999813102 - 10/2022
en-GB

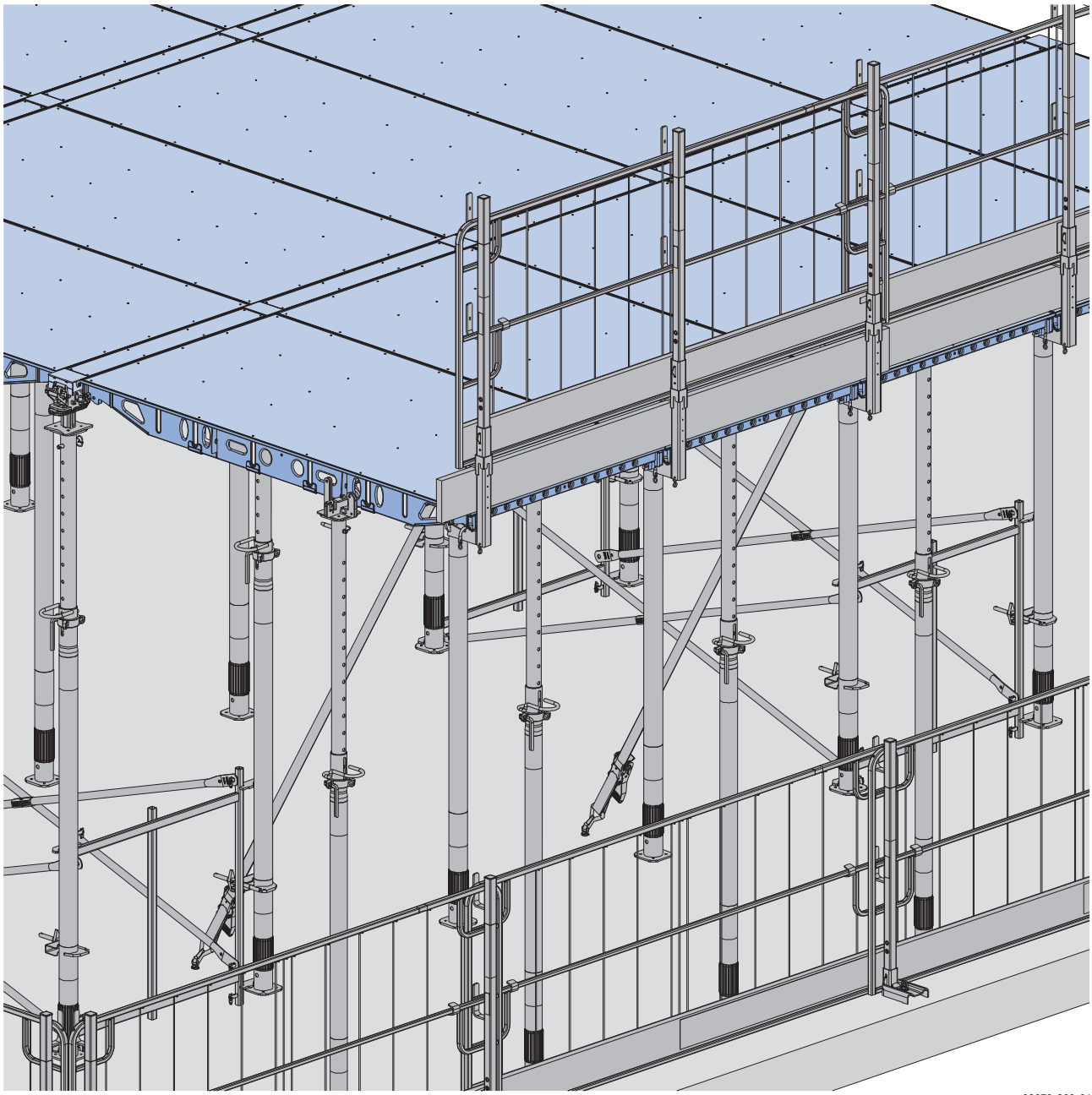
The Formwork Experts.

Structure edge

Panel floor formwork Dokadek 30 with drop head

User Information

Instructions for assembly and use (Method statement)



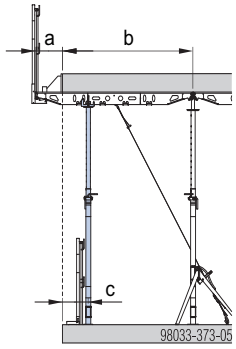
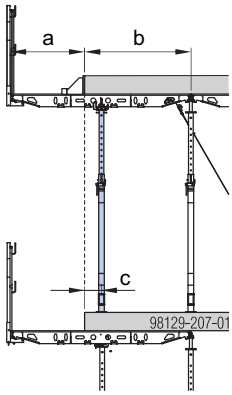
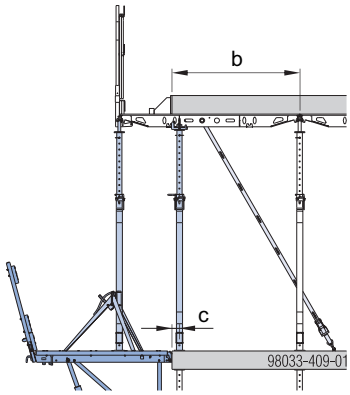
98070-360-01

Contents

Overview

NOTICE

- This document is valid only in combination with the basic document(s): 'Panel floor formwork Dokadek 30 with drop head' User Information booklet.
- When using Dokadek 30 with drop head for structures with high floor-to-ceiling heights, also follow the directions in the 'Alternative methods of assembly' User Information booklet.
- Use of Dokadek panels 1.22x1.22m and 0.81x1.22m at structure edge not permitted.

	Variant 1 Propping of the cantilevering panels at the one-third point		**Variant 2** Propping of the cantilevering panels at the middle point		**Variant 3** Propping the cantilevering panels at the one-third point or at the middle point on Folding platform K
	Operating with assembling tool	Operating with DekLift 4.50m	Operating with assembling tool and personal fall-arrest system	Operating with DekLift 4.50m	
					
Permitted cantilever **a** of the Dokadek panel	max. 71 cm		max. 112 cm		—
Permitted concrete load **b**	220 cm[1)]		140 cm		220 cm[1)]
Distance **c** (floor prop centreline to slab edge)	min. 10 cm		min. 10 cm		min. 10 cm

[1)] depending on slab stop-ends

Variant 1 - Propping of the cantilevering panels at the one-third point

Ground rules

NOTICE

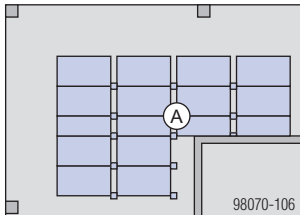
Use of Dokadek panels 1.22x1.22m and 0.81x1.22m at structure edge not permitted.

Permitted slab thickness [cm] without additional precautions

Panel size	Permitted slab thickness	Deflection as defined by DIN 18202
1.22x2.44m	30	Line 6
1.22x2.44m	> 30 - 35	Line 5
1.22x1.22m	35	Line 5
0.81x2.44m	45	Line 6
0.81x2.44m	> 45 - 50	Line 5
0.81x1.22m	50	Line 6

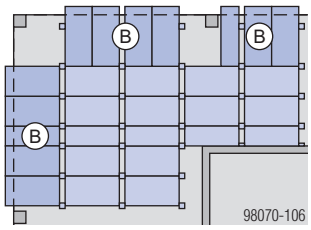
Schematic set-up

1) Erect formwork in the typical zone until only the planned infill zone is left unformed; level and secure it against tip-over.



A Typical zone

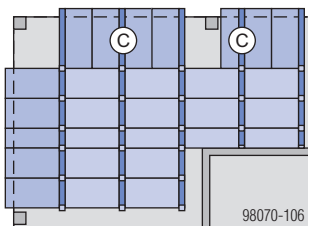
2) Set up the cantilevering panels, level them and tie them back.



B Cantilevering panels

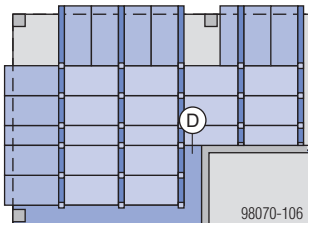
3) Mount guardrail systems.

4) Insert the closure panels.



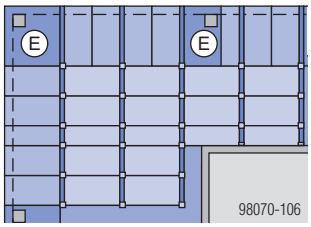
C Closure panels

5) Form the infilling in the typical zone.



D Infilling in typical zone

6) Form the infilling between the cantilevering panels.

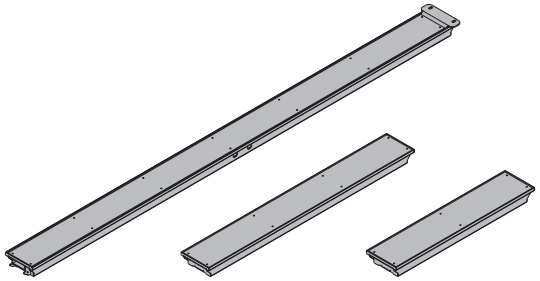


D Infilling between cantilevering panels

7) Mount the stop-end formwork.

Dokadek closure panels

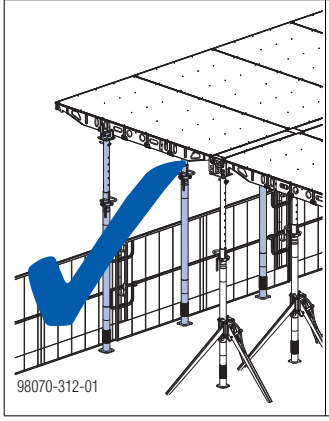
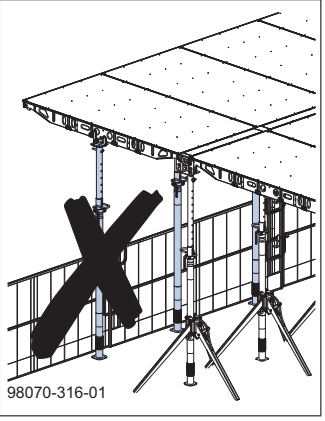
- galvanised, yellow coated steel frames with riveted wood/plastic composite sheets

Dokadek closure panel 0.15x2.44m Dokadek closure panel 0.15x1.22m Dokadek closure panel 0.15x0.81m


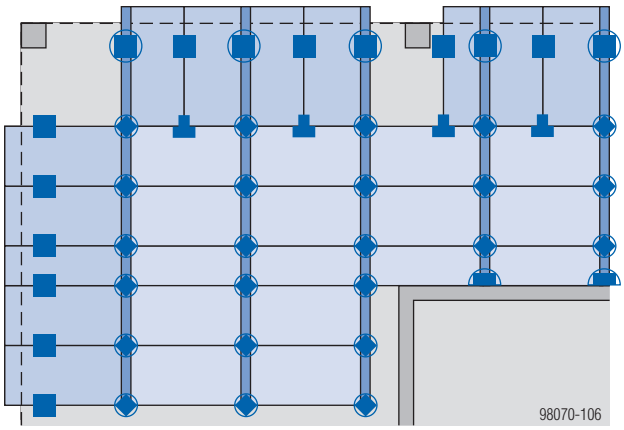
Dokadek heads

WARNING

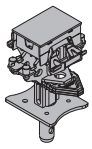
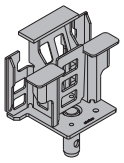
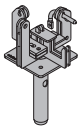
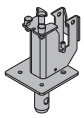
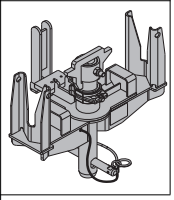
- The Dokadek heads must always be fixed to the floor prop with the correct pin (exception: edge heads at a panel joint).
- The edge head may only be fitted to the outside one-third point of the panel.

