

# PRECAST REINFORCED AND PRESTRESSED CONCRETE ELEMENTS FOR INDUSTRIAL STRUCTURES

NOVEMBER 2025





## ARTBETON SOLUTIONS - A (PRECAST) STEP TOWARDS SUCCESS



**Integrated solutions** offered in the design and production of structural elements provide support and guidance from the project concept definition to the completion of construction execution.

**Economic advantages** result from executing the project with precast elements in record time compared to on-site works, with high precision, using the latest technologies and reduced costs due to the optimization of all stages and processes.

**Flexibility** in producing elements of variable sizes and sections is ensured by high-performance equipment using German technology, acquired from the global leaders of the precast industry.

**The diversity** of products in the ARTBETON catalog allows for the successful realization of the most demanding industrial structures and commercial construction designs, offering viable solutions for the highest requirements.

**The strategic positioning** of the ARTBETON production plant, just 20 km from Chisinau and connected to the M2 highway, ensures national coverage and rhythmic deliveries for any project across the country.

**Increased safety** in using precast elements results from their production in a high-tech environment, with standardized processes and quality control according to held certifications.

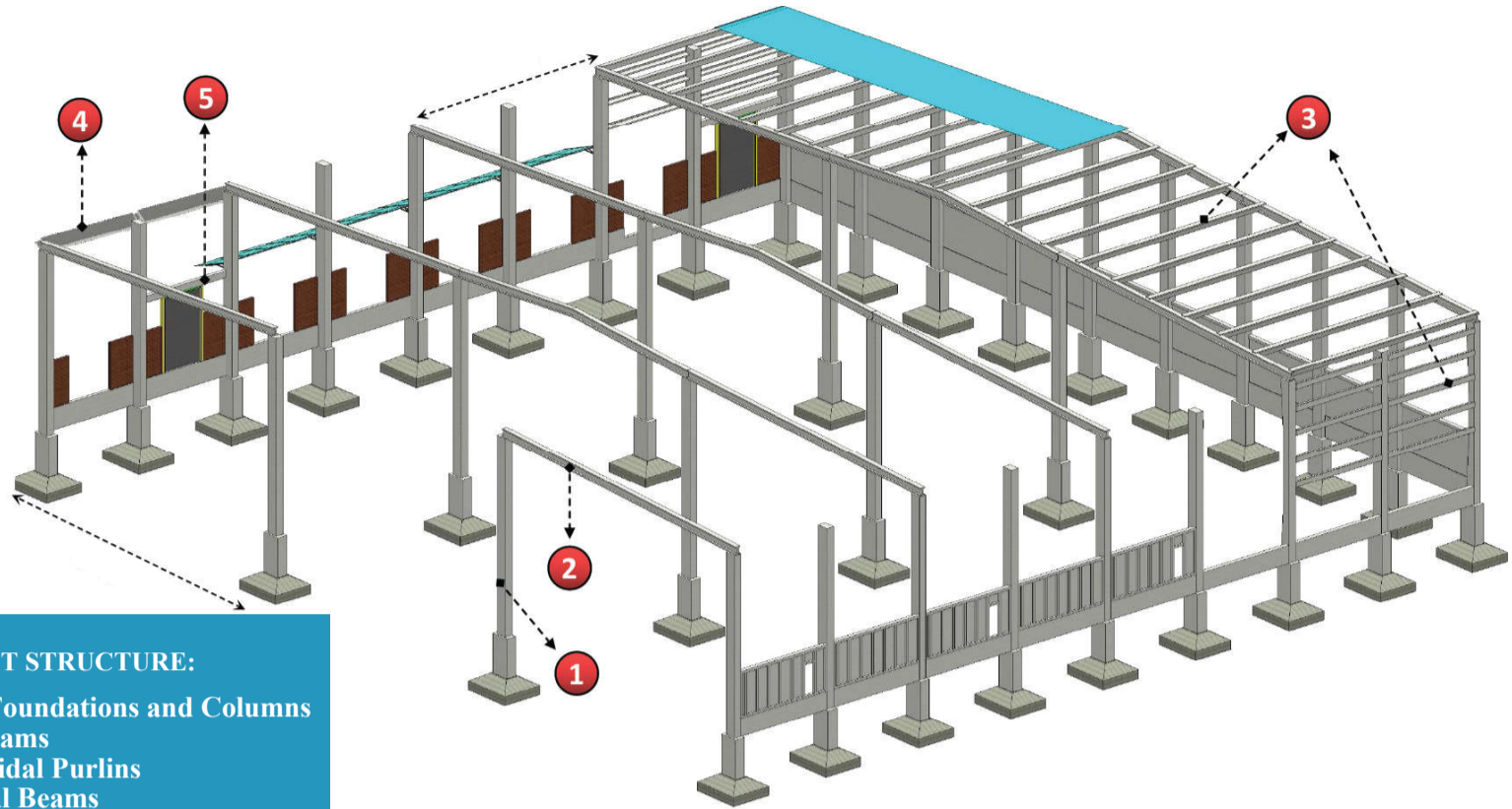
**A production capacity** of over 30,000 m<sup>3</sup> annually ensures on-time delivery of any element configurations.

**The LEAN production** system ensures high efficiency and strict compliance with all technical requirements, quality standards, and delivery schedules.





# GENERAL REPRESENTATION OF PRECAST STRUCTURE ELEMENTS:



## EXAMPLE OF PRECAST STRUCTURE:

- 1. Precast Pocket Foundations and Columns
- 2. Precast Main Beams
- 3. Precast Trapezoidal Purlins
- 4. Precast Marginal Beams
- 5. Precast Panels/Walls

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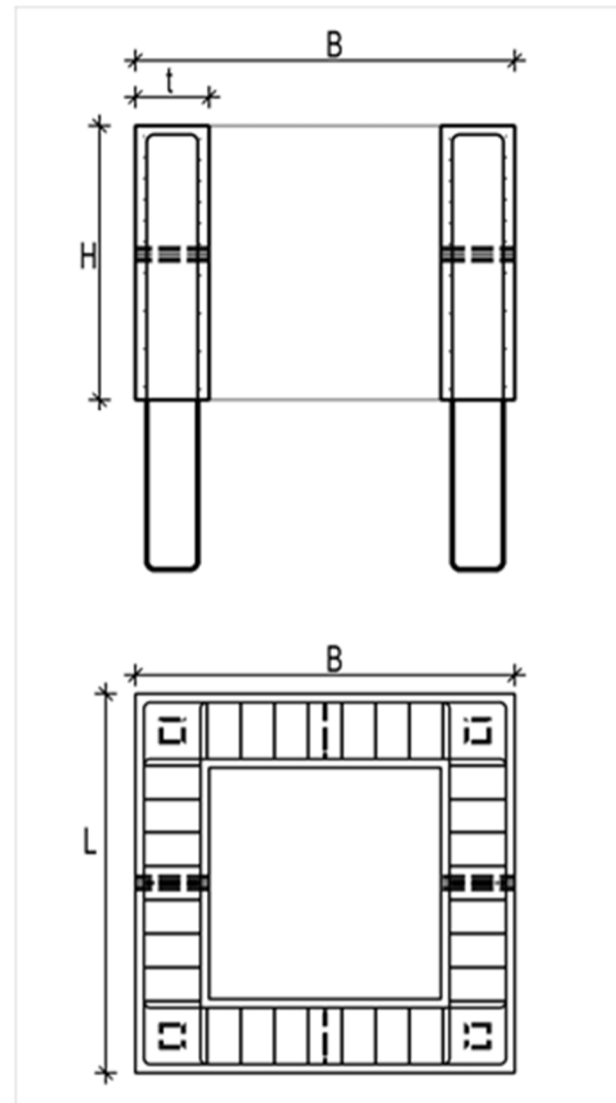
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# POCKET Foundations

The POCKET foundation represents the connection element between the monolithic foundation block and the column element.

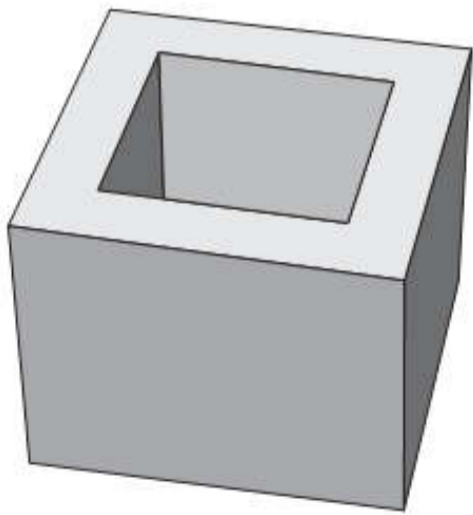
Precast POCKET elements allow for a significant increase in the assembly speed of the entire structure, reduce on-site labor, offer higher precision, and better control over product quality and assembly works.

