

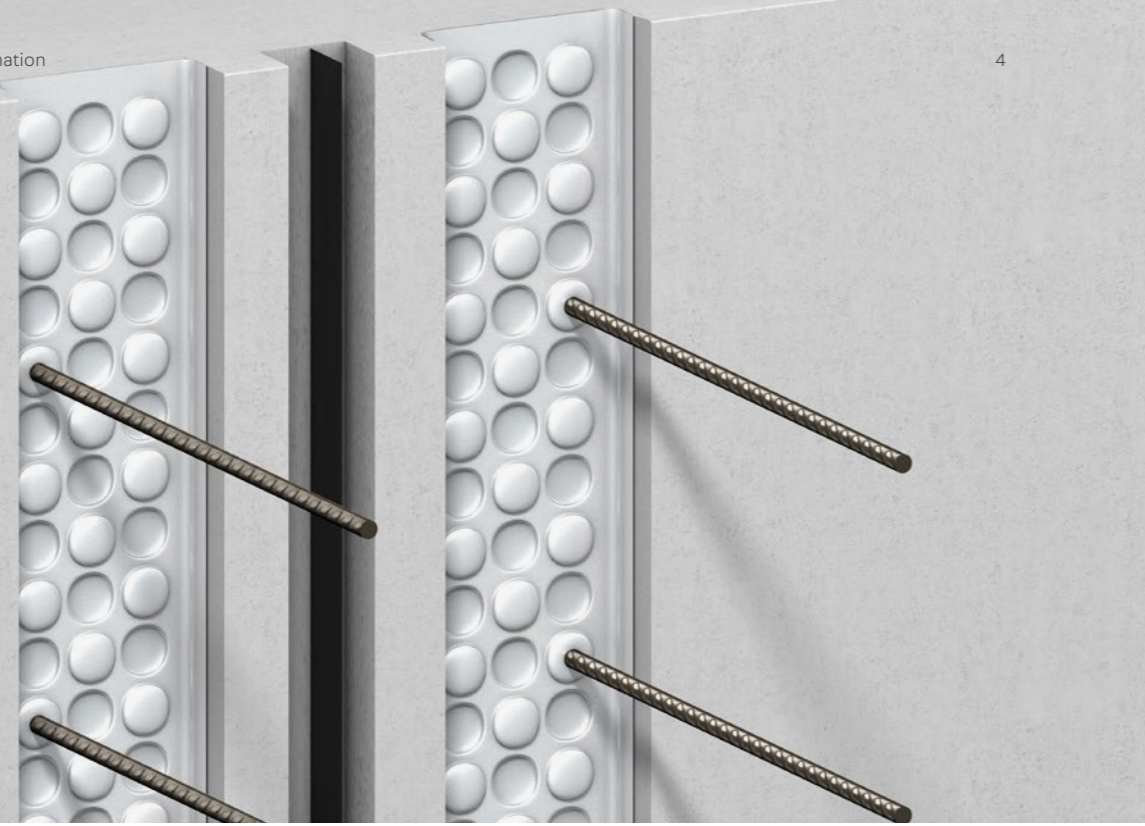
PENTAFLEX® Modul

Technical information



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PENTAFLEX® Modul

Watertight reinforcement connector with tried-and-tested PENTAFLEX® technology

NEW
with
abP*

The product

In combination with PENTAFLEX® Modul, two single-row FERBOX® rebend connectors become a watertight reinforcement connector. FERBOX® rebend connectors connect two reinforced concrete parts together statically or structurally. To seal the resulting construction joint and prevent water from leaking in through the joint, a further protective box and a PENTAFLEX® seam sheet - the PENTAFLEX® Modul - are installed between two single-row FERBOX® protective boxes. This guarantees the watertightness of construction joints with rebend connectors using tried-and-tested PENTAFLEX® technology.



Benefits

- General building code test certificate P-5120/231/09 MPA-BS
- Watertight thanks to tried-and-tested PENTAFLEX® technology
- Permissible water pressure 0.75 bar in line with German building code test certificate (abP)
- Simple installation and further processing in combination with FERBOX® rebend connectors
- Fulfills all requirements of rebend connectors

Areas of application

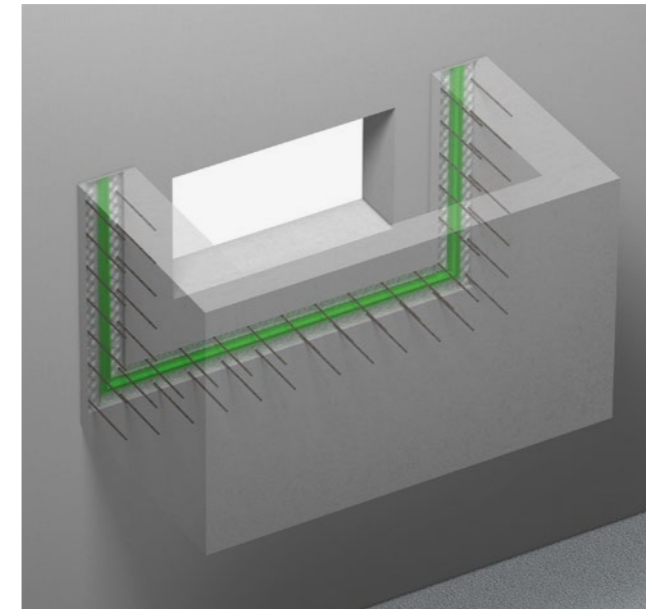


The PENTAFLEX® Modul in combination with FERBOX® rebend connectors is the ideal solution wherever structural components have to be connected to form friction-locked and watertight connections. They can be used in industrial, commercial, residential or public building projects.

