

# Podio balcony panels



For you to create



# Fundermax

[www.fundermax.com](http://www.fundermax.com)

**“Balconies are about freedom –  
which includes freedom of design.”**

(Isabelle S., project manager)





## Contents

Product information	4
Surfaces and decors	8
Application and installation	12

## Fundermax

No matter whether it's furniture, facades, or interior design: where ideas and materials meet, you'll find Fundermax. As a global market leader in the field of compact panels and a manufacturer of high-quality wood-based materials and laminates, the company is proud to look back on a history spanning 130 years. The continued success is based on the highest quality, innovative and varied design, and sustainable production. Made in Austria—with great love for wood as a natural material, creations, and imagination.

- modern production facilities in Austria, Norway and the Netherlands
- around 1,400 employees
- part of Constantia Industries AG
- Integrated management system certified according to ISO standards: 9001 quality, 14001 environment, 50001 energy efficiency, 45001 occupational health and safety
- FSC, PEFC and SURE certified

# 1 Product information





**“Satisfaction with the results is also a product of the material.”**

(Hannes K., architect)

## Material description

Max Compact Exterior panels are duromer high pressure laminates of type EDF according to EN 438-6; they offer effective protection from the weather thanks to double hardened acrylic polyurethane resin. The panels are produced in laminate presses, under high pressure and at high temperature.

Used as balcony flooring, the panels are high quality, CE-certified construction products with non-slip hexagonal surfaces. This makes them ideal for stairs and landings as well as balconies. The material is used for supporting structures in new buildings as well as outdoor restoration projects.

## Formats

XL = 4100.0 x 1854.0 mm = 7.6 m<sup>2</sup>

X2 = 2050.0 x 1854.0 mm = 3.8 m<sup>2</sup>

Advantage:

- easier handling thanks to lower weight

GR = 2800.0 x 1300.0 mm = 3.64 m<sup>2</sup>

Advantage:

- easy processing and adaptation at the construction site
- no sealing of edges required
- decorative underside
- minimal waste with standard balcony depth of 2500.0 mm
- ideal for balcony restoration projects

Format tolerances +10.0–0.0 mm (EN 438-6, 5.3)

Panel format is a production format. For accuracy of dimensions and angles, we recommend an all-sided blank. Depending on the method of trimming, net size is reduced by approx. 10.0 mm.

## Core

The core is available in F-Quality, flame-retardant, in colour brown.

## Thicknesses (depending on static requirement)

Thicknesses	Tolerances (EN 438-6, 5.3)
16.0 mm	±0.7 mm
18.0 mm	±0.7 mm
20.0 mm	±0.8 mm

Observe local building regulations!  
For horizontal use only!

## Anti-slip classes

- R10 according to DIN 51130
- Group C according to DIN 51097

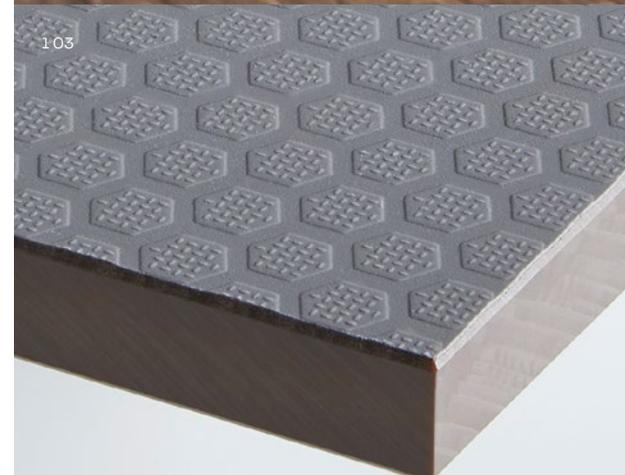
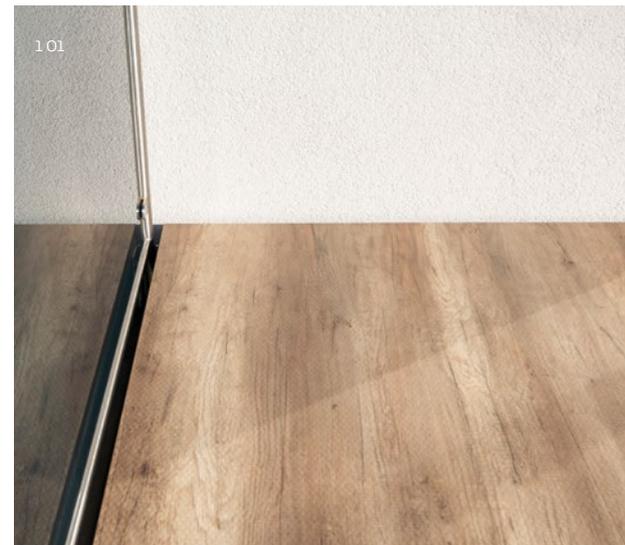
## Approval: General design certification