DOUBLE POCKET foundations are used for seismic joints.

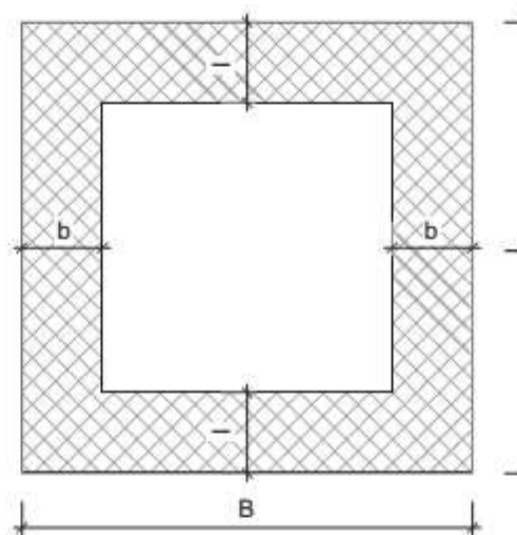


t, cm	L, m	B, m	H, m
15—50	0.80—2.50	0.80—2.50	1.00—2.50

3D VIEW—POCKET



POCKET SECTION



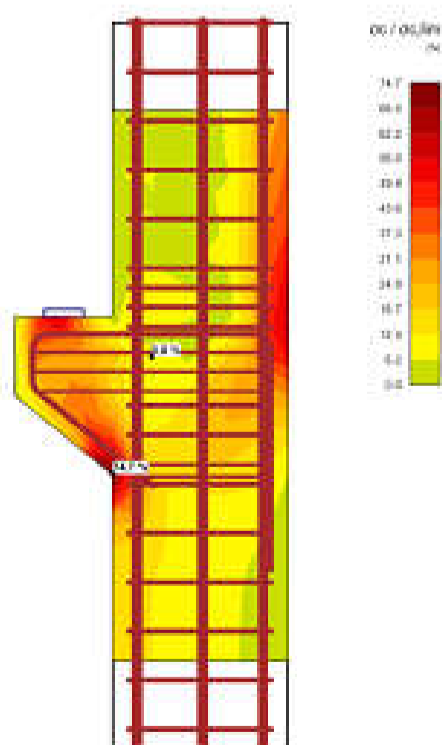
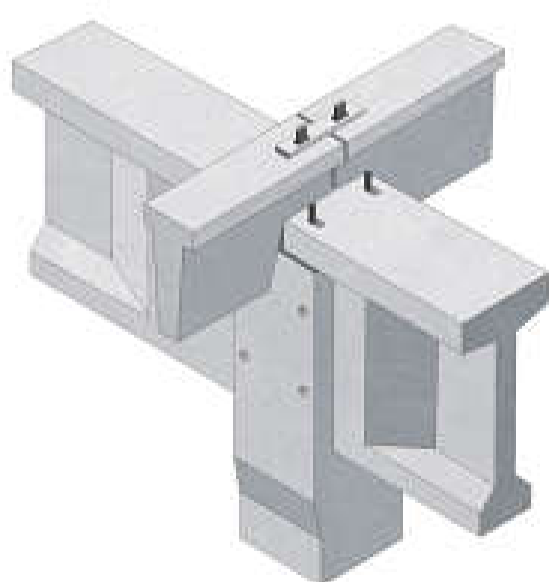
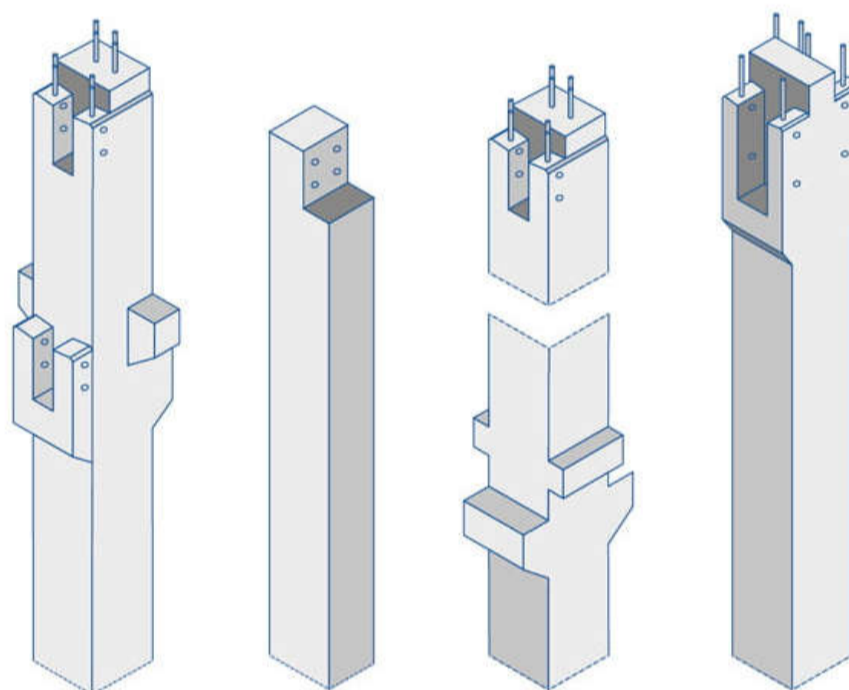
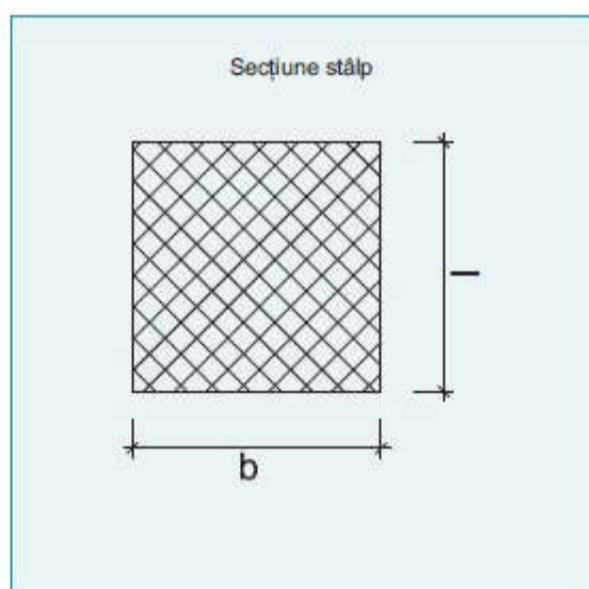


## PRECAST COLUMNS

In the production of precast columns, ARTBETON offers the possibility of executing columns with sections ranging from 0.30 to 1.20 meters, in both constant and variable sections.

Consoles can be projected on all 4 sides of the columns at any level to support floor beams, crane beams, or any other elements.

