

LINEAR 84C CEILING SYSTEM



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# SHORT SYSTEM DESCRIPTION

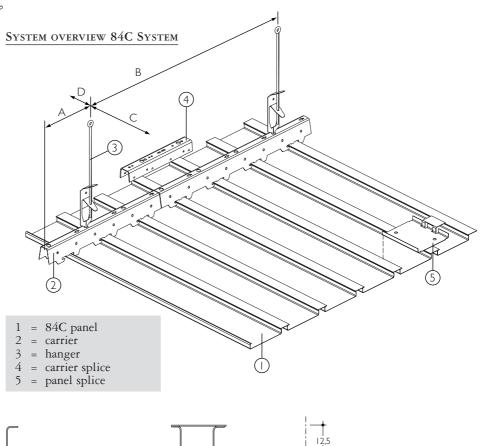
The Luxalon<sup>®</sup> 84C closed ceiling system consists of box shaped panels (1) which can be easily clipped on a 84C carrier (2). The 84 mm wide panels feature a 24 mm wide flange that closes-off the 16 mm joint between the panels (module 100 mm). The 12,5 mm deep recessed joint gives a linear direction 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 mm. Carriers have a standard length of 5000 mm and are connected by using the carrier splice (4).

The Luxalon<sup>®</sup> standard range of 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 joining the panels to a minimum.
- The panels can be easily removed and replaced by using a hookedshaped 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/O 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.



### MAXIMUM SPANS

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

\* Minus 200 mm in case of acoustic pads.

84

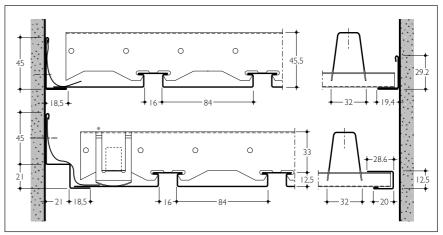
## **DIMENSIONS & WEIGHTS**

Panel	Width	Module	Min.	Max.	Weight panels & carriers/m <sup>2*</sup>		
	(mm)	(mm)	length	length	Steel	Alu.	
			(mm)	(mm)	carrier	carrier	
84C	84	100	1000	6000	2.2 kg	2.1 kg	
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\* Based on panels installed on 3 or more carriers

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

## STANDARD CONSTRUCTION DETAILS



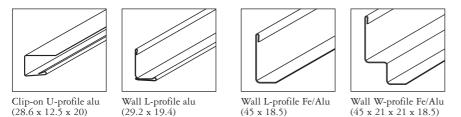
\* Luxalon<sup>®</sup> locking clip necessary when no edge-profile springs are used.

# Material Requirement per $M^2$

	Unit	Linear 84C system		
Panels	lm	10		
Carriers	lm	0.56		
Carrier splice	рс	0.11		
Suspension	pc	0.43		

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

# EDGE PROFILES

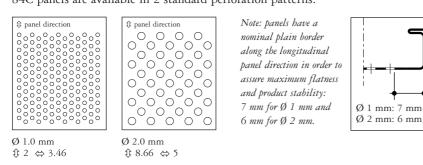


# ACOUSTIC PERFORMANCE

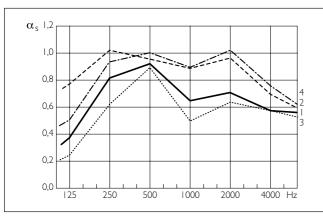
In order to improve interior sound control, the Luxalon<sup>®</sup> 84C panels can be perforated. As a standard feature, perforated panels can be supplied with a soundabsorbing non-woven tissue glued into the panel for enhanced acoustical performance.

# - PERFORATION OPTIONS

84C panels are available in 2 standard perforation patterns:



# - Sound Absorption data



 $\alpha_s$  = soundabsorption degree: an absorption of 1.0 indicates a 100% absorption of sound.