### Type approvals:

Number Z-50.4-337

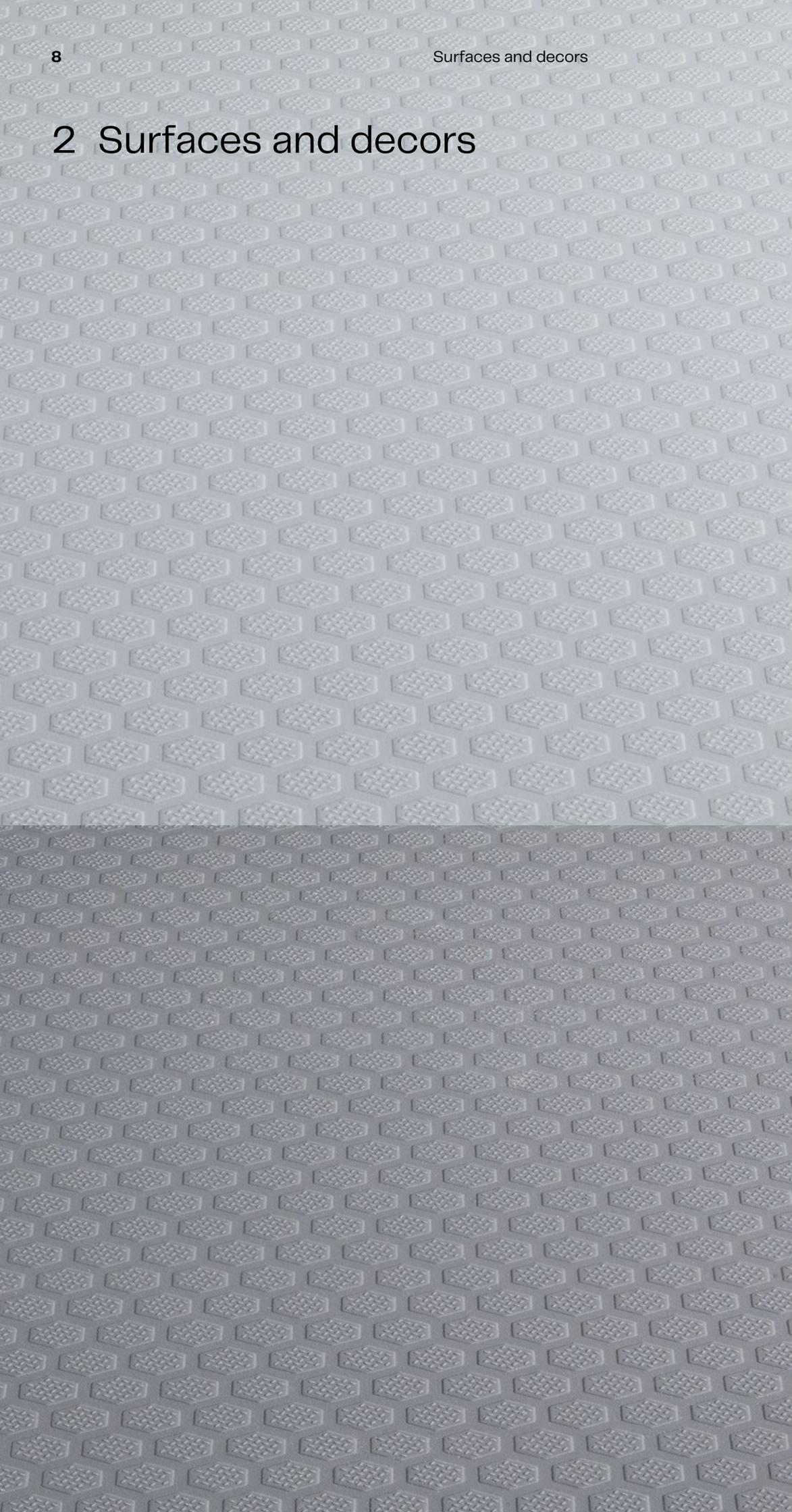
### Fire resistance tests:

REI60 according to EN 13501-2 for thickness 20.0 mm and use in building classes 4 and 5



- 1 01** Wall connection, railings  
**1 02** 5171 NH Polar Oak with 8.0 mm joint  
**1 03** 0075 NH Dark Grey

## 2 Surfaces and decors



**“The differences you can see  
and feel are what makes my  
house special.”**

(Bettina F., businesswoman)



# Surfaces

Outdoor areas especially require surfaces that not only meet high requirements in terms of safety and resistance, but are also aesthetically pleasing.

