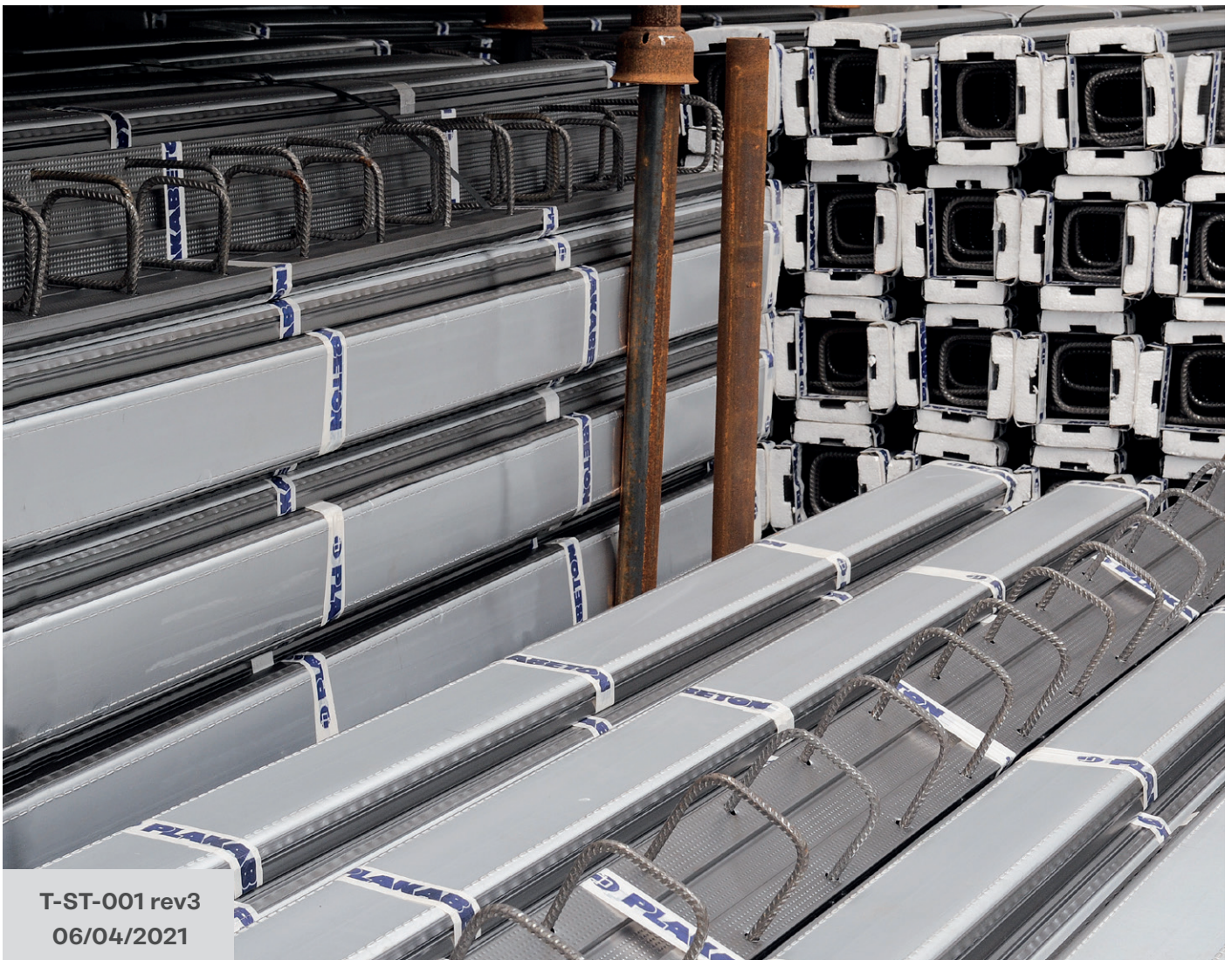


Structural Connections
Reinforcement continuity systems

Leviat[®]
A CRH COMPANY

Plaka Stabox

Reinforcement continuity system



T-ST-001 rev3
06/04/2021

Leviat®

A CRH COMPANY

We imagine, model and make engineered products and innovative construction solutions that help turn architectural visions into reality and enable our construction partners to build better, safer, stronger and faster.

Leviat is a world leader in connecting, fixing, lifting and anchoring technology.

From the build of new schools, hospitals, homes and infrastructure, to the repair and maintenance of heritage structures, our engineering skills are making a difference around the world.

