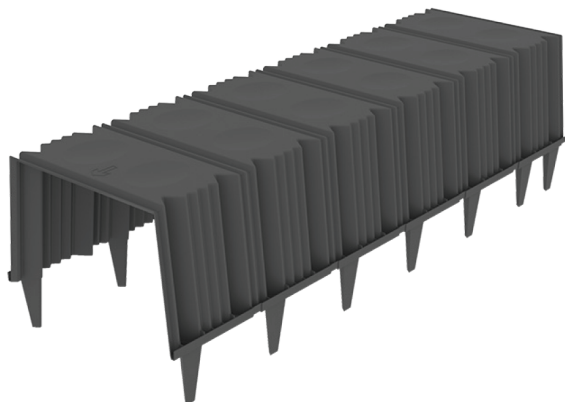


**U-bahn®
beton**

H 13 cm



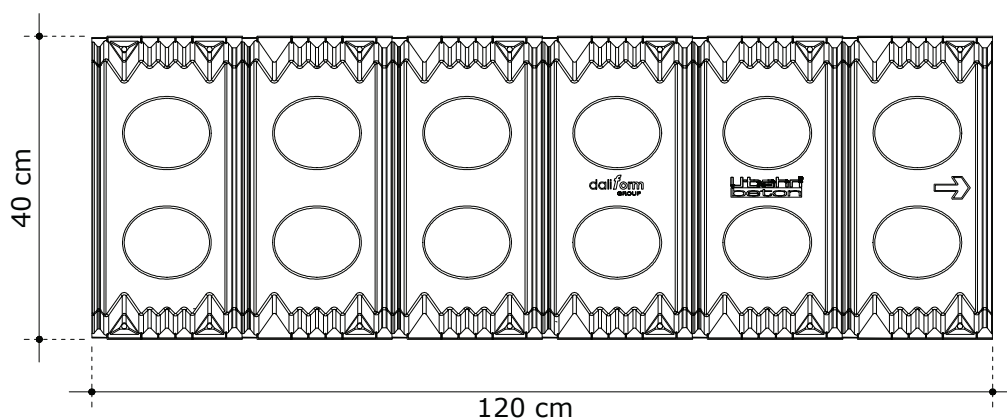
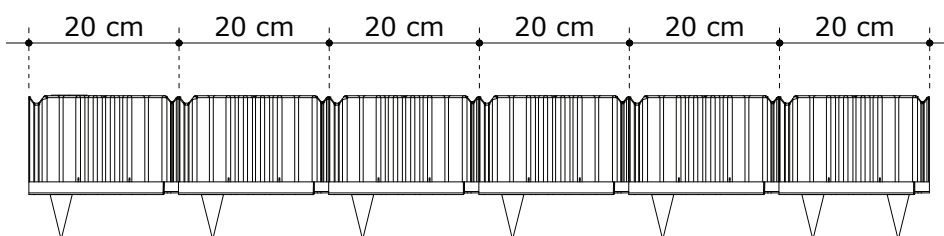
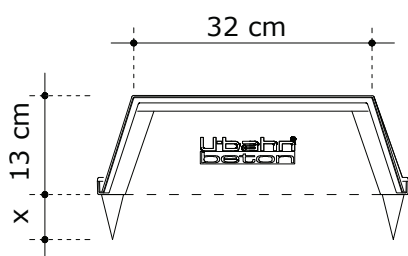
U-Bahn® Beton is the ideal solution for creating lightened one way slabs for all types of structures: residential, commercial, executive, industrial buildings as well as public structures (schools, hospitals, etc).

U-Bahn® Beton is fundamentally used in all applications that require one way beams and slabs as well as a reduced use of concrete and reduced weight. With U-Bahn® Beton slabs with a greater thickness can be created with less concrete.

A particular type of use of U-Bahn® Beton is for underground constructions made with the so-called "top down" technique, where instead of working from bottom to top (as for normal open-air constructions), they proceed building the load-bearing floors from the top to the bottom (precisely top down), alternating the construction of the floor with the excavation of the lower level.