Right! (floor props fitted to the outside one-third point)	Wrong! (floor props fitted to the inside one-third point or to the middle)
	

Position of the Dokadek heads



Legend

XF drop head [1]	XF wall head [1]	Edge head 18mm / 21mm / 27mm [1] [2]	Cross head [1]	XF edge head 18mm / 21mm / 27mm
				
				

Spring locked connecting pin D16 with eye	Spring locked connecting pin 16mm
	

[1] Spring locked connecting pin 16mm and Spring locked connecting pin D16 with eye not included with product

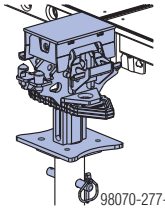
[2] Spring locked connecting pin 16mm only needed when the edge head is combined with an infill beam

NOTICE

- When placing the panels onto the heads, make sure that the panels are correctly fixed in the heads.
- Edge heads to which infill beams are mounted (in the infill zone) must be secured with Spring locked connecting pins 16mm.
- If a Dokadek panel 1.22x2.44m is to be connected, the cross head is fitted in the middle of the broadside of the panel.
- If a Dokadek panel 0.81x2.44m is to be connected, the cross head is fitted at the one-third point of the broadside of the panel.

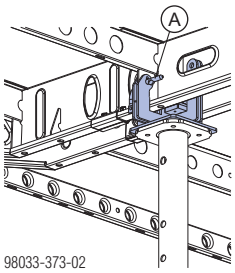
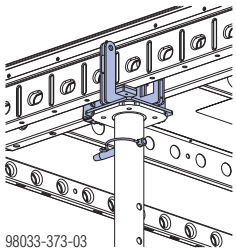
Installation examples

XF drop head



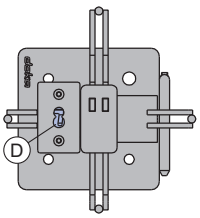
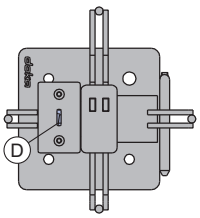
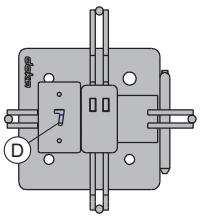
Used on Dokadek panel

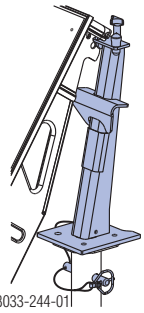
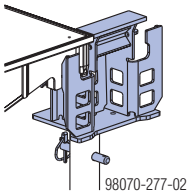
Edge head

Used at panel joint	Used with panel and infill beam
	

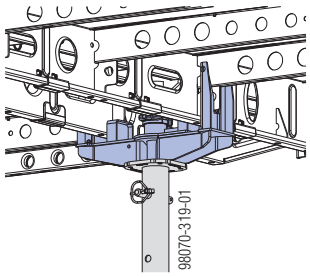
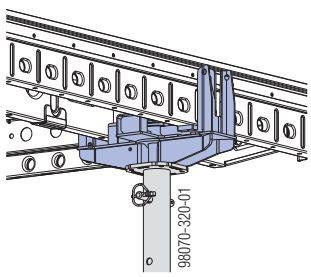
A Pin for fixing the edge head on the panel (included with product)

Identification mark (D) on 'Edge head' to show matching sheet thickness

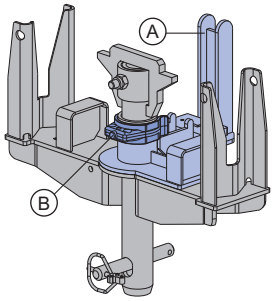
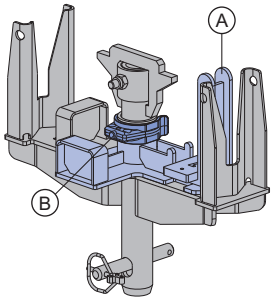
Sheet thickness		
18 mm	21 mm	27 mm
		

Wall head	XF wall head
 Used on narrowside of formwork	 Used on broadside of formwork

XF edge head

Used at panel joint, with closure panel	Used with panel, closure panel and infill beam
	

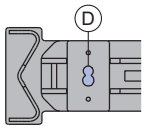
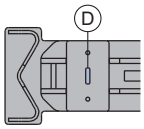
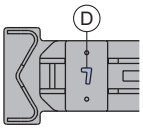
Make sure that the swivel support is in the correct position! (fixed in place with tube connector)

A Swivel support

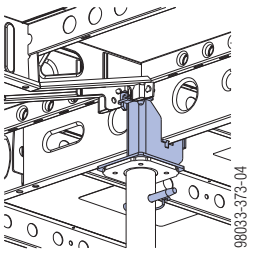
B Tube connector

Identification mark (D) on XF edge head to show matching sheet thickness

Sheet thickness		
18 mm	21 mm	27 mm
		

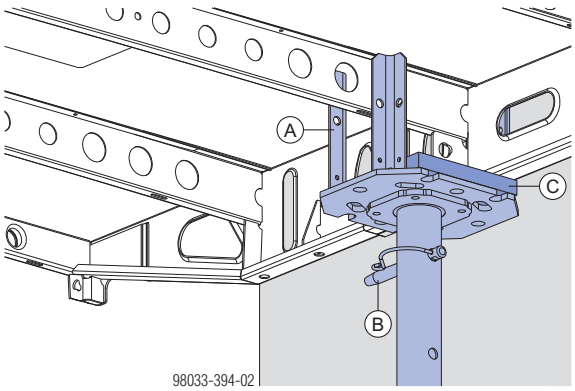
Cross head

Used on the broadside of the panel, at the one-third point or in the middle of the panel



Forming wall junctions

In place of the relevant edge head at the one-third point of the panel, on wall junctions the 4-way head or Lowering head is used instead.



A	4-way head H20 or Lowering head H20
B	Spring-locked connecting pin 16 mm
C	Height compensation min. 21 mm (fix with nails)

Securing the formwork against tip-over

WARNING

- ➤ Before anybody steps onto the surface of the formwork, its stability must be ensured by e.g. wall clamps or lashing straps.
- ➤ Transfer of concreting loads must be ensured by other measures (e.g. by transferring these loads into the structure or using tie-backs).
- ➤ All cantilevered panels must be secured against overturning.

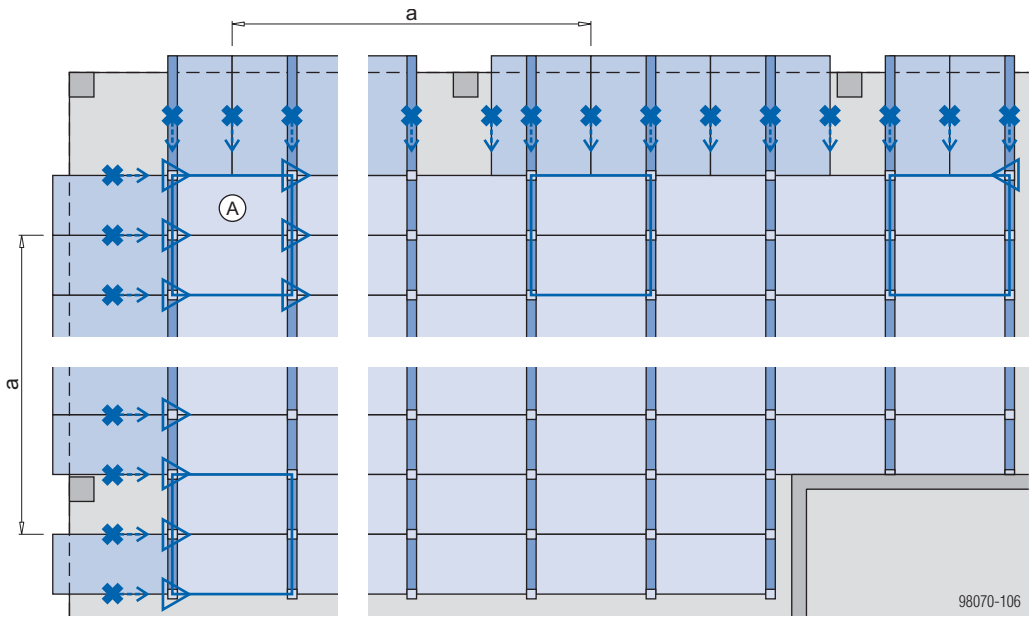
For more information on tie-backs with lashing straps, see the section headed 'Floor formwork around edges' in the 'Panel floor formwork Dokadek 30 with drop head' User Information booklet.

Follow the 'Doka express anchor 16x125mm' Fitting Instructions or the 'Lashing strap 5.00m' User Information booklet!

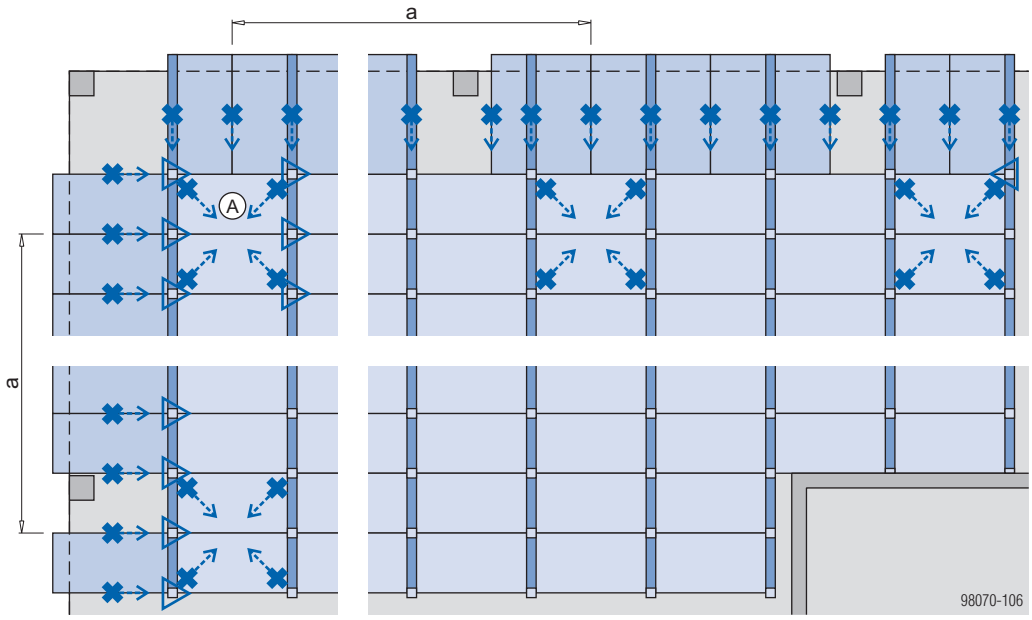
NOTICE

- Secure every floor prop in the 1st row of props with a Removable folding tripod.
  - Shoring height < 3.00 m: Removable folding tripod
  - Shoring height ≥ 3.00 m: Removable folding tripod 1.20m
- While the formwork is being set up, make a braced unit on the 1st pair of panels (with removable folding tripods), every max. 7.50 m and on the last pair of panels (without removable folding tripods) – see 'Practical examples 1 & 2'.
  - Alternatively, tie-backs can also be attached (see Practical example 3).
- Important to remember when mounting the floor prop (incl. cross head): in the typical zone, secure – with tripods – the props that have only 1 panel resting on them.
- Tie back the typical zones at the corners.
- Tie back cantilevering panels:
  - by the Scaffold tube 0.50m on every panel joint (see Practical example 5)
  - additionally, on the outside panels, by the middle stiffening plate (see Practical example 6)