## **NH – Hexa (front side)**

- deep studded structure
- texture with good grip to prevent slipping
- offers ideal protection of decors against weathering
- for additional decor choices, see the full product range

## **NT (rear side)**

- decorative balcony underside

# Decors

A taste of freedom, an expanded living space, a design feature and an indispensable part of modern architecture – the potential uses of a balcony are as individual as the personal tastes of those who enjoy them.

Bearing in mind the option of combining with other materials (facades, windows, balcony furniture, etc.), Fundermax offers two neutral yet trendy colour ranges.

The first, for looks inspired by nature, comprises warm tones with a feelgood vibe; the second consists of urban colours as an expression of contemporary lifestyle – the perfect accompaniment to purist decor schemes and urban modernity.





## Product range

		Product		Max Compact Exterior Podio balcony panels				
		Formats (mm)	4100.0 x 1854.0	2050.0 x 1854.0 *	2800.0 x 1300.0	Reverse side decor		Decor direction
		Thicknesses (mm)	16.0 / 18.0 / 20.0					
		Surface	NH, reverse side NT					
		Quality/core colour	F-Quality, brown					
Decor type	Decor no.	Decor name	Nearest NCS code/wood type					
U	0066	Sand	S 1505-Y20R	○	○	○	X	N
U	0074	Pastel Grey	S 2500-N	○	○	○	X	N
U	0075	Dark Grey	S 5000-N	○	○	○	X	N
U	0144	Costa	S 3005-Y20R	○	○	○	X	N
M	0427	Skyline		○	○	○	X	L
H	5171	Polar Oak	Oak	○	○	○	X	L

For more design and decor options, please see the full Exterior product range.  
 Delivery: Reverse side (NT) top  
 All decors also available with reverse side (NT) decor O890 Balcony white.

### Delivery options

○ = according to current delivery times

### \* Minimum order quantity

2 pcs. per decor and thickness

### Decor types

U = Colour  
 M = Material  
 H = Nature

### Decor/decor direction

X = Decor on both sides  
 L = This decor is directional (length).  
 Please consider this during optimisation and cutting.  
 N = This decor is directionless. You can turn it during cutting.

### 3 Application and installation



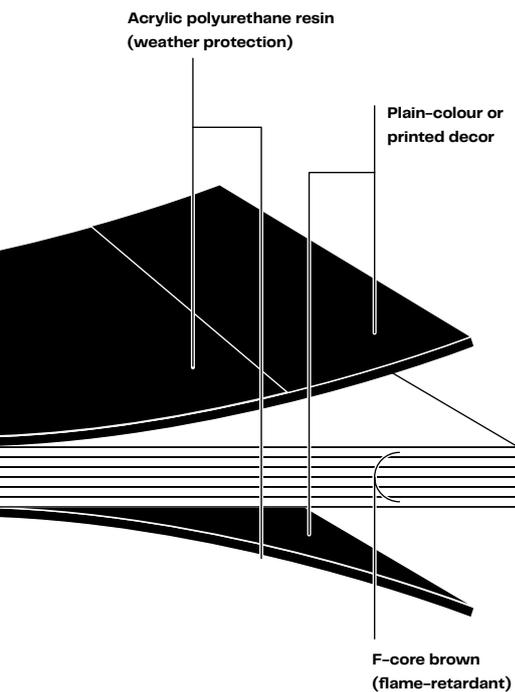
**“Good materials must  
be processed properly.”**

(Jonas G., processor)



# Fundamentals of handling

3 01



- 3 01** Structure of balcony panel  
**3 02** Vertical section: principle of ventilation and incline  
**3 03** Distances to substructure

