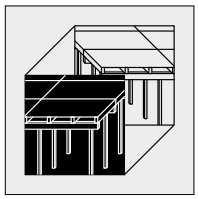
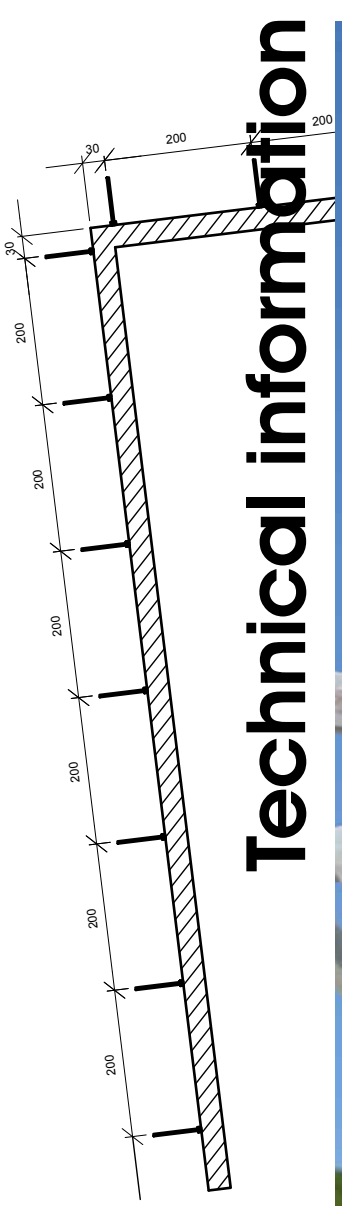
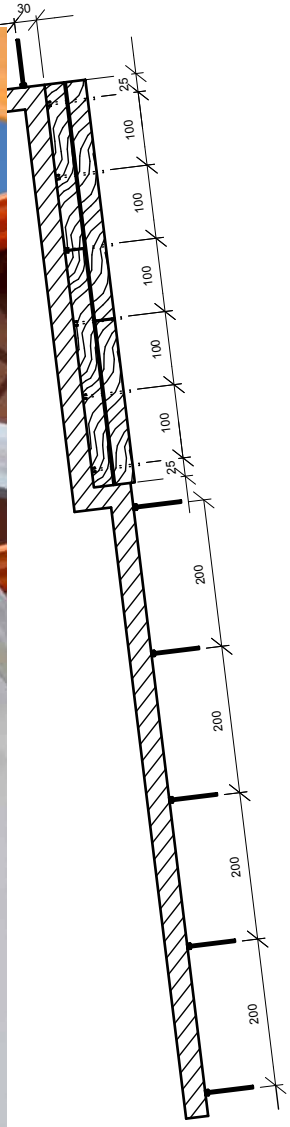


Slab edge formwork

Technical information





PASCHAL

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Important information regarding the intended use and safe application of formwork and falsework
Version 08.2009

The contractor is responsible for drawing up a comprehensive risk assessment and a set of installation instructions. The latter is not usually identical to the assembly instructions.

• Risk Assessment
The contractor is responsible for the compilation, documentation, implementation and revision of a risk assessment for each construction site. His employees are obliged to implement the measures resulting from this in accordance with all legal requirements.

• Installation Instructions
The contractor is responsible for compiling a written set of installation instructions. The assembly instructions forms part of the basic for the compilation of a set of installation instructions.

• Assembly Instructions
Formwork is technical work equipment which is intended for commercial use only. The intended use must take place exclusively through properly trained personnel and appropriately qualified supervising personnel.
The assembly instructions are an integral component of the formwork construction. They comprise at least safety guidelines, details on the standard configuration and intended use, as well as the system description. The functional instructions (standard configuration) contained in the assembly instructions are to be complied with as stated. Enhancements, deviations or changes represent a potential risk and therefore require separate verification (with the help of a risk assessment) or a set of installation instructions which comply with the relevant laws, standards and safety regulations. The same applies in those cases where formwork and/or falsework components are provided by the contractor.

• Availability of the Assembly Instructions
The contractor has to ensure that the assembly instructions provided by the manufacturer or formwork supplier are available at the place of use. Site personnel are to be informed of this before assembly and use takes place, and that they are available at all times.

• Representations
The representations shown in the assembly instructions are, in part, situations of assembly and not always complete in terms of safety considerations. The safety installations which have possibly not been shown in these representations must nevertheless be available.

• Storage and Transportation
The special requirements of the respective formwork constructions regarding transportation procedures as well as storage must be complied with. By way of example, name the appropriate lifting gear to be used.

• Material Check
Formwork and falsework material deliveries are to be checked on arrival at the construction site/ place of destination as well as before each use to ensure that they are in perfect condition and function correctly. Changes to the formwork materials are not permitted.

• Spare Parts and Repairs
Only original components may be used as spare parts. Repairs are to be carried out by the manufacturer or authorized repair facilities only.

• Use of Other Products
Combining formwork components from different manufacturers carries certain risks. They are to be individually verified and can result in the compilation of a separate set of assembly instructions required for the installation of the equipment.

• Safety Symbols
Individual safety symbols are to be complied with.
Examples:


Safety information: non-compliance can lead to damage tomaterials or risk to the health of site personnel(alsolife)


Visual check: the intended operation is to be carried out through a visual check.


Note: supplementary information for safe, correct and professional execution of work activities.

• Miscellaneous
Technical improvements and modifications are subject to change without notice. For the safetyrelated application and use of the products, all current country-specific laws, standards as well as other safety regulations are to be complied with without exception. They form a part of the obligations of employers and employees regarding industrial safety. This results in, among other things, the responsibility of the contractor to ensure the stability of the formwork and falsework constructions as well as the structure during all stages of construction. This also includes the basic assembly, dismantling and the transport of the formwork and falsework constructions or their components. The complete construction is to be checked during and after assembly.

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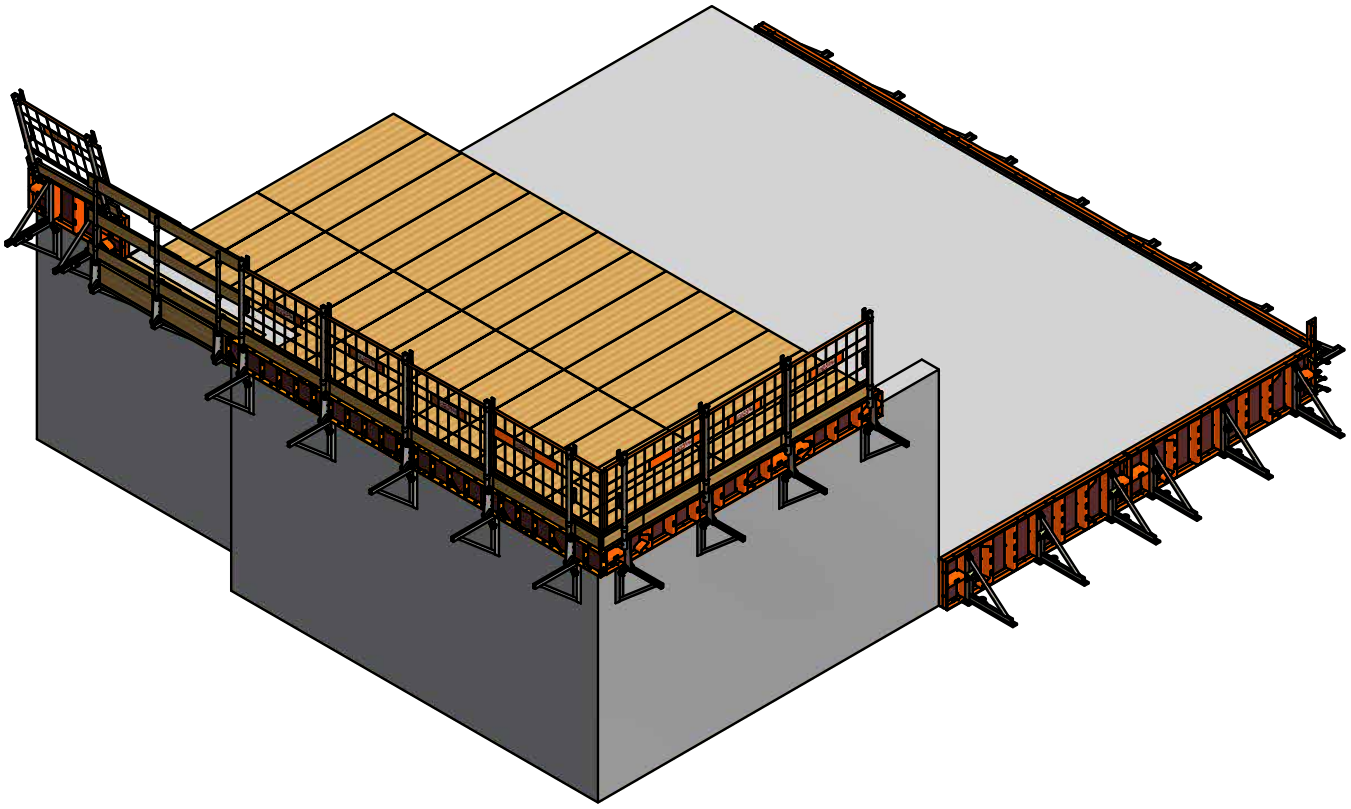
TI Slab edge formwork
Issue 01/20 on 15.07.2020