Variant with braced unit

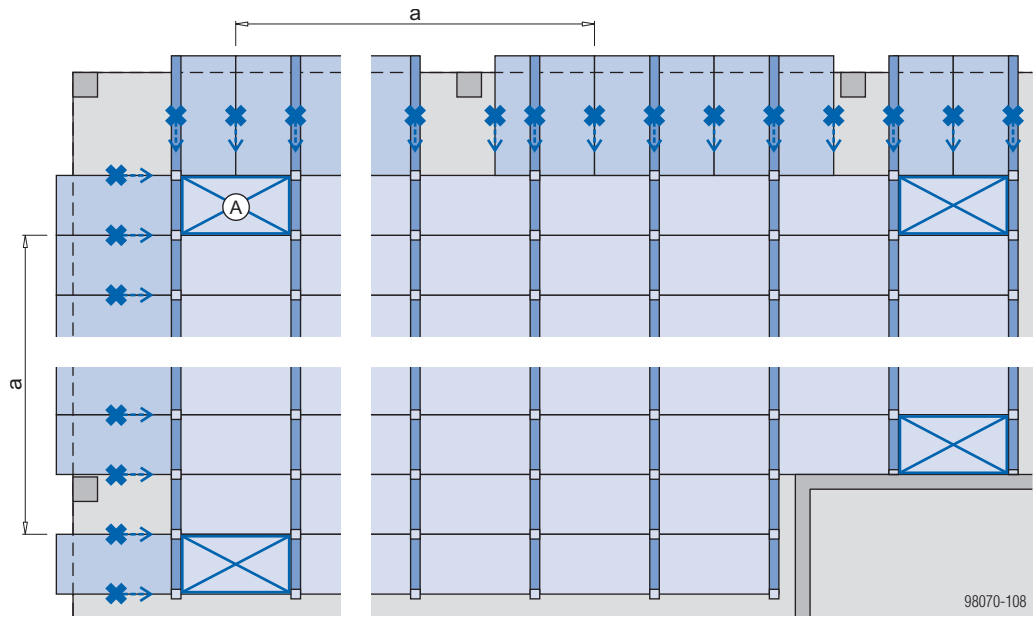


Variant without braced unit



a ... braced unit / tie-back on 1st pair of panels, every max. 7.50 m **and** on the final pair of panels

Variant with Bracing frame Eurex



a ... every 7.50 m and on last panel

A Starting unit

Legend

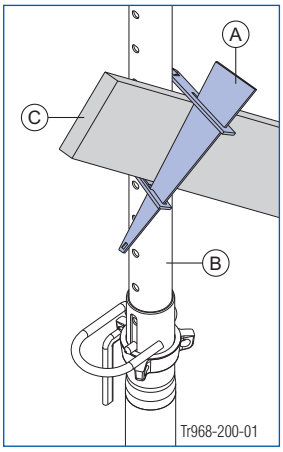
▽	Removable folding tripod
✖ ←	Fixing point (e.g. with tie-back) Arrow = direction of the tie-back
□	Braced unit
☒	Bracing frames Eurex with diagonal crosses

Bracing clamp B

Planks can be attached to the floor props as diagonal braces, using the Bracing clamp B.

NOTICE

- Only allowed to be used as a set-up aid.
- Not suitable for sustaining horizontal loads during pouring.
- Always hammer in the wedge from top to bottom!



A Bracing clamp B
B Doka floor prop Eurex 30 top
C Plank

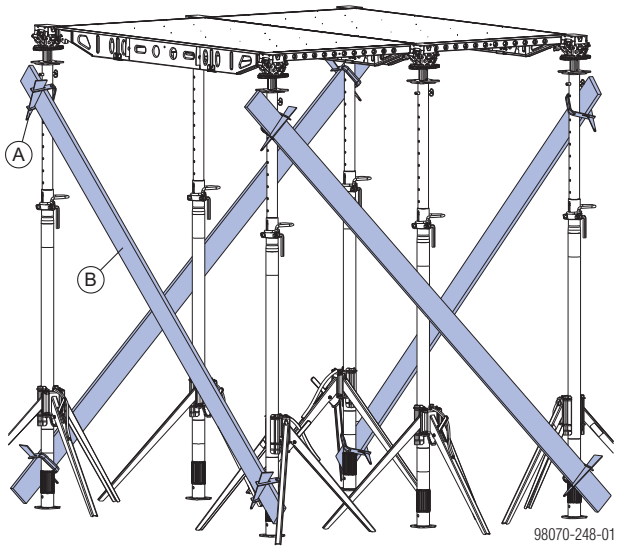
Possible plank/floor-prop combinations with the Bracing clamp B

Eurex 30 top	Plank											
	2.4 x 15		3 x 15		4 x 15		5 x 10		5 x 12		5 x 15	
	IT	OT	IT	OT	IT	OT	IT	OT	IT	OT	IT	OT
250	—	✓	—	✓	✓	✓	✓	✓	✓	✓	✓	✓
300	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
350	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
400	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
450	✓	✓	✓	✓	✓	✓	✓	—	✓	—	✓	—
550	✓	✓	✓	✓	✓	—	✓	—	✓	—	—	—

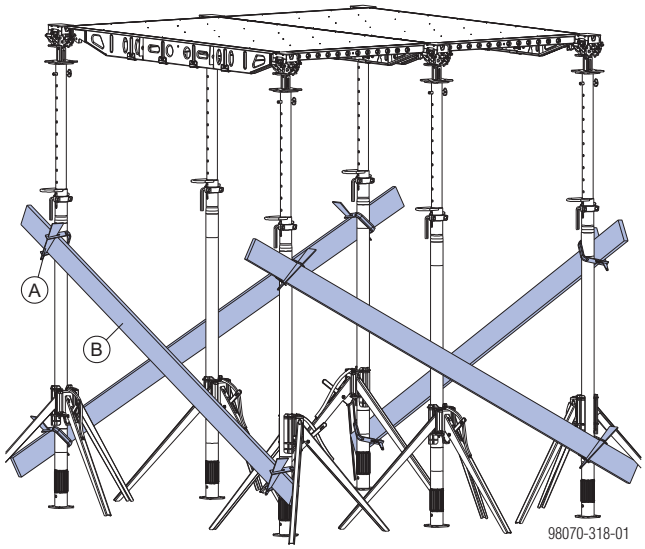
Legend:

IT	Inner tube
OT	Outer tube
✓	Possible to combine
—	Not possible to combine

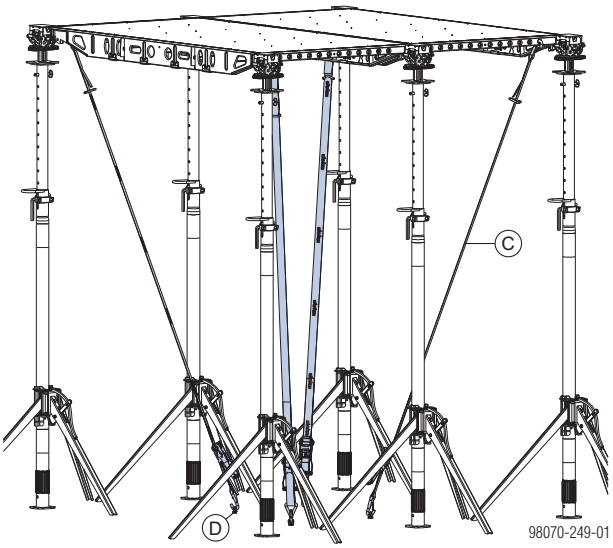
Practical example 1 - Braced unit on 1st pair of panels



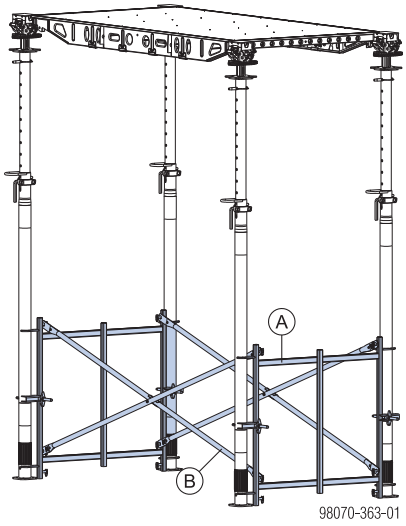
Practical example 2 - Alternative braced unit



Practical example 3 - Alternative tie-back

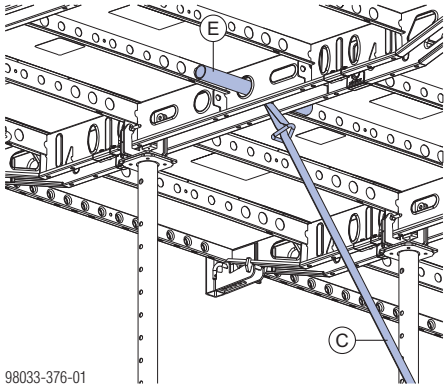


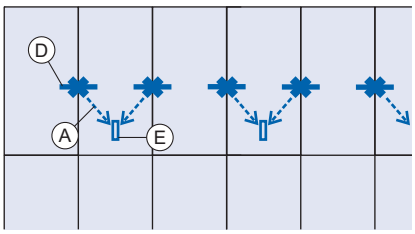
Practical example 4 - With bracing frame Eurex

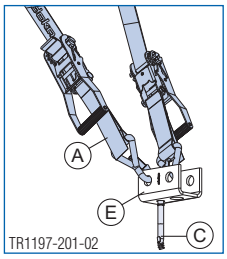


A Bracing frame Eurex
B Diagonal cross

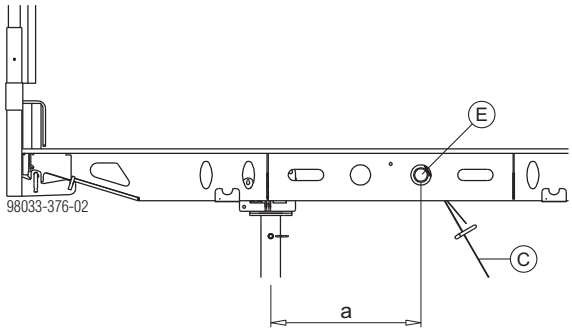
Practical example 5 - Tie-back at panel joint







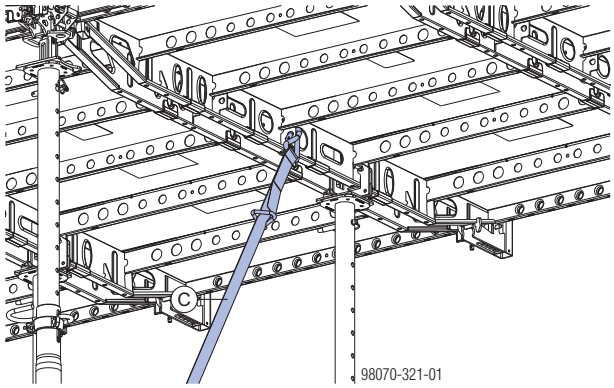
A Lashing strap 5.00m
C Doka express anchor 16x125mm
D Scaffold tube 48.3mm 0.50m
E Bracing shoe



a ... 50 cm

Permitted bracing force in longitudinal direction on the Scaffold tube 48.3mm 0.50m: 5 kN

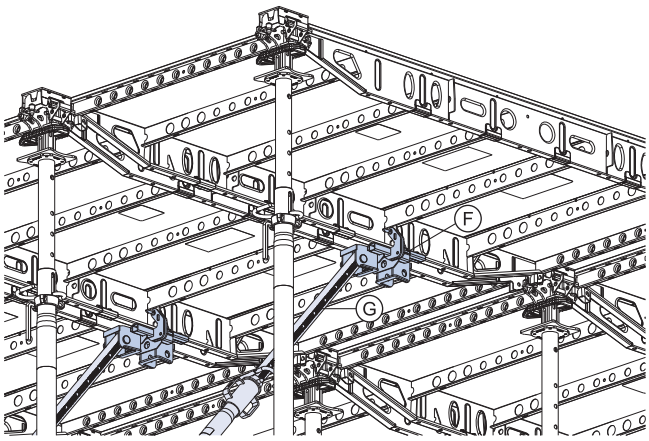
Practical example 6 - Tie-back in middle stiffening plate



A	Bracing clamp B
B	Plank
C	Lashing strap 5.00m
D	Doka express anchor 16x125mm
E	Scaffold tube 48.3mm 0.50m

Permitted bracing force in longitudinal and transverse directions at the middle stiffening plate: 5 kN

Practical example 7 - Tie back at the inter-panel joint at the one-third point with Dokadek plumbing strut connector

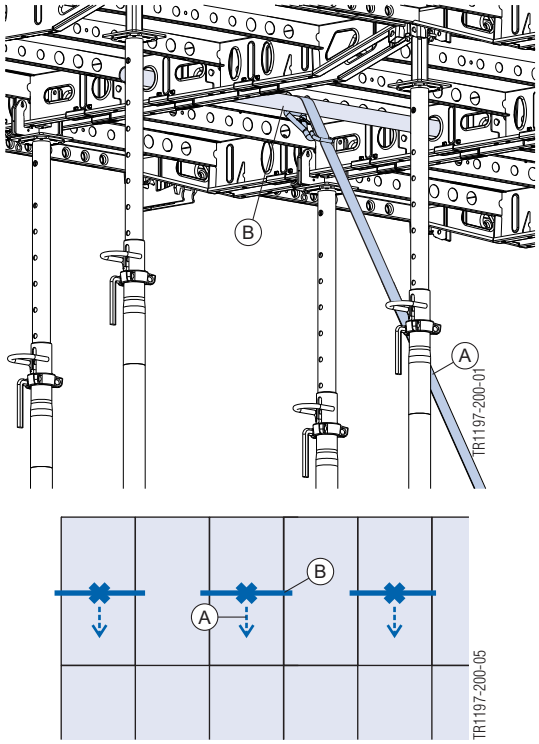


A	Bracing clamp B
B	Plank
C	Lashing strap 5.00m
D	Doka express anchor 16x125mm
E	Scaffold tube 48.3mm 0.50m
F	Dokadek plumbing-strut connector
G	Plumbing strut 340 IB or 540 IB

Permitted compressive force: 13.5 kN
Permitted tensile force: 5 kN

For details on use of the Dokadek plumbing strut connector see the section headed 'Sloping slabs' in the 'Panel floor formwork Dokadek 30' User Information booklet.