l, cm	b, cm	Length, cm
30—120	30—120	300—3200

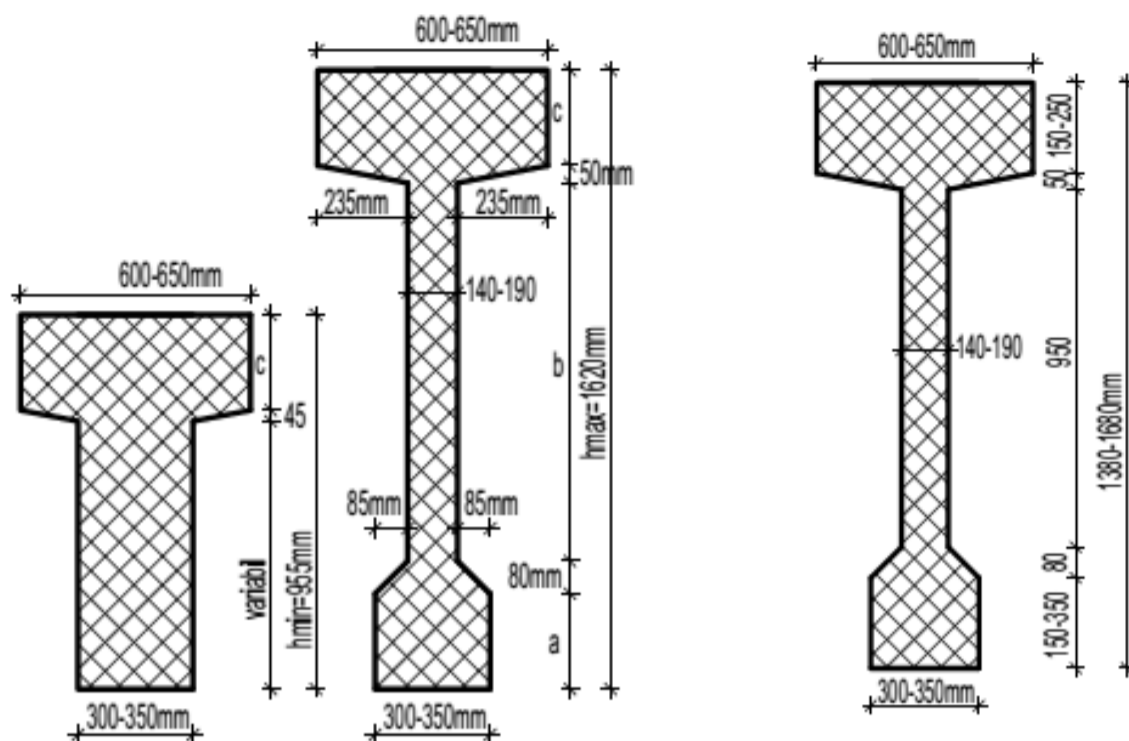




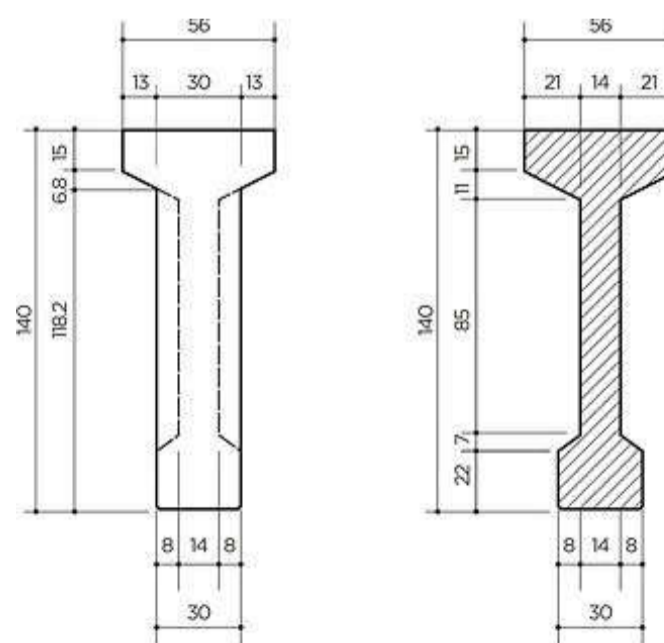
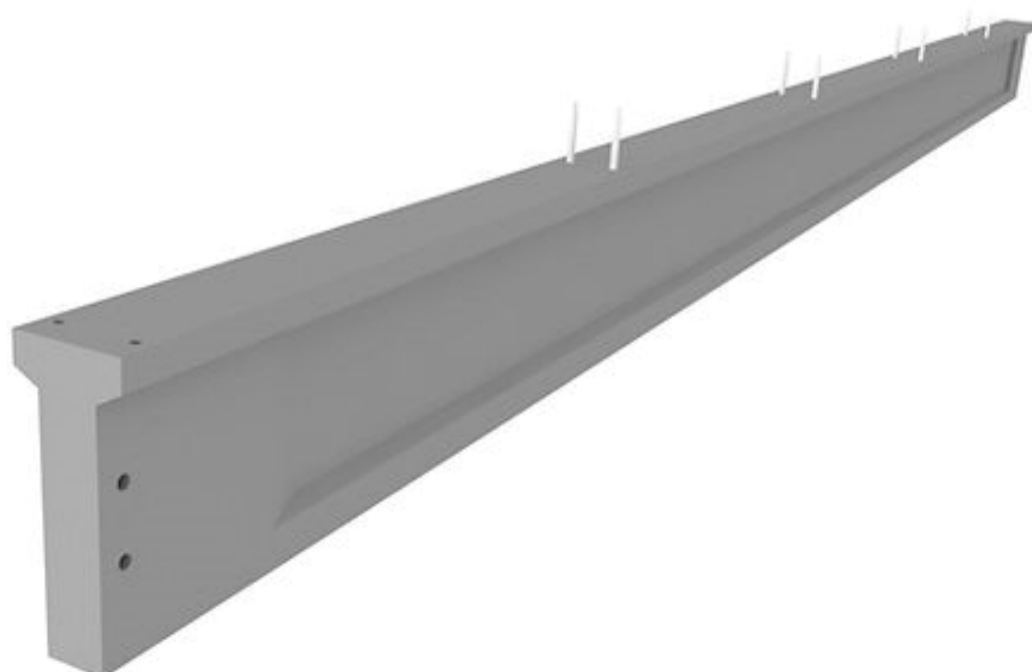
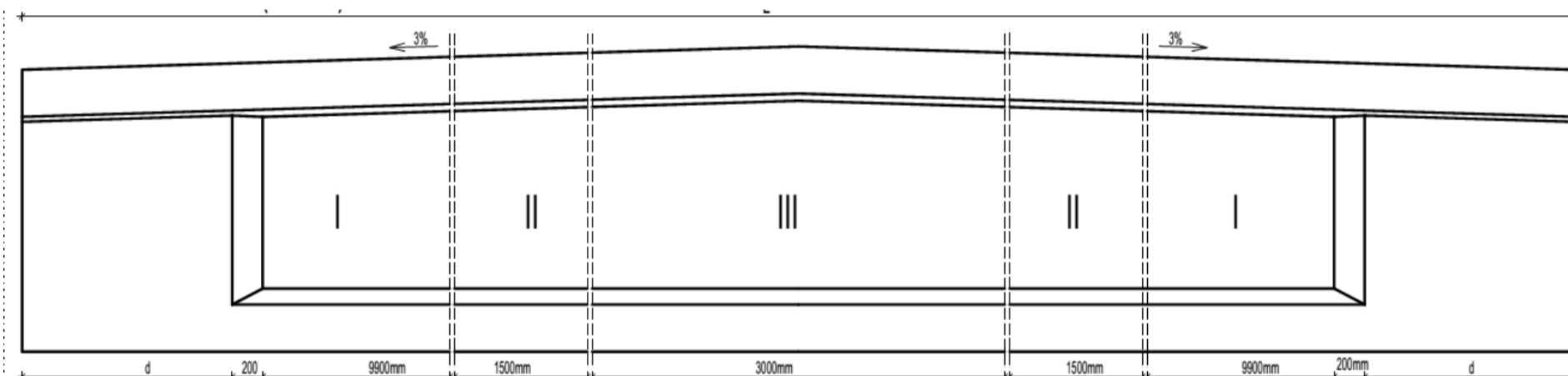
# ROOF BEAMS - "I" SECTION

Depending on the hall structure and the chosen roof type, the prestressed "I" main beam can be produced in a constant section or with a double slope (gabled), with or without a thickening segment.

The maximum length of the beam is 30 m, and the slope can be adjusted between 3-10%.



