion resistance
- Screw clamp can be used for combining the two panel types
- Curved façades can be achieved by using screw clamps

150F/200F FAÇADE SYSTEM OVERVIEW

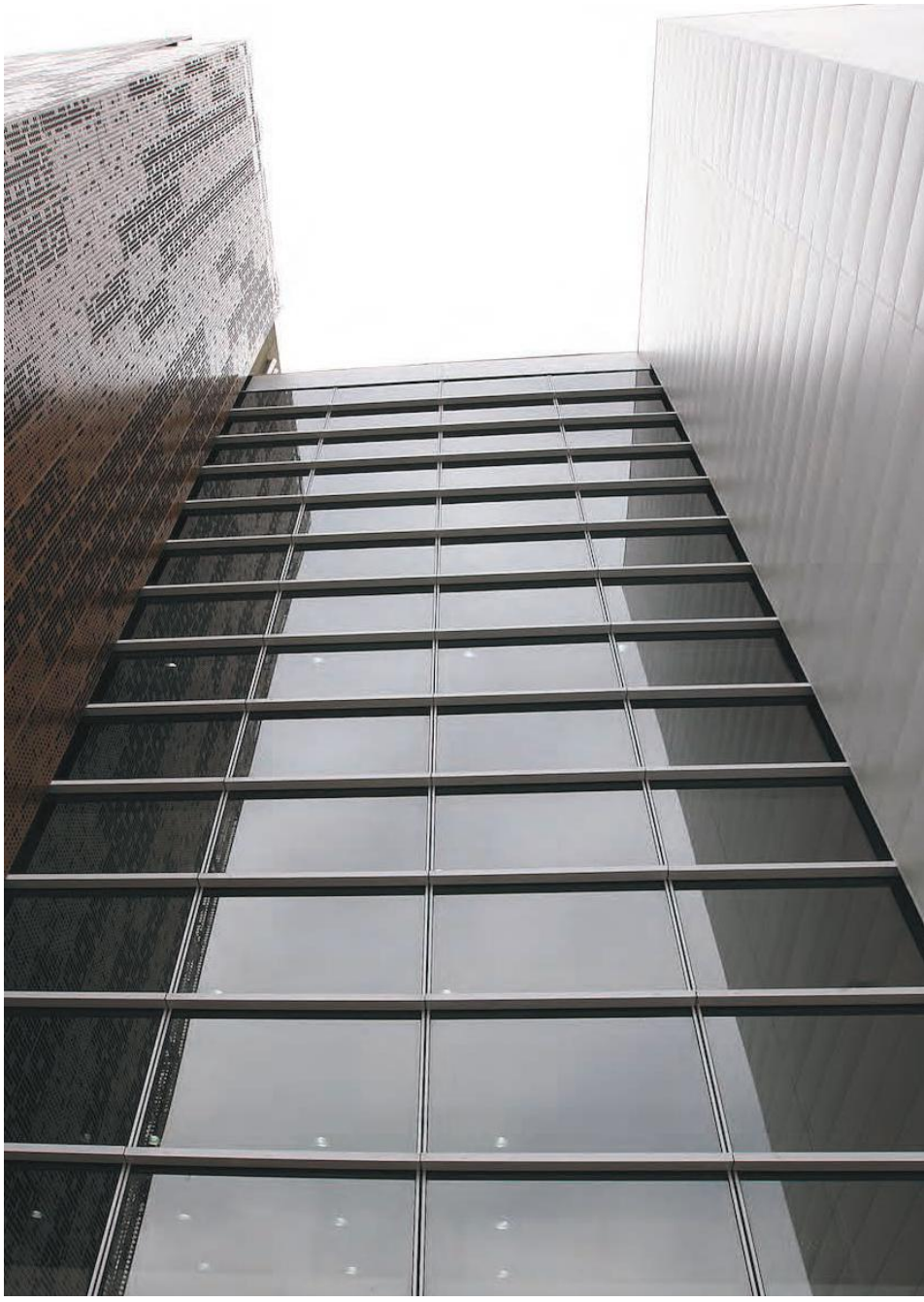


1 = 150F/200F panel
2 = 150F/200F stringer
3 = panel splice
4 = washer set
5 = U-bracket*
6 = non-HD sub-construction
7 = screw-clamp
8 = sealing piece

** Only used in case of extreme windloads*
Note: 150F/200F panels can be installed horizontally, vertically or diagonally depending on desired directional emphasis.



Vanachai Office Building, Thailand
150F



CDB Santo Amaro Diagnostics Center
400F

Miniwave Facade

The Luxalon Miniwave panel has been designed for the application of Interior & Exterior cladding. Its geometry is based on undulating lines that resemble a corrugated metal sheet.It has the advantage of being installed in continues lengths of max up to 6mtr with a tongue and groove joint system that conceals the fixing elements. Fixing system is specially designed exclusively for windy areas.

The lining can be installed with its waves in either horizontal or vertical position. The Perforated version of this panel can be used for acoustic purpose as well for special application on passive sun control.