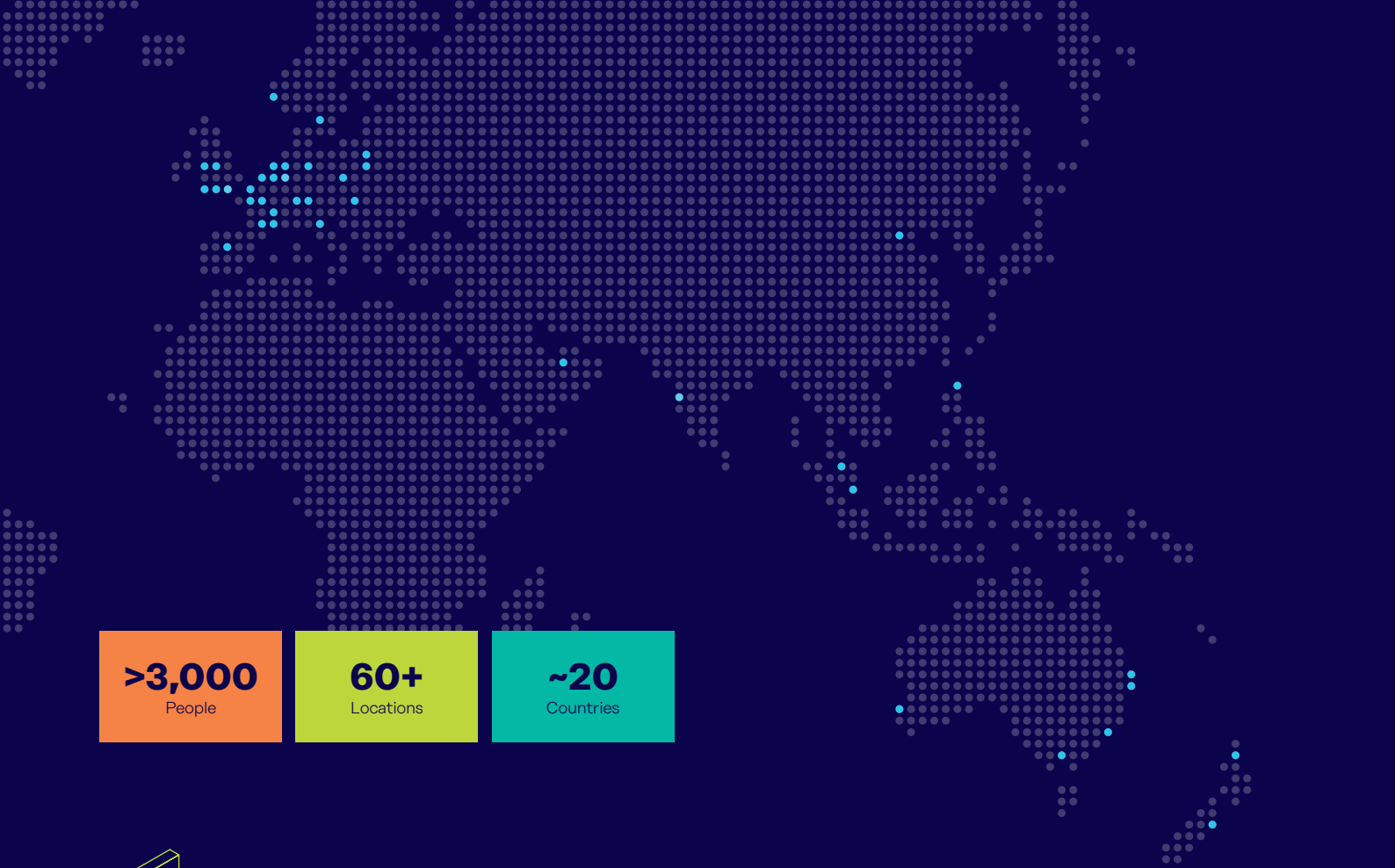
We provide technical design assistance at every stage of a project, from initial planning to installation and beyond.

Our technical support services range from simple product selection through to the development of a fully customised project-specific design solution.

Every promise we make locally, has the commitment and dedication of our global team behind it. We employ almost 3,000 people at 60 locations across North America, Europe and Asia-Pacific, providing an agile and responsive service worldwide.

Leviat, a CRH company, is part of the world's leading building materials business.