*abP - German building code test certificate

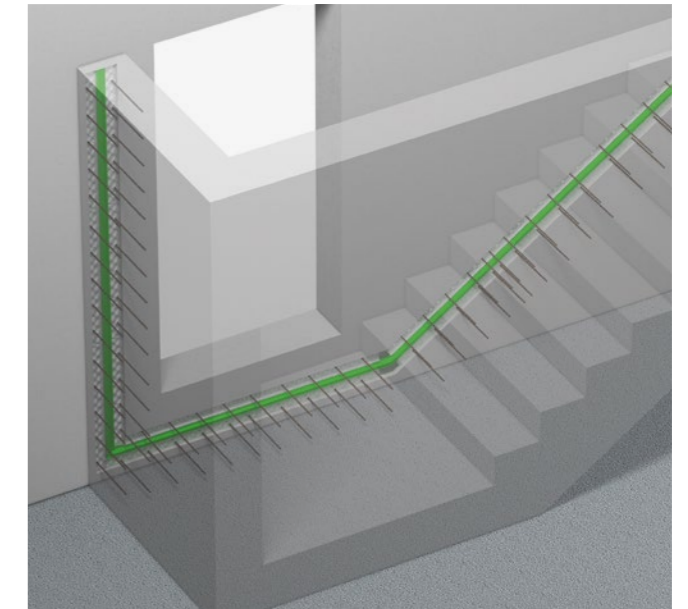
Possible applications

Light well / cellar wall



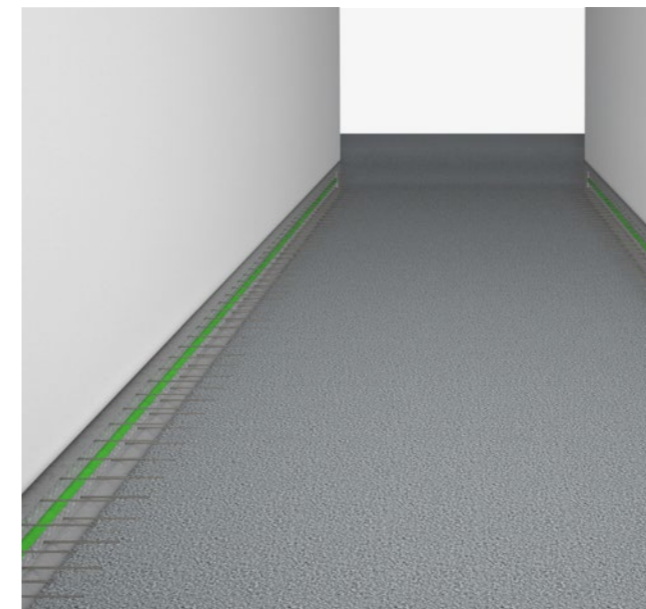
PENTAFLEX® Modul is ideal for sealing construction joints with continuous formwork, e.g. joints between light wells and cellar walls.

Cellar stairs / cellar wall



Construction joints between cellar walls and cellar stairs can also be sealed against the ingress of water by using PENTAFLEX® Modul.

Wall / floor slab ramp



It is essential to waterproof joints in parts of buildings below ground level, such as underground garages, to prevent the structure being damaged by the ingress of water.



Our Application Technology department would be happy to provide you with further information on individual installation situations.

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technik-hbau@pohlcon.de

The perfect combination of FERBOX® and PENTAFLEX®

The watertight rebend connector

PENTAFLEX® seam sheet

PENTAFLEX® seam sheets are coated on both sides with a special coating. The bond between the special coating and the fresh concrete reliably prevents water infiltrating the joint system. The seam sheet is 60 mm high and has a split protective film 30 mm high on both sides, which is only removed immediately before pouring the concrete.

Protective box

The dimensionally stable casing is 30 mm tall and contains the PENTAFLEX® seam sheet and two EPP filling strips. Both are removed after the first section has been cast.

EPP filling strips

The two expanded polypropylene (EPP) strips are 30 mm high and are removed when the formwork is stripped from the first cast section.

Nail flange

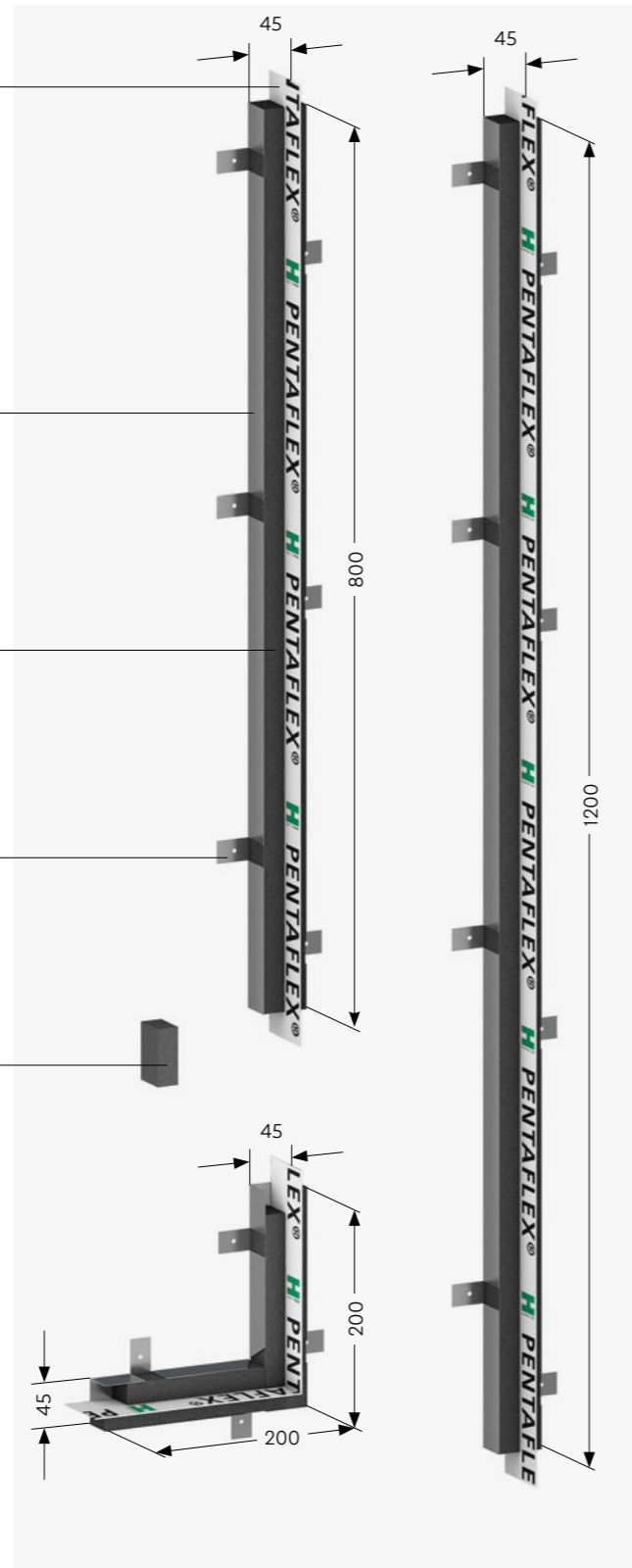
The nail flanges on the protective box are used to fasten it to the formwork.

