



## LMD-E 213 BWS

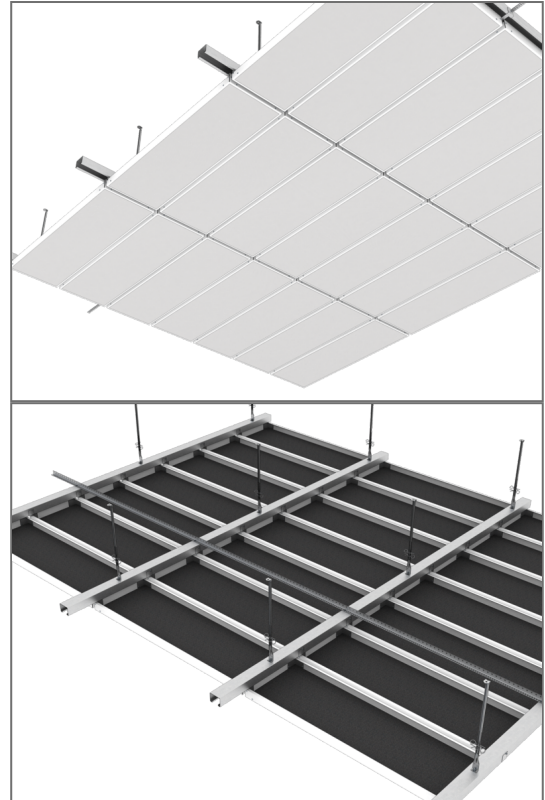
### Hook-On Ceiling, Ball-Impact Resistant

This Hook-On ceiling is successfully tested for ball-impact resistance according to DIN EN 13964 annex D class 1A - 3A and is a safe choice for sports halls, swimming pools or similar. The system is visually characterised by accentuated joints in both directions along the ceiling panels and a concealed substructure. Different ceiling panels are available that can be removed or swung down and slid.

- hook-On ceiling with tested ball-impact resistance
- homogeneous ceiling surface due to concealed substructure
- ceiling layout with accentuated joints in both directions possible
- maintenance option due to ceiling panels that can be individually operated, swung down and slid
- perforations with max. 3 mm diameter and max. 30 % open area
- hygienic and easy to clean

#### Examples for areas of application

**Businesses, Recreation and Culture:** Sports Halls and Gymnasiums, Stadiums and arenas, Public Swimming Pools

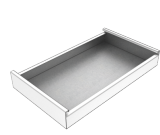
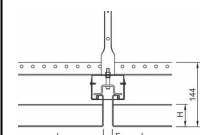


**TAIM**



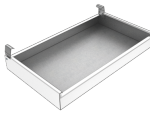
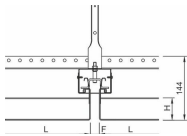
#### Ceiling elements

##### LMD-E 213 BWS Typ 1

Hook-On, aluminium		 	
Length (L)	500 - 1230 mm		
Width (B)	200 - 1230 mm		
Height (H)	50 mm		
Joint width (F)	20 mm, 25 mm, 30 mm		

##### LMD-E 213 BWS Typ 2


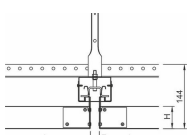


Hook-On, Swing-Down and slide option, aluminium		 	
Length (L)	500 - 1230 mm		
Width (B)	200 - 1230 mm		
Height (H)	50 mm		
Joint width (F)	20 mm, 25 mm, 30 mm		

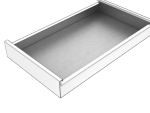
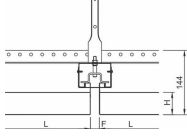
#### LMD-E 213 BWS Typ 3

Hook-On, aluminium/steel		 	
Length (L)	500 - 2500 mm		
Width (B)	200 - 500 mm		
Height (H)	50 mm		
Joint width (F)	20 mm, 25 mm, 30 mm		


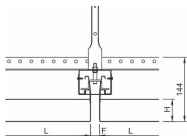
#### LMD-E 213 BWS Typ 4

Hook-On, Swing-Down and slide option, aluminium/steel		 	
Length (L)	500 - 2500 mm		
Width (B)	200 - 500 mm		
Height (H)	50 mm		
Joint width (F)	20 mm, 25 mm, 30 mm		

#### LMD-E 213 BWS Typ 5

Length (L)	500 - 3000 mm	 	
Width (B)	200 - 800 mm		
Height (H)	50 mm		
Joint width (F)	20 mm, 25 mm, 30 mm		