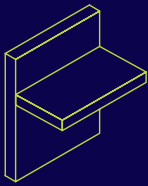




>3,000
People

60+
Locations

~20
Countries

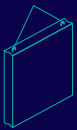


Structural Connections

Systems to form robust, efficient connections, and continuity of concrete reinforcement as necessary, between walls, slabs, columns, beams and balconies, providing structural integrity as well as enhanced thermal and acoustic performance.

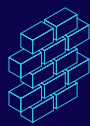
- Insulated balcony connectors
- Reinforcing bar couplers
- Concrete Connections
- Reinforcement continuity systems
- Punching shear reinforcement
- Shear load connectors
- Floor Joint Systems
- Precast / Reinforced Columns
- Infrastructure Products
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- Acoustic dowels and bearings
- Prestress

Other areas of expertise:



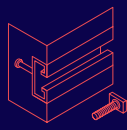
Lifting & Bracing

Systems for the safe and efficient transportation, lifting and temporary bracing of cast concrete elements and tilt-up panels before permanent structural connections are made.



Façade Support & Restraint

Systems for the safe and thermally-efficient fixing of the external building envelope, including brick and natural stone, insulated sandwich panels, curtain walling and suspended concrete façades, and also the repair and strengthening of existing masonry installations.



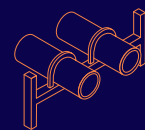
Anchoring & Fixing

Systems for fixing secondary fixtures to concrete, including anchor channels, bolts and inserts; also tension rod systems for roofs and canopies.



Formwork & Site Accessories

Non-structural accessories that complement our engineered solutions and help keep your construction environment operating safely and efficiently, including moulds for casting standard and special concrete elements and construction essentials such as reinforcing bar spacers.



Industrial Technology

Mounting channels, pipe clamps and other versatile framing systems that provide safe fixing in a wide range of industrial applications.

Leviat product ranges:

Ancon | Aschwanden | Connolly | Halfen | Helifix | Isedio | Meadow Burke | Modersohn | Moment | Plaka | Scaldex | Thermomass

Plaka Stabox

Reinforcement continuity system

Due to the exclusive profile, specially designed to anchor itself in the concrete, the Stabox is the only rebar casing capable of making an anchoring which can transfer significant forces around the structural joints.



Advantages

- The external dovetail shape guarantees a tongue and groove connection between the two concreting phases. **1**
- The double internal dovetail shape fixes the profile in the concrete and limits the width of cracks caused by shrinkage. Only the Stabox can improve the water-tightness of the structural joint. **2**
- The diamond shaped pattern on the surface of the casing improves the bond and allows the transfer of shear forces. **3**
- The corrugated edges on the sides prevent displacement of the casing when the lid is removed, improving the quality of the anchoring. **4**
- The cardboard lid is easy to remove under all conditions because of the double longitudinal perforations present. **5**
- The polystyrene inserts, perfectly adapted to the shape of the casing, prevent the penetration of cement slurry along the sides of the casing. **6**

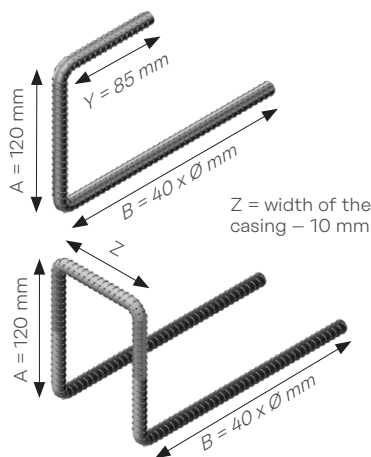
Technical properties

- The two commercial* standard lengths of Stabox are: 1.25 and 2.45 m
- The width of the casing depends on the type of casing
- The height of the metal casing is 30 mm

Stirrups: Serrated steel BE500 S with certificate AFCAB - BENOR - KIWA.

- Ø 6 mm cold-rolled
- Ø 8, 10 and 12 mm bendable once-only

* The lengths of the steel casings are 1.20 and 2.40 m respectively. The standard measurements of the stirrups are shown above. Other versions (dimensions A and B) are available to order.