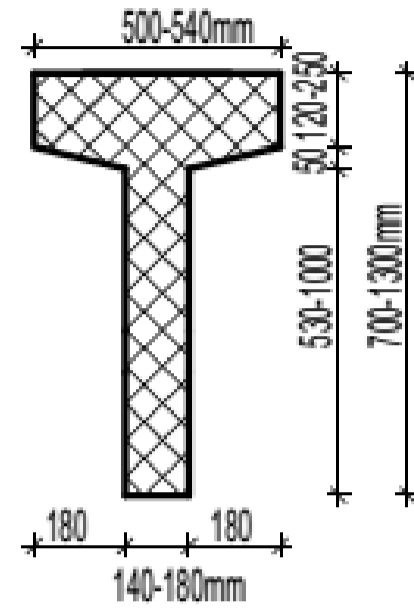
b1, cm	b2, cm	t, cm	h, cm	H, cm	Length, cm
30 - 35	60 - 65	14 - 19	15 - 25	138 - 168	1800 - 3100



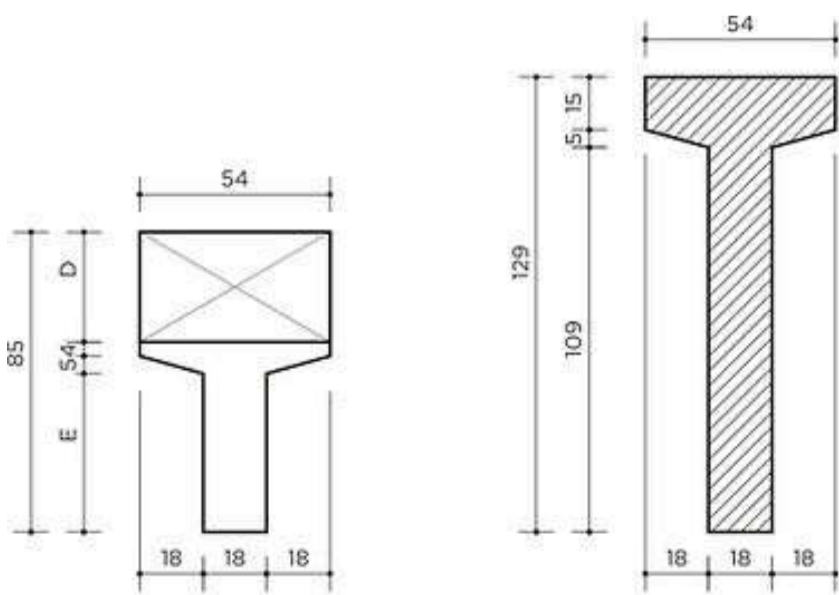
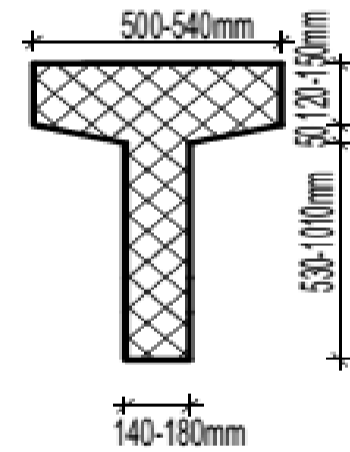
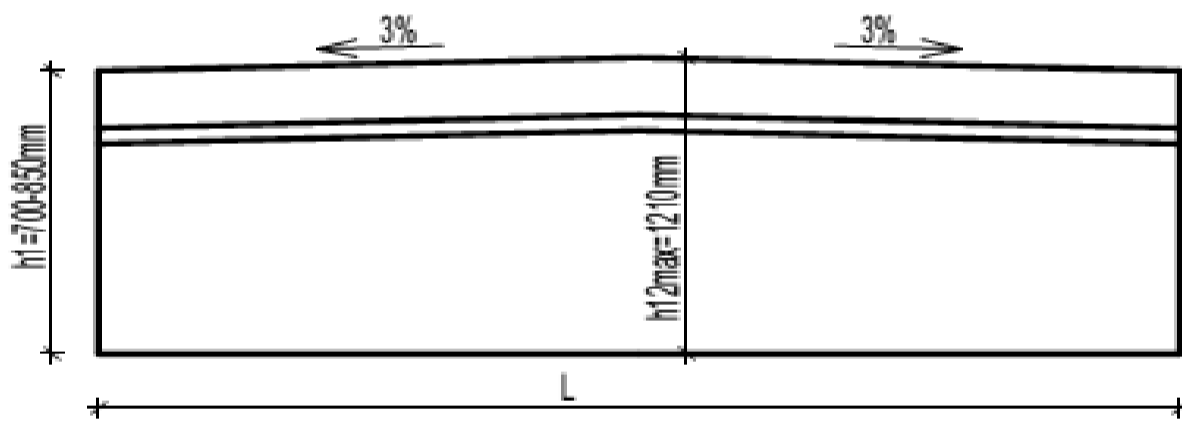
# ROOF BEAMS - "T" SECTION

Depending on the hall structure and the chosen roof type, the prestressed "T" main beam can be produced in a constant section or with a double slope (gabled), with or without a support bulb.

The maximum length of the beam is 25 m, and the slope can be adjusted between 3-10%.



b1, cm	t, cm	h, cm	H, cm	Length, cm
50 - 54	14 - 18	12 - 25	70 - 130	900 - 2500

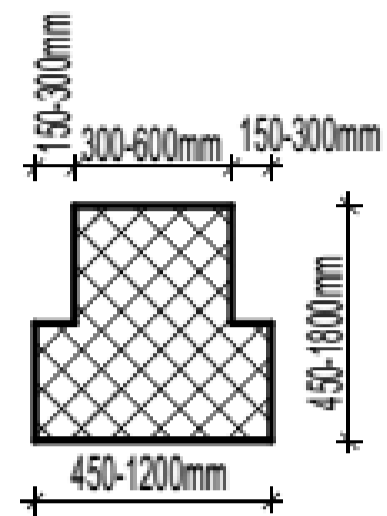




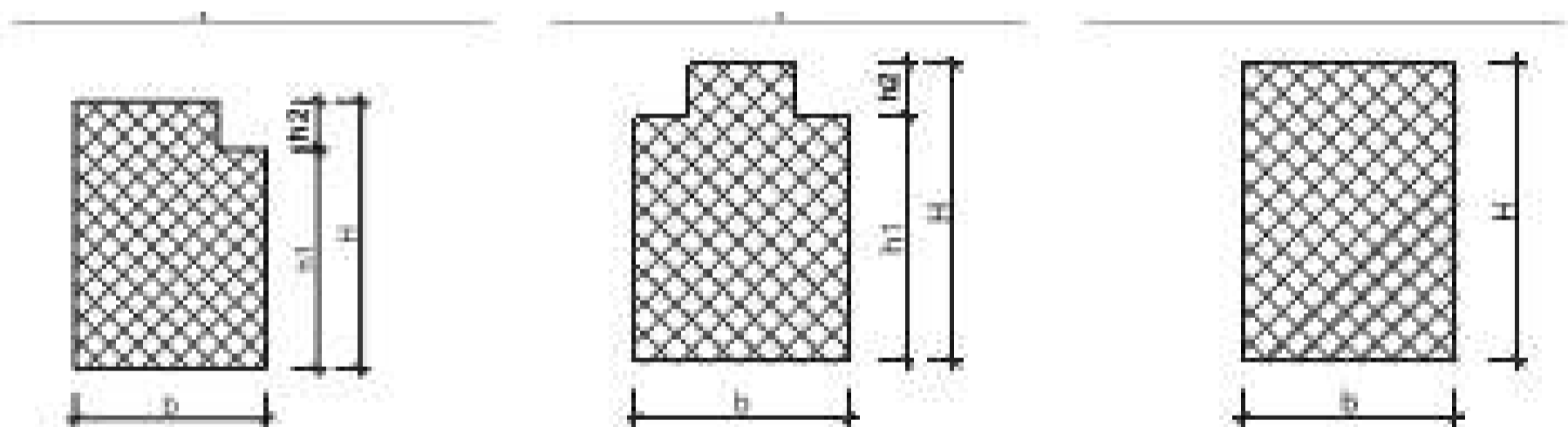
# FLOOR BEAMS - INVERTED T, L, R SECTIONS

Prestressed floor beams can be executed in a wide range of sections and sizes including rectangular, inverted T, or L types.