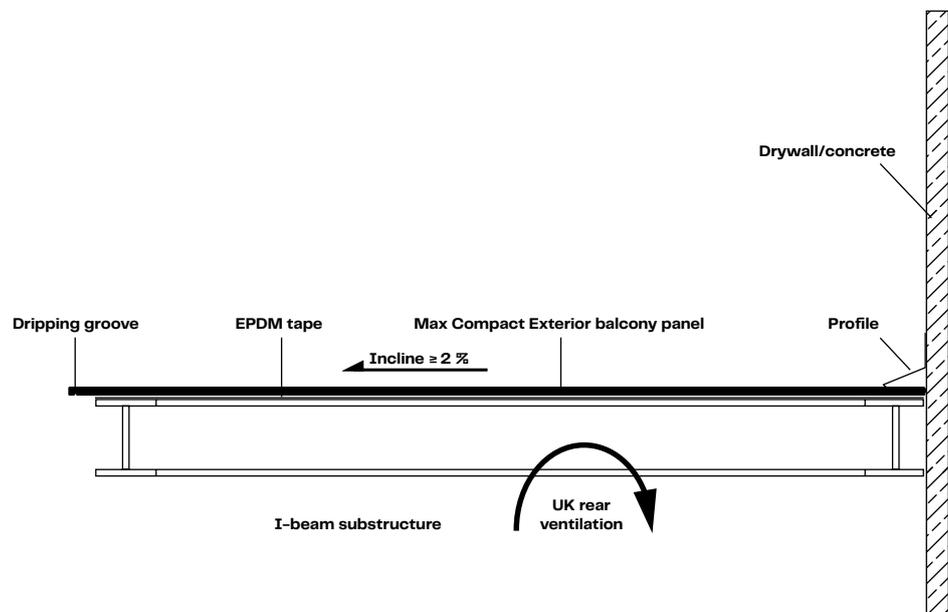
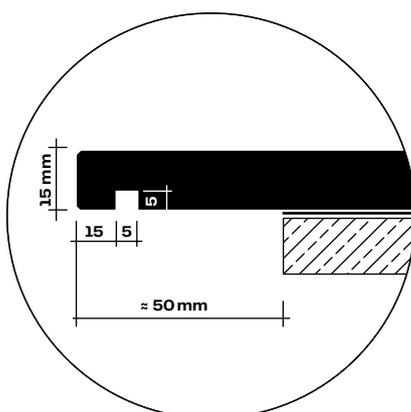
Podio balcony panels can be screwed or glued in various ways to suitable substructures, with an incline. The substrate and substructure must be sufficiently load-bearing. Ensure rear ventilation with a minimum distance of 25.0 mm from the substrate. Moisture-storing surfaces (grass, ballast, gravel, etc.) are unsuitable. Ensure sufficient drainage of the substrate.

Protect material from accumulating moisture; panels must be able to dry. Generally, balconies should be provided with an incline of  $\geq 2\%$ . Ensure sufficient expansion clearance. The joints between panels must be at least 8 mm. For substructures that run parallel to joints, the gaps between panels must be placed above a substructure, and may be held at the same height by suitable joints. Avoid elastic intermediate layers between the panel and the substructure, as well as between parts of the substructure, that allow a tolerance of more than  $\pm 0.5$  mm.

When installing panels on a wooden substructure with screws, form fixed and sliding points. Construct the wood substructure in line with national standards (wood moisture  $15\% \pm 3$ ). Pay attention to structural or chemical wood preservation.

Ensure suitable rear ventilation so that the panels can be conditioned on both sides. Do not allow the panels to rest fully on the ground below. Protect the substructure against corrosion.

3 02



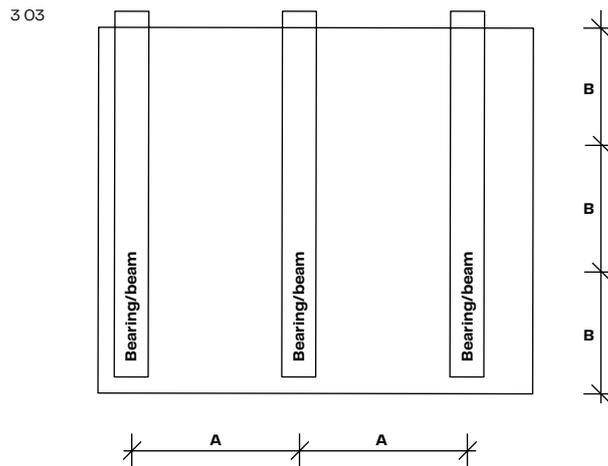
# Guidelines for laying panels

## Fixing distances

The substructure battens must have a width of  $\geq 60.0$  mm ( $\geq 80.0$  mm in the joint area). For wood substructures in the joint area, the width must be  $\geq 100.0$  mm. Distance B should be  $\leq$  distance A (bearing/beam), and never greater than 600.0 mm.

## Edge distances

For installation with screws, the edge distance can be 20.0–100.0 mm.



## Panel joints and joint formation

The joints must be at least 8.0 mm wide so that changes in size can be realised without hindrance. Fill joints with a permanently elastic sealant, and place a permanently elastic rubber band in the groove.