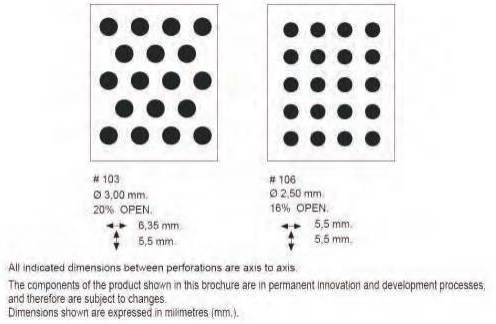


PRODUCT DESCRIPTION

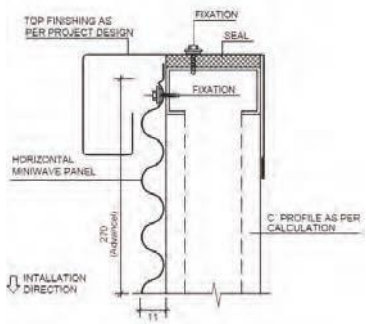
Material	:	Aluminium / GI
Material on Request	:	Zinc / Copper
Thickness & Weight	:	0.5mm Thick GI, 5.62 kg/m^2 0.7/0.8mm Thick Alu, 3.34 kg/m^2
Colours	:	Luxalon Standard Colours & Special Colours upon request (Interior / exterior)
Panel Coating	:	Coil Coated, Powder Coated & PVDF
Finish	:	Plain / Perforated
Panel Length	:	Project Specific, Max 6 mtr
Coverage	:	Advance 270mm (± 5) with yield of 3.7 panels / mtr
Application	:	External / Internal Cladding



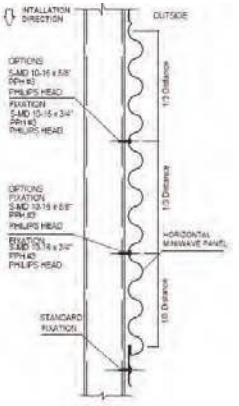
PERFORATION DETAILS :



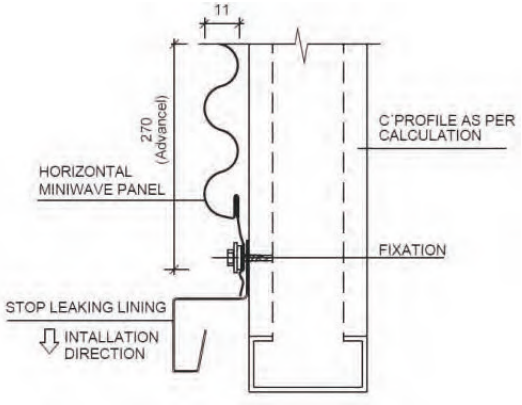
TOP FIXING POSITION :



FIXATION POSITION :

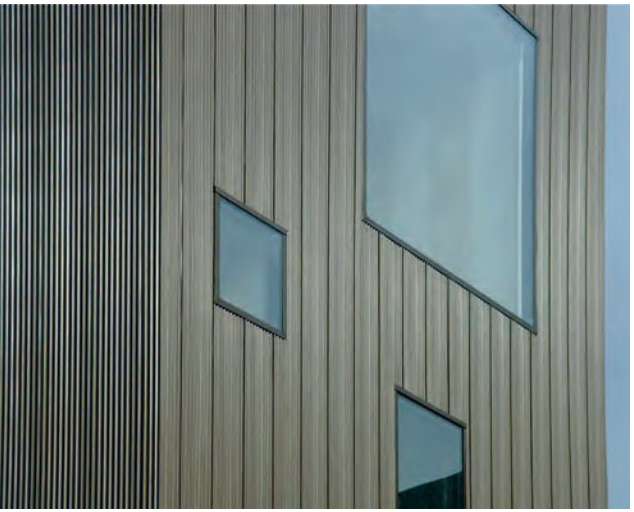


BOTTOM FIXING POSITION :



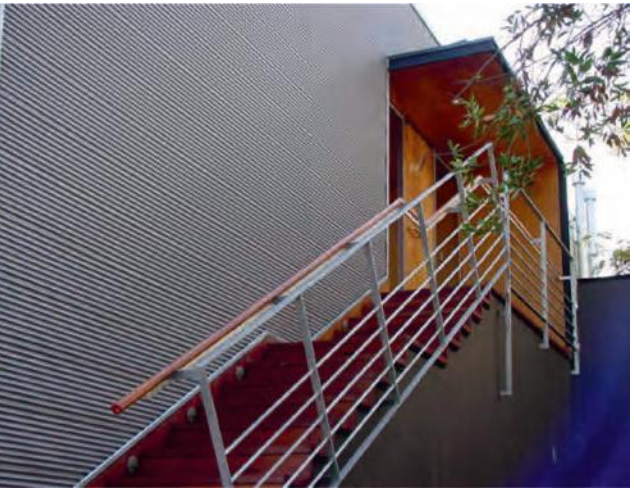
Miniwave Facade













Indian Green Building Council
MEMBER

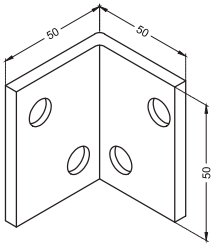
Screen Facade

Exterior screens from Hunter Douglas helps to make maximum use of natural daylight and manage solar control. The preforated metal screen panel let sunlight move in to the interior while reducing thermal gain.

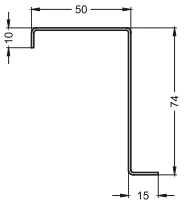
PRODUCT DESCRIPTION :

Material	:	Aluminium
Material on Request	:	GI / Zinc / Copper
Thickness	:	2mm or 3mm Thick Aluminium (4mm on request)
Colours	:	Luxalon Standard Colours & Special Colours upon request (Interior / exterior)
Panel Coating	:	Powder Coated & PVDF
Finish	:	Plain / Standard Perforation / Custom Perforation
Panel Length	:	Project Specific, Max 4.5 mtr (Subjected to design)
Panel Width	:	Project Specific, Max 1 mtr (Subjected to design)
Application	:	External / Internal Cladding