EPP stopper strips

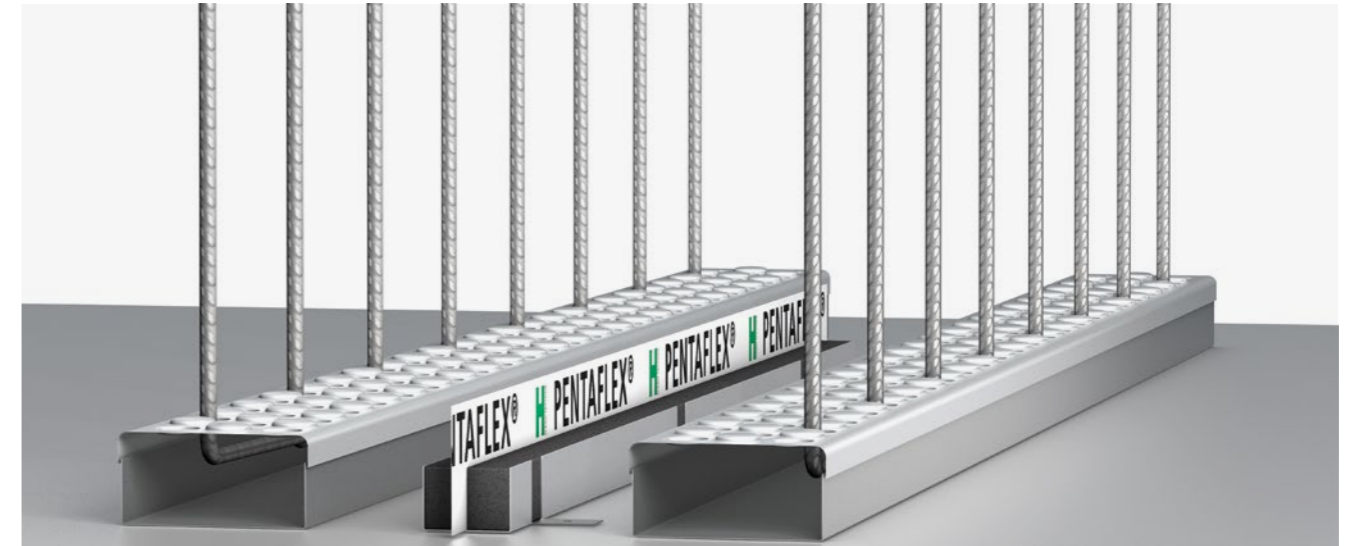
When connecting PENTAFLEX® modules, the transitions are filled with EPP stopper strips after connecting the seam sheets.

The range includes

- PENTAFLEX® Modul 1200
- PENTAFLEX® Modul 800
- PENTAFLEX® Modul Eck



Basic information




PENTAFLEX® Modul

- For combination with all single-row FERBOX® types: 2 x E01, 2 x E02, 2 x E03, EE
- Sealed by tried-and-tested PENTAFLEX® seam sheet 60 mm high
- Permissible water pressure 0.75 bar in line with German building code test certificate (abP)
- Seam sheet anchoring depth in line with German building code test certificate 30 mm
- Module length: 800 mm or 1200 mm, other lengths on request
- PENTAFLEX® Modul Eck as an addition for corner connections
- Multiple PENTAFLEX® Modul units can be overlapped and connected together by leaving a 50-mm PENTAFLEX® seam sheet overlap

FERBOX®

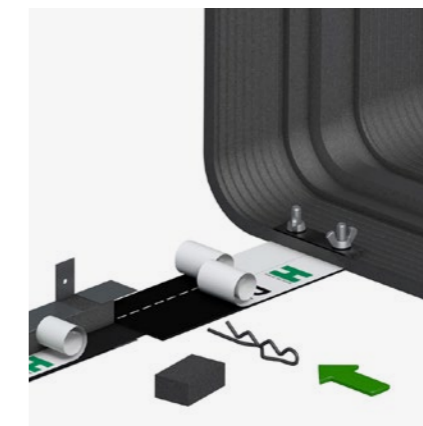
- ETA-20/0842
- Reinforcement bars dia. 8/10/12/14 made from B500B rebar
- Stainless steel rebar available on request
- Nubbed protective box for interlocking joints in line with EC2
- Galvanised steel cover
- For dimensions, see FERBOX® technical information

 For further information on FERBOX®, see the technical information for FERBOX® rebend connectors.