Freq. Hz.	125	250	500	1000	2000	4000
Curve 1	0.37	0.81	0.91	0.65	0.70	0.58
Curve 2	0.68	1.01	0.94	0.87	0.94	0.69
Curve 3	0.24	0.62	0.87	0.51	0.64	0.57
Curve 4	0.55	0.94	1.00	0.90	1.01	0.78

## PLENUM ACCESSIBILITY

The Luxalon® 84C 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<sup>®</sup> 84C panels are rollformed from 0.5 mm 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<sup>®</sup> colour range for 84C includes a wide range of colours and finishes. See Luxalon<sup>®</sup> colour chart. Any other (RAL or NCS) colour is available on request.

## - FIRE BEHAVIOUR

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

### - Curve 1

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

### - Curve 2

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

### CURVE 3

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

### CURVE 4

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

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



# $Luxalon^{\ensuremath{\circledast}}$ 84C ceiling system specification

# PART 1. 84C SYSTEM GENERAL

1.1 INTRODUCTION Supply and fix Luxalon® 84C system as manufactured by Hunter Douglas Architectural Products.

1.2 Description of the system The system will consist of linear box shaped panels fixed to an adjustable suspension system which allows for individual panels to be removed by hand.

# PART 2. PRODUCT

\_\_\_\_m<sup>2</sup> Luxalon<sup>®</sup> 84C ceiling, consisting of:

2.1 PANELS

Panels, 84 mm wide, 12,5 mm deep, to be rollformed from 0.5 mm thick stove enamelled aluminium strip, plain/perforated with/without nonwoven acoustic textile. Panels feature a 24 mm wide flange that closes-of the 16 mm joint between the panels. Optionally the flange with 3 x 7 mm ventilation holes can be used to achieve a ventilated ceiling.

Panels to be manufactured from prepainted, stove enamelled aluminium, alloy EN-AW-5050 or equivalent (according to EN 1396 and ECCA). Panels have a length of \_\_\_\_\_ mm (manufacturer availability 1000 - 6000 mm and on request 250-1000 mm and > 6000 mm). Panels to be coupled in longitudinal direction by means of panel splices.

#### 2.2 SUSPENSION

Rows of 0.5 Fe/0.95 Alu rollformed carriers shall be installed at centre on centre by means of adjustable suspensions at a \_\_\_\_\_, centre on centre. Carriers will be joined by means distance of \_ of carrier splices. Carriers provided with prongs to hold panels in a standard module of 100 mm.

# PART 3. ADDITIONAL SPECIFICATIONS

#### 3.1 PERIMETER PROFILES

- Clip-on U profile 28.6 x 12.5 x 20 mm, made of 0.35 mm thick aluminium
- Wall L-profile 29.2 x 19.4 mm made of 0.5 mm thick aluminium
- Wall L-profile 45 x 18.5 mm made of 0.8 mm thick steel or aluminium
- Wall W-profile 45 x 21 x 21 x 18.5 mm made of 0.8 mm thick steel or aluminium

#### 3.2 PERFORATIONS

Manufacturer shall supply Luxalon® 84C panels with following perforation specifications:

- Ø 1.0 mm,  $\Delta$  2 mm with 23% open area
- Ø 2.0 mm,  $\Delta$  5 mm with 16% open area

Perforated panels to have a nominal plain border along the longitudinal panel direction to assure a maximum flatness and product stability:

- 84C panel, 1 mm perforated to have a plain border of 7 mm
- 84C panel, 2 mm perforated to have a plain border of 6 mm

# LUXALON® CEILING SYSTEMS

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### 3.3 ACOUSTICS

Manufacturer shall supply acoustic non-woven tissue, thickness 0.2 mm factory applied inside the panels. Alternatively the installer can place individually PE wrapped mineral wool pads.

#### 3.4 COATING

Architect will make a colour selection from the standard Hunter Douglas colour range for Luxalon® 84C panels code no. \_\_\_\_\_ or a special colour will made to match.

The coating will consist of a tough and durable polyester finish in nominal thickness of approximately 20 microns, applied in a continuous coilcoating process ensuring uniform coating and absolute adhesion.

### 3.5 INSTALLATION

All materials shall be installed in strict compliance with all local codes, ordinances and manufacturers recommandations including specific additional requirements as may be called for in the specifications or shown on the drawings.