Positioned centrally or marginally, they ensure connections with floor elements.



b1, cm	t, cm	H, cm	L, cm	Length, cm
30 - 60	15 - 30	45 - 180	45 - 120	600 - 2400

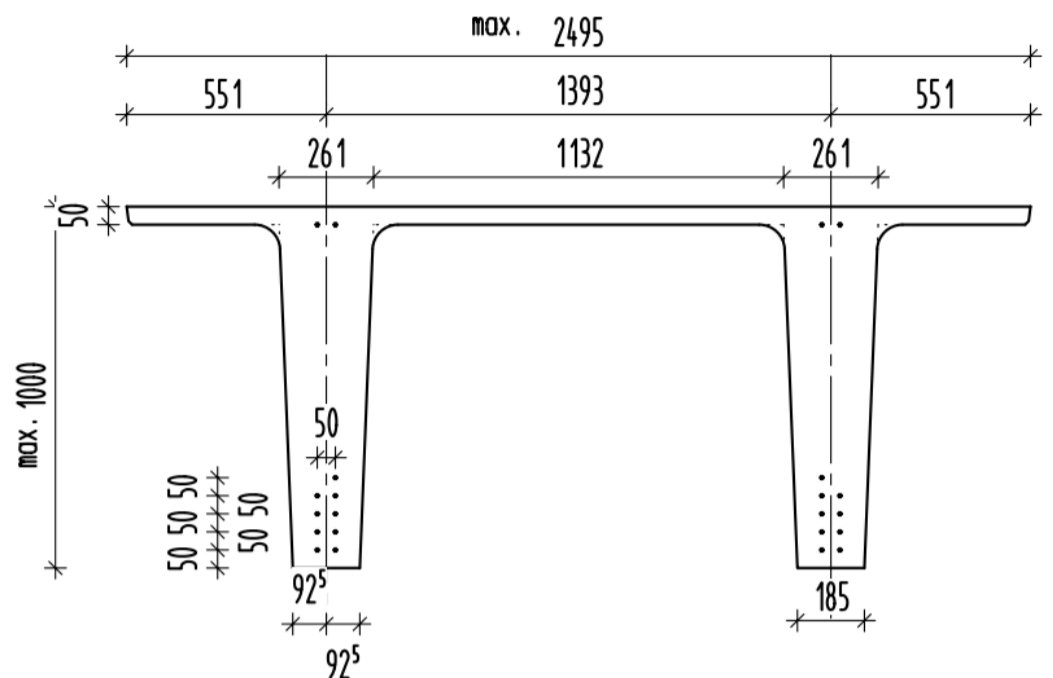




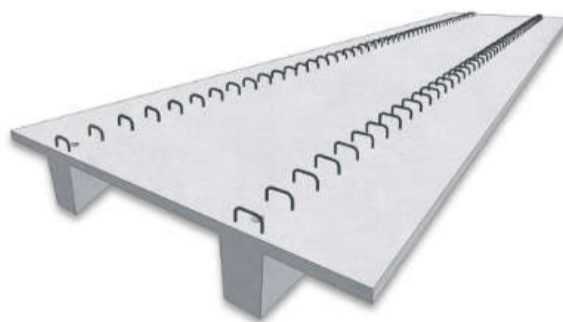
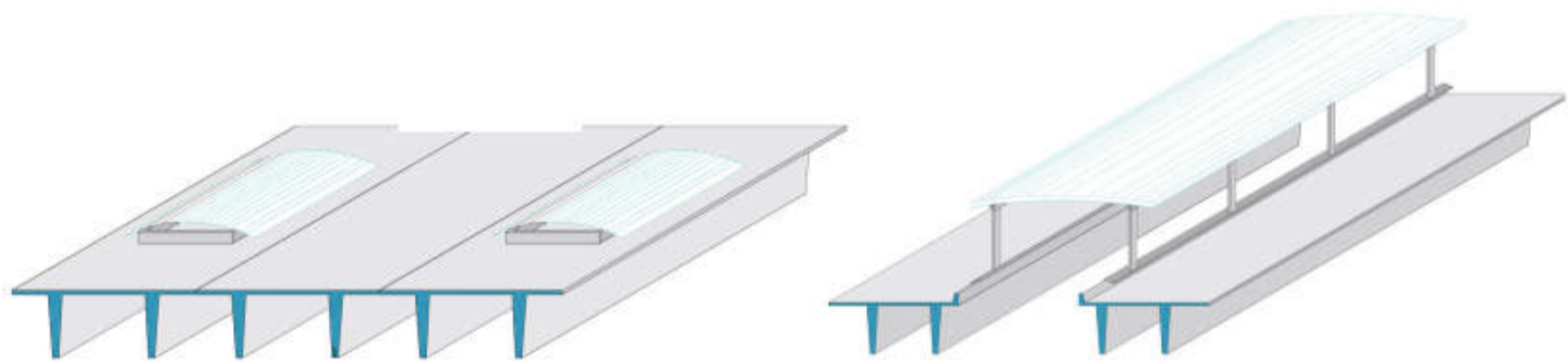
## TT TYPE FLOOR ELEMENTS / SLABS

TT floor elements are prestressed elements with one or two ribs.

Having a relatively low weight, they allow for generous spans with high loads, covering extensive areas in a short assembly time.



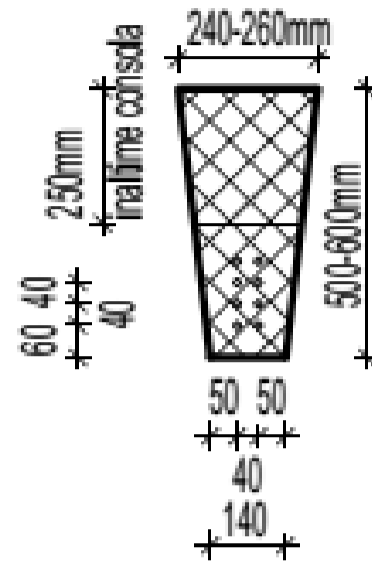
b1, cm	t, cm	H, cm	L, cm	Length, cm
5 - 8	18.5 - 23.5	35 - 100	max - 249.5	600 - 2400



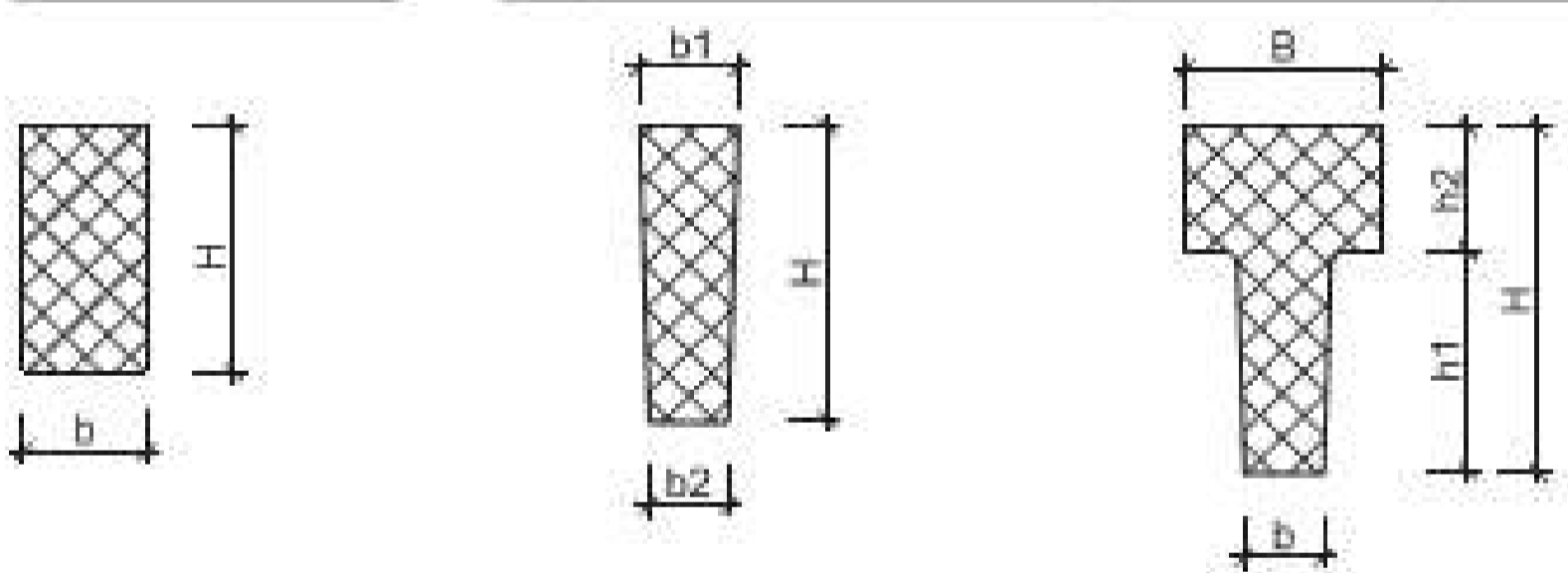


## TRAPEZOIDAL AND T-SECTION PURLINS

Trapezoidal purlins, including those with a T-section, are precast elements made of prestressed or reinforced concrete, produced according to the projected loads and structural system.