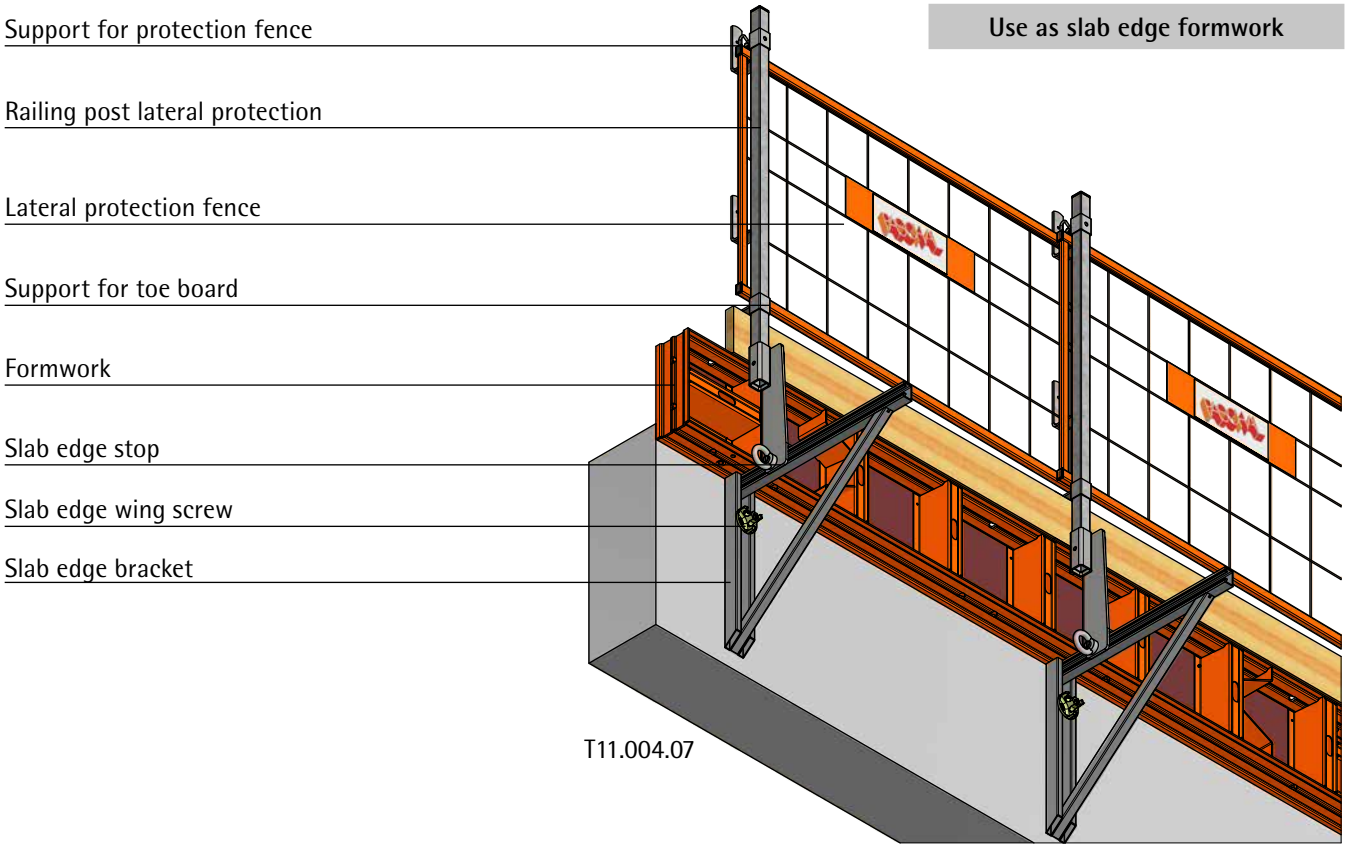
Slab edge formwork

- In slab edge and base plate formwork, the formwork panels used must be held and secured against pressure from fresh concrete. PASCHAL slab edge formwork components meet this requirement.
- For slabs, overhangs of up to 50 cm can also be formed.
- The bracket is the load-bearing part in each case, which absorbs the pressure forces from fresh concrete. The bracket is back-anchored in the wall below for slab edge formwork, and in the blinding concrete for base plate formwork.
- Permissible reference values for spacings between brackets can be found in the tables on pages 12/14/15/19/21.
- For the required work safety for slab edge formwork, handrail posts and lateral protection fences can be integrated (alternatively 3x15 cm boards).



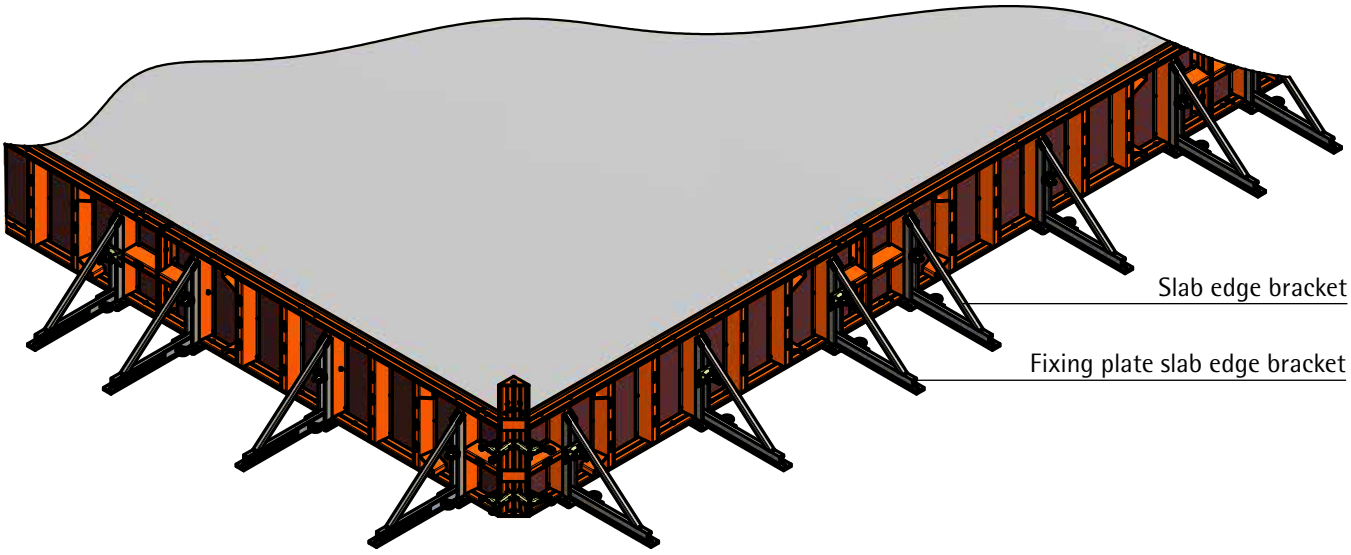
T11.001.01

Use as slab edge formwork

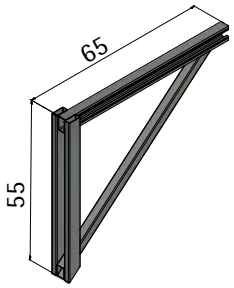
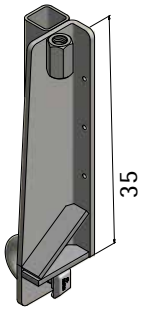
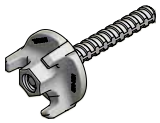
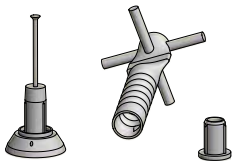
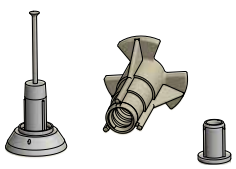