Underground parking buildings in historical city centres are often created using this technique due to the obvious constraints related to the presence of numerous buildings near the excavation, as well as the need to quickly restore traffic flows. For projects that use this technique, it is of strategic importance to supply the yard with light-weight and non-bulky material.

Made of ALAPLEN® CV30



The images are only for examples.
Recyclable material is allowed a size tolerance of $\pm 1,5\%$.



2,526

Average piece weight



m³ 0,055

Piece volume

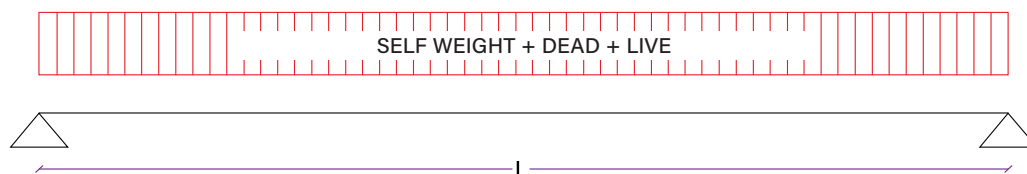
Formwork installation time-exposure: 35 m²/h

Example of pre-dimensioning of slab with U-Bahn® Beton with one span

The table expresses the value of elastic deformation (in cm) for a given height of slab, according to span and loads; the maximum value of the deformation has been limited to $L/1000$.

Slab thickness (H cm)	Formwork (H cm)	Lower slab thickness (cm)	Upper slab thickness (cm)	Load (D+L) (kN/m ²)	Span (m)	Elastic deformation (cm)
21	13	4	4	4	4	0.11
21	13	4	4	6	4	0.15
21	13	4	4	8	4	0.18
21	13	4	4	10	4	0.21
21	13	4	4	4	5	0.28
23	13	5	5	6	5	0.27
23	13	5	5	8	5	0.33
23	13	5	5	10	5	0.39
23	13	5	5	4	6	0.45
23	13	5	5	6	6	0.57
25	13	6	6	8	6	0.54
25	13	6	6	4	7	0.67

STATIC METHOD

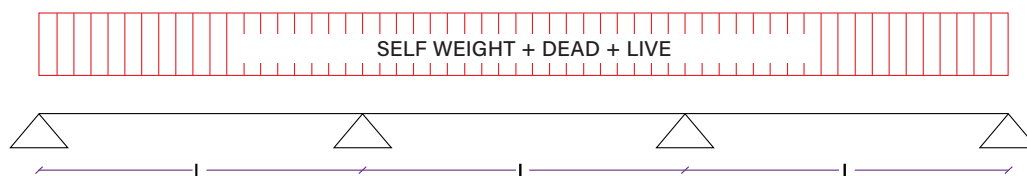


Example of pre-dimensioning of slab with U-Bahn® Beton with three spans

The table expresses the value of elastic deformation (in cm) for a given height of slab, according to span and loads; the maximum value of the deformation has been limited to $L/1000$.

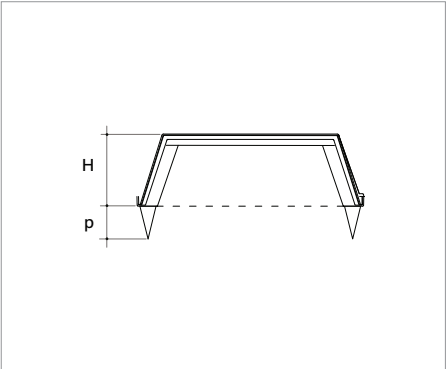
Slab thickness (H cm)	Formwork (H cm)	Lower slab thickness (cm)	Upper slab thickness (cm)	Load (D+L) (kN/m ²)	Span (m)	Elastic deformation (cm)
21	13	4	4	4	4	0.06
21	13	4	4	6	4	0.077
21	13	4	4	8	4	0.09
21	13	4	4	10	4	0.11
21	13	4	4	4	5	0.15
21	13	4	4	6	5	0.19
21	13	4	4	8	5	0.23
21	13	4	4	10	5	0.27
23	13	5	5	4	5	0.24
23	13	5	5	6	5	0.3
23	13	5	5	8	5	0.36
23	13	5	5	10	5	0.43
23	13	5	5	4	6	0.44
23	13	5	5	6	6	0.55
25	13	6	6	8	8	0.53
25	13	6	6	10	8	0.61
25	13	6	6	4	4	0.6