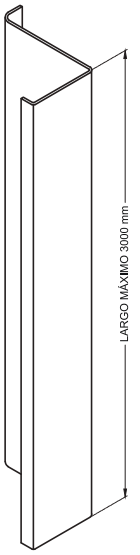
COMPONENTES



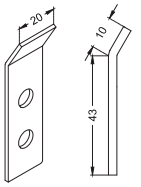
ESCUADRA TIPO L



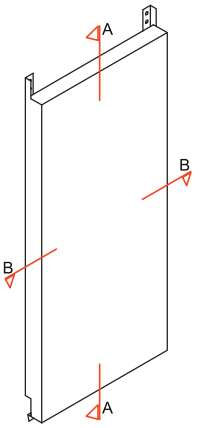
PERFIL Z SCREEN PANEL

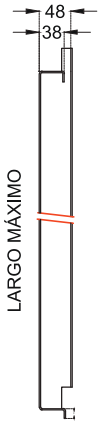


SCREENPANEL G

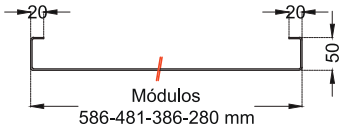


GUA DE SOPORTE

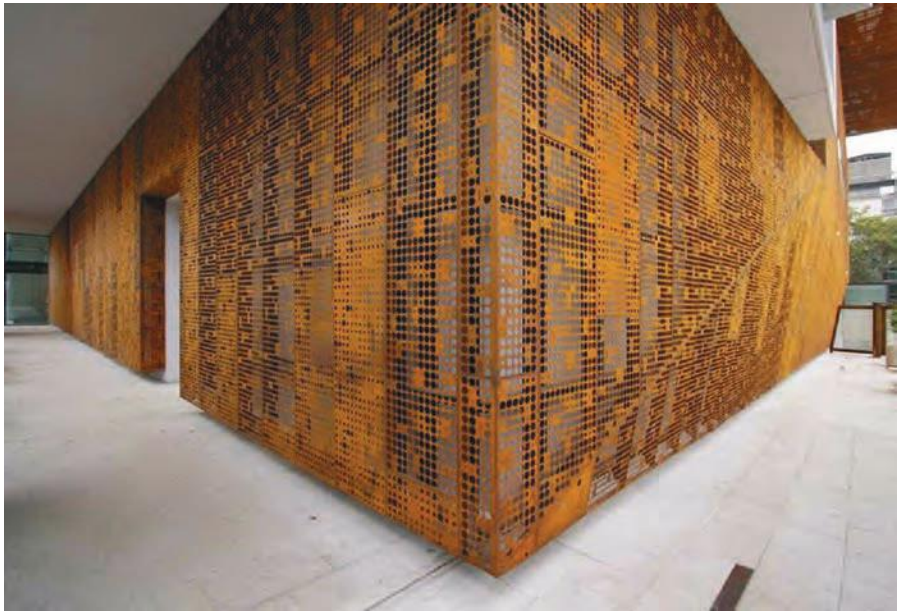




CORTE A



CORTE A










YOUTOPIA
The Sports Club

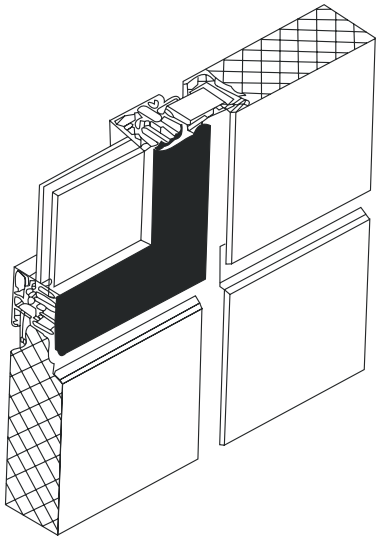
SANDWICH WALL CLADDING



Gree Electric Appliances Industrial Zone, China - Sandwich Wall 50



GIFU Information Centre, Mori-no Terrace, Japan



- Horizontal, Vertical and diagonal applications
- Unmatched panel flatness
- Curved and cranked panels
- Unique and secure mounting system
- Outstanding corrosion, scratch and UV resistant attractive finish
- Mineral wool or foam core
- Made-to-measure
- Modules from 200mm up to 1500mm
- Highly Insulated panels thicknesses include 50, 75 & 100mm
- Total façade system including windows, doors and louvers