T11.004.07

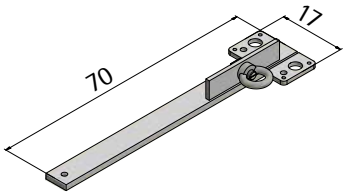
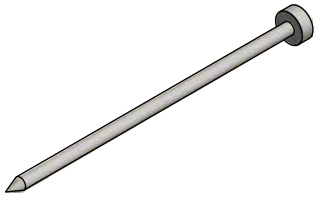
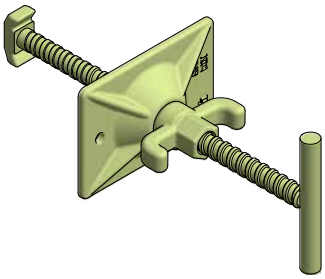
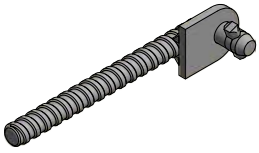
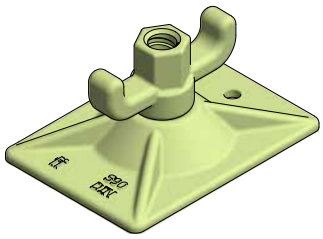
Use as formwork for the base plate

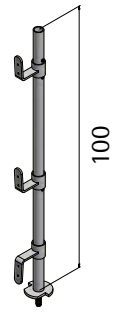
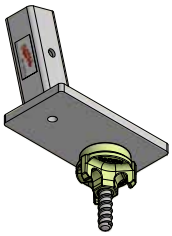
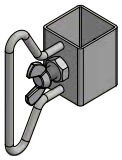


T11.001.12

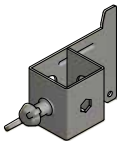
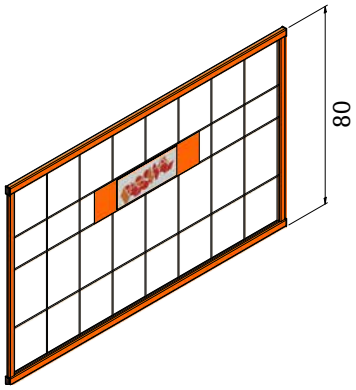
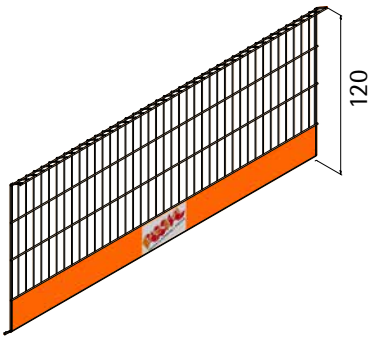
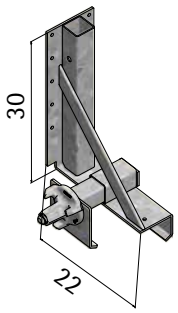
	Art.-N°	Item	Weight [kg]
	N183.003.0001	Slab edge bracket 60 cm	5,10
	N189.000.0030	Slab edge stop	4,45
	N183.003.0020	Slab edge wing screw DW15 x 115	0,55
	N183.003.0030	Slab edge bracket connector	1,20
	N940.014.0163	V2A UNI concrete anchor DW 15 cpl. with cone peg and cap	0,17
	N940.014.0168	UNI concrete bush DW 15 cpl. with cone peg and cap	0,01

Parts list (base plate formwork)

	Art.-N°	Item	Weight [kg]
	N183.003.0015	Fixing plate slab edge bracket	6,00
	N189.005.0041	Ground nail D.20 x 55 cm forged	1,70
	N187.500.0021	Support for walers DW15 clamping length 6-20 cm	1,95
	N189.001.0031	Waler guide 100 clamping length 10 cm	0,50
	N189.001.0059	Plate with ball-and-socket joint DW15 10 x 14 cm	1,20

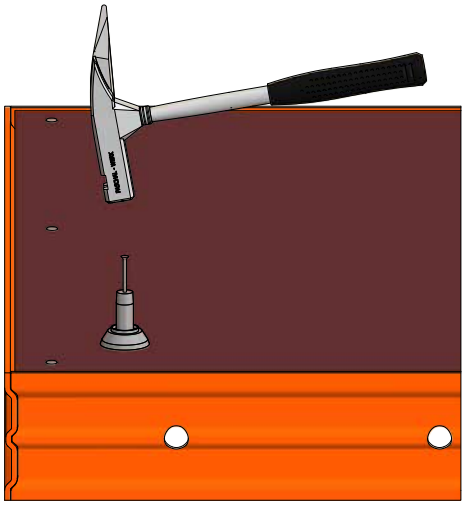
	Art.-N°	Item	Weight [kg]
	N183.003.0010	Guard rail DW 15 mount.	4,20
	N189.000.1001	Railing post 120 cm lateral protection	3,20
	N189.000.0001	Support LOGO cpl. lateral protection	2,50
	N189.000.0010	Support Modular cpl. lateral protection	2,10
	N189.000.0041	Support NeoR cpl. lateral protection	2,87
	N189.000.1011	Support for protection fence (phase-out model)	0,20

Parts list (occupational safety)

	Art.-N°	Item	Weight [kg]
	N189.000.1100	Support for protection fence	0,21
	N189.000.1010	Support for toe board lateral protection	0,46
	N189.000.1036	Lateral protection fence 130 x 80	6,35
	N189.000.1035	Lateral protection fence 230 x 80	10,10
	N189.000.1030	Lateral protection fence 260 cm	19,80
	N189.000.1022	Edge stop H20 Secuset	4,12

1. Nail the cone peg on the plywood

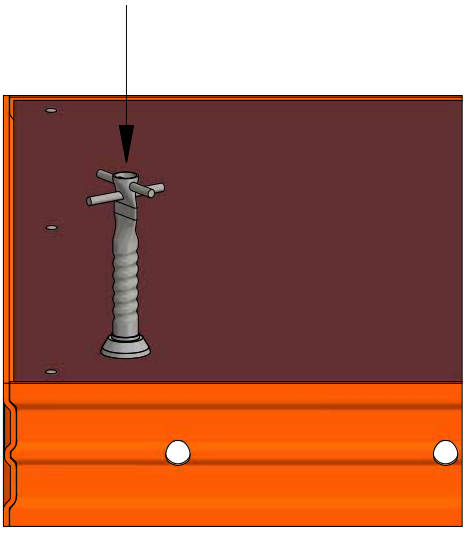
1.



T11.002.01

2. Push on a V2A UNI concrete anchor DW15

2.

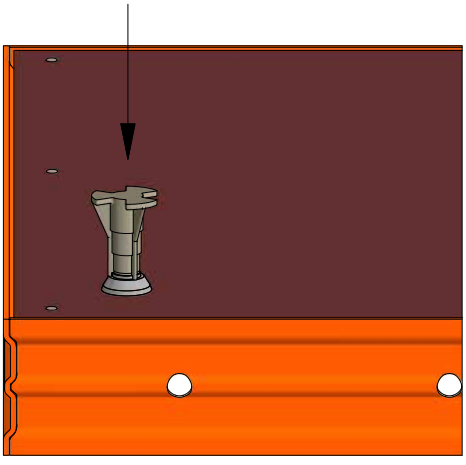


T11.002.02

or

2. a UNI concrete bush DW15

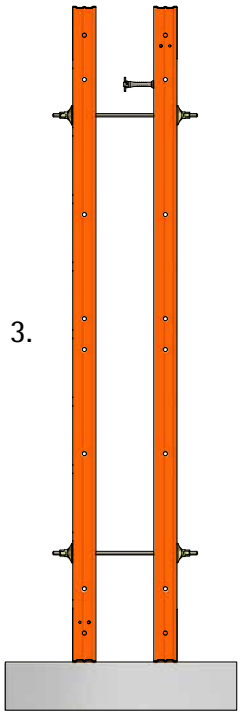
2.



T11.002.03

Slab edge formwork, installing the anchors

3.