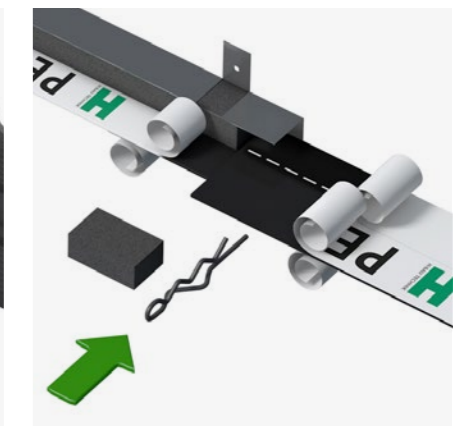
Connection options



FBA KB 80 joint tape connection



Connection to KUNEX® joint tape

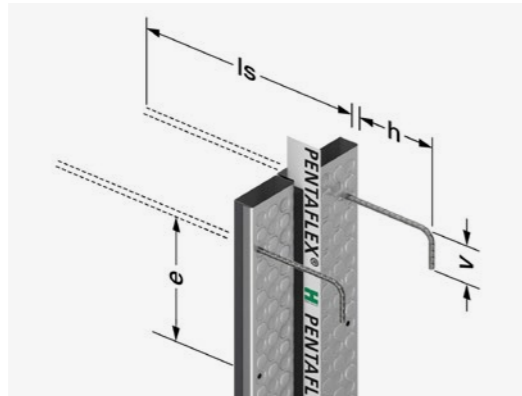


Connection to PENTAFLEX® KB

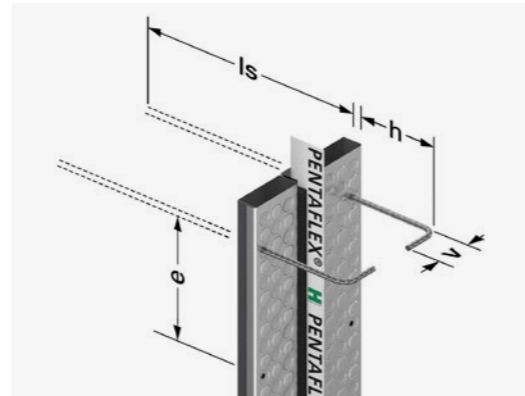
Technical data

Possible configurations with single-row FERBOX® rebend connectors

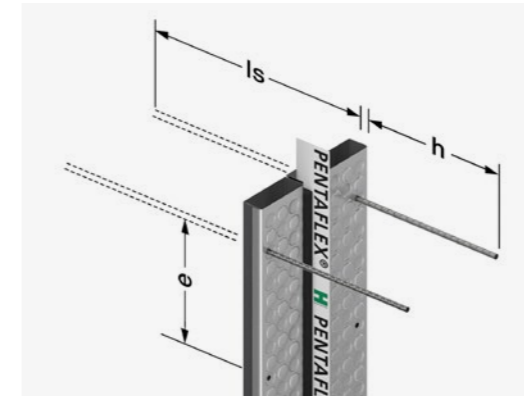
PENTAFLEX® Modul with 2 x type E01



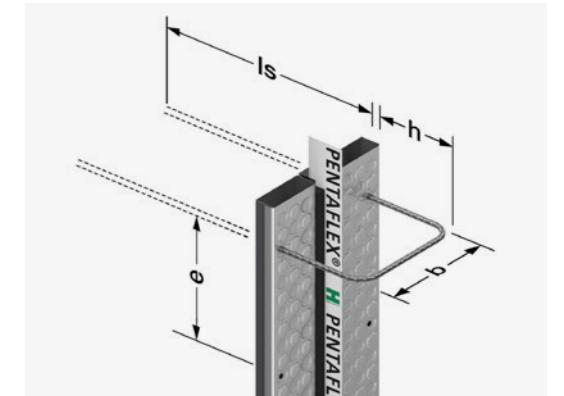
PENTAFLEX® Modul with 2 x type E02




PENTAFLEX® Modul with 2 x type E03



PENTAFLEX® Modul with 1 x type EE



 FERBOX® type designation, see page 8

B mm	Dia./e mm	h mm	ls mm	v mm
60	8/100	100-600	150-210	75-90
	8/150		150-510	
	8/200		150-600	
	8/250	150-600	90-100	
	10/100	150-200		
	10/150	150-390		
10/200	150-510			
85	10/250	150-510	90-600	
	8/100	150-430		
	8/150	150-510		
	8/200	150-600		
	8/250	150-600		
	10/100	150-430		
	10/150	150-510		
	10/200	150-600		
	10/250	150-600		
	12/100	200-430		
	12/150	200-510		
	12/200	200-600		
110	12/250	200-600	110-600	
	10/100	150-500		
	10/150	150-600		
	10/200	150-600		
	10/250	150-600		
	12/100	200-600		
	12/150	200-600		
	12/200	200-600		
135	12/250	200-600	110-600	
	12/100	200-600		
	12/150	200-600		
	12/200	200-600		

B: Box width | dia.: Bar diameter | e: Bar spacing | h: Anchoring length | ls: Overlap length | v: Hook length

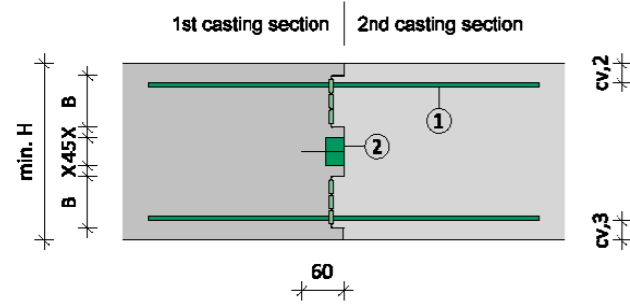
B mm	Dia./e mm	h mm	ls mm	b mm	h mm	ls mm		
60	8/100	150-600	150-210	140-500	100-300	200-210		
	8/150		150-510			200-510		
	8/200		150-600			200-600		
	8/250		150-600			200-600		
	10/100		150-200			-		
	10/150		150-390	300-390				
	10/200		150-510	300-510				
	10/250		150-510	300-510				
	85		8/100	150-600	150-430	190-500	100-300	200-430
			8/150		150-510			200-510
8/200		150-600	200-600					
8/250		150-600	200-600					
10/100		150-430	300-430					
10/150		150-510	300-510					
10/200		150-600	300-600					
10/250		150-600	300-600					
12/100		200-430	-					
12/150		200-510	360-510					
110	12/200	200-600	200-600	240-500	120-300	360-600		
	12/250		200-600			360-600		
	10/100		150-500			-		
	10/150		150-600			-		
	10/200		150-600			-		
	10/250		150-600	-				
	12/100		200-600	360-600				
	12/150		200-600	360-600				
	12/200		200-600	360-600				
	12/250		200-600	360-600				
135	12/100	200-600	200-600	290-500	120-300	360-600		
	12/150		200-600			360-600		
	12/200		200-600			360-600		
	12/250		200-600			360-600		

B: Box width | dia.: Bar diameter | e: Bar spacing | h: Anchoring length | ls: Overlap length | b: Stirrup width

Planning notes

Determine the minimum component thickness

Straight connection (e.g. wall/wall)

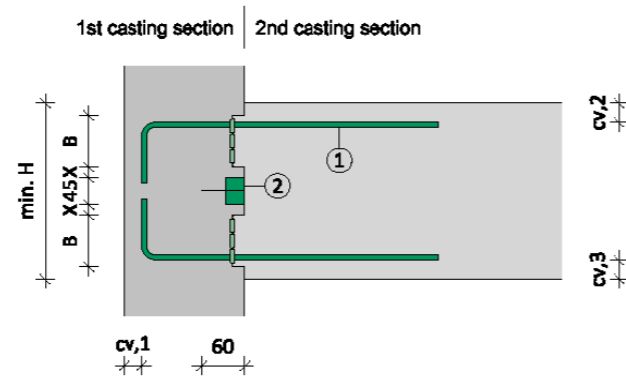


Minimum component thickness

$$\text{min. H} = \text{cv,2} + \text{cv,3} + 2 \times \text{B} + 45 - 25 + 15$$

- min. H minimum component thickness (mm)
- B box width FERBOX® (mm)
- cv,1 concrete layer 1st casting section (mm), not relevant for determining min. H
- cv,2 concrete layer (mm)
- cv,3 concrete layer (mm)
- X Spacing between FERBOX® protective box and PENTAFLEX® Modul, at min. H, X = 0 mm

Right-angle connection (e.g. light well)