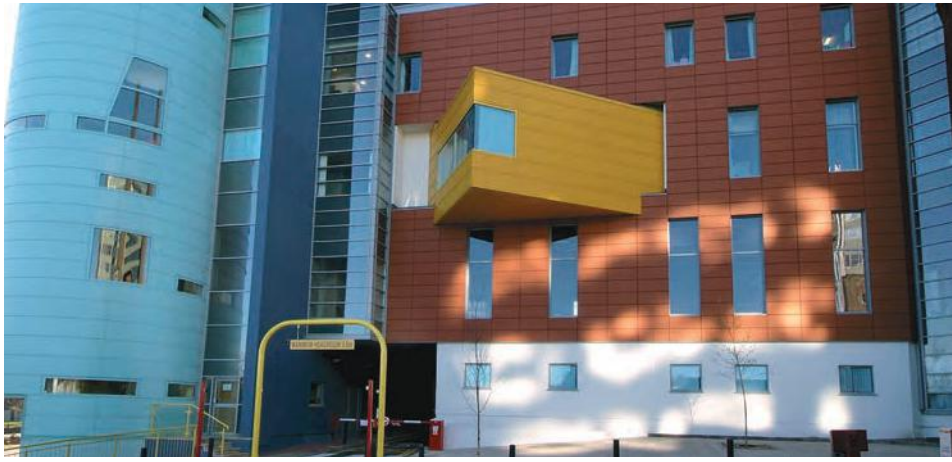
Rolls-Royce, Glasgow, United Kingdom



Changchun Railway station, China

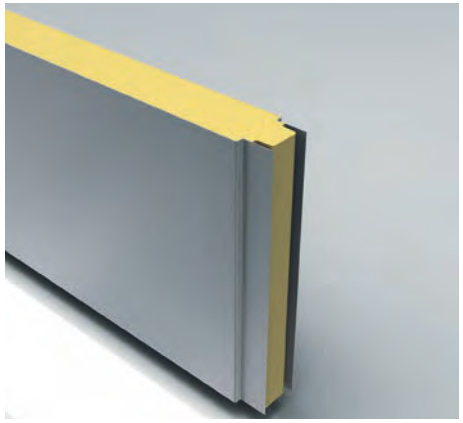


Polynorm, The Netherlands

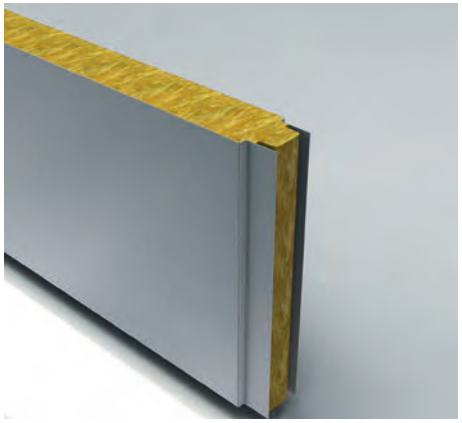


Birmingham Children's Hospital, United Kingdom

Insulated Faades



Foam



Mineral Wool

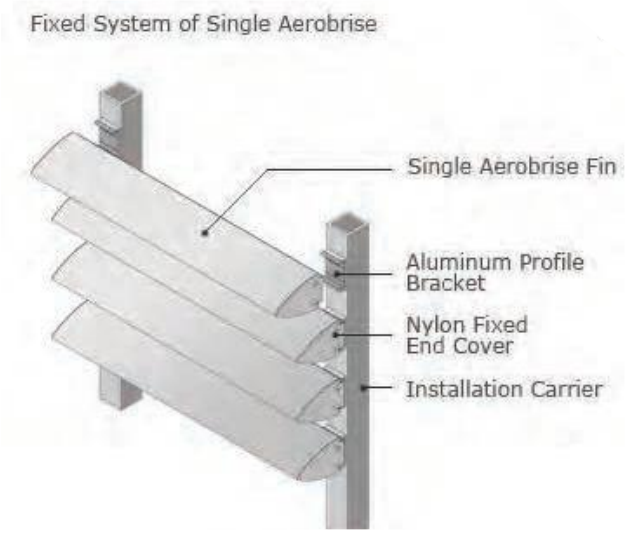


Integrated Window

SUN CONTROL SYSTEMS (AEROBRISE AB)

Hunter Douglas® Sun Control System program contains a highly aesthetically pleasing selection of products and innovative solutions. When included in the design stage, the Sun Control System will become an integral part of the building architecture. HunterDouglas® has achieved a complete Sun Control System program with which new as well as existing buildings can be equipped.

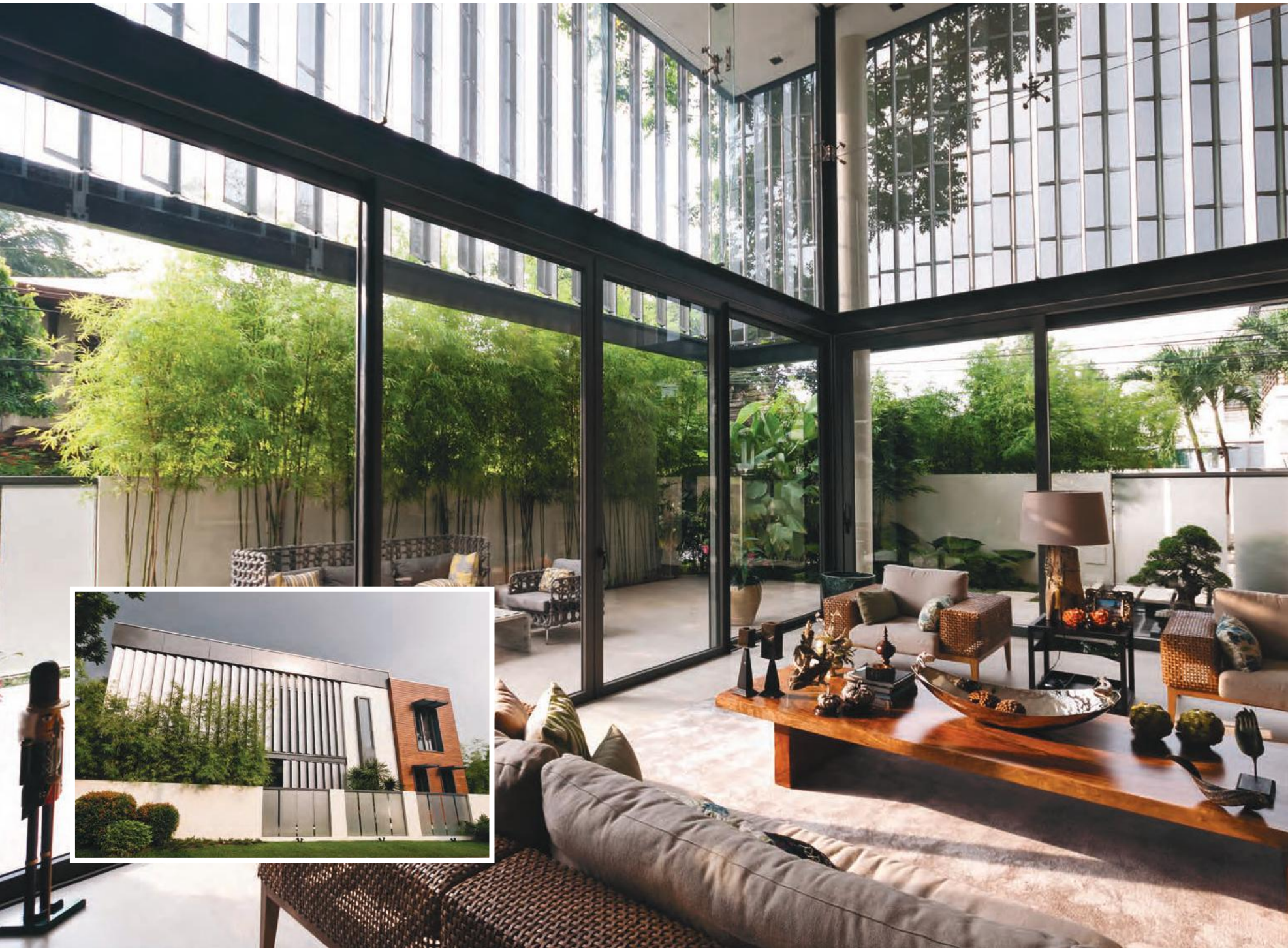
- Highly aesthetic, stylish products
- Effective sun control by selecting the right product from the HunterDouglas® program
- Colour availability, many standard colours and custom made to order
- Flexible solutions, dimensions and shape adaptable to design of building
- Proven product quality, tested in real-life situations
- Durable solutions, use of aluminium and Luxacote® - UV and scratch resistant coating
- Strong and reliable partner, experienced in Sun Control Systems since 1961.