b1, cm	H, cm	L, cm	Length, cm
14 - 18.5	50 - 60	24 - 26	Max - 1250



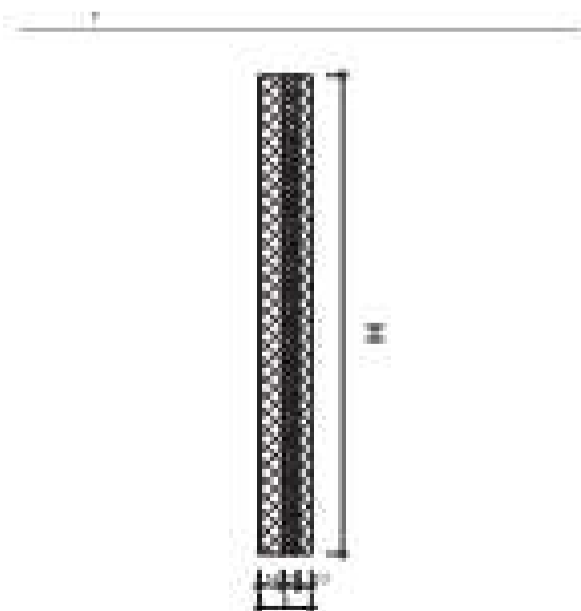
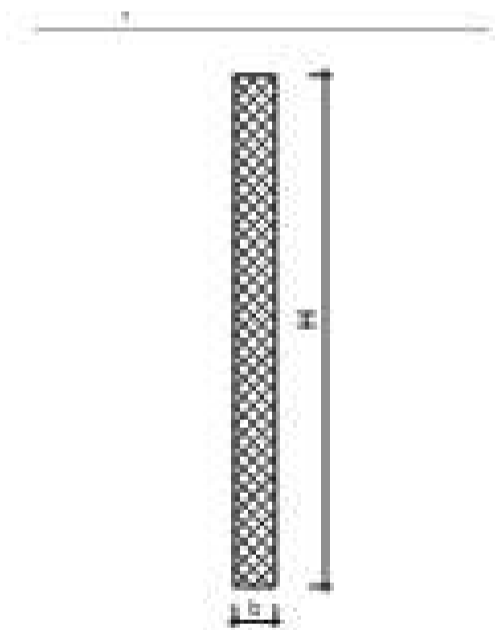


## PRECAST PANELS / WALLS

Concrete precast panels / walls can be produced as single-layer for enclosures or internal partitioning, or as three-layer insulated panels for exterior walls or plinth panels.



H, cm	L, cm	Length, cm
max - 400	max - 45	max - 1300

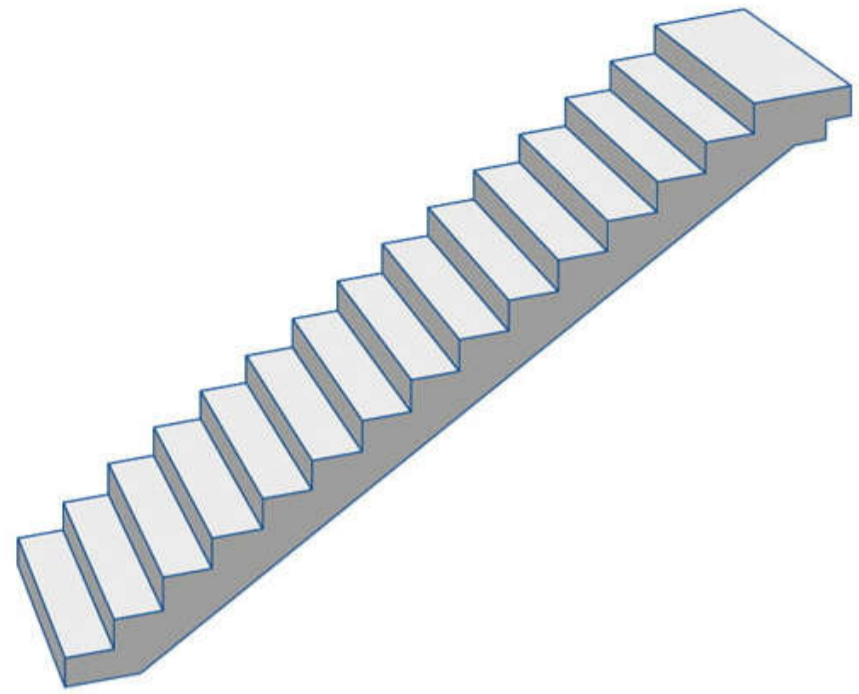




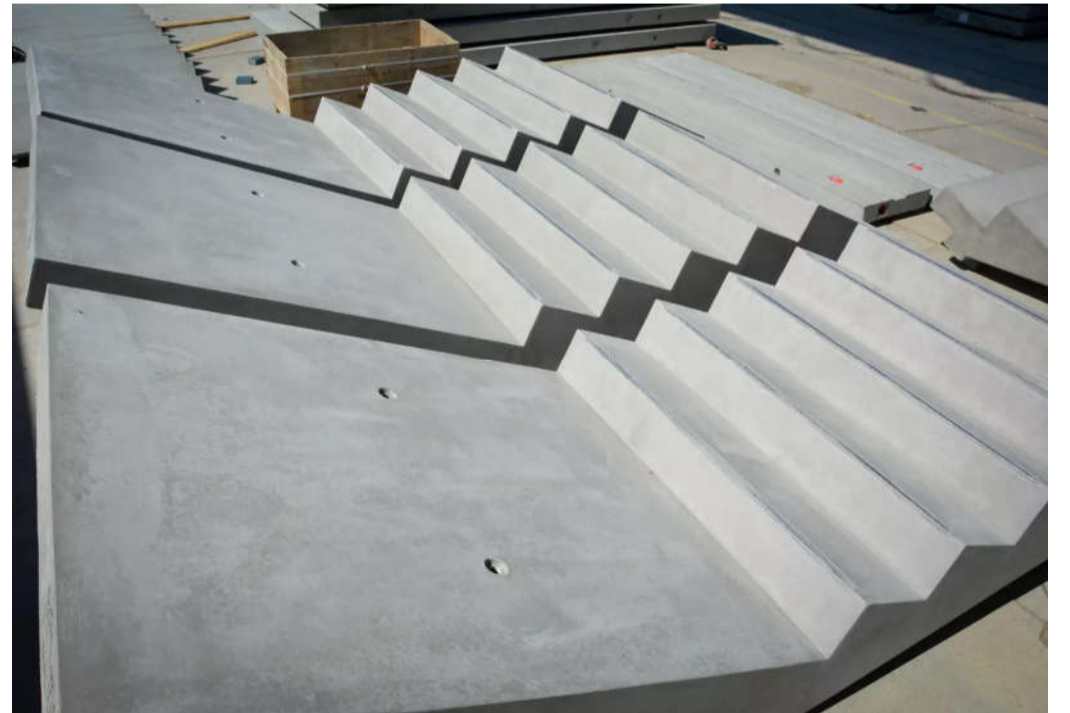
## PRECAST STAIRS

Precast stairs / ramps can be produced with included landing platforms (upper and lower) or without them.

Width of the ramp, landings, and steps are adjustable.



b step, cm	h step, cm	L platform, cm	Nr steps	Ramp Width, cm
25 - 32	14 - 20	160x160	3 - 18	160