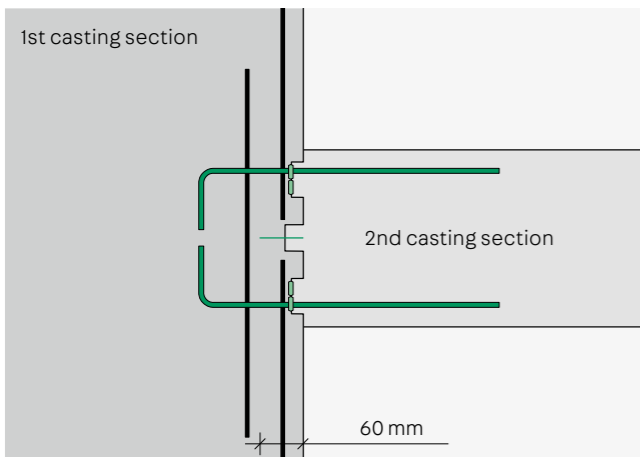
Minimum component thickness

$$\text{min. H} = \text{cv,2} + \text{cv,3} + 2 \times \text{B} + 45 - 25$$

The PENTAFLEX® Modul protective box is 45 mm wide. It is not absolutely necessary to leave a space (X) between the FERBOX® and PENTAFLEX® Modul.

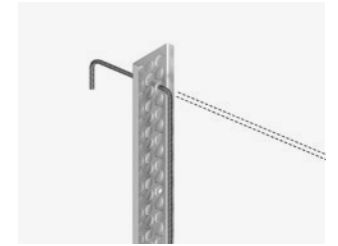
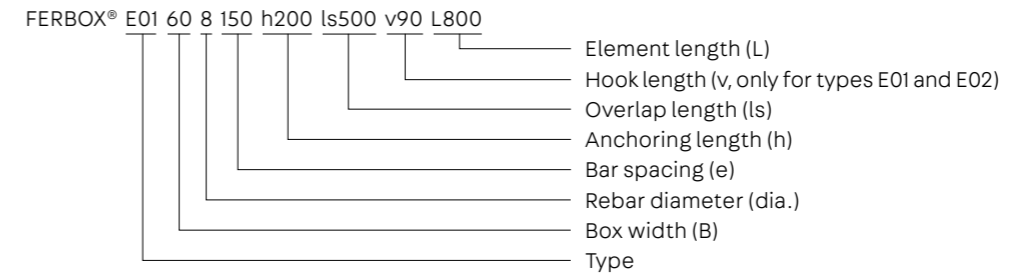
Adjacent component reinforcement

Example



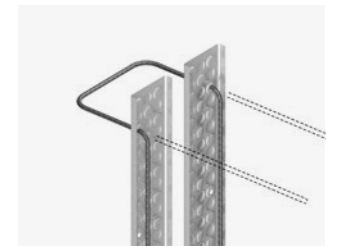
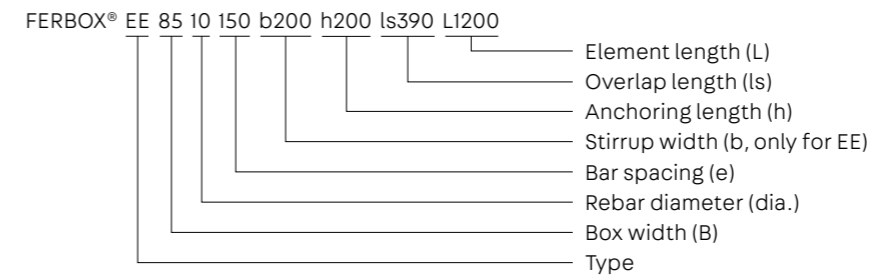
As the PENTAFLEX® seam sheet is 60 mm high, it may not be possible for the component reinforcement to pass through the construction joint. It is advisable to make the crossing reinforcement in two parts and to provide an extension if required.

Example FERBOX® type designation



Example FERBOX® type E01

Example FERBOX® type designation

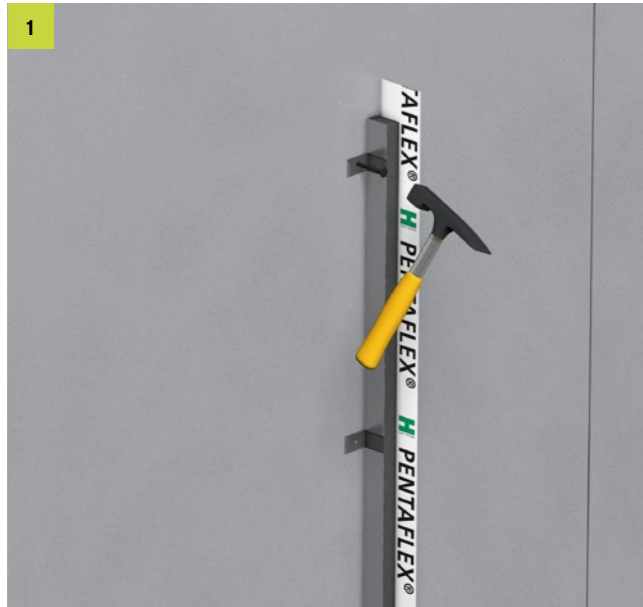


Example FERBOX® type EE

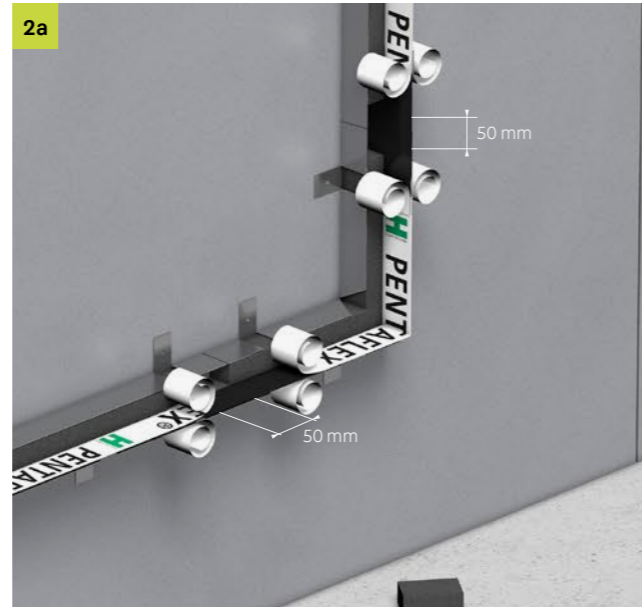
Our Application Technology department would be happy to provide you with further information on individual installation situations.