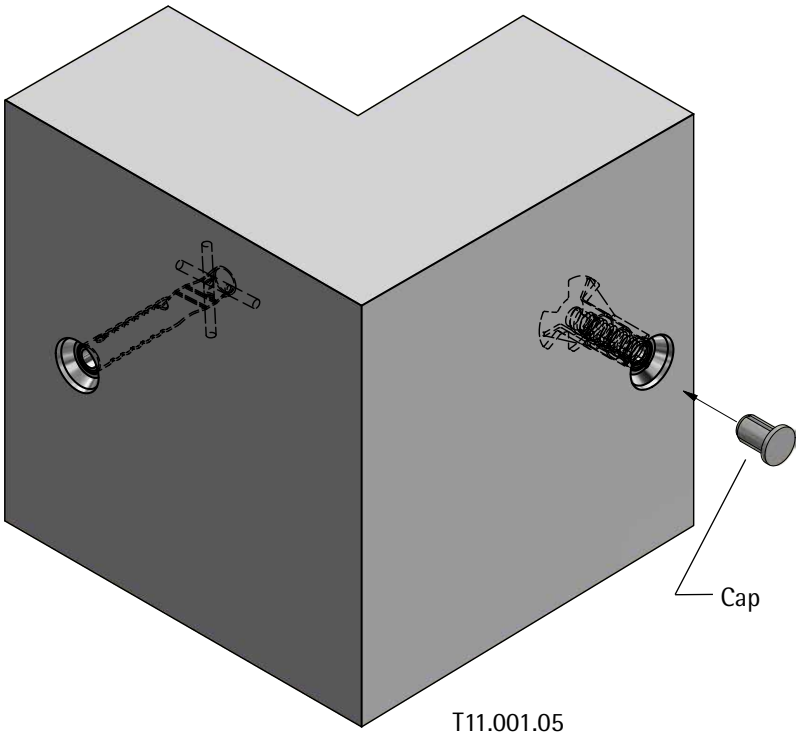
T11.002.06

3. Mount the formwork completely and set the anchors in concrete

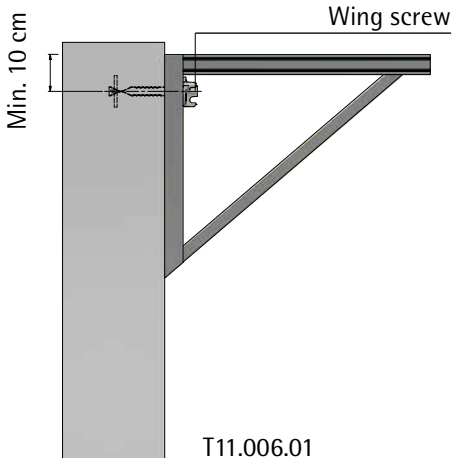
After dismantling, the slab edge formwork is assembled (pages 12-17)

Note:

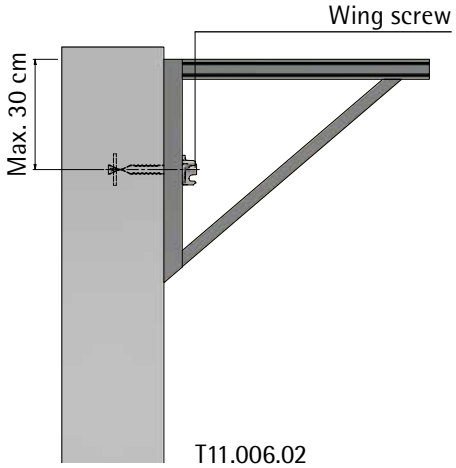
After all work has been completed, the openings in the wall can be closed with caps.



T11.001.05



T11.006.01



T11.006.02

1. Attach the slab edge brackets and bolt it with the wing screw DW 15 x 115 into the anchor

Admissible bracket spacing a_k according to slab thickness d

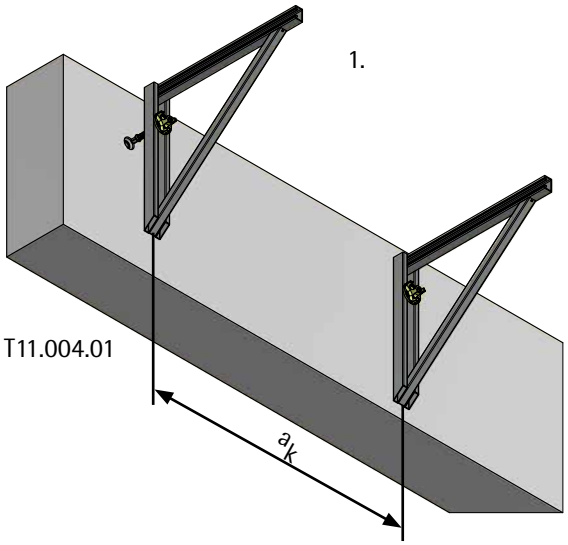
Slab thickness d [cm]	adm. bracket spacing ak [cm]
20	200
30	155

Safety information:

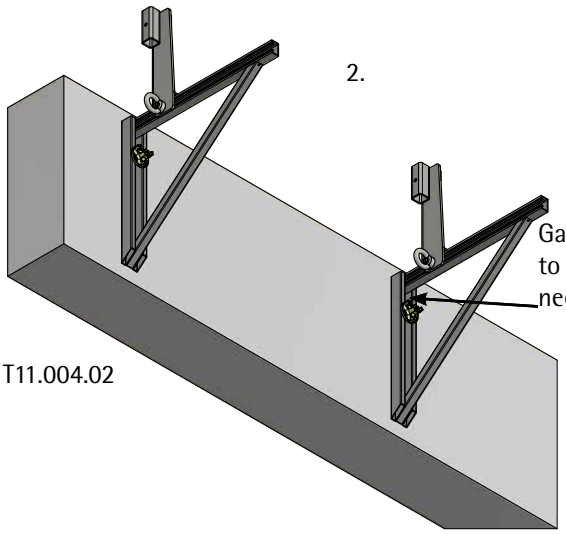
The formwork must be sized separately.

2. Slide slab edge stop into all brackets

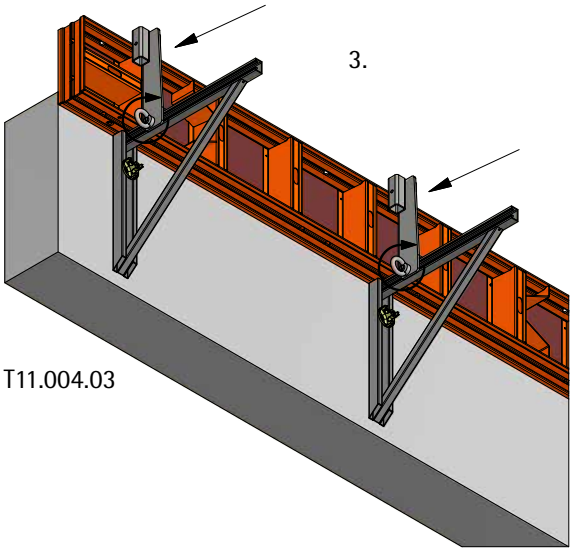
3. Fit the formwork panel, press the slab edge stop against the formwork panel and tighten it in the C-rail of the bracket with the ring nut