#### LMD-E 213 BWS Typ 6

Hook-On, Swing-Down and slide option, steel		 	
Length (L)	500 - 3000 mm		
Width (B)	200 - 800 mm		
Height (H)	50 mm		
Joint width (F)	20 mm, 25 mm, 30 mm		

## Technical details

### Technical Details

Material	galvanised sheet steel aluminium
Serviceability	swing-down and slide option removable
Possible wall connections	U-profile
Weight	10 - 12 kg/m <sup>2</sup>

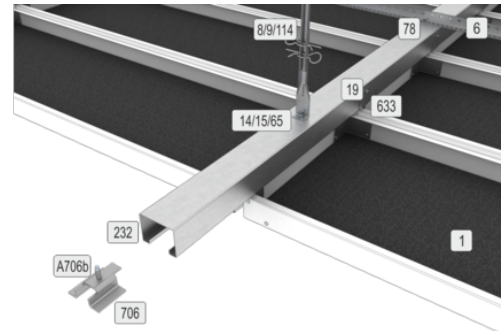


Notice: Weight without fixtures/installations

## Component list

### Bauteile

1	ceiling panel
6	L-profile 28
8/9/114	vernier suspension
14/15/65	screwing
19	self-drilling screw fillister head
78	self-drilling screw hexagon head with flange
232	double hook-on profile 54/BWS
633	spacer for double hook-on profile 54/BWS
706	hold-down clip for double hook-on profile 54/BWS
A706b	set screw with hexagon socket



## Acoustics

### Room acoustics

Sound absorber class	ISO 11654		E - A
Noise Reduction Coefficient	ASTM C 423	NRC	0.15 - 0.95
Evaluated Sound Absorption Coeff.	ISO 11654	$\alpha_w$	0.15 - 1.00

## Fire protection

### Building material class

Building material class	EN 13501-1	A2 - s1,d0
Building material class	ASTM E 84	class A

### Fire stability

Fire stability	EN 13501-2	30 minutes
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## Static

### Statics

Ball-impact resistance	EN 13964	1A 2A 3A
Seismic safety		Qualification according to AC 156/ Eurocode/SIA 261



## Durability

### Durability

Exposure class	EN 13964	A
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## Sustainability

### Declarations

EPD (Environmental Product Declaration)	The product has a verified EPD in compliance with the applicable standards. ( ISO 14025/EN 15804)
Circular Economy	Cradle to Cradle Certified® Gold
French VOC Regulation	Emission class A+
Product Self-Declaration	A self-declaration in accordance with ISO 14021 is available. This contains extensive environmental information for planning, tenders and building certifications (LEED, DGNB, EU taxonomy).

### Key figures

Recycled content	24.40 %
Indoor air measurement EN 16516 options	< 5 µg/m³
Formaldehyde emissions	< 3 µg/m³

### Evidence

Indoor Air Comfort	Accomplished
Indoor Air Comfort Gold	Accomplished
AgBB	Accomplished
BREEAM International	Conform
LEED v4	Conform
DGNB	Conform

### Green Level Certificate

Outstanding 

**Circularity:** All components can be reused/ refurbished

**Life Cycle Assessment:** EPD according to ISO 14025 and EN 15804

**Cradle to Cradle Certified®:** C2C Certified® Gold

## Surfaces

### Surfaces

Powder coatings	COLOURline - Powder Coating MOODline - Powder Coating Deep Matt ARTline - Decorative Powder Coating GRAPHICline - Digital Print
Perforations	BASICline - Standard Perforations REGULARline - Further Perforations



	SPREADline - Scattered Perforations
Functional coatings	Meteo - Corrosion Protection Coating

## Additional equipment

### Additional equipment

Acoustic inlays	Acustica - Acoustic fabric inlay Insula - Mineral wool inlay in acoustic foil Calma - Glass yarn inlay in textile cover
Luminaires	SHL 298 - Luminaire for sports halls SYS 298 - Luminaire for sports halls

## Certification

### Certificates

CE marking	The ceiling system is a harmonised construction product acc. to regulation (EU) No. 305/2011 (Construction Products Regulation) and EN 13964: Suspended ceilings - Requirements and test methods.
TAIM e.V.	The ceiling system fulfils the requirements of the "Technical Manual Metal Ceilings" (TMMC) of TAIM e.V. (Association of Industrial Metal Ceiling Manufacturers).

## Project solutions

This product data sheet refers to the standard version of the product mentioned above. We would be happy to work with you to find the right solution for your project. Adapted to your building project, you will receive a perfectly matched system. Project-specific constructions and adaptations can be found in the offer documents.