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technik@h-bau.de

Installation instructions

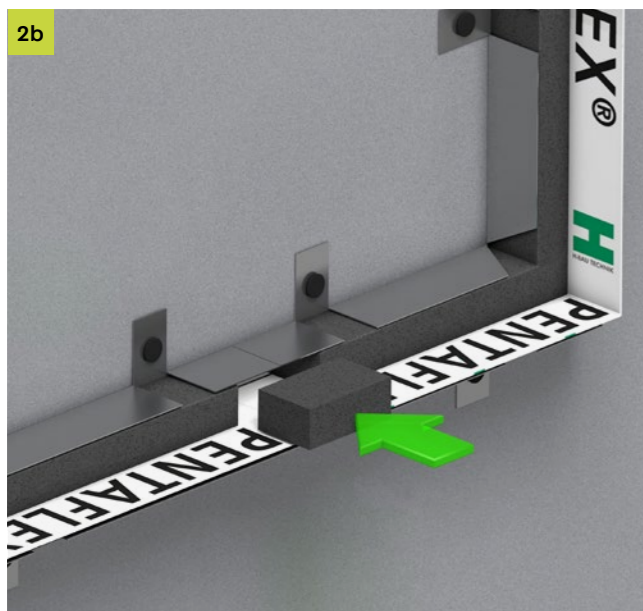


1 Nail the PENTAFLEX® Modul to the formwork using the nail flanges



2a Connecting the corner module using two PENTAFLEX® modules:

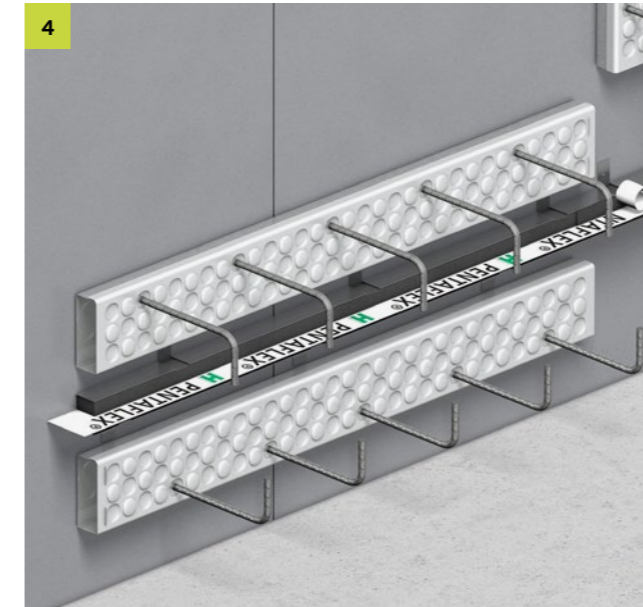
- Remove the protective film
- Overlap the sheets by at least 50 mm



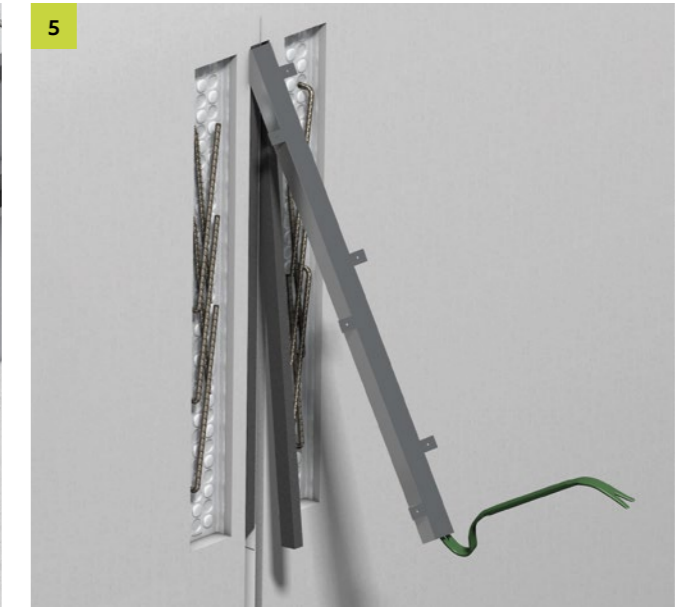
2b Reattach the protective film and fill any empty spaces at the overlaps using EPP stopper strips



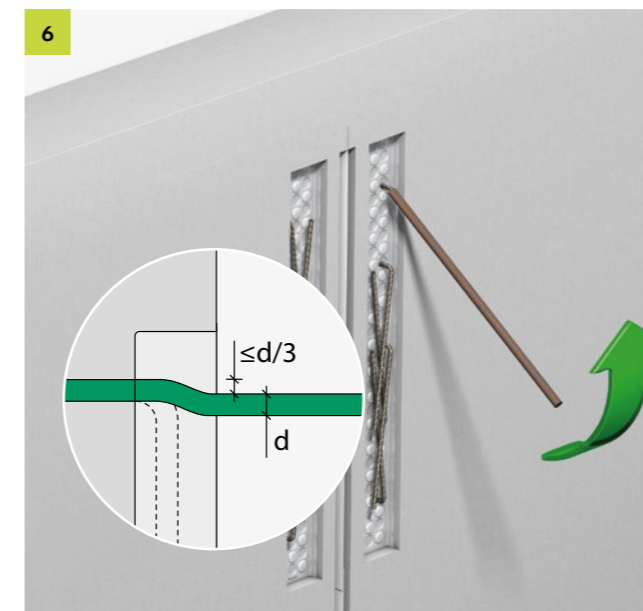
3 Next to the PENTAFLEX® Modul, nail two single-row FERBOX® rebend connectors to the formwork



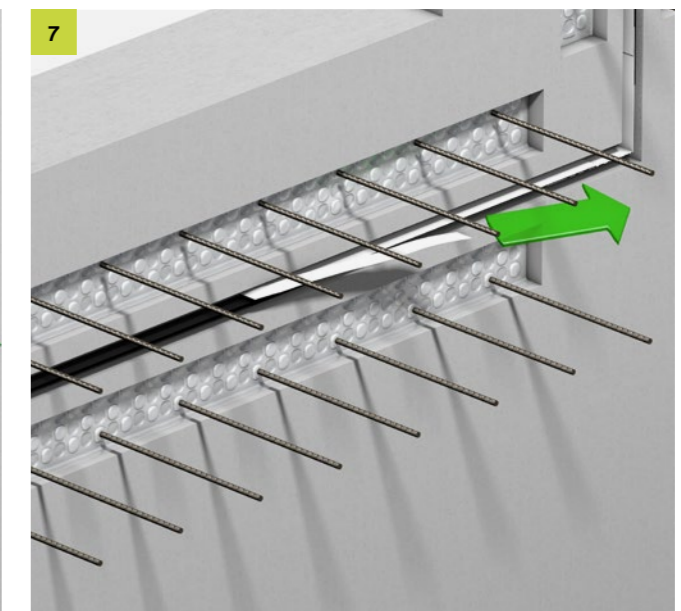
4 Before pouring the concrete, remove the top part of the protective film from the PENTAFLEX® seam sheet