Plaka Stabox

Reinforcement continuity system

Instructions for use



1

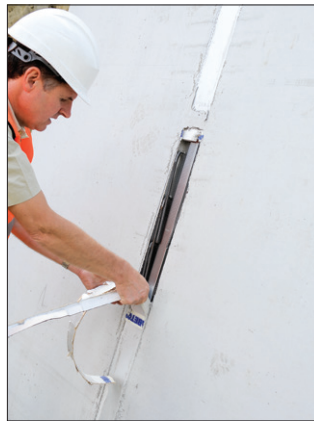


2

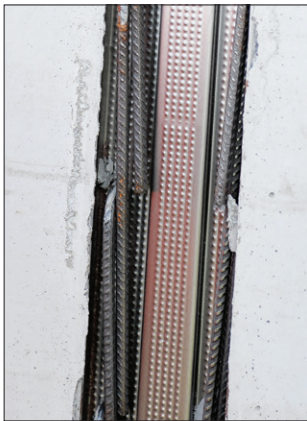
- 1 Check that the chosen dimensions of the Stabox correspond with the required concrete cover of the second concreting phase. Ensure that the polystyrene inserts are in place at both ends of the casing.
- 2 Fix the Stabox to the formwork and to the reinforcements as well if required.
- 3 Cast the concrete in the first phase.
- 4 Remove the cardboard lid and the polystyrene inserts after removing the formwork.
- 5 Check that the stirrups are completely clean.
- 6 Bend the bars out. It is advisable to use a bending tool to avoid distortion of a bayonet.



3



4

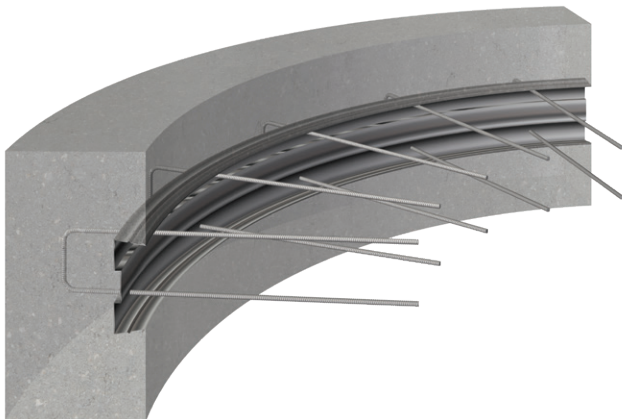


5



6

Centring the Stabox



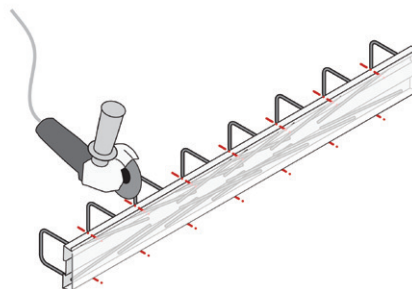
The only rebar casing which can realise a tongue and groove connection between the two concreting phases.

The Stabox can cope with a curve because of the saw cuts on the sides of the casing.



Obviously the starter bars may not be cut or damaged.

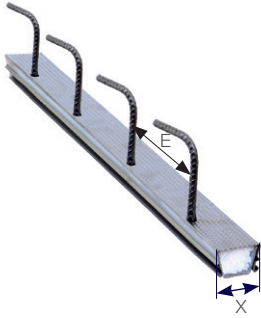
The openings in the casing must be carefully sealed before the concrete is cast.



Plaka Stabox

Standard types

Type S

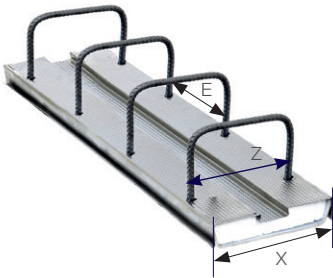


45 S				
	E (mm)			
Ø 6	-	200	240	300
Ø 8	150	200	240	-
Ø 10	150	200	-	-

60 S				
	E (mm)			
Ø 6	-	-	-	-
Ø 8	150	200	-	-
Ø 10	150	200	-	-

90 S				
	E (mm)			
Ø 8	-	-	-	-
Ø 10	100	150	-	-
Ø 12	100	150	200	-

Type D



90 D				
	E (mm)			
Ø 6	-	200	240	300
Ø 8	150	200	240	-
Ø 10	150	200	-	-

120 D				
	E (mm)			
Ø 6	-	200	240	-
Ø 8	150	200	240	-
Ø 10	150	200	-	-

160 D				
	E (mm)			
Ø 6	-	-	-	-
Ø 8	150	200	-	-
Ø 10	150	200	-	-
Ø 12	150	200	-	-

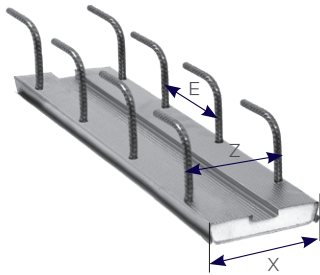
190 D				
	E (mm)			
Ø 6	-	-	-	-
Ø 8	150	200	-	-
Ø 10	150	200	-	-
Ø 12	150	200	-	-