Practical example 8 - Tie-back in middle of the panel



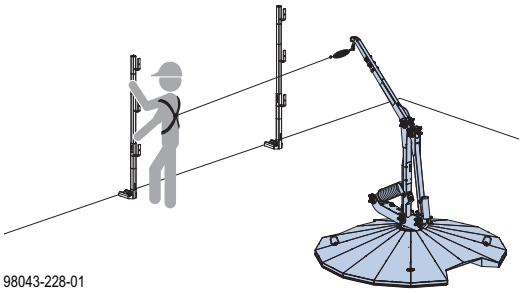
A	Lashing strap 5.00m
B	Scaffold tube 48.3mm 1.50m

Permitted bracing force in longitudinal direction on the Scaffold tube 48.3mm 1.50m: 3 kN

FreeFalcon

WARNING
Risk of falling at open edges!
- ➤ Personnel must be trained to use personal fall-arrest systems (e.g. safety harness) until all fall protection has been installed.
- ➤ Suitable anchorage points must be defined by an approved person appointed by the contractor.

A fall arrester such as the FreeFalcon provides a mobile anchorage point for the safety harness.

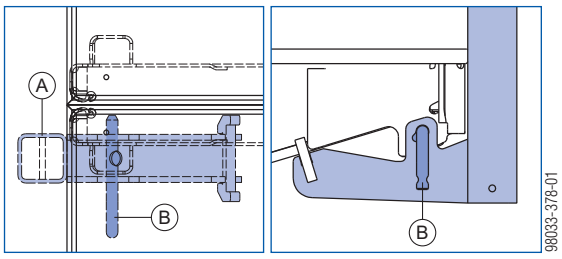


User instruction prior to use of the FreeFalcon is mandatory.
Follow the directions in the 'FreeFalcon' Operating Instructions.

Guardrail systems on the formwork

For more information on permitted influence width of the handrail-post shoe, see the section headed 'Floor formwork around edges' in the 'Panel floor formwork Dokadek 30 with drop head' User Information booklet.

Note:
The position of the Handrail-post shoe short is different from that in the standard installation configuration as described in the 'Floor formwork around edges' section of the 'Panel floor formwork Dokadek 30 with drop head' User Information booklet.



A Dokadek handrail-post shoe short
B Bolt (vertical!)

Fall-arrest systems on the structure

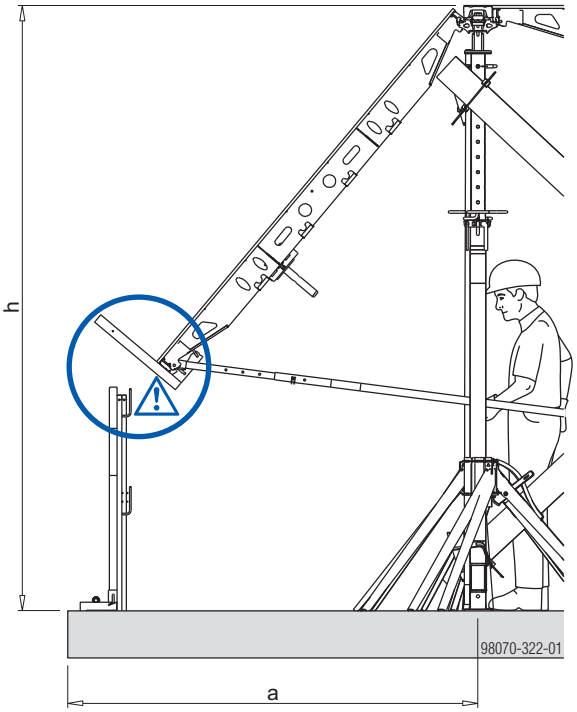
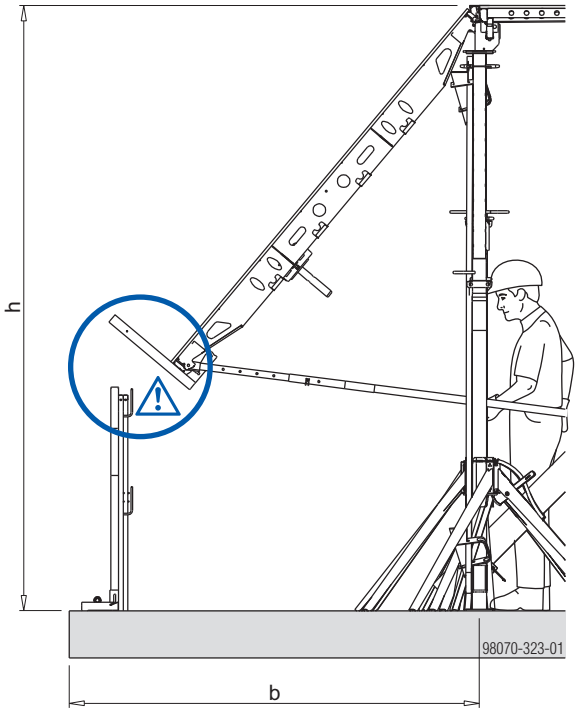
Note:
When tilting up cantilevering panels, make sure that these do not collide with the guardrail system on the structure. Different minimum room heights are required, depending on the attachment method used.

Possible ranges of use with Edge protection system XP

Attachment method used	Min. room height 'h'
Handrail-post shoe XP	310 cm
Railing clamp XP 40cm	300 cm
Screw-on shoe XP	300 cm

Note:
Always comply with the country-specific safety regulations! For lower room heights, the guardrail system can be temporarily removed and a personal fall-arrest system (PFAS) must be used instead (e.g. safety harness).

Practical examples

Tilting up panels that cantilever in the longitudinal direction of the typical zone	Tilting up panels that cantilever in the transverse direction of the typical zone
	
a ... 217.5 cm (checking is necessary for any other dimension than this!)	b ... 210 cm (checking is necessary for any other dimension than this!)

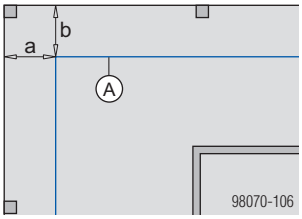
Operating with Dokadek assembling tool

Formwork set-up in the typical zone

NOTICE

➤ The procedure for setting up the formwork in the typical zone is the same as in the standard set-up procedure (see the section headed 'Instructions for Assembly and Use' in the 'Panel floor formwork Dokadek 30 with drop head' User Information booklet), with the exception of the 1st row of panels.

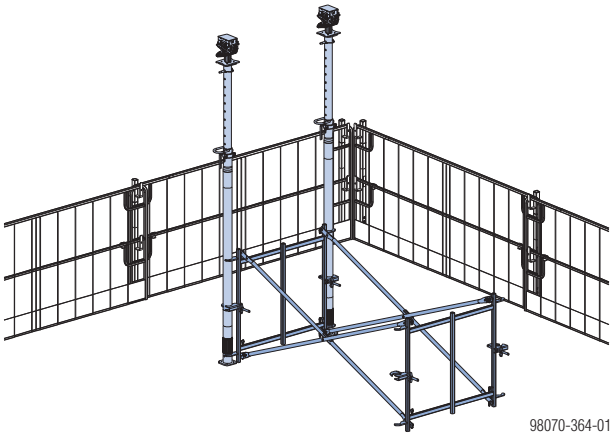
➤ Draw a vertical plan of the typical zone.



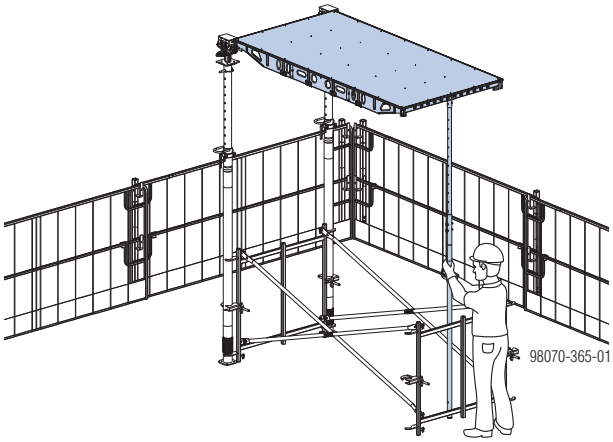
a ... 217.5 cm
b ... 210.0 cm

A Vertical plan

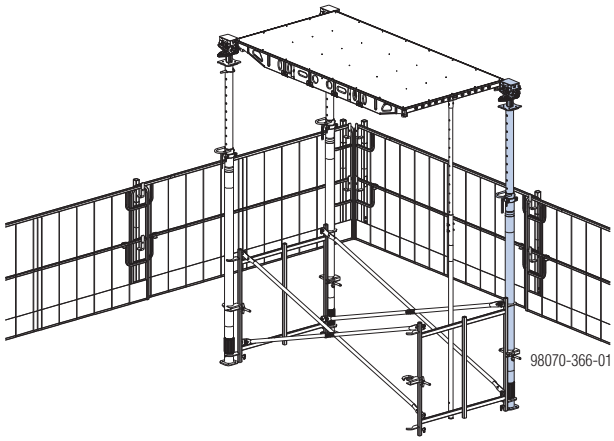
➤ Pre-assemble the unit consisting of bracing frames and diagonal crosses and set up the first two floor props (with XF drop heads) at the appropriate positions.



➤ Engage the panel, raise the free end and support it with the assembling tool. Secure the assembling tool so that it cannot tip over.



➤ Secure another floor prop (with XF drop head) to the bracing frame with the quick-fixing mechanism. Assembling tool remains securely propped in position. (Max. inclination of the assembling tool with respect to the perpendicular: 5°).

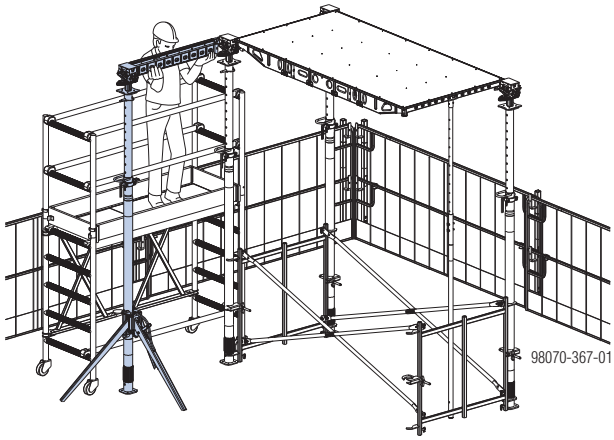


NOTICE

➤ Make sure that the Wheel-around scaffold DF has sufficient stability against overturning!