T11.004.01

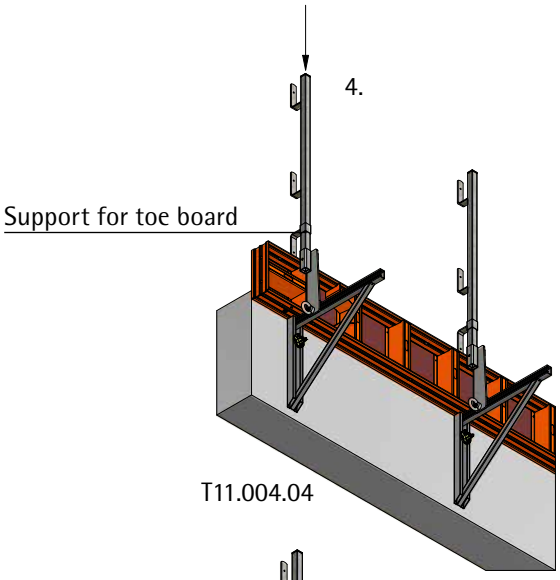


T11.004.02



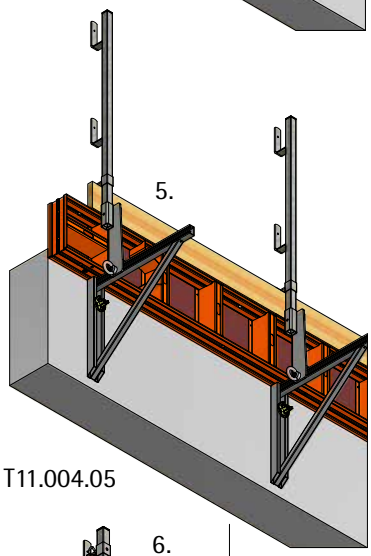
T11.004.03

Slab edge formwork assembly



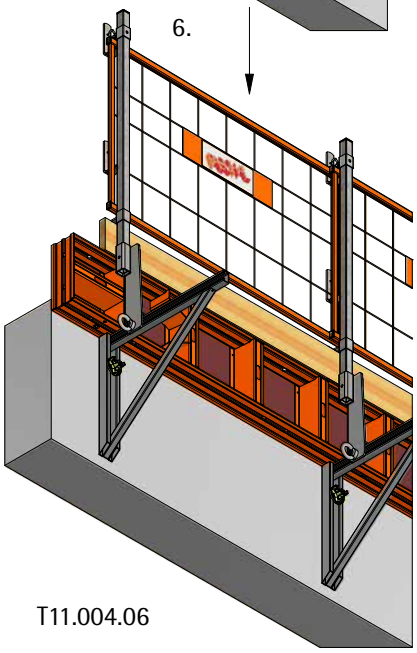
T11.004.04

4. Insert railing post with toe board support into slab edge stop



T11.004.05

5. Secure toe board with toe board support



T11.004.06

6. Hook the lateral protection fence (alternatively boards) into the railing posts and secure them with the support for lateral protection fence

Slab edge with bracket, overhang

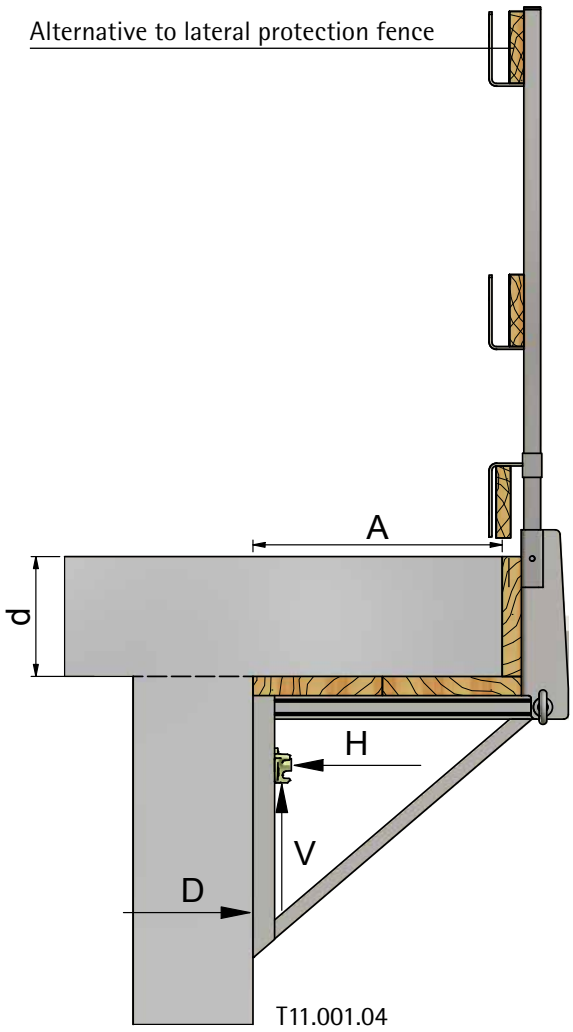
Together with the actual slab edge, the slab edge bracket also enables the forming and concreting of overhangs. Admissible bracket spacings according to slab thickness and overhang can be taken from the adjacent table.

Safety information:

The formwork for the overhang on the slab edge brackets must be designed separately.

Admissible bracket spacing according to slab thickness d and overhang A

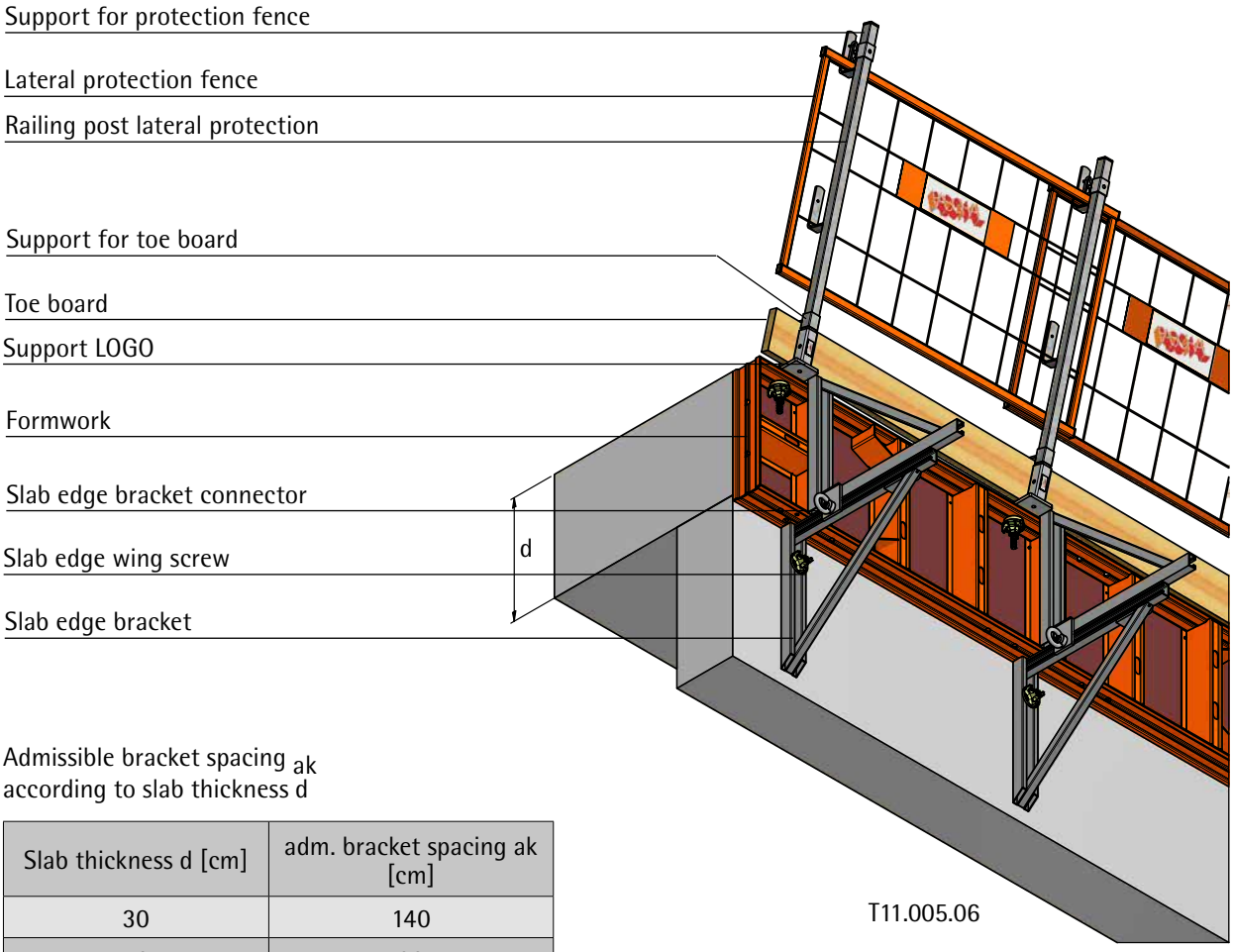
Slab thickness d [cm]	Overhang A [cm]					
	0	10	20	30	40	50
20	200	200	200	200	150	110
30	155	155	145	115	90	70



Maximum anchor load

(working loads)
Max. H = 8.3 kN
Max. V = 4.3 kN
Max. D = 6.8 kN

Slab edge brackets for larger slab thicknesses

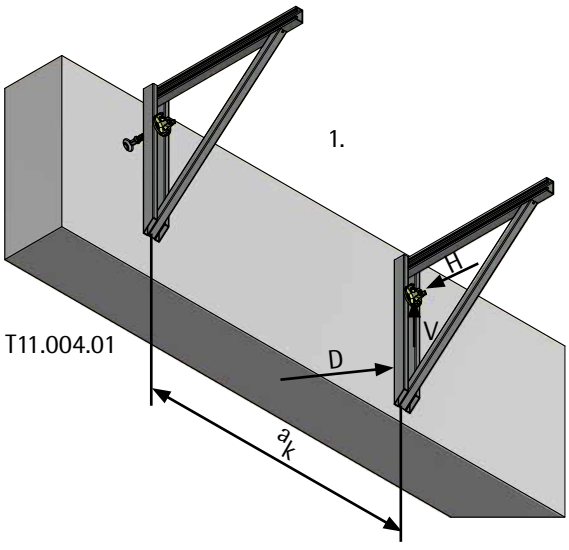


T11.005.06

Admissible bracket spacing a_k according to slab thickness d

Slab thickness d [cm]	adm. bracket spacing ak [cm]
30	140
40	80
50	50

For slab thicknesses greater than or equal to 30 cm, a second slab edge bracket is placed on top of the first and connected (see following illustrations). Admissible bracket spacings according to the slab thickness can be found in the adjacent table.