5 After casting the first section, remove the protective boxes of the FERBOX® rebend connectors, the protective boxes of the PENTAFLEX® Modul and the EPP filling strips



6 Bend back the reinforcement bars of the FERBOX® rebend connectors using suitable tools



7 Remove the second half of the protective film from the PENTAFLEX® seam sheet. Finally, apply the shutter for the second casting section and pour the concrete

 For further details on installing FERBOX® units, see the technical information for FERBOX® rebend connectors.

Order sheet

1) Building project

2) Quote for

Company _____

Contact _____

Telephone _____ Fax _____

Email _____

Street _____




Post code, town/city _____ Company stamp _____


3) Project phase

Calculation _____

Requirements Construction company _____

4) PENTAFLEX® Modul version

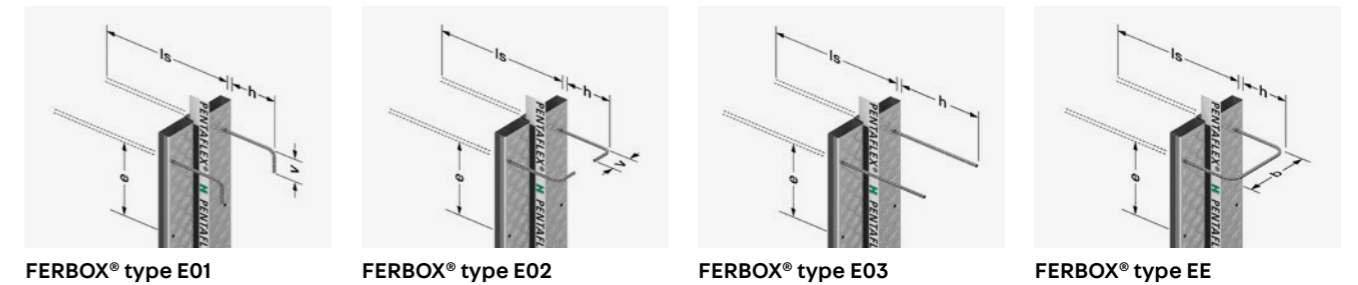
Item	Type	Quantity Units
PENTAFLEX® Modul 1200		
PENTAFLEX® Modul 800		
PENTAFLEX® Modul Eck		

 Special lengths available on request.
Feel free to get in touch.