➤ When work is being carried out near drop-off edges (i.e. at a distance of < 2 m), the Wheel-around scaffold DF accessory set (consisting of a toeboard and intermediate guardrail) is needed.

➤ Working from a Wheel-around scaffold DF, put up the next floor prop (with XF drop head), secure it with a Removable folding tripod and engage infill beams into the heads to fix the props the correct distance apart.



CAUTION

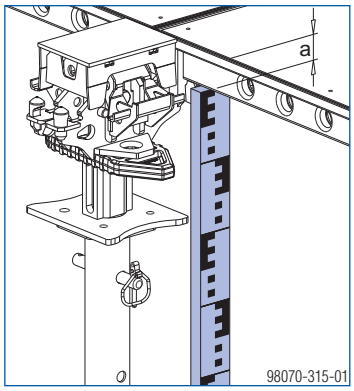
➤ When engaging and tilting up the panel, give the floor props additional fixing (i.e. as well as with the Removable folding tripods) to prevent them tipping over.

➤ Set up further panels in the same way, until only the planned infill zone is left unformed. Assemble units consisting of bracing frames and diagonal crosses (see the section headed 'Securing the formwork against tip-over' in the 'Panel floor formwork Dokadek 30 with drop head' User Information booklet).

➤ From now on, all the other rows of panels follow the standard set-up procedure.

Levelling the typical zone

➤ Adjust the panels at the corners to the desired floor-slab height (= room height minus 6.5 cm, with reference to the frame cross-profile).



a ... 6.5 cm

Securing the typical zone against tip-over

➤ See the section headed 'Ground rules'.

Adding cantilevering panels

Preparations

➤ Set at least **2 Dokadek assembling tools** to the required length (= approx. room height + 20 cm).

➤ Roughly adjust the height of the floor prop, using the fastening clamp (required length = room height minus 25 cm).

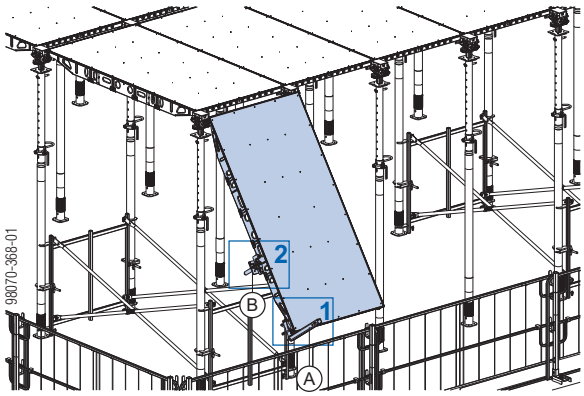
➤ Fit the cross head onto the floor prop and secure it with the pin.

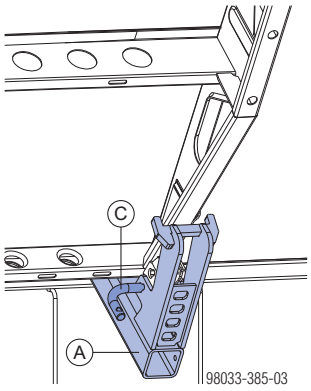
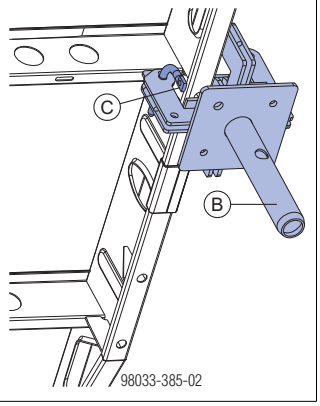
➤ Fit the XF edge head onto the floor prop and secure it with the pin.

Adding to narrowside of standard panels

➤ Engage the cantilevering panel in the XF drop heads.

➤ Mount a handrail-post shoe short and an edge head.



Close-up 1 Handrail-post shoe short	Close-up 2 Edge head
	

A Dokadek handrail-post shoe short

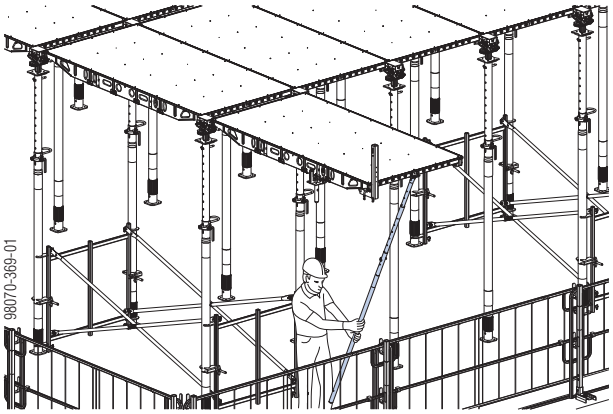
B Dokadek edge head

C Safety pin (vertical!)

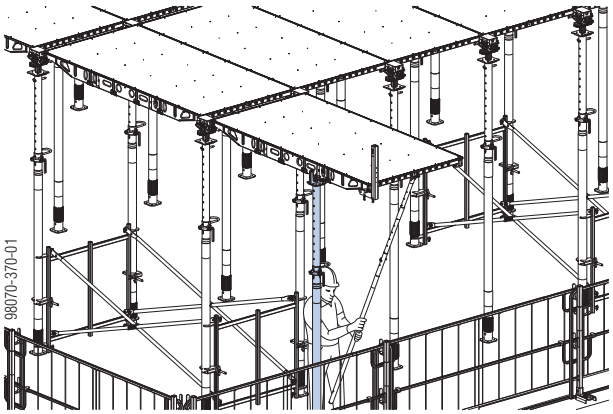
WARNING

➤ When putting up cantilevering panels, the assembling tools must always be held by one person to prevent it tipping over.

➤ Hook the assembling tool into the middle of the outside cross profile of the panel, raise the panel and secure the assembling tool so that it cannot tip over.

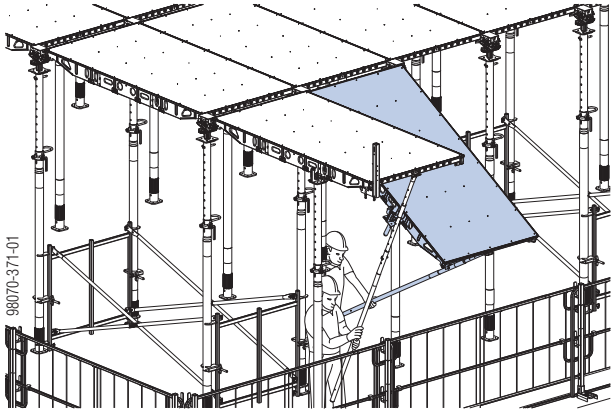


➤ Shore the panel by placing a floor prop under the edge head. Assembling tool remains securely propped in position.



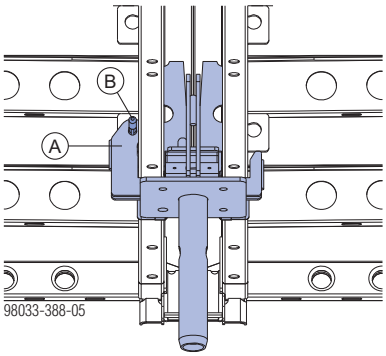
➤ Engage the next panel.

➤ Mount the edge head and, if necessary, the Handrail-post shoe short (depends on the permitted influence width). Then tilt the panel up.



B Dokadek edge head

Close-up of edge head



A Dokadek edge head

B Safety pin (vertical!)

➤ Set up further panels in the same way, until only the planned infill zone is left unformed. In this case, however, an extra edge head is needed on the final panel.

Dokadek panels 0.81x2.44m can be used to optimise the infill width around columns.

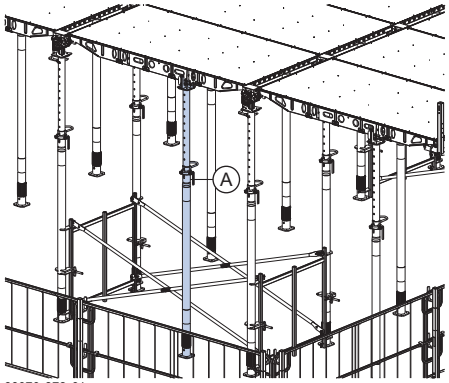
The Dokadek panels 0.81x2.44m are mounted in the same way as the Dokadek panels 1.22x2.44m.

Adding to broadside of standard panels

NOTICE

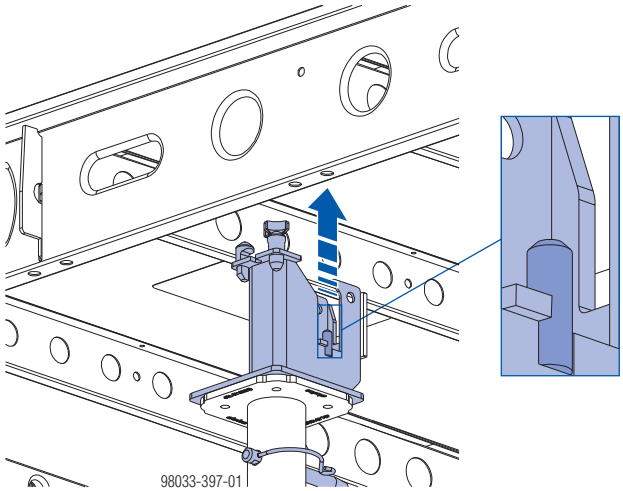
- ➤ Props with a cross head should only be extended (by turning the adjusting nut) until the prop encounters resistance from above. The panel must not be raised.
- ➤ At the corners, use tripods to secure those floor props that have only 1 panel resting on the heads.

➤ Shore the panels with floor props and cross heads at the required position.



A Doka floor prop with Dokadek cross head

Close-up of cross head

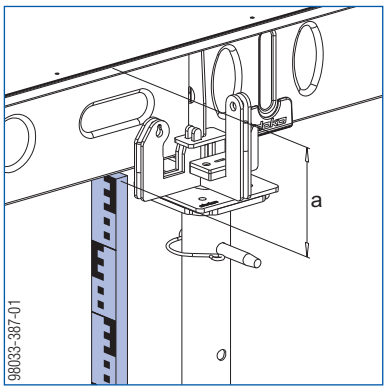


The pins of the cross head must be fitted into the two holes in the panel.

➤ All the other worksteps are the same as for adding cantilevering panels to the narrowsides of standard panels, the only difference being that an XF edge head with a floor prop must be used in the area of the closure panel (see the section headed 'Ground rules').

Levelling cantilevering panels

➤ Adjust the panels above the floor prop to the desired floor-slab height (= room height minus 17.5 cm), with reference to the longitudinal profile.



a ... 17.5 cm

Securing cantilevering panels against tip-over

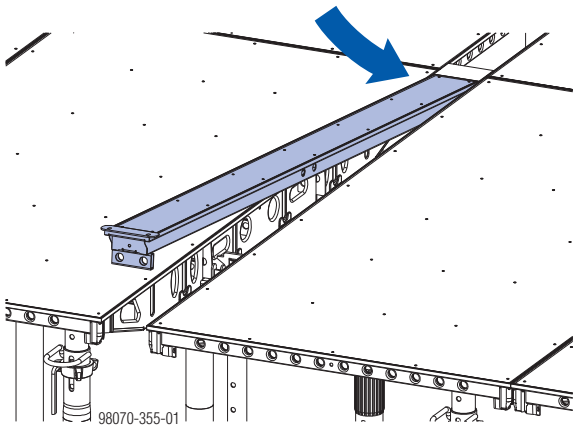
➤ See the section headed 'Ground rules'.

Mounting guardrail systems

For more information, see the ‘Panel floor formwork Dokadek 30 with drop head’ User Information booklet.

Mounting closure panels

➤ Engage the closure panels onto the early-stripping heads or XF edge heads from above.



Mounting fillers

Mounting fillers in the typical zone

For more information, see the ‘Panel floor formwork Dokadek 30 with drop head’ User Information booklet.