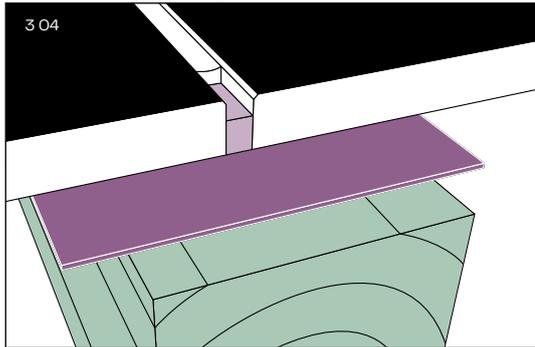
### Traffic load $\text{kN/m}^2$

Max. allowable deflection of $1/300 \text{ kN/m}^2$	3.0	4.0	5.0	
Panel thickness	Support spacing in mm			
	<b>A <math>\leq</math> 500.0</b>			
	<b>Austria/Germany/Swiss</b>			
16.0 mm	X	X	X	
18.0 mm	X	X	X	
20.0 mm	X	X	X	
	<b>A <math>\leq</math> 600.0</b>			
	<b>Austria/Germany/Swiss</b>			
16.0 mm	X	X	-	not valid for GER
18.0 mm	X	X	X	not valid for GER
20.0 mm	X	X	X	
	<b>A <math>\leq</math> 800.0</b>			
	<b>Austria/Swiss</b>			
20.0 mm	X	X	-	

x = permissible

For applications requiring approval in Germany, observe the maximum support spacing in accordance with the general building inspectorate approval Z-50.4-377. For current permits, see [www.fundermax.at](http://www.fundermax.at).

# Installing Podio Balcony Floor Panels— Invisible Mechanical Fastening



## Fixed Point

Fixed points serve to evenly distribute (halve) changes in size. The drill hole diameter in Max Compact Exterior panels should be one channel depth smaller than the diameter of the screw.