230 D				
	E (mm)			
Ø 6	-	-	-	-
Ø 8	150	-	-	-
Ø 10	150	200	-	-
Ø 12	150	-	-	-

Plaka Stabox

Standard types

Type DS



120 DS

E (mm)		
Ø 10	100	150
Ø 12	100	150

160 DS

E (mm)		
Ø 10	-	150
Ø 12	100	150

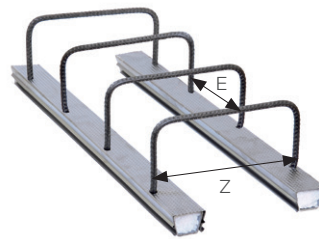
190 DS

E (mm)		
Ø 10	-	150
Ø 12	100	150

230 DS

E (mm)		
Ø 10	-	150
Ø 12	100	150

Type DX

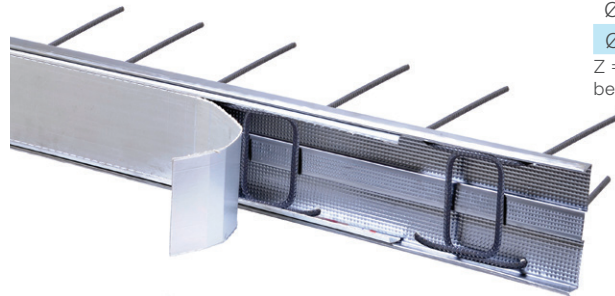
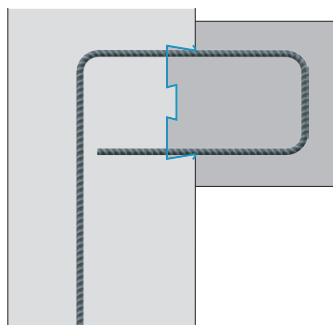


DX

E (mm)			
Ø 6	-	200	240 300
Ø 8	150	200	240 -
Ø 10	150	200	- -
Ø 12	150	200	- -

Z = outer dimensions of stirrup to be shown

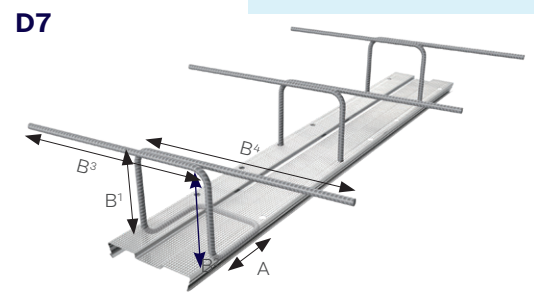
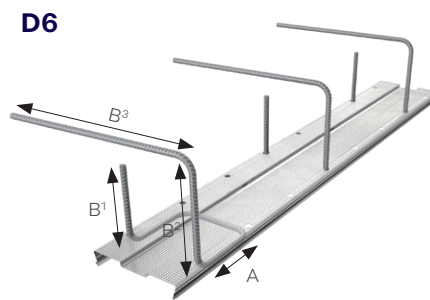
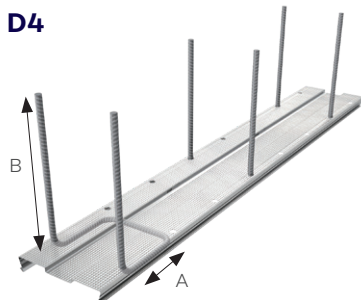
Stabox reversed stirrups



A type of Stabox with stirrups bent in the casing can be used to produce a reinforced concrete corbel. The stirrups can be bent in accordance with the models D4, D6 and D7 below.



You must provide the size of the concrete corbel and the concrete sizes in the 1st phase when ordering, as well as the concrete cover.