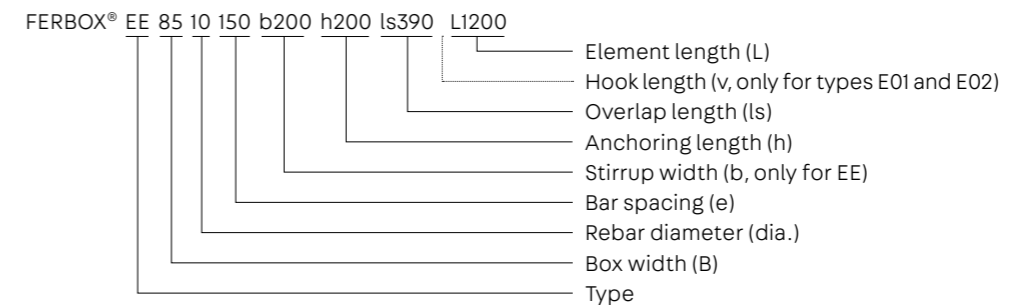
5) Version FERBOX®

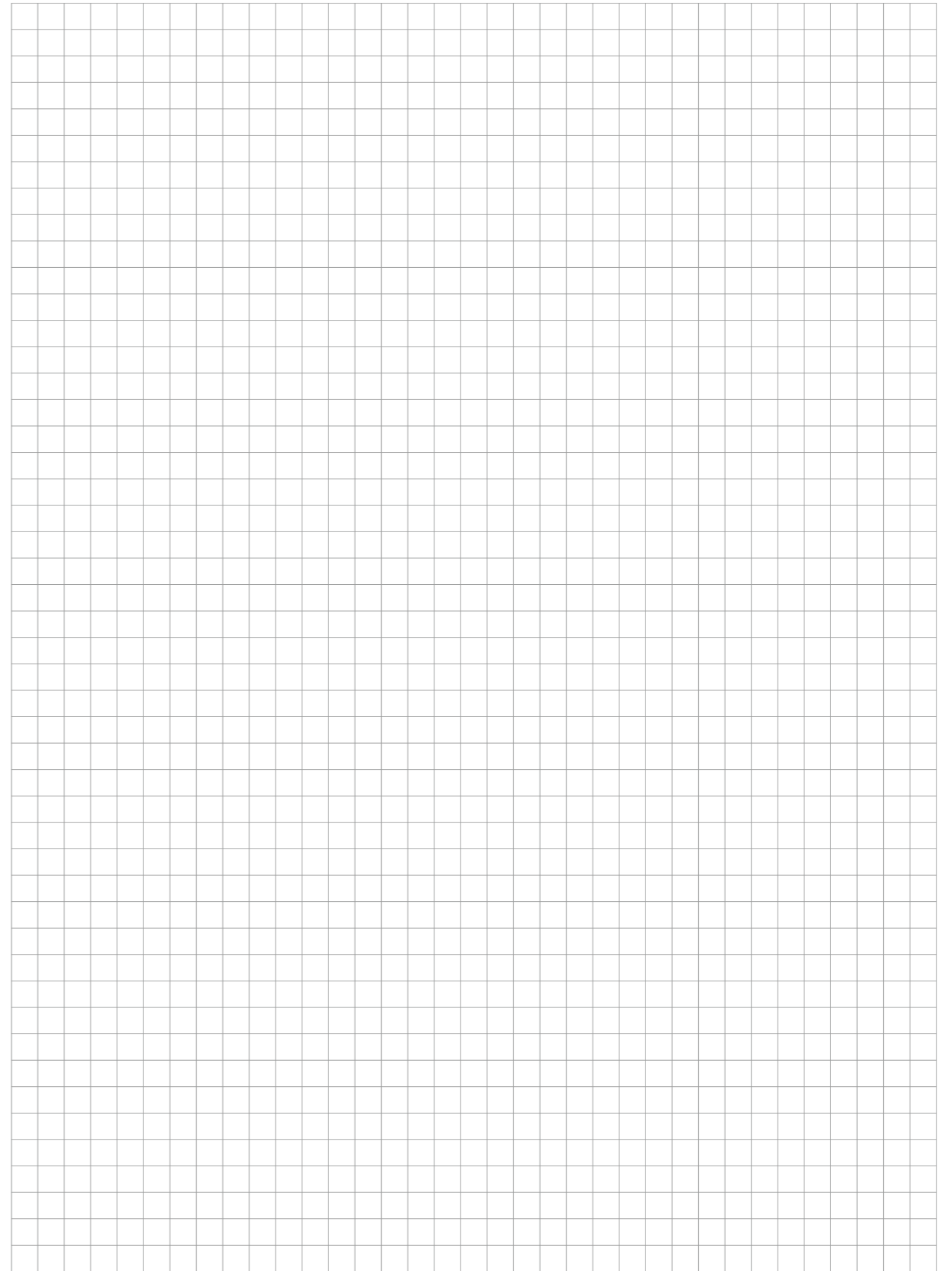
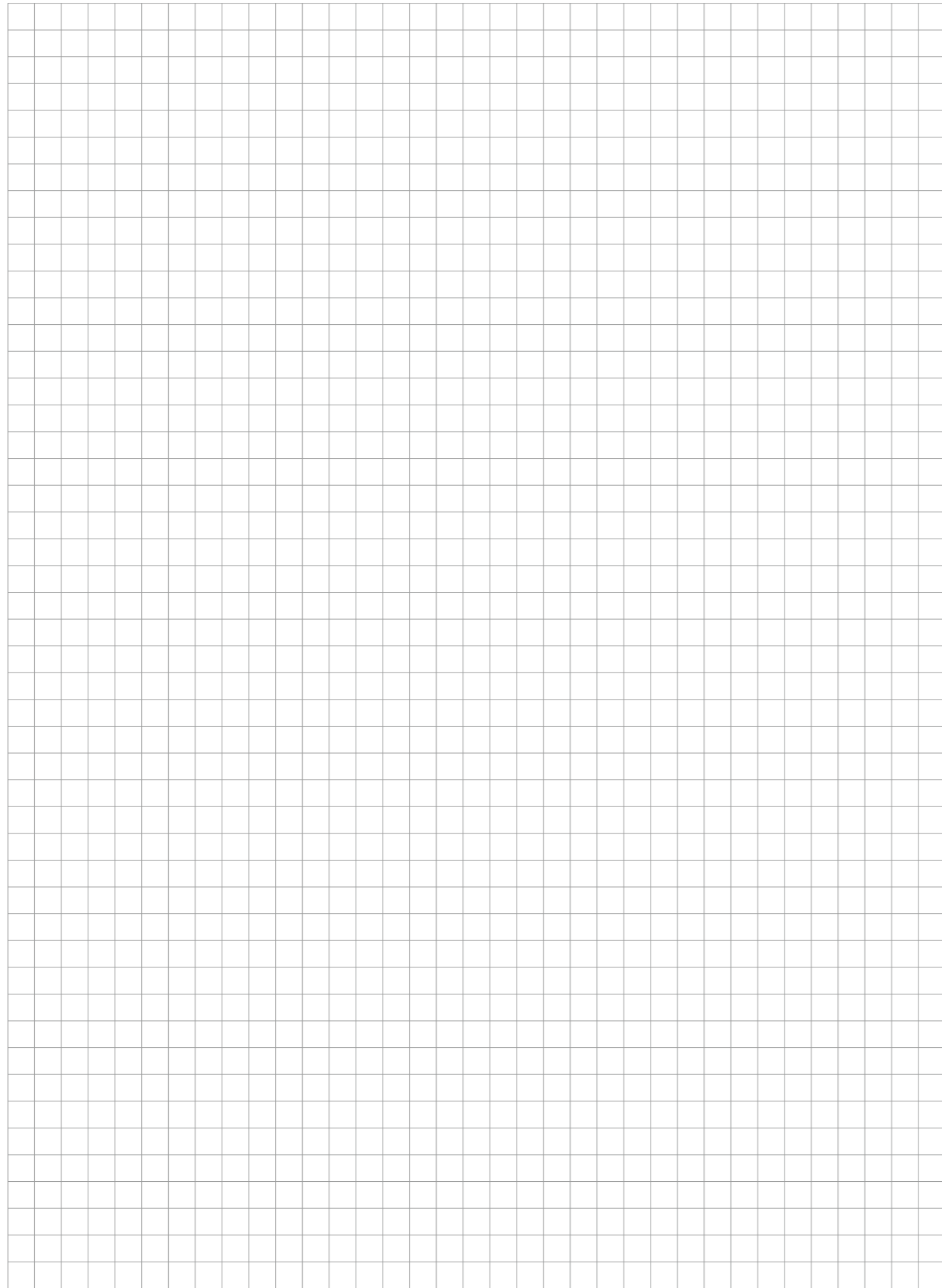
Item	Type	Box width B mm	Rebar mm		Dimensions mm				Quantity Units	
			Dia.	e	b	h	ls	v		L

Model overview



Example FERBOX® type designation





Our synergy concept for your benefit

With us, you benefit from the collective experience of three established manufacturers, who combine products and expertise in a comprehensive range. That is the PohlCon synergy concept.



Full-service consulting

Our extensive network of consultants is available to answer all your questions about our products on site. From planning to use, you can enjoy personal support from our qualified employees.



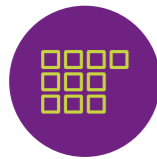
Digital solutions

Our digital solutions provide targeted support in planning with our products. From tender texts to CAD details and BIM data, right through to modern software solutions, we offer customized support for your planning process.



7 fields of application

We think in terms of holistic solutions. This is why we have combined our products into seven fields of application, where you can benefit from their synergy and the overall PohlCon product portfolio.



10 product categories

In order to find the right product in our extensive range even faster, we have divided our products into ten product categories. This way you can navigate unerringly between our products.



Individual solutions

No series product on the market is suitable for your project? We realize unique construction projects and exceptional challenges with the many years of expertise of the three manufacturing brands.



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