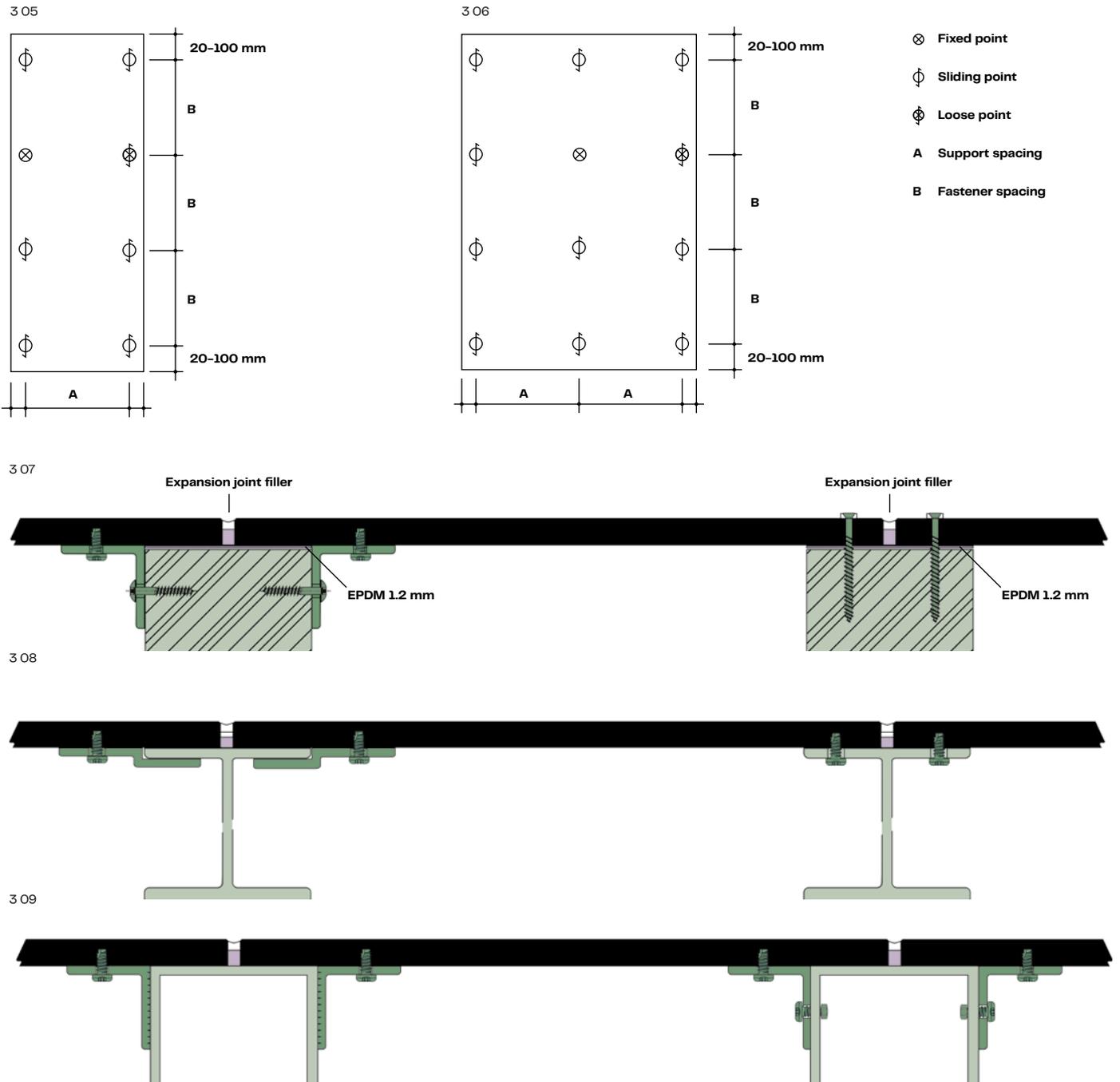
## Sliding Point

Based on the expansion clearance required, the diameter of the drill hole in the substructure should be larger than the diameter of the fasteners. Shaft diameter of the fastener plus 2 mm per meter of cladding material starting from the fixed point. Attach fasteners so the panel can move. Do not screw them in too tight. Do not use countersunk screws. The center of the hole in the substructure must match the center of the hole in the panels. Use a centering aid (drilling jig). Start fastening the panels at the center of the panel and work outward.

## Notes

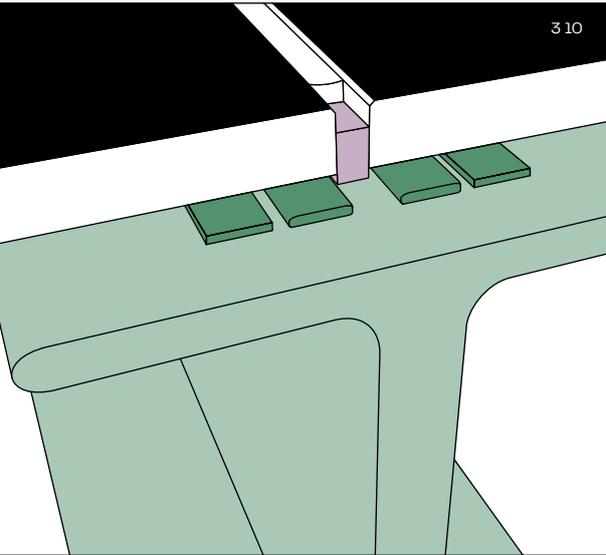
For timber substructures, please take note of the need for construction-related or chemical timber protection. Use an EPDM strip with a thickness of at least 1.2 mm.

For flawlessly sealed joints, using expansion joint filler is recommended.



- 3 04** Balcony floor and wooden block
- 3 05** Single span panel
- 3 06** Double span panel
- 3 07** Balcony floor panel on wooden block with invisible fastening (screwed) using Rampa sleeves (left) or countersunk screw and rosette (right)
- 3 08** Balcony floor panel on steel beams with invisible fastening (screwed) with profile (left) or without profile (right) using Rampa sleeves
- 3 09** Balcony floor panel on moulded tube with invisible fastening (screwed), angle floor bracket welded on (left) or screwed on (right)

# Installing Podio Balcony Floor Panels Using an Adhesive System



## Gluing

Alternative to mechanical fastening: Gluing using specially designed adhesive systems from Pro Part or Innotec. These work on standard metal substructures.