Plaka Stabox

Dimensioning

Conformity with sections - cm ² /m						
Ø / E (mm)	100	150	200	240	300	
6 (0,222 kg/m)	2,83	1,87	1,41	1,18	0,95	
8 (0,395 kg/m)	5,03	3,33	2,51	2,09	1,71	
10 (0,617 kg/m)	7,85	5,27	3,93	3,27	2,67	
12 (0,888 kg/m)	11,31	7,53	5,65	4,71	3,84	

Maximum length B						
Type	Ø staal	Spacing				
		300	240	200	150	100
45 S	6	1100	1100	1000		
	8	1000	800	700	500	
	10		600	500	390	
	12					
60 S	6					
	8		1100	1000	800	
	10			800	700	
	12					
90 S	6					
	8					
	10			1050	900	600
	12			950	700	480
90 D	6	1000	900	800	750	
	8	800	700	600	450	
	10			500	390	
	12					
120 D	6	1200	1200	1000		
	8	1000	750	600	500	
	10			650	400	
	12					
160 D	6			1200	1200	
	8			1100	900	
	10			800	700	
	12			750	600	

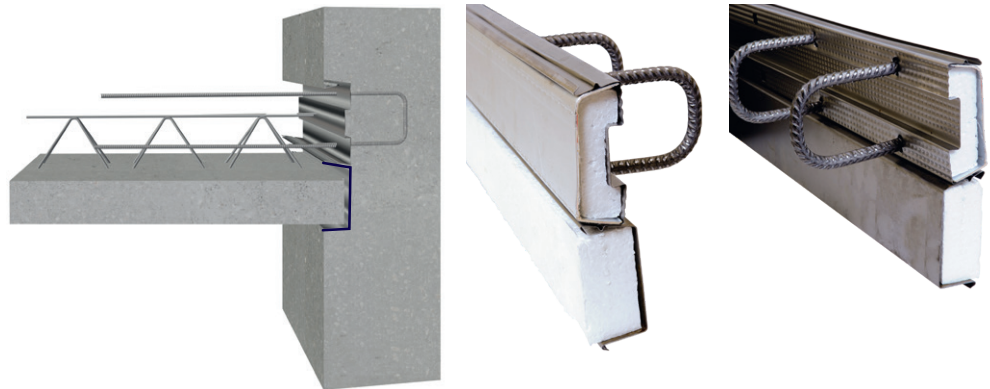


Plaka Stabox

Accessories

Prefab casing slab

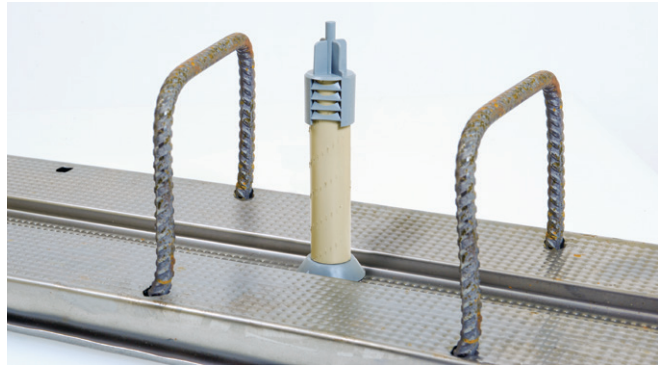
A rebate welded to the Stabox creates a support for the pre-cast casing slab and simplifies the implementation.



Spacers

Spacers are available to guarantee good stability of the unit and to prevent shifting in the formwork.

The length of the spacers must be 20 mm less than the thickness of the wall.



Fixings



- The Stabox is nailed to wooden formwork or tied to the reinforcing.
- The Stabox is fixed with magnetic blocks and tied to the reinforcing or a spacer is used in metal formwork.

Magnetic blocks:

Type 45 for Stabox 45 & 60

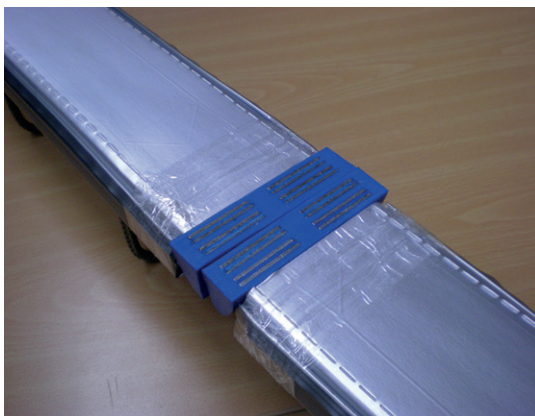
Type 90 for Stabox 90 & 120

The magnetic blocks are made from a synthetic resin in which non-removable ferrite is incorporated.

The blocks are placed at each end of the Stabox next to the polystyrene inserts (do not remove the inserts).

Use of a spacer is necessary when the Stabox is positioned horizontally.

The magnetic blocks are easily recovered when the formwork is removed.



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