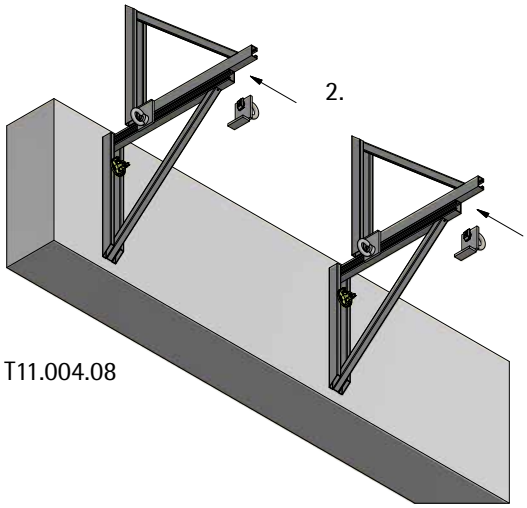
T11.004.01

Maximum anchor load
(working loads) Max. H = 7.5 kN Max. V = 1.5 kN Max. D = 5.5 kN

1. Attach the slab edge bracket and bolt it with the wing screw DW15 x 115 into the anchor

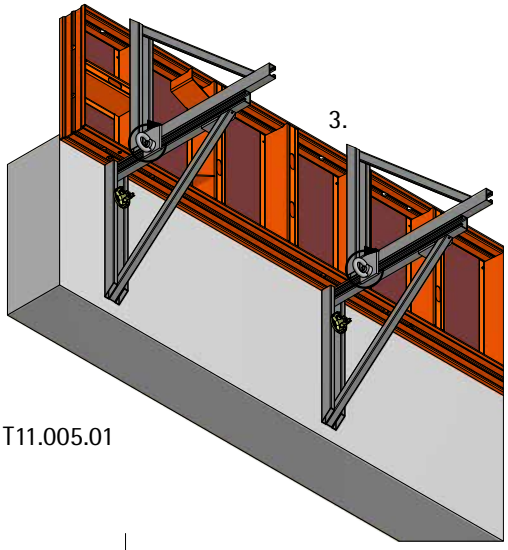
Slab edge brackets for larger slab thicknesses

2. Mount the second bracket and fasten it to the lower bracket with two bracket connectors



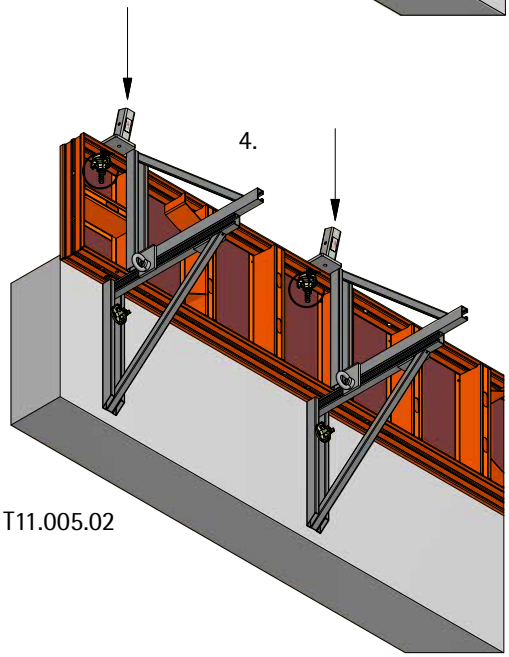
T11.004.08

3. Fit the formwork panel, attach upper brackets to panel, fasten bracket connector



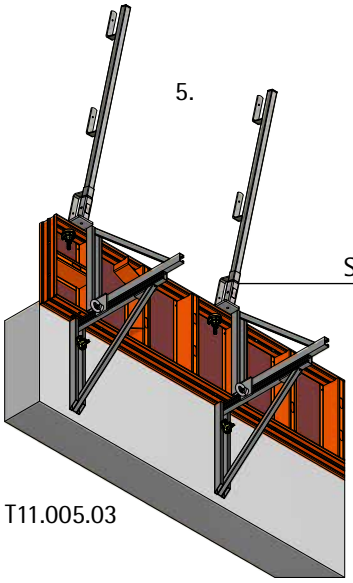
T11.005.01

4. Bolt the lateral protection support to the formwork panel



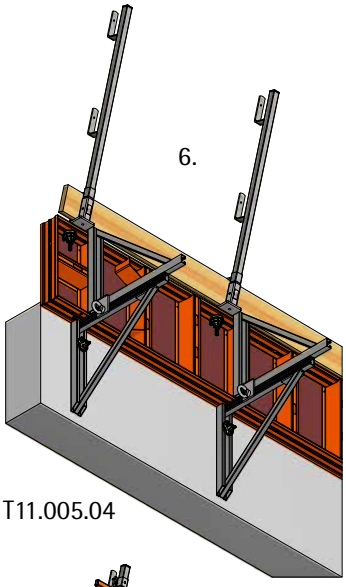
T11.005.02

Slab edge brackets for larger slab thicknesses



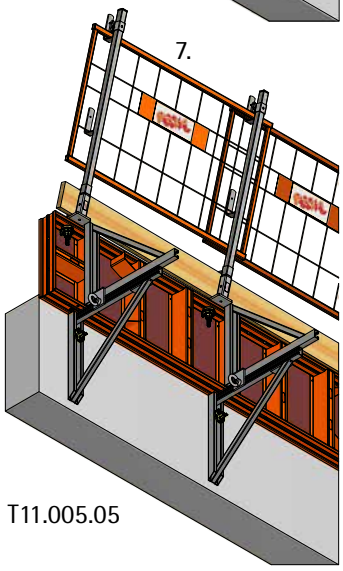
T11.005.03

5. Attach the railing posts with toe board support



T11.005.04

6. Mount toe board

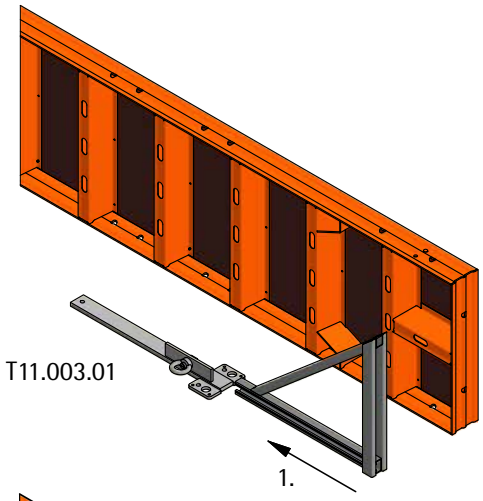


T11.005.05

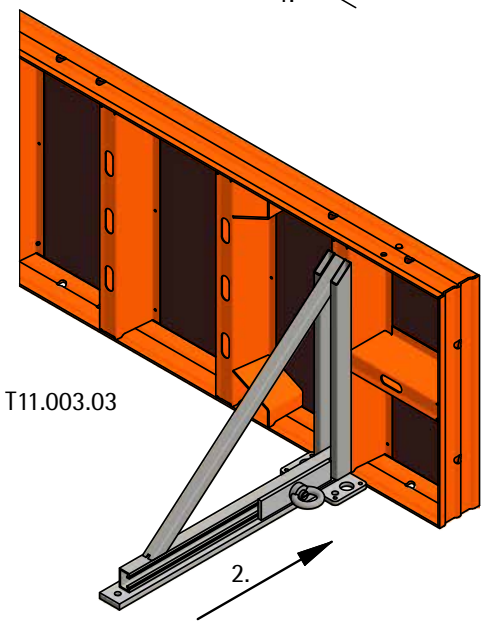
7. Hook the lateral protection fence (alternatively boards) into the railing posts and secure it with the support for lateral protection fence