*Single Aerobrise Available in AB100, AB150, AB200 & AB250

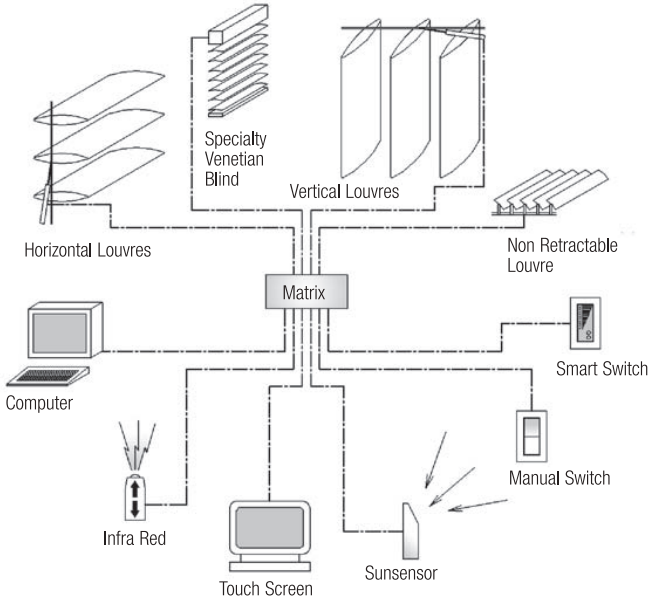


Enrich Platinum FC@Kota Damansara, Malaysia
AB 300 louvre



Private House, Manila Philippines
Aeroscreen 450





CONTROL SYSTEMS

The Hunter Douglas Aeroscreen® can be controlled by various systems of automatic control. In general we can provide three different systems: a conventional stand alone system with a central control unit, sun- and wind detectors and relay boxes for the motor control. We also can provide the more sophisticated systems with Smart control. In these systems, either stand alone or integrated in a building management system. With these smart systems a controlled sun following program can easily be adapted into the system.

Remote controlled systems are an other option for controlling the Aeroscreen®. Based upon free ranges in the radio frequencies we can operate the motors by means of a transmitter (hand or wall system) and a receiver. The addressable motors can operate stand alone or in a definable group. Based upon your specification and functionality Hunter Douglas can help design the optimal system for your building.

Project : Nanjing Library
Architect : ZUADR
Product : Aeroscreen®

MOTORISATION

GENERAL

The adjustable aerofin system consists of adjustable Aeroscreen® interconnected by a driving rod, which is driven by an actuator.

The rotation angle of the fins is variable up to a maximum of 120 degrees. Adjusting the stroke of the actuator will set the position and rotation angle of the aerofoils.

The amount of Aeroscreen® fins, connected to 1 actuator depends on their type and size.
Rough guideline:
12m² / actuator (external)
20m² / actuator (internal)

There are many available types of actuator depending on fin size, quantity, loadings etc and project complexity.

The adjustable system is applicable for horizontal and vertical oriented fins. In case of a vertical fin orientation the actuator can be placed at the top or bottom side.



Project : Avansalud Clinic, Santiago - Chile
Architect : Carlos Elton & Asociados Arquitectos
Product : Aeroscreen®