STATIC METHOD



TECHNICAL DATA

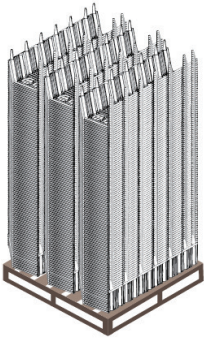
U-BAHN BETON h 13



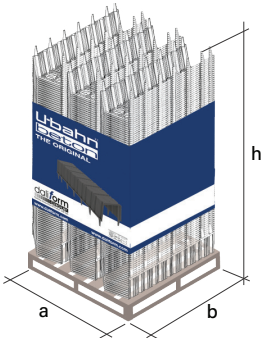
Useful size*	cm	120 x 40
Height H*	cm	13
Feet height p	cm	0-4-5-6-7
Average piece weight	kg	2,526
Piece volume**	m³	0,055
Pallet dimensions	cm	120 x 120 x 251
Pieces per pallet***	pc/PAL	300
Pallet weight***	kg/PAL	772

* Recyclable material is allowed a size tolerance of ± 1,5%.
** The volume may vary depending on the pouring condition and the tolerance of the material.
*** For production necessity the technical data can be change.

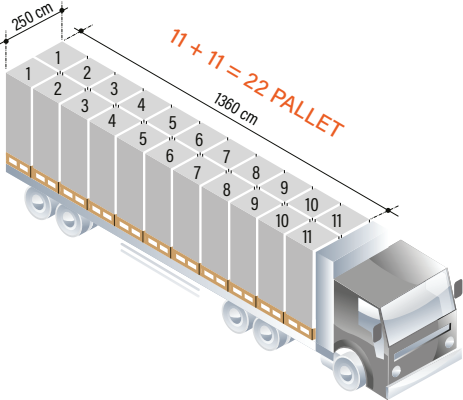
TECHNICAL PACKING AND TRUCKING



1 pallet: 4 piles of 75 pieces
Pieces per pallet: 300



(a x b x h)
120 x 120 x 251
measurements are in cm




11 + 11 = 22 PALLET
250 cm
1360 cm

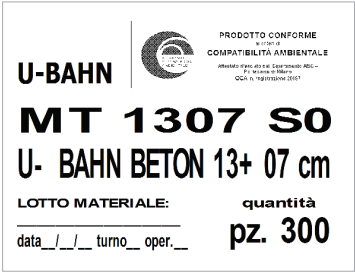
Pieces per truck: 6.600

LABELLING

Each pallet is identified with:



A coloured band containing:
the brand, a type image of the product,
the Company name, the website and
any warnings.



A lebel with the following informations:
product's name and code, quantity, Certificate
of the Environmental Compatibility, date of
production, shift of production, n° of the worker,
production line batch.

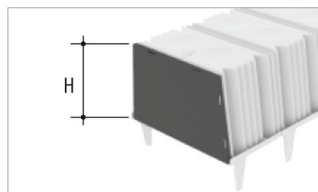
CREDITS

- Declaration of Performance Conformity;
- Rupture load tests;
- Certificate of Environmental Compatibility.

The product does not fear the weather and can be stored outside. Take the utmost care to prevent the product from being deformed or overstressed during the unloading, storage and assembly. In case of disposal the product is totally recyclable.

ACCESSORIES

CLOSING PANEL



Useful size	cm	40 x 13
Thickness	mm	0,30
Weight	kg/pc	0,120
Pieces per pallet	pc/PAL	2600

CLOSING PLATE



Useful size	cm	121,1 x 40,5
Thickness	mm	0,30
Weight	kg/pc	0,431
Pieces per pallet	pc/PAL	1000

TIE ROD - REINFORCEMENT



Useful size	cm	41,2 x 4,7 x 2,8
Weight	kg/pc	0,045
Pieces per pallet	pc/PAL	4000