Forming of the base plate using LOGO panels

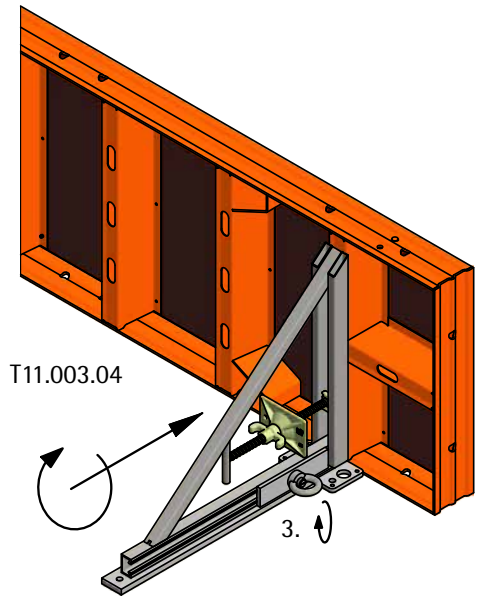
1. Mount the formwork and push the slab edge bracket onto the fixing plate



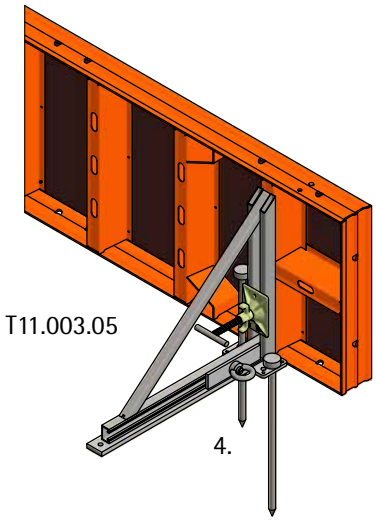
2. Attach the slab edge bracket and the fixing plate to the formwork



3. Clamp the bracket to the formwork using the support for walers DW 15 and tighten the ring bolt of the bracket



Forming of the base plate using LOGO panels



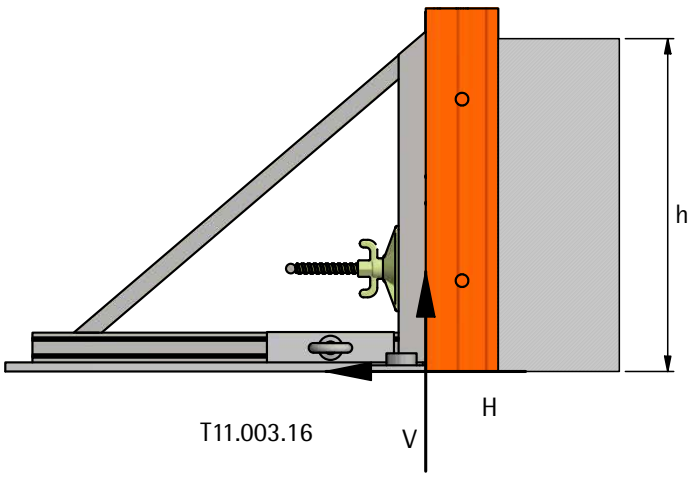
4. Secure the fixing plate in the ground to prevent it from slipping, e.g. with ground nails

Admissible bracket spacing $_a$k with anchor loads according to concreting height h

Concreting height h [cm]	perm. bracket spacing ak [cm]	H [kN]	V [kN]
30	270	3.1	0.6
40	270	5.4	1.3
50	150	4.7	1.4
60	90	4.1	1.4
70	60	3.7	1.5

Safety information:

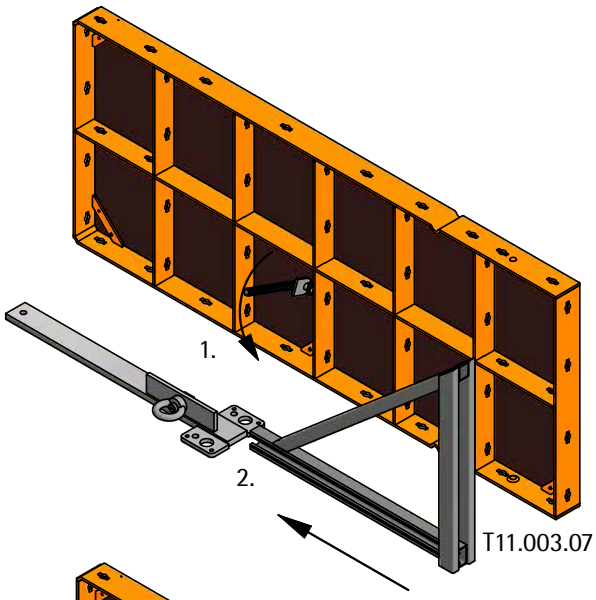
The formwork must be designed separately according to the selected bracket spacing, as well as the anchoring according to the condition of the ground.



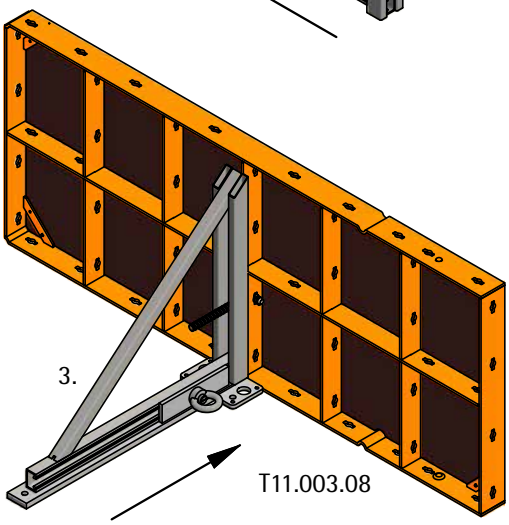
Forming of the base plate with Modular formwork panels

1. Mount the formwork, insert the waler support in the bolt hole of the cross bar and turn horizontally

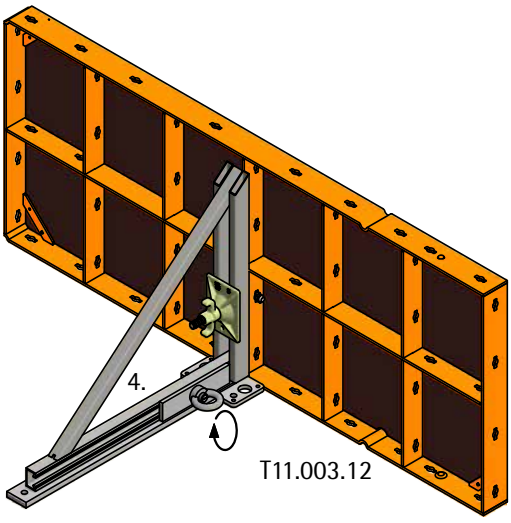
2. Slide the edge slab bracket onto the fixing plate



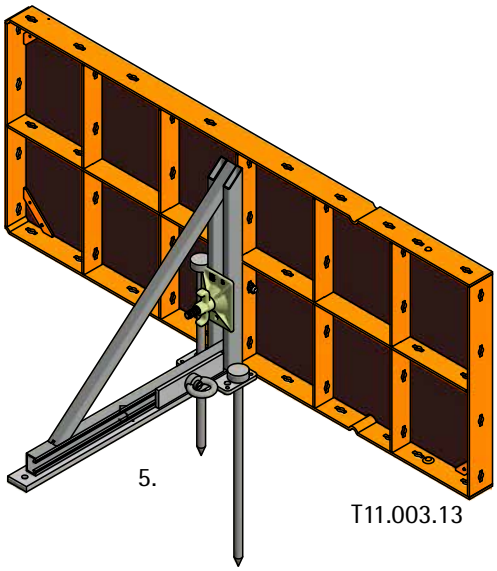
3. Attach the slab edge bracket and fixing plate to the formwork



4. Fix the bracket to the formwork using the plate with ball-and-socket joint and tighten the ring bolt on the bracket



Forming of the base plate with Modular formwork panels



5.

T11.003.13

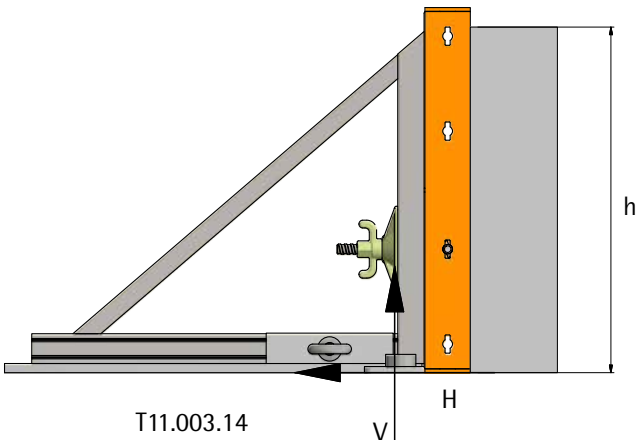
5. Secure the fixing plate in the ground to prevent it from slipping, e.g. with ground nails.