## Notes

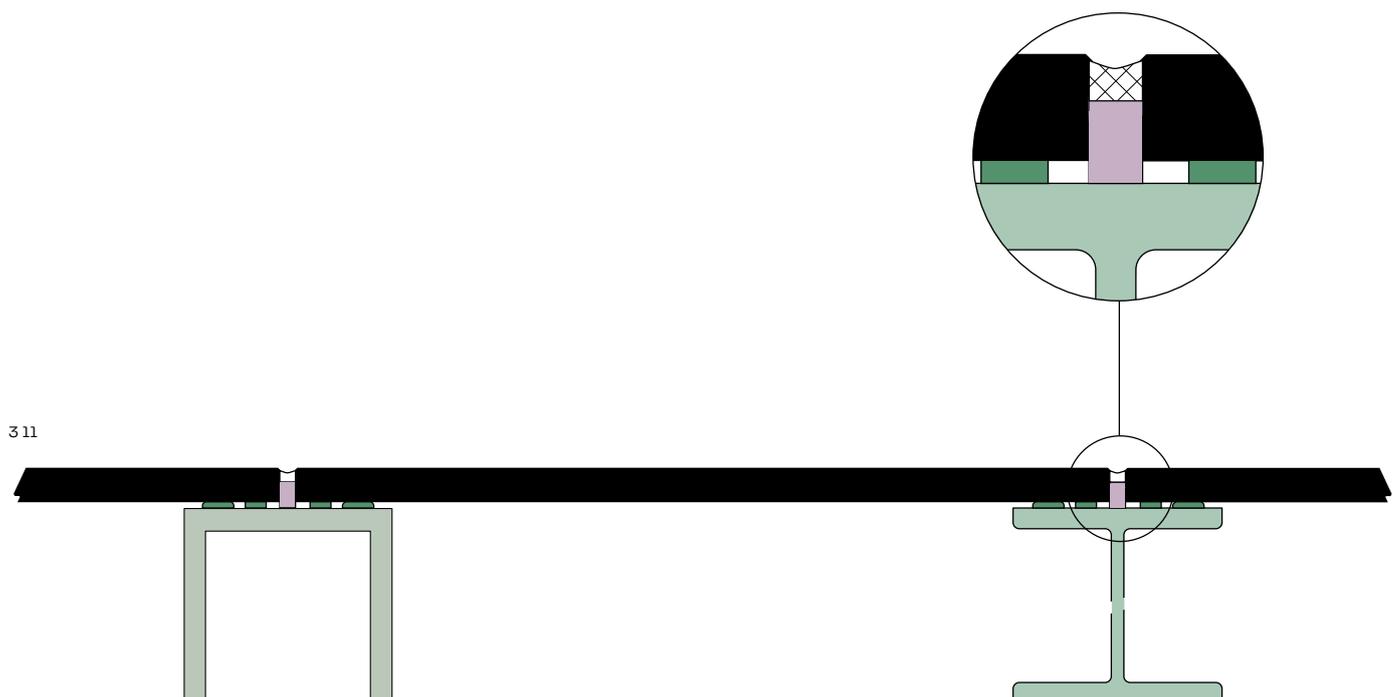
Ensure fastening is unrestricted. Take into account the expansion and shrinkage behavior of Max Compact Exterior panels. Gluing does not have building regulation approval in Germany.

Find out the maximum panel size from the approval of the adhesive manufacturer. Installation guidelines can be found in the approval of the relevant adhesive system (notes and process information can also be found in the “Invisible Glued Fastening Using an Adhesive System” section).

Gluing balcony floor panels is not approved in Germany.

3 10 Balcony floor panel glued onto steel beams

3 11 Cross section of joints between balcony floor panels



## Physical data and approvals

Properties	Testing method	Assessment	Standard value <sup>1)</sup>	Typical value <sup>2)</sup>
<b>Lightfastness and weather resistance (NT)</b>				
Resistance to artificial weathering*	EN 438-2:2016, Section 29, 3000 h	Contrast: Gray scale Appearance: Degree	Contrast: $\geq 3$ Appearance: $\geq 4$	Contrast: 4-5 Appearance: 5
Resistance to UV rays*	EN 438-2:2016, Section 28	Contrast: Gray scale Appearance: Degree	Contrast: $\geq 3$ Appearance: $\geq 4$	Contrast: 4-5 Appearance: 5
Properties	Testing method	Unit of measurement	Standard value <sup>1)</sup>	Typical value <sup>2)</sup>
<b>Mechanical properties</b>				
Bulk density	DIN 52328 / EN ISO 1183	g/cm <sup>3</sup>	$\geq 1.35$	1.44
Flexural strength	EN ISO 178	MPa	$\geq 80$	Crosswise: 105 Lengthwise: 170
Flexural modulus	EN ISO 178	MPa	$\geq 9,000$	Crosswise: 11,000 Lengthwise: 16,000
Tensile strength	EN ISO 527-2	MPa	-	Crosswise: 95 Lengthwise: 140
Resistance to impact with a large ball	EN 438-2:2016, Section 21	mm	$\leq 10$	5-6
<b>Thermal properties</b>				
Resistance to moisture	EN 438-2:2016, Section 15	%	Mass increase $\leq 8$	2
Dimensional tolerance at high temperature	EN 438-2:2016, Section 17	%	Lengthwise: $\leq 0.30$ Crosswise: $\leq 0.60$	Lengthwise: 0.08 Crosswise: 0.16
Coefficient of thermal expansion	DIN 52328	1/K		18 x 10 <sup>-6</sup>
Thermal conductivity		W/mK		0.3
Water vapor diffusion resistance				approx. 17,200 $\mu$
<b>Building material classes</b>				
Europe building material class	EN 13501-1	MA39-VFA Vienna	Euroclass B-s2, d0 for 6-13 mm**	
Austria facade fire testing	ÖNORM B 3800-5	MA39-VFA Vienna	tested panel thicknesses 8-13 mm	
Fire resistance test balcony floor Podio Austria	EN 1365-2	MA39-VFA Vienna	REI60 for thickness 20mm	
Switzerland building material class	EN 13501-1	MA39-VFA Vienna	Euroclass B-s2, d0 for 6-13 mm <sup>2)</sup>	
France building material class	NFP 92501	LNE	M1 for 2-10 mm	
Spain building material class	UNE 23727-90	LICOF	M1 for 6-10 mm	
Poland building material class	PN-B-02867:2013-06	Instytut Techniki Budowlanej	NRO for 6 - 10 mm mechanical visible/invisible fixing NRO for 8 - 10 mm invisible glued fixing	
<b>Approvals</b>				
Germany facade approval		Institut für Bautechnik, Berlin	6, 8, 10 mm, Approval no. Z-10.3-712	
ETB guidelines for components that protect against falling, from 6/1985 balcony railings		TU Hanover	present (depending on building regulations and railing construction, 6, 8, 10, or 13 mm panel thickness)	
France Avis technique		CSTB	6, 8, 10, and 13 mm, timber and metal subframe, approval No. 36-87 2/16-1749 No. 36-106 2.2/14-1623_V1 No. 36-125 2.2/13-1565_V2 No. 36-125 2.2/21-1809_V1 No. 36-125 2.2/16-1716 No. 36-29 ATT-20/013_V1 No. 26-29 ATT-20/014_V1	
WinMark UK		Wintech	A10114	