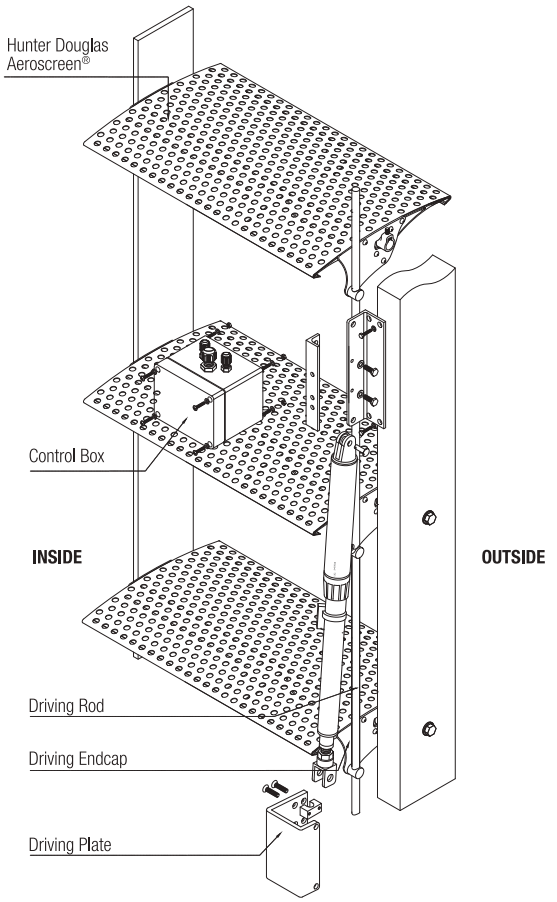
MULTIPLE BAY

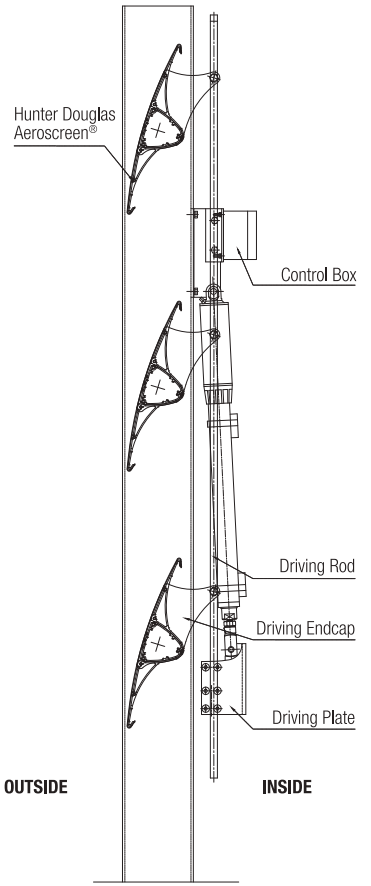
It is possible to adjust two bays of Aeroscreen® with 1 actuator when a tube substructure is applied. The driving rod should be placed face-to-face. The coupling is provided with a bay coupling brace.

Note: This coupling does not apply for strip 100 x 10 substructures. But similar custom solutions are however possible.

ACTUATOR SPECIFICATIONS

Stroke length	300 / 200	mm
Max. load	2000	N
Speed	5	mm/s
Max. current	1.7	A

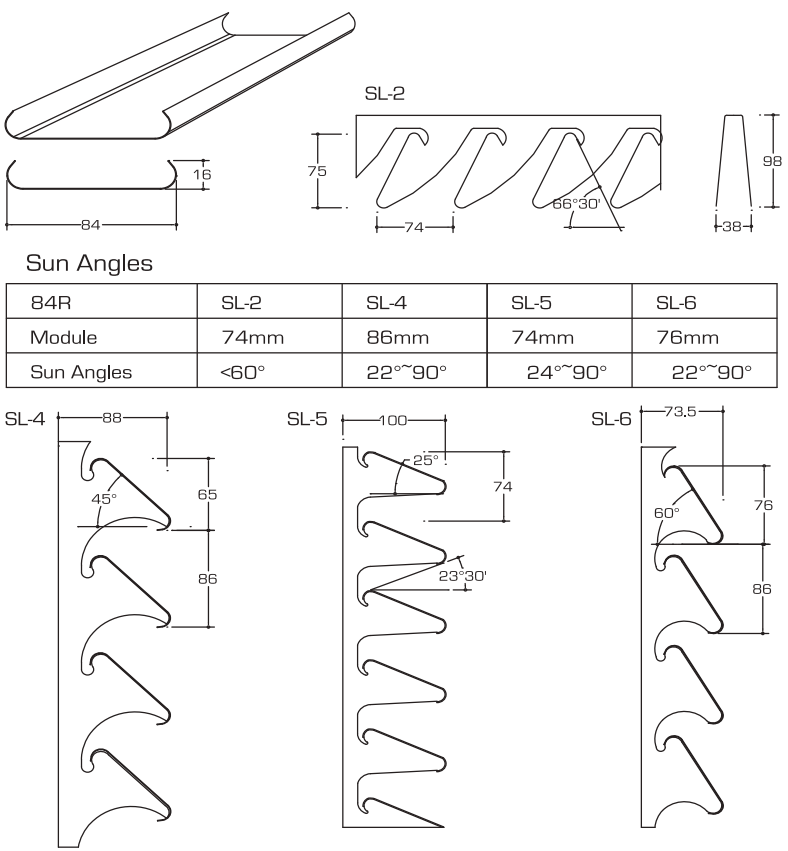




SUN CONTROL SYSTEMS (84R)

HunterDouglas® 84R Sun Louvre system is a real classic, used for applications on straight, curved or angled facades. The product has an elegant and light appearance with nicely curved edges

- Roll formed aluminium panels of 84 mm wide
- Coil coated with a UV and scratch resistant Luxacote® coating, available in 14 standard colours. Other colours on request
- A variety of carrier systems with fixed or variable modules are available allowing the optimal solution for their application
- HunterDouglas® 84R system can be installed in four ways:
  - Projected horizontally, at the top of the glazed area
  - Angled projection, to give even more shade
  - Positioned vertically
  - Combination of horizontal and vertical
  - Bent or curved to follow the shape of the building
- Panels can be connected to achieve an endless appearance
- Span at an everage wind load 1.2m.
- Corner solutions available
- Can also be used as ventilated facade system, covering for example installations on rooftops or staircases



Sun Angles

84R	SL-2	SL-4	SL-5	SL-6
Module	74mm	86mm	74mm	76mm
Sun Angles	<60°	22°~90°	24°~90°	22°~90°

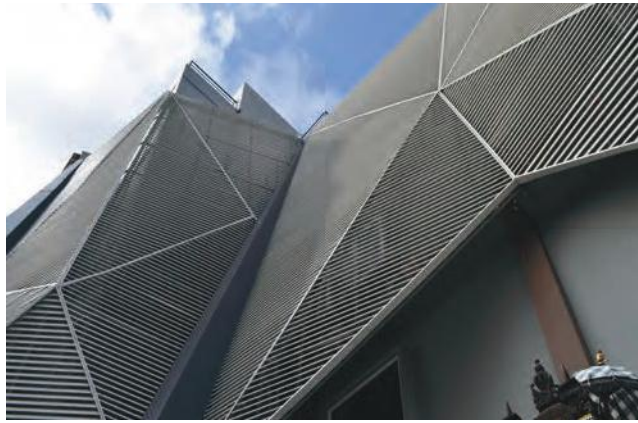
Suzlon One Earth Corporate HQ, Pune, India