Mounting fillers between the cantilevering panels

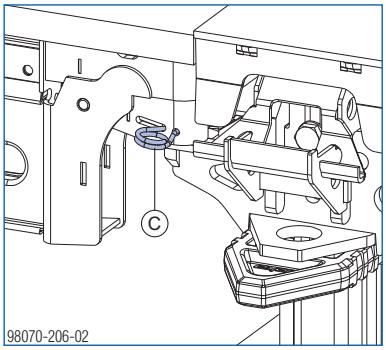
- In order to be able to transfer the horizontal forces, the superstructure components must be firmly attached to one another.
- The back-stay can be fastened to either the secondary or primary beam.

WARNING

- ➤ Secure cantilevering slab formwork to prevent lift-out and tipover.
- ➤ Secondary beams with stop-end formwork must be secured against horizontal pull-out.
- ➤ In addition, if necessary, put up a protection platform on the structure (e.g. Folding platform K).

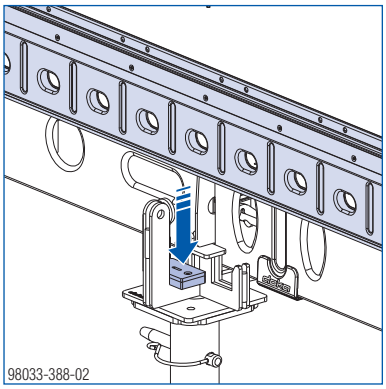
➤ Engage an infill beam 2.44m into the heads (cheek plate at top), and secure with spring cotter.

Position on XF drop head

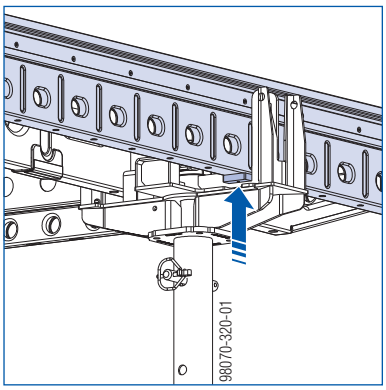


C Position for necessary anti-liftout guard with spring cotter (included with product)

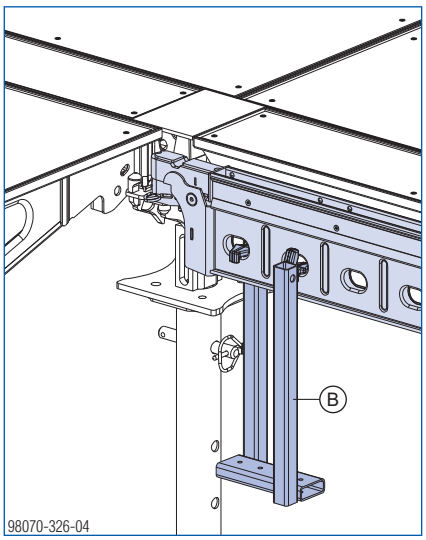
Position on edge head



Position on XF edge head



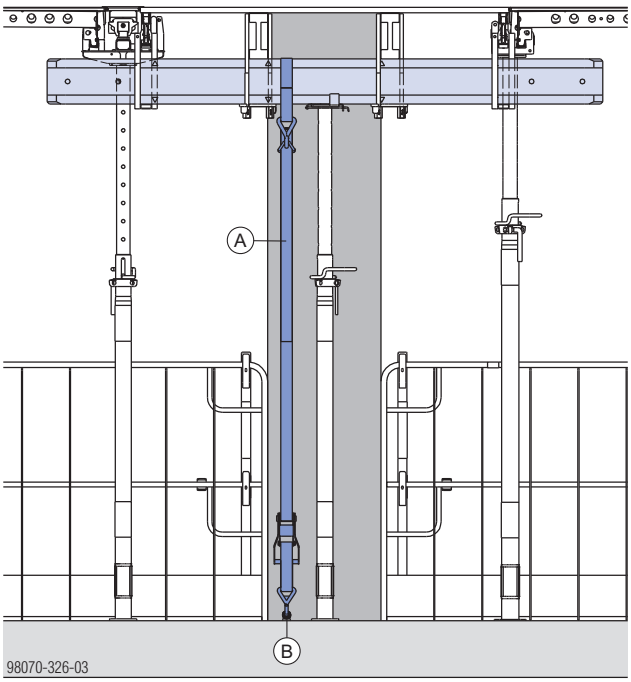
➤ Hook 4 suspension clamps into the infill beam, **as close as possible to each floor prop**.



B Dokadek suspension clamp H20

➤ Fit 2 Doka beams H20 into the suspension clamps, to serve as primary beams.

➤ Tie back each primary beam in the vertical with a lashing strap.



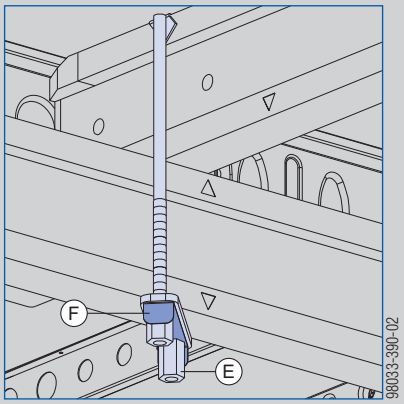
A Lashing strap 5.00m

B Doka Express anchor 16x125mm

CAUTION

There is a risk of the hexagon nuts working loose on the Brace stirrup 8.

➤ Fix the hexagon nuts on the Brace stirrup 8 with an **Anti-twisting plate for Brace stirrup 8**.



Always bend the anti-twisting plate over the flat side of the hexagon nut.

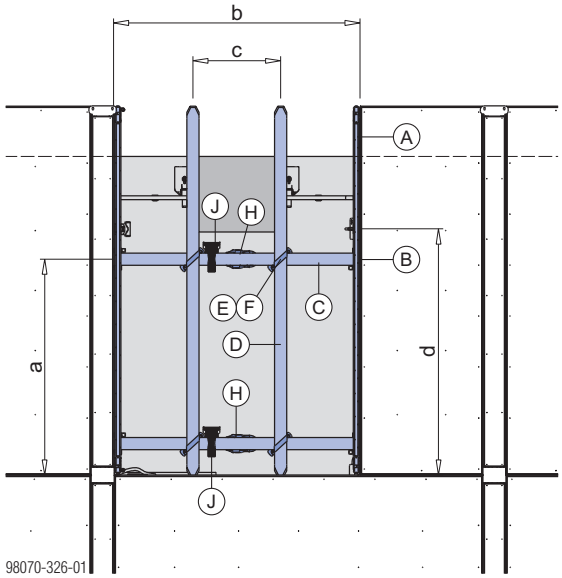
Use each anti-twisting plate once only.

➤ Mount Doka beams H20 as secondary beams and fix them with Brace stirrups 8.

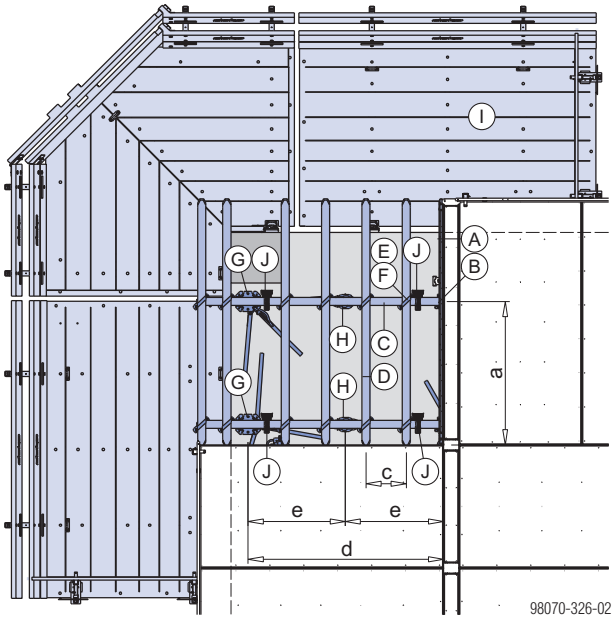
➤ Mount the fillers.

Practical examples

Infilling between cantilevering panels



Infilling at corner of building



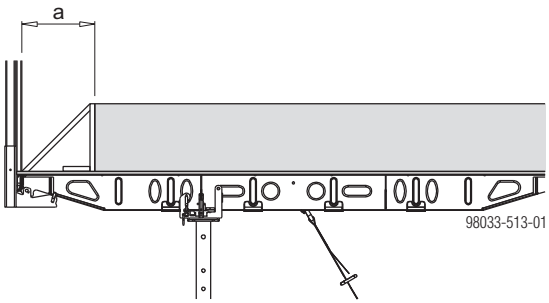
Permitted dimensions [cm]

Max. slab thickness	32	45
Dokadek panel	1.22x2.44m	0.81x2.44m
a (position of outside primary beam)	≥ 142	
b (max. infill width **with no** extra shore in middle)	≤ 122	≤ 81.3
b (max. infill width **with** 1 extra shore in middle)	≤ 184	≤ 81.3
c (max. secondary-beam spacing)	50	30
d (position of floor prop with edge head)	163	
e (max. spacing of props)	96.5 (with 1 extra shore in middle)	64 (with 2 extra shores – 1 at each of the one-third points)

A Dokadek infill beam 2.44m
B Dokadek suspension clamp H20
C Doka beam H20 used as primary beam
D Doka beam H20 used as secondary beam (e.g. 2.45m)
E Brace stirrup 8
F Safety plate
G Floor prop Eurex 30 top
Removable folding tripod
Lowering head H20
H Floor prop Eurex 30 top and Supporting head H20 DF
I Protection platform, e.g. folding platform
J Lashing strap 5.00m

Pouring

WARNING
Ensure correct direction of pouring!
➤ Always work outwards from the middle of the building towards the edge of the slab when pouring.



a ... 20 to 30 cm

NOTICE
Use of Dokadek panels 1.22x1.22m and 0.81x1.22m at structure edge not permitted.

Permitted slab thickness [cm][1)]

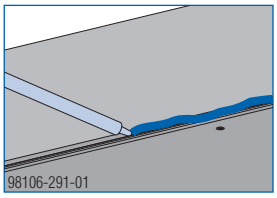
Panel size	**Without** additional pre-cautions	**With** additional pre-cautions[2)]	Flatness deviation as per DIN 18202, Table 3
1.22x2.44m	30	—	Line 6
1.22x2.44m	> 30 - 35	—	Line 5
1.22x2.44m	—	> 30 - 50	Line 6
1.22x1.22m	35	> 30 - 50	Line 5
0.81x2.44m	45	—	Line 6
0.81x2.44m	> 45 - 50	—	Line 5
0.81x2.44m	—	> 45 - 50	Line 6
0.81x1.22m	50	—	Line 6

[1)] when using Doka floor prop Eurex 30 top

[2)] see the section headed ‘Additional precautions for slab thicknesses of up to 50 cm’.

To protect the surface of the form-facing, we recommend using a vibrator with a protective rubber cap.

PU foam (e.g. Hilti CF-FW 500 or Würth UNI PUR) can be used to seal any gaps between the formwork and the walls.



Early stripping

NOTICE

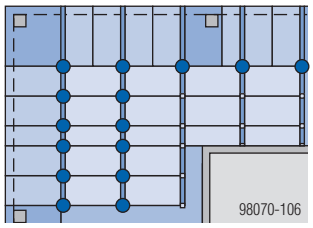
- Comply with the stipulated stripping times.
- There are no props with drop-head function at the edge of the floor slab.
- Always strip out the formwork in reverse order (see variant A)
- Where fall protection is still required, the panels at the slab edge and panels with cross heads must remain in place (see variant B).
- Observe the following sections in the 'Panel floor formwork Dokadek 30 with drop head' User Information booklet.
  - ‘Reshoring props, concrete technology and stripping’
  - If necessary, 'Additional precautions for slab thicknesses of up to 50 cm'.

WARNING

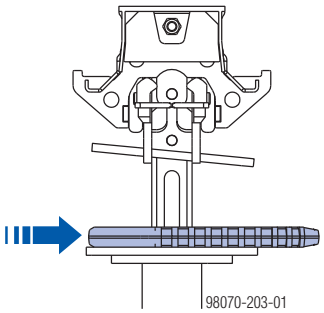
➤ Do **not** release the sliding plates of the remaining XF drop heads (see blue marks in the sketch below) (= 2nd lowering stage), and do **not** back off the floor props.