A gloss degree tolerance of  $\pm 5$  GE applies for the surface NT, measured at 60°. The tolerances information sheet (version 2017-1-16) of the ÖFHF (www.oefhf.at) applies with regard to colour tolerance.

<sup>1)</sup> According to EN 438-6

<sup>2)</sup> Examples are shown: Fundermax only guarantees compliance with standard values  
Further certificates and approvals: [www.fundermax.at/downloads](http://www.fundermax.at/downloads)

\* Decor AUTN: artificial weathering EN ISO 4892-2: 1500 h; assessed according to grey scale EN 20105-A02:2

\* Individual decor: artificial weathering EN ISO 4892-2: 3000 h; assessed according to grey scale EN 20105-A02:3

\*\* Exception: Podio balcony panel, EUROCLASS B-s2, d0 (6.0-20.0 mm)

Legal notices:

Please observe all valid building regulations. We accept no responsibility in this regard. Please check whether your construction project meets the requirements for the effective restriction of fire propagation (e.g. OIB-RL 2, DE sample management regulations for technical building regulations MVV TB etc.). This brochure is intended for professionals who are familiar with the relevant standards, technical regulations, legal requirements and guidelines relevant to building products.

While these guidelines have been prepared with great care, we would like to point out that the responsibility for correct planning lies with the planner and the responsibility for correct installation lies with the installer.

**Fundermax Deutschland GmbH**

Mundenheimer Weg 2  
D-67117 Limburghof  
infoGermany@fundermax.biz  
www.fundermax.com

**Fundermax France S.a.r.l.**

29 Rue Maurice Flandin  
F-69003 Lyon  
accueil@fundermax.biz  
www.fundermax.com

**Fundermax India Pvt. Ltd.**

Sy. No. 7, Honnenahalli, Doddballapur Road,  
IND-Yelahanka Hobli, Bangalore - 560064  
officeindia@fundermax.biz  
www.fundermax.in

**Fundermax Italia s.r.l.**

Viale Venezia 22  
I-33052 Cervignano del Friuli  
infoitaly@fundermax.biz  
www.fundermax.com

**Fundermax North America, Inc.**

9800 Twin Lakes Parkway, Suite B,  
US-Charlotte, North Carolina 28269  
contactfna@fundermax.biz  
www.fundermax.us

**Fundermax Polska Sp. z o.o.**

ul. Rybitwy 12  
PL-30 722 Kraków  
T: +48 (0)12 65 34 528  
infopoland@fundermax.biz

**Fundermax Swiss AG**

Industriestrasse 38  
CH-5314 Kleindöttingen  
T: +41 (0)56 268 83 11  
infoswiss@fundermax.biz  
www.fundermax.com

**Fundermax GmbH**

Klagenfurter Straße 87-89, A-9300 St. Veit/Glan  
T: +43 (0)5 9494-0, F: +43 (0)5 9494-4200  
office@fundermax.at  
www.fundermax.com