Kielce Fairs Poland
84R



Armanee Condo@Damansara Perdana, Malaysia

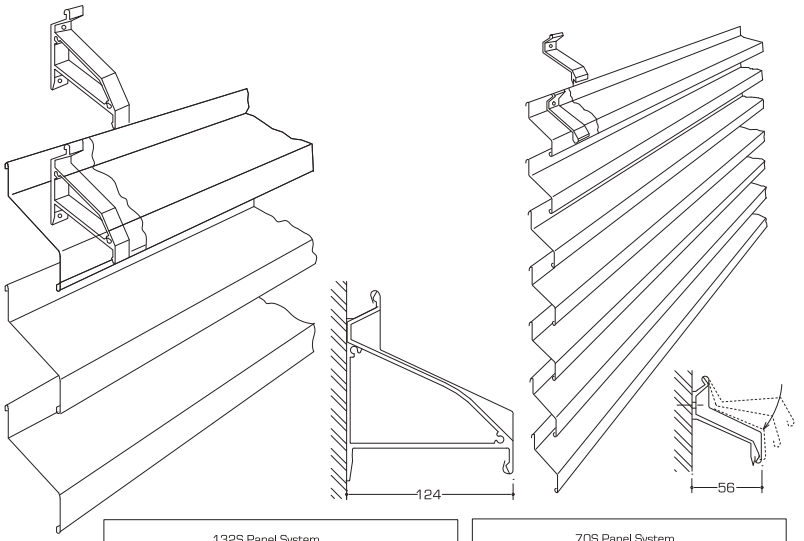


Neo Hotel, Bali Indonesia

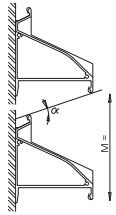
SUN CONTROL SYSTEMS (70S/132S)

HunterDouglas® 70S and 132S Sun Louvre system consist of Z-shaped sturdy panels. The panels are used in order to achieve a crisp Sun Louvre or facade, resulting in an overall aesthetically pleasing appearance.

- Roll formed aluminium panels of 70 or 132 mm wide
- Coil coated with a UV and scratch resistant Luxacote® coating available in 14 standard colours. Other colours on request
- Stylish carrier rails with sliding brackets allow a variable module by which openness and shading angle can be selected
- 70S and 132S panels can be combined on one support rail
- HunterDouglas® 70S and 132S Sun louvre system can be installed in two ways:
  - Projected horizontally, at the head of the glazed area
  - Positioned vertically
- Span at an everage wind load 1.3 m for 70S and 1.8 m for 132S
- Corner solutions available
- The vertical HunterDouglas® 70S and 132S Sun Louvres combine multiple functions in a single product:
  - The Z-shaped panels have been specially developed as a louvre system for facades exposed to low sun angles
  - It can also be used as ventilated facade system, covering for example installations on rooftops or staircases

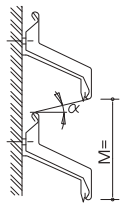


132S Panel System



Module (mm)	Sun Angle (∝)
132	0°
140	5°
150	10°
160	15°
170	20°
180	25°
190	30°
200	34°
210	38°
220	41°
230	44°
240	47°
250	50°
260	52°
270	54°
280	56°

70S Panel System



Module (mm)	Sun Angle (∝)
70	0°
75	7°
80	14°
85	20°
90	25°
95	30°
100	35°
105	39°
110	43°
115	46°
120	49°
125	51°
130	54°
135	56°
140	57°

PPUM Biocardiology, Malaysia
132S sun louvre system



USJ Height Residence, Malaysia
70S Sun Louvre System



Lam Soon Factory, Malaysia
132S Sun Louvre System



Amsterdam High School, Hanoi, Vietnam
132S sun louvre system

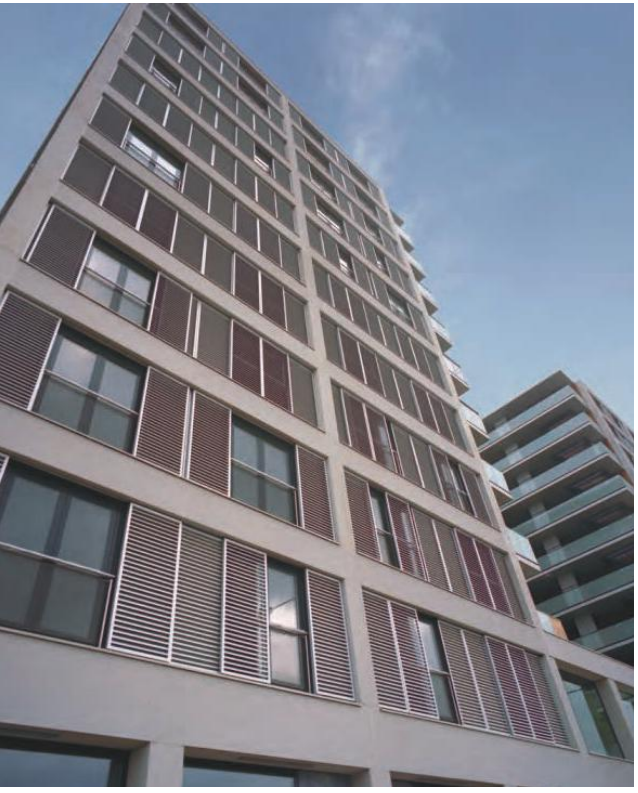
NEW: SHUTTERS

HunterDouglas® Shutters are a design trend in architecture. The systems, vertically mounted to the façade, gives the architect the opportunity not only to focus on sun control and privacy, but also on the façade's visual enhancement. Hunter Douglas Shutters are manufactured from high quality materials and are suitable for many different types of buildings. The features offered by these shutters allow them to be incorporated during the early design stage.