➤ Proceed panel by panel when stripping at the edge of the floor slab. **Immediately** put up reshoring for each panel in turn as stripping proceeds.

➤ No temporary reshores must be put beneath the closure panels.



➤ Lower all the panels by knocking the red lowering wedge of the XF drop head with a hammer (= 1st lowering stage).



The floor props with an XF drop head will still be restrained.

➤ Before lowering, clean the dirty baseplates of the drop heads!

➤ Lower the floor props with an XF wall head or cross head approx. 2 cm (approx. 1 turn of the adjusting nut).

WARNING

➤ Strip all panels (variant A and B) before pouring the floor-slab above.

➤ After this, take the load off the floor props with a drop head or replace them with temporary reshores.

Variant A: Stripping from the structure edge to the structure core

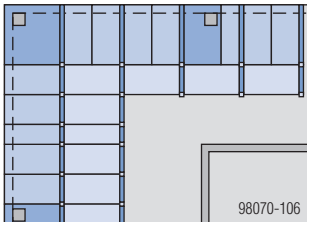
➤ Strip the panels in reverse order.

➤ For more information, see the section headed 'Operating with assembling tool - Early stripping' in the 'Panel floor formwork Dokadek 30 with drop head' User Information booklet.

Variant B: Stripping from the structure core to the structure edge

WARNING

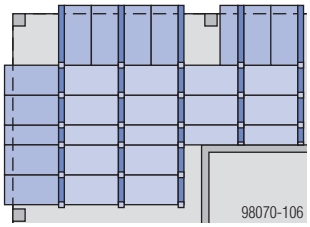
➤ The panels at the slab edge and the panels with cross heads must remain in place (see illustration).



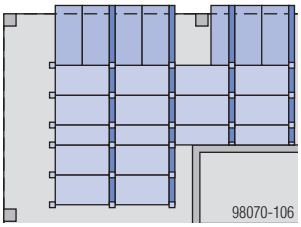
➤ For more information, see the section headed 'Operating with assembling tool - Stripping' in the 'Panel floor formwork Dokadek 30 with drop head' User Information booklet.

Stripping of cantilevering panels – in detail

➤ Put up temporary reshoring in the infill zone.
➤ Strip the infill zone.

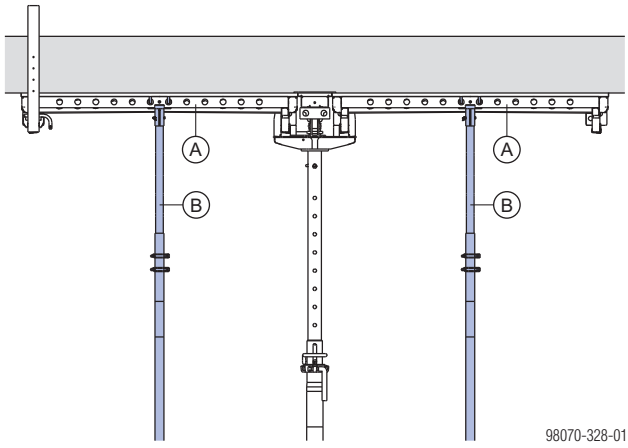


➤ Strip the panels cantilevering on the narrowside of the panels in the typical zone, in reverse order from the order in which they were put up. Temporary reshoring must be put up immediately for each panel that has been stripped.
➤ Strip the closure panels with the assembling tool.



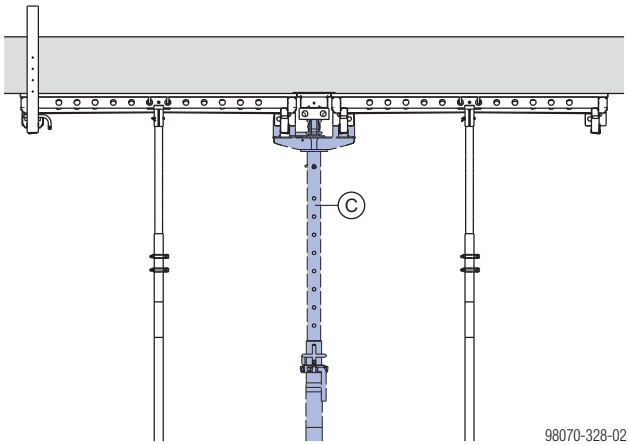
Stripping of panels cantilevering on the long side of the panels in the typical zone:

➤ Place assembling tools beneath the panels. Secure the assembling tools so that they cannot tip over.



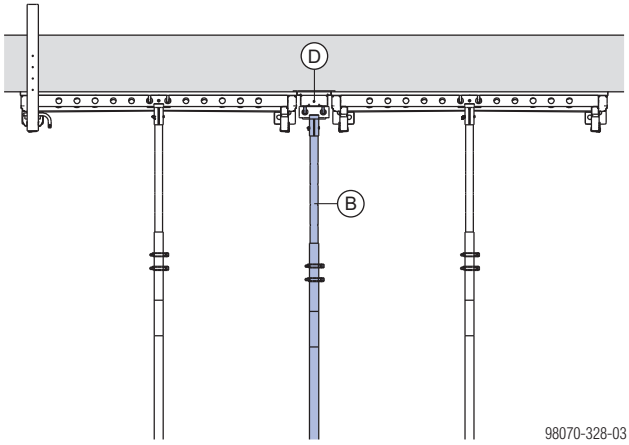
A Dokadek panel
B Dokadek assembling tool

➤ Remove the floor prop (plus XF edge head).

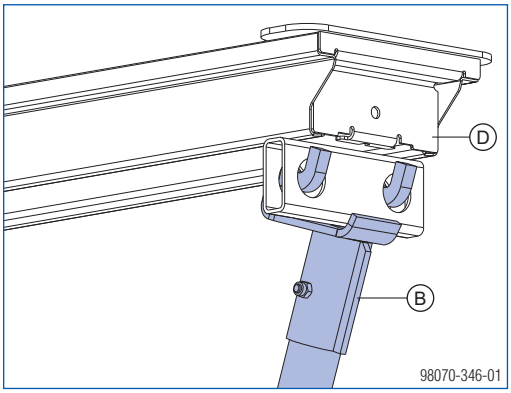


C Floor prop Eurex 30 top and Dokadek XF edge head

➤ Place an assembling tool beneath the closure panel and secure the assembling tool so that it cannot tip over.

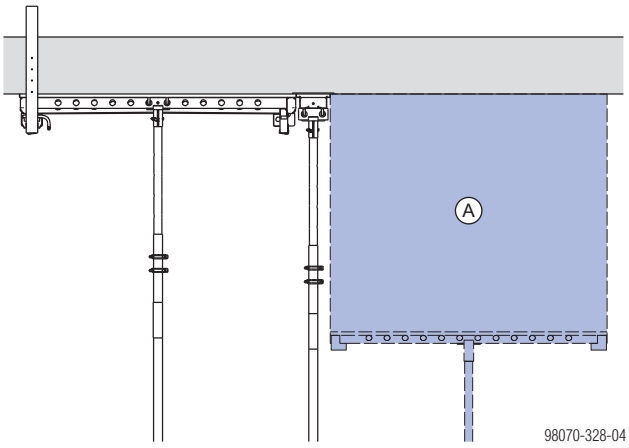


Close-up



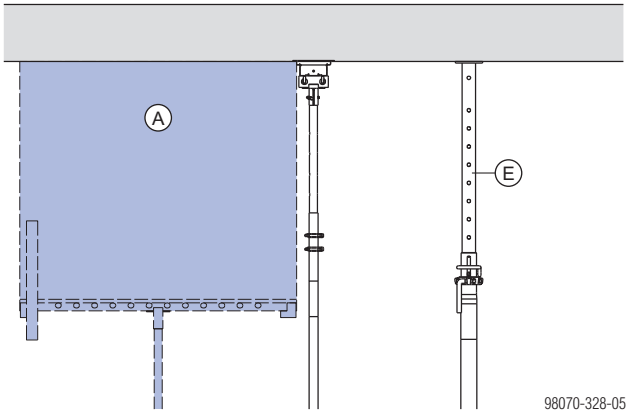
B Dokadek assembling tool
D Dokadek closure panel

➤ Tilt down the panel, disengage it from the heads, and set it down.



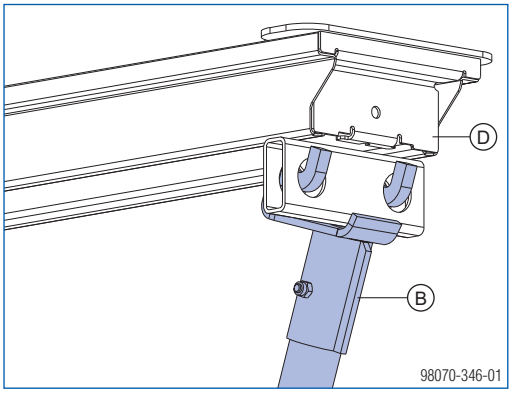
A Dokadek panel

➤ Put up temporary reshoring.
➤ Tilt down the next panel, disengage it from the heads, and set it down.



A Dokadek panel
E Temporary reshoring

➤ Put up the next temporary reshore.
➤ Tilt down the closure panel and disengage it from the head.



B Dokadek assembling tool
D Dokadek closure panel

Cleaning the formwork

For more information, see the ‘Panel floor formwork Dokadek 30 with drop head’ User Information booklet.

Reshoring

➤ Before pouring the next floor-slab (i.e. above the one that has just been stripped), put up reshoring props.

For more information, see the ‘Panel floor formwork Dokadek 30 with drop head’ User Information booklet.

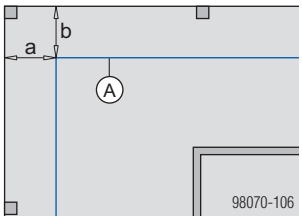
Operating with DekLift 4.50m

Formwork set-up in the typical zone

NOTICE

➤ The procedure for setting up the formwork in the typical zone is the same as in the standard set-up procedure (see the section headed 'Instructions for Assembly and Use' in the 'Panel floor formwork Dokadek 30 with drop head' User Information booklet), with the exception of the 1st row of panels.

➤ Draw a vertical plan of the typical zone.



a ... 217.5 cm
b ... 210.0 cm

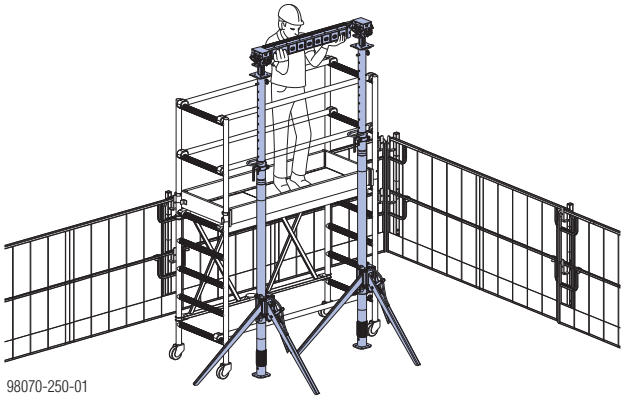
A Vertical plan

➤ Put up the first two floor props (each with an XF drop head) in the planned position, and secure them with Removable folding tripods.

NOTICE

➤ When work is being carried out near drop-off edges (i.e. at a distance of < 2 m), the Wheel-around scaffold DF accessory set (consisting of a toeboard and intermediate guardrail) is needed.

