

# HODY® 146

## Composite steel floor deck

HODY® 146 Trapezium steel sheets are profiled sheets that are used to create composite steel floor decks with a thickness over 215 mm. The optimised geometrics, and use of high-quality steel, make it possible to realise large spans up to 6590 mm without using temporary propping.

### Composite steel floor deck

The HODY® 146 Trapezium steel sheet is used as formwork and base reinforcement in HODY® composite steel floor decks. The profile creates effective interaction between the steel sheet and the concrete. This means a limited amount of concrete and a minimum amount of mesh reinforcement can be used to create a thin and light composite steel floor deck. HODY® 146 composite steel floor decks are the ideal floor solution for new-build, conversion, renovation and redevelopment projects.

### Simple and fast installation

HODY® 146 Trapezium steel sheets have a low self weight, are easy to install without construction cranes and can be walked on immediately. It is thus possible to quickly create a safe work floor. Thanks to a working width of 600 mm, the sheets are easy to use and allow floor areas to be quickly assembled.

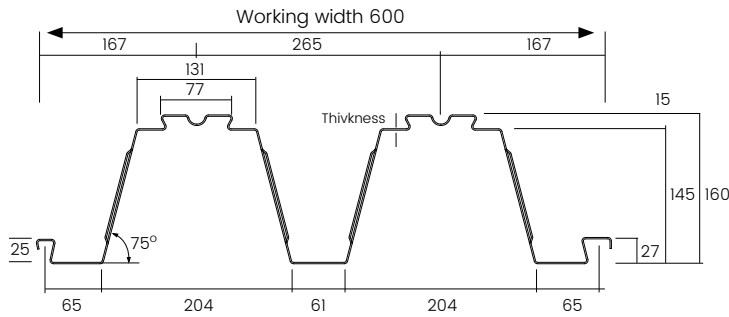


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# HODY® 146 Composite steel floor deck

## Profile and dimensions (mm)



Thickness = 1.2 mm and 1.5 mm

Maximum length 14.0 meters

### Service and advice

You may always contact our technical advisors with any questions during the design and implementation phase. They can offer extensive advice about using HODY® 146 composite steel floor decks in your project.

### Specification service

Specification descriptions for HODY® composite steel floor decks are available.

### Fire resistance

HODY® 146 composite steel floor decks offer fire resistance of at least 30 minutes. Fire resistance can be improved by using additional mesh reinforcements in the channels of the steel sheet. Depending on the floor thickness, it is possible to realise fire resistance of 120 minutes.

### Calculation

We can also provide calculations and reinforcement drawings for HODY® composite steel floor decks.

### Advantages of HODY® 146 Trapezium steel sheets:

- Free span up to 11650 mm
- Simple and fast installation
- Efficient logistics to and on the construction site
- Large unpropped span up to 6590 mm
- Detailing possible
- Relatively lightweight floor construction
- Fire resistance ≥ 30-120 minutes
- Aesthetic appeal
- Available from stock

### Section properties per metre width

NORMAL THICKNESS (mm)	SELF WEIGHT		HEIGHT TO NEUTRAL AXIS	SECOND MOMENT OF AREA cm <sup>4</sup> /m	STEEL AREA (mm <sup>2</sup> /m)	ULTIMATE MOMENT CAPACITY (kNm/m) Sagging
	(kg/m <sup>2</sup> )	(kN/m <sup>2</sup> )				
1,2	19,4	0,191	78,8 mm	836	2400	32,4
1,5	24,3	0,239	79,9 mm	1080	3020	42,3

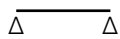
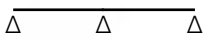
Values in accordance with m and k method m = 248.6, k = 0.01673



### Design tables

The table below can be used to design HODY® 146 composite steel floor decks. You can always contact us for additional design advice and information about using HODY® 146 Trapezium steel sheets in multiple span applications.