Permissible bracket spacing $_a$k with anchor loads according to concreting height h

Concreting height h [cm]	perm. bracket spacing ak [cm]	H [kN]	V [kN]
30	270	3.1	0.6
40	270	5.4	1.3
50	150	4.7	1.4
60	90	4.1	1.4
70	60	3.7	1.5

Safety information:

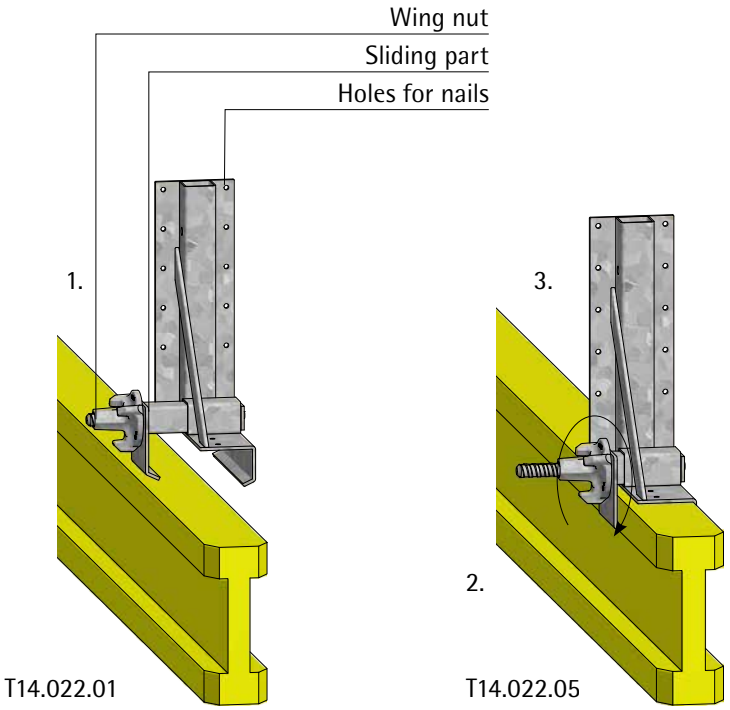
The formwork must be designed separately according to the selected bracket spacing, as well as the anchoring according to the condition of the ground.

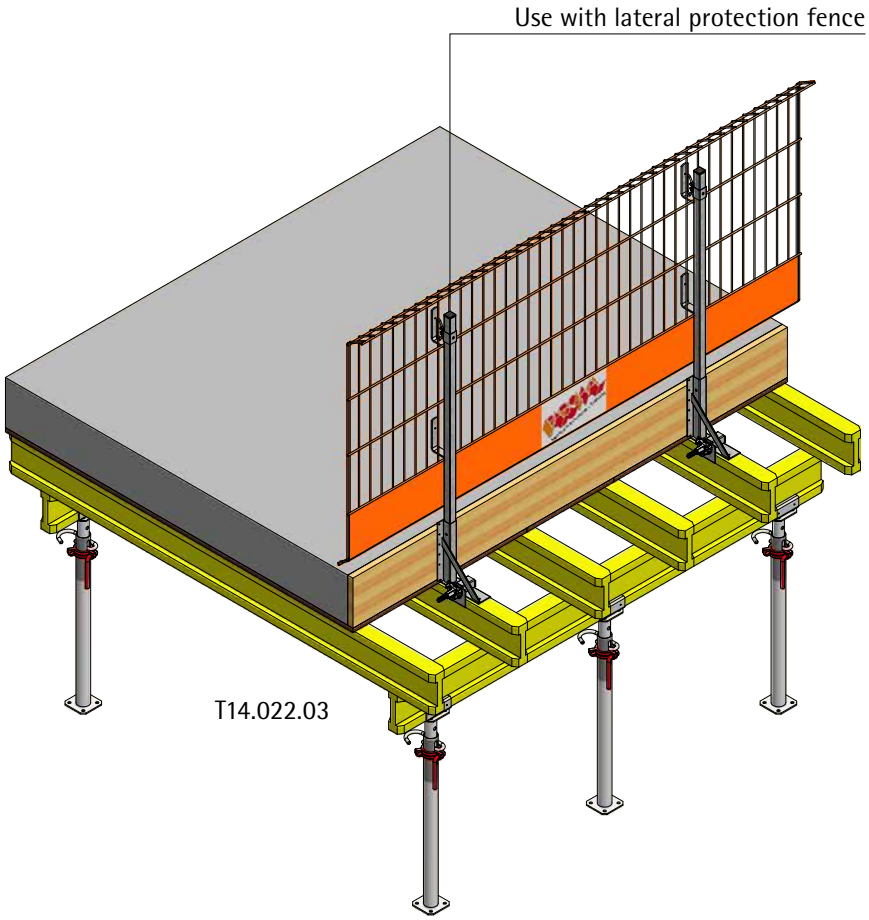


T11.003.14

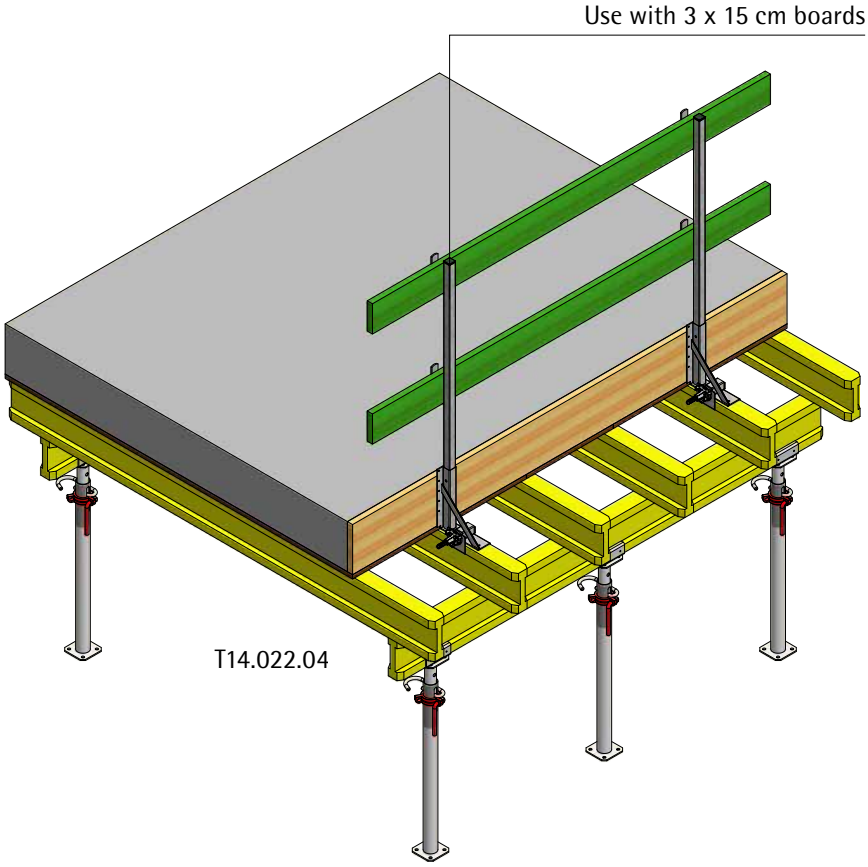
The edge stop H20 connects the Secuset post to an H20 beam. At the same time a slab edge formwork, with or without beams, can be supported.

1. Put the open edge stop H20 on the H20 beam.
2. Push the sliding part inwards.
3. Tighten wing nut with 60 Nm.





Edge stop H20



If the edge stop H20 is only used to hold the post, the following maximum spacings are possible:

2.40 m when using lateral protection fences.

2.00 m when using 3 x 15 cm boards.

When supporting a slab edge, with or without beams, the dimensions given in the table below apply:

Note:
The values in the table refer to the Secuset edge stop H20.
Depending on the formwork used (plywood, planks or formwork panels), shorter spacings may be required

Beam height (cm)	Maximum spacing between the Secuset edge stops H20 (cm)		
	Formwork of beam without slab	20 cm slab thickness	30 cm slab thickness
30	220	150	125
35	200	125	100
40	175	100	85
45	150	90	75

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