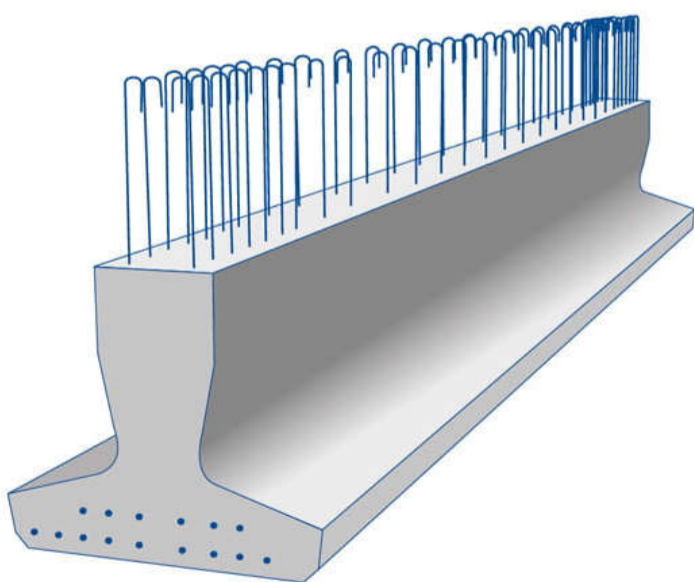
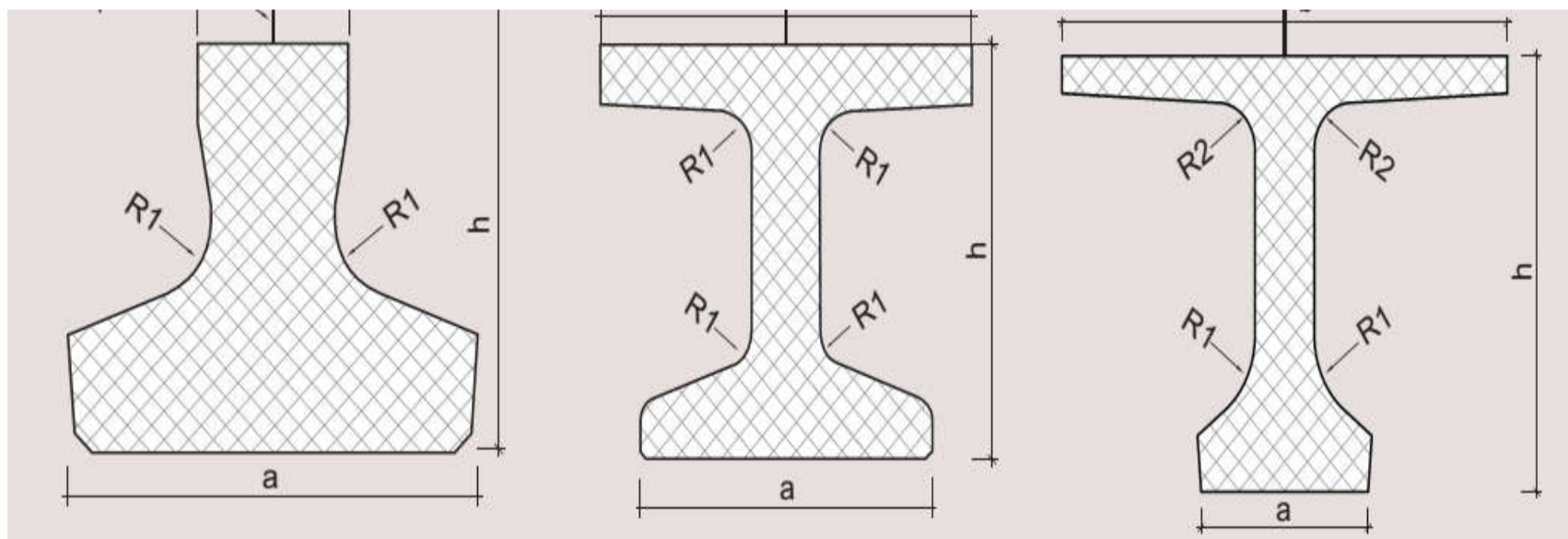
## BRIDGE BEAMS TYPE IPTANA / EUROCODE: T / I / INVERTED T

Bridge beams are prestressed beams produced in accordance with SR EN 15050+A1:2012 for bridge structures, overpasses, underpasses, viaducts, and platforms.

According to the execution design specifying reinforcement type, number of strands, concrete class, etc.

ARTBETON has the capacity to produce bridge beams up to 40 m in length, requiring a prestressing force of 1400T.

BEAM TYPE	L, cm	H, cm	Weight, kg	Volume, mc
GP42-52	600 - 1200	42 - 52	2000 - 4500	0.8 - 1.8
GP42-52E	800 -1200	52	3000 - 5100	1.2 - 2.04
GP72-80	1400 - 1800	72 - 80	13500 - 18325	5.4 - 7.4
GP93-95	2100 - 2400	93 - 95	16600 - 21300	6.4 - 8.5
GP85E/95E/105E	1400 - 2400	85 - 105	8200 - 32000	3.3 - 12.8



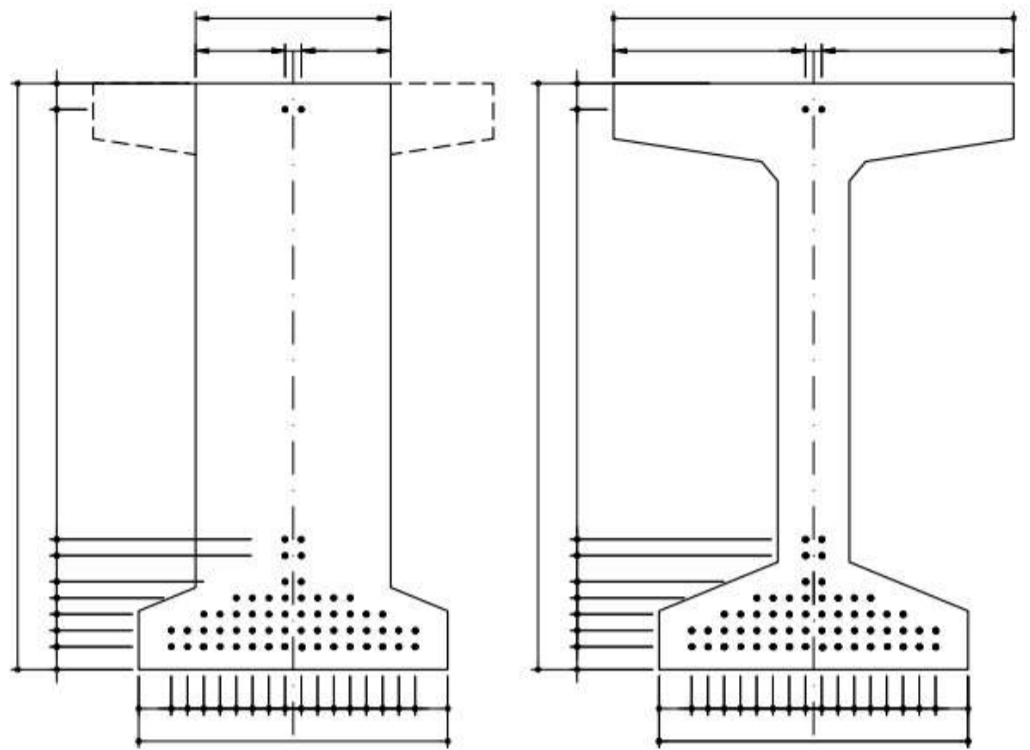


## HIGHWAY BRIDGE BEAMS

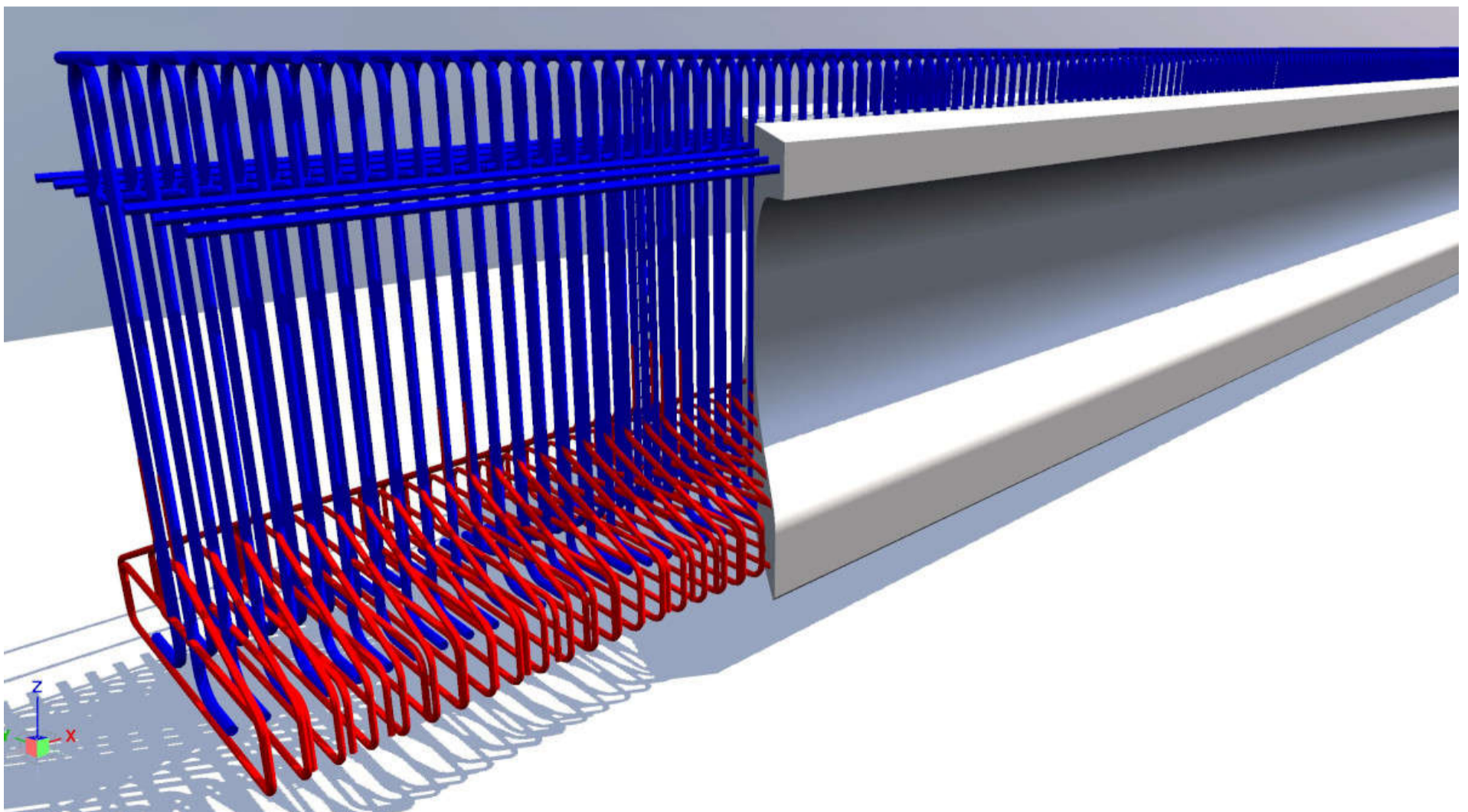
According to the execution design specifying reinforcement type, number of strands, concrete class, etc.