On project base we also offer Folding Shutters, their special and technical appearance allow the architect to make a statement in the building design. These systems need to be fully incorporated In the building structure and therefore we offer you the expertise of our design team that must be involved in an early stage of the building development.

Range of Shutters

- Sliding Shutters
- Folding Shutters
- Custom Shutters



Nieuw Australie, The Netherlands
Sliding Shutters



Fioretti College, the Netherlands
Folding Shutters



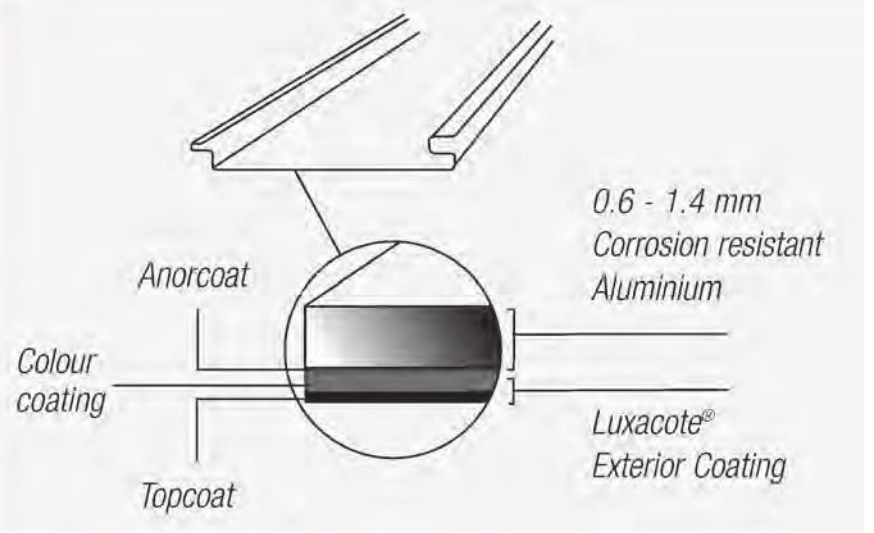
Designcentre De Winkelhaak, Belgium
Custom Shutters

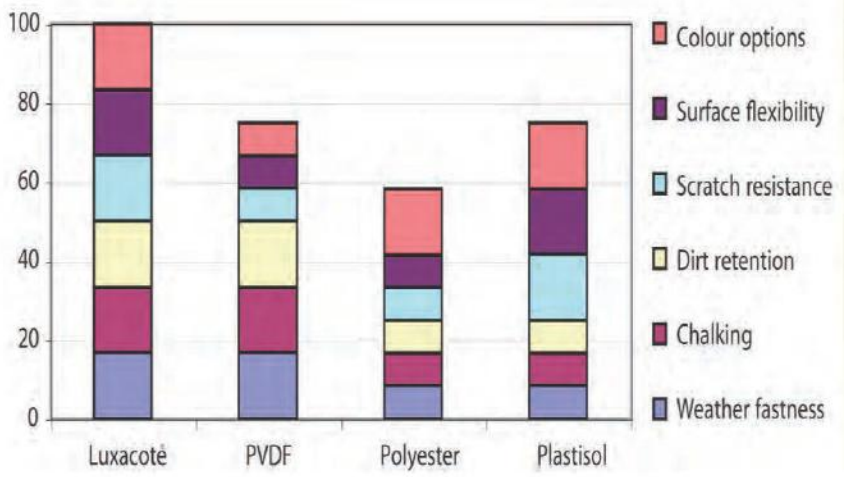
UNPRECEDENTED PROTECTION LUXACOTE® FOR EXTERIOR APPLICATION

LUXACOTE® is an exclusive Hunter Douglas innovation that enhances the durability of exterior aluminium building application. Its strength and efficiency comes from a powerful 3-layered system that consist of an anorcoat pretreatment, a colour coating, and a transparent topcoat.

The benefits of LUXACOTE®

- Durability
  - protects the aluminium surface from corrosion.
- Powerful pigments
- Topcoat
  - protect from UV rays, improving the durability of the colour and gloss
- Colour and gloss stability
- Corrosion resistance
- High scratch resistance





TECHNICAL SPECIFICATIONS LUXACOTE®

Characteristic	According standard	Specification
Coating thickness	EN 13523-1, ISO 2360	24-32 microns
Gloss	EN 13523-2, ISO 2813	$28^{\pm 5}$ units
Gloss variation within 1 delivery	EN 13523-2, ISO 2813	± 3 units
Colour difference compared to standard	EN 13523-3, ISO 7724, part 3	ΔE<2 units
Colour variation within 1 delivery	EN 13523-3, ISO 7724, part 3	ΔE<0.7
Flexibility	EN 13523-7, ISO 1519	depends on chosen aluminium and required profile
Adhension	EN 13523-5, ISO 6272 EN 13523-7, ISO 1519 ISO 2409	impact: 2T: no loss of adhesium
Pencil hardness	EN 13523-4 ASTM D 3363	 ≥ HB
Durability	EN 1396, EN 13523-19	highest category (see table C3)
Corrosion resistant	EN 1396, EN 13523-19	highest category (see tabel C2)
Humidity resistance	EN 13523-9, ISO 6270 ISO 4628/2	blisters less than size 2 (S2 or S3)
Salt acetic acid spray test	EN 13523-9, IS 4628/2	1000 hours, less than 2 mm. Undercreep and blistering max. S2 or S3
Salt spray test	ISO 7253	test too mild for aluminium

HunterDouglas
Architectural

Vietnam | Thailand | Taiwan | Singapore | Philippines | Malaysia | Korea | Japan | Indonesia | India | Hong Kong | China | Africa | Australia
Europe | Middle East | Latin America | North America