#### HODY® 146 steel thickness 1.20 mm - Maximum span [m]

FLOOR THICKNESS (mm)	SINGLE SPAN 						DOUBLE SPAN 					
	UNPROPPED (m)	LOAD (EXCL. FLOOR) [kN/m²]					UNPROPPED (m)	LOAD (EXCL. FLOOR) [kN/m²]				
		2,00	3,00	4,00	5,00	6,00		2,00	3,00	4,00	5,00	6,00
215	5,46	7,55	6,85	6,30	5,85	5,50	6,14	7,95	7,20	6,65	6,20	5,85
225	5,37	7,70	6,95	6,45	6,00	5,65	6,04	8,10	7,40	6,85	6,40	6,00
235	5,29	7,80	7,10	6,55	6,10	5,75	5,95	8,90	8,10	7,50	7,05	6,65
245	5,21	7,90	7,20	6,65	6,25	5,90	5,86	9,05	8,30	7,70	7,20	6,80
255	5,14	7,95	7,30	6,80	6,35	6,00	5,78	9,80	9,00	8,35	7,85	7,15
265	5,07	8,05	7,40	6,90	6,45	6,10	5,71	9,95	9,15	8,55	8,05	7,30
275	5,01	8,15	7,50	7,00	6,55	6,20	5,63	10,05	9,30	8,70	8,20	7,40
285	4,95	8,15	7,50	7,00	6,55	6,20	5,57	10,20	9,45	8,85	8,20	7,30
295	4,89	8,30	7,65	7,15	6,75	6,40	5,50	10,30	9,55	8,95	8,05	7,20
305	4,84	8,35	7,75	7,25	6,85	6,50	5,44	10,40	9,70	8,90	7,90	7,05



### HODY® 146 steel thickness 1.50 mm - Maximum span [m]

FLOOR THICKNESS (mm)	SINGLE SPAN $\overline{\Delta \quad \Delta}$						DOUBLE SPAN $\overline{\Delta \quad \Delta \quad \Delta}$					
	UNPROPPED (m)	LOAD (EXCL. FLOOR) [kN/m <sup>2</sup> ]					UNPROPPED (m)	LOAD (EXCL. FLOOR) [kN/m <sup>2</sup> ]				
		2,00	3,00	4,00	5,00	6,00		2,00	3,00	4,00	5,00	6,00
215	5,86	8,10	7,60	7,00	6,50	6,15	6,59	7,95	7,20	6,65	6,20	5,85
225	5,77	8,30	7,75	7,15	6,70	6,30	6,49	8,10	7,40	6,85	6,40	6,00
235	5,68	8,50	7,90	7,30	6,85	6,45	6,39	8,90	8,10	7,50	7,05	6,65
245	5,60	8,65	8,05	7,45	6,95	6,55	6,30	9,05	8,30	7,70	7,20	6,80
255	5,53	8,85	8,15	7,55	7,10	6,70	6,22	9,80	9,00	8,35	7,85	7,15
265	5,45	9,00	8,25	7,70	7,20	6,80	6,14	9,95	9,15	8,55	8,05	7,30
275	5,39	9,05	8,35	7,80	7,35	6,95	6,06	10,05	9,30	8,70	8,20	7,40
285	5,32	9,15	8,45	7,90	7,45	7,05	5,98	10,20	9,45	8,85	8,20	7,30
295	5,26	9,25	8,55	8,00	7,55	7,15	5,91	10,30	9,55	8,95	8,05	7,20
305	5,20	9,30	8,65	8,10	7,65	7,25	5,85	10,40	9,70	8,90	7,90	7,05

### Volume and weight HODY® 146 composite steel decks

FLOOR THICKNESS (mm)	CONCRETE VOLUME LITERS [m <sup>3</sup> ]	WEIGHT (EXCL. STEEL DECK) [kN/m <sup>2</sup> ]
215	133	3,19
225	143	3,43
235	153	3,67
245	163	3,91
255	173	4,15
265	183	4,39
275	193	4,63
285	203	4,87
295	213	5,11
305	223	5,35

Weight concrete 24 kN/m<sup>3</sup>

- m = span in meters
- maximum span based on deflection of 1/180 L
- permissible load in kN/m<sup>2</sup> incl. finishing and excl. self weight
- concrete quality C20/25
- floor thickness excludes reinforcements, coincidental restraints, recesses, line loads, concentrated loads, etc.
- with additional reinforcement larger spans can be made



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