ARTBETON has the capacity to produce bridge beams up to 40 m in length, requiring a prestressing force of 1400T.

ARTBETON molds allow modeling of the beam section, height, width, flange, and strand positioning.



BEAM TYPE	L, cm	H, cm	Weight, kg	Volume, mc
GPA40	2400 - 4000	105 - 220	35000 - 87500	13 - 34.8





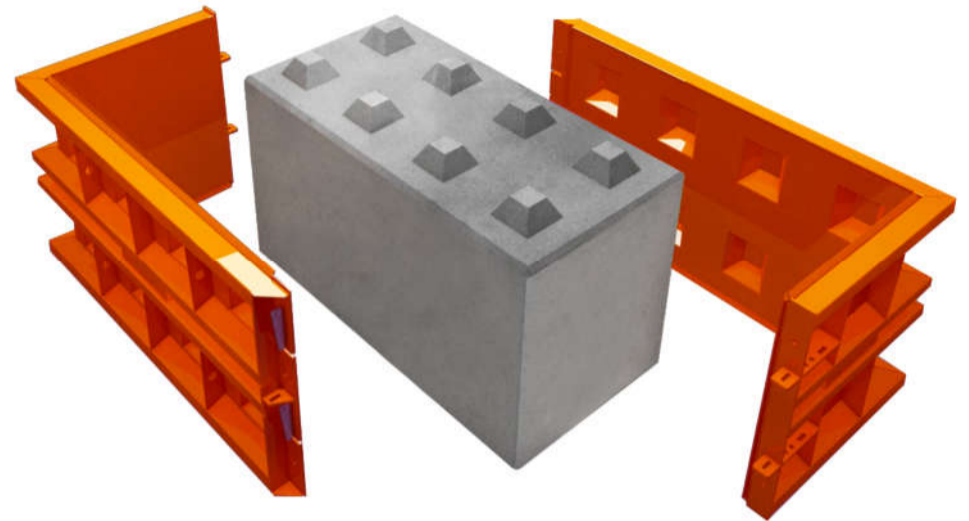
## MODULAR STRUCTURES - BETONBLOCK

Concrete monoblocks are the most versatile products in the precast range.

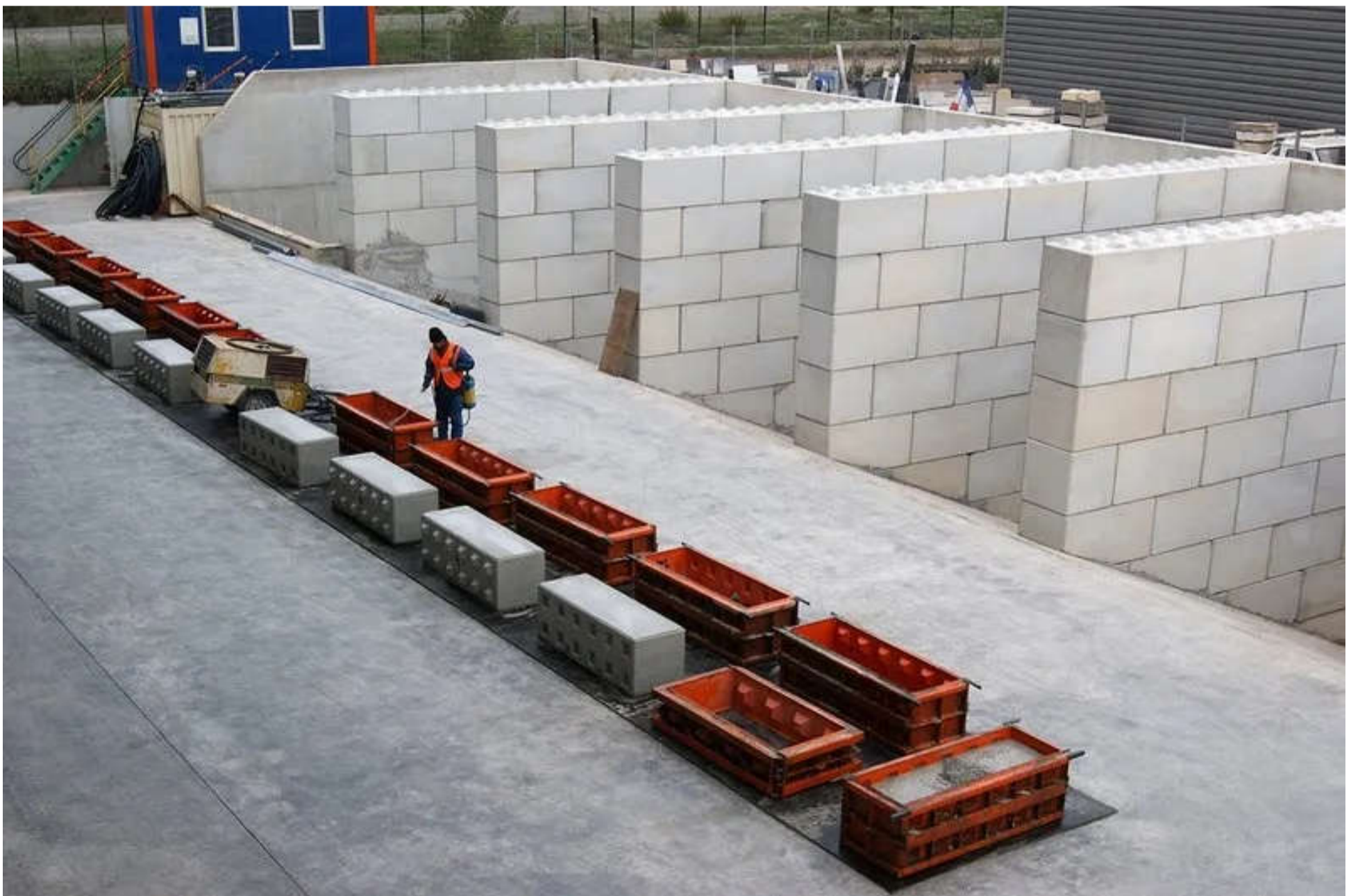
They are used for building storage spaces, shelters, storage walls, or retaining walls.

Assembly follows the LEGO-style block building principle.

Due to their high durability and materials used, they are resistant to atmospheric and mechanical conditions and have excellent fire resistance properties.



L, cm	H, cm	Length, cm
60 - 80	60 - 80	120 - 160





## PRECAST SAFETY BARRIERS

New Jersey type precast concrete safety barriers are versatile products covering a wide range of uses, with the possibility of being surface-installed, fixed with piles, anchored, or embedded.

Precast barriers are quickly assembled, can be relocated at any time, and provide a level of safety for all road traffic participants.



L, cm	H, cm	Length, cm
58 - 64	80 - 100	300 - 600





## NOTES

A large area for writing notes, consisting of numerous horizontal dashed lines.





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