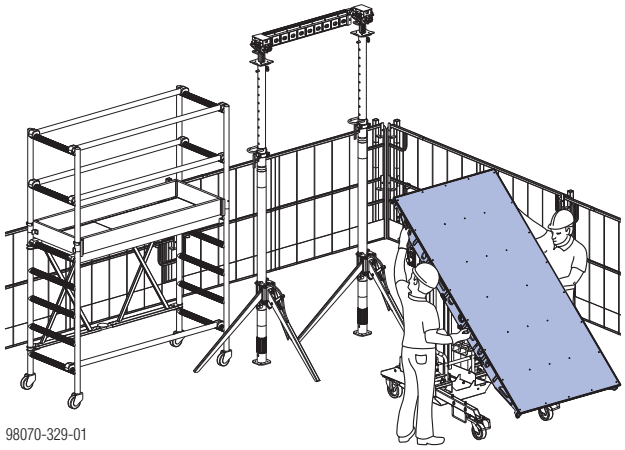
➤ Working from a Wheel-around scaffold DF, engage an infill beam into the heads, to fix the props the correct distance apart. When doing this, ensure that the Wheel-around scaffold DF has sufficient stability against overturning!



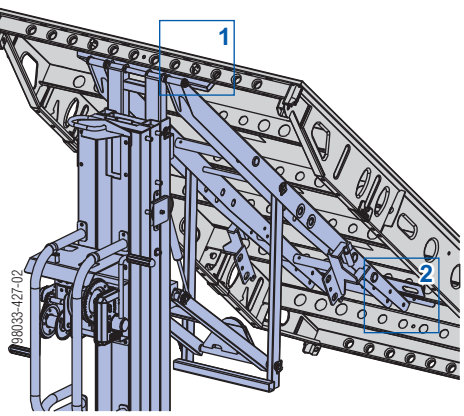
CAUTION

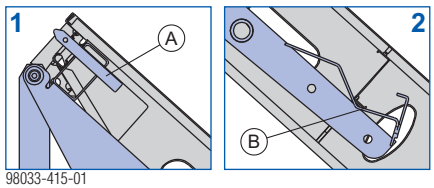
➤ When engaging and tilting up the panel, give the floor props additional fixing (i.e. as well as with the Removable folding tripods) to prevent them tipping over.

➤ Place the panel down centrally on the DekLift and wheel it to the usage location.



Check to make sure that the panel is properly engaged in the locating pins **(A)** and locating brackets **(B)** on the DekLift (wind lift-out protection).

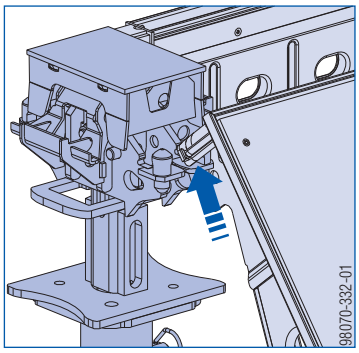




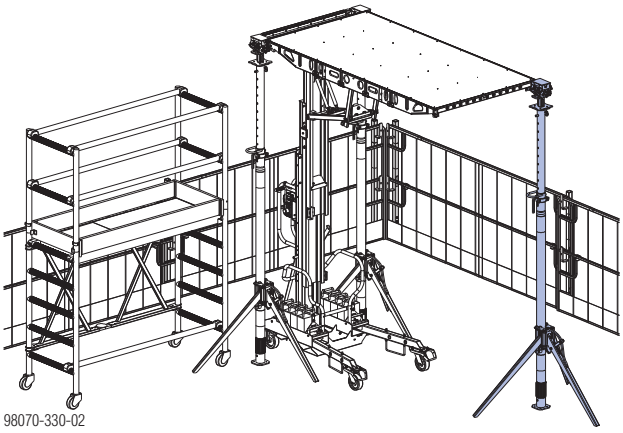
➤ Turn the crank-handle of the DekLift to raise the panel and hook it into the heads.

Make sure that the panel is correctly fitted onto the pins of both heads.

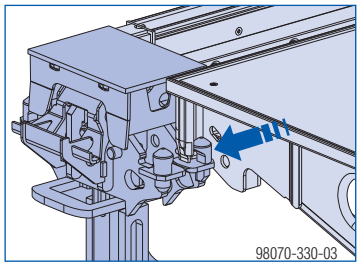
XF drop head



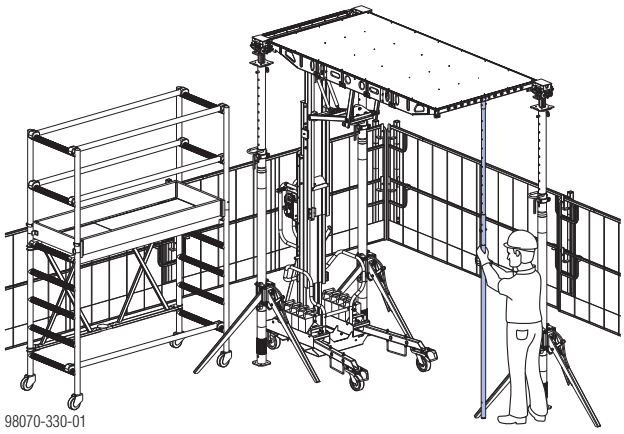
➤ Tilt up the panel with the DekLift and place a floor prop (plus XF drop head) beneath it. Secure the floor prop with a Removable folding tripod.



Make sure that the panel is correctly fitted onto the pin of the head.

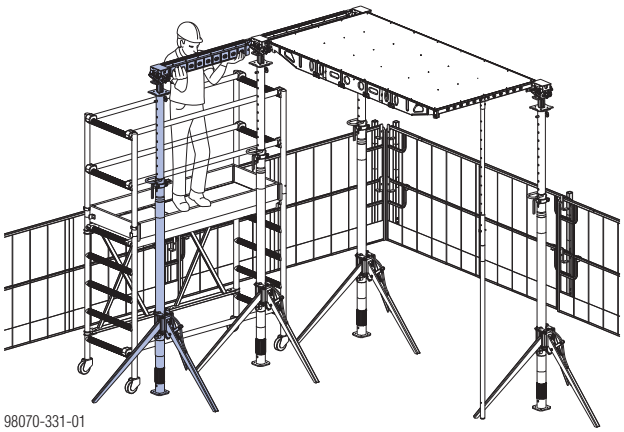


➤ Place an assembling tool beneath the panel and secure the assembling tool so that it cannot tip over. (Max. inclination of the assembling tool with respect to the perpendicular: 5°)



➤ Remove the infill beam.

➤ Put up the next floor prop (with an XF drop head), secure it with a Removable folding tripod and engage infill beams into the heads to fix the floor props the correct distance apart.

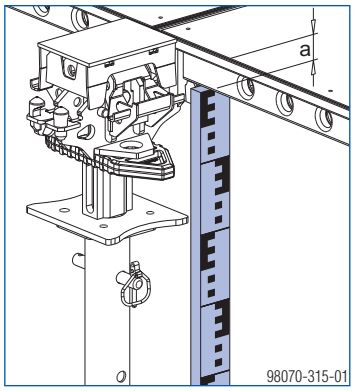


➤ Set up further panels in the same way, until only the planned infill zone is left unformed. Prepare braced units (see the section headed 'Securing the formwork against tip-over')

➤ From now on, all the other rows of panels follow the standard set-up procedure.

Levelling the typical zone

➤ Adjust the panels at the corners to the desired floor-slab height (= room height minus 6.5 cm, with reference to the frame cross-profile).



a ... 6.5 cm

Securing the typical zone against tip-over

➤ See the section headed 'Ground rules'.

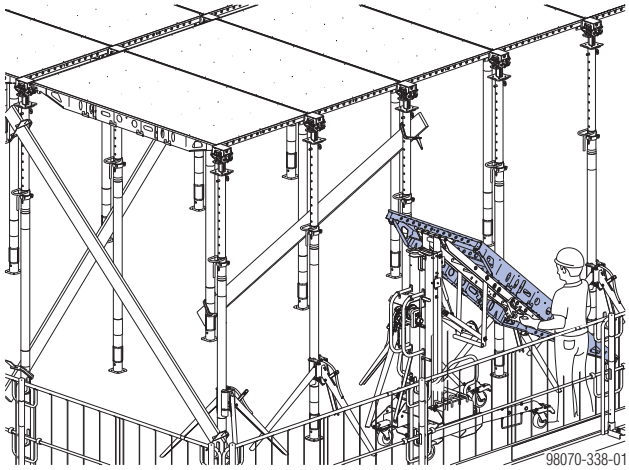
Adding cantilevering panels

Preparations

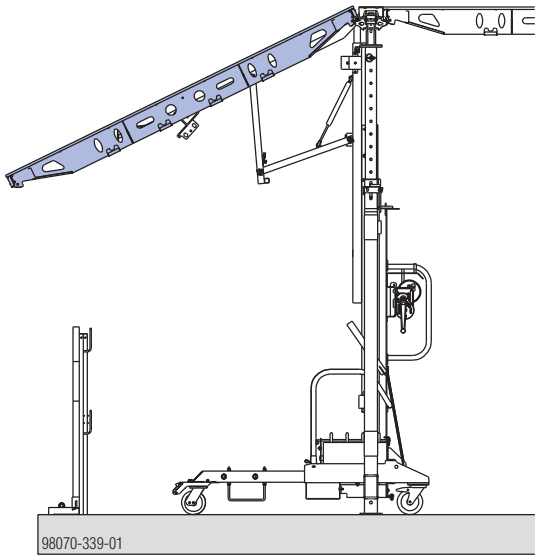
➤ Set at least **2 Dokadek assembling tools** to the required length (= approx. room height + 20 cm).
➤ Roughly adjust the height of the floor prop, using the fastening clamp (required length = room height minus 25 cm).
➤ Fit the cross head onto the floor prop and secure it with the pin.
➤ Fit the XF edge head onto the floor prop and secure it with the pin.

Adding to narrowside of standard panels

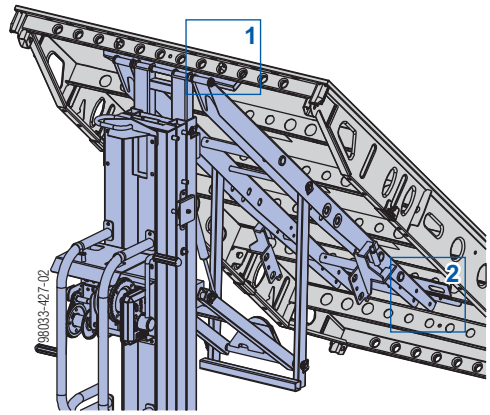
➤ Place the panel down centrally on the DekLift.

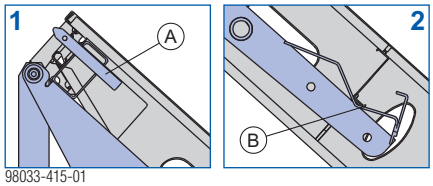


➤ To make it easier to reposition the DekLift, one bracing plank may briefly be dismounted.
➤ For lower room heights, the panel can be tilted-up sufficiently far to avoid collision with the guardrail system (see also 'Guardrail systems on the structure' in the section headed 'Ground rules').

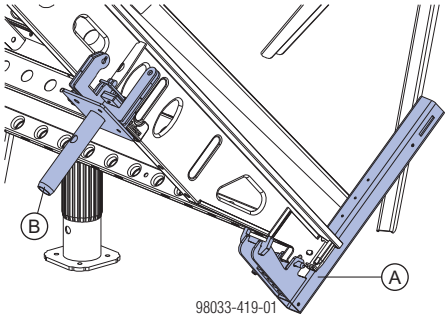


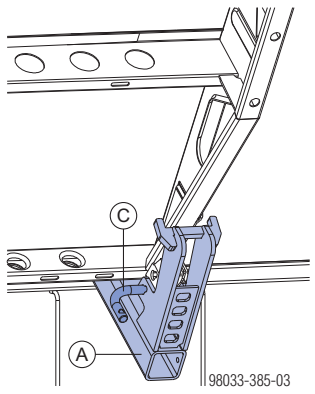
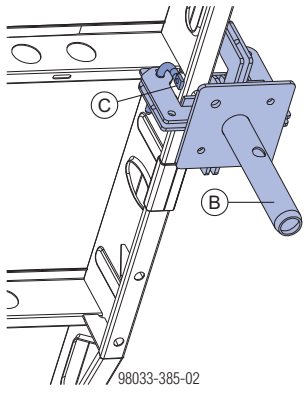
Check to make sure that the panel is properly engaged in the locating pins **(A)** and locating brackets **(B)** on the DekLift (wind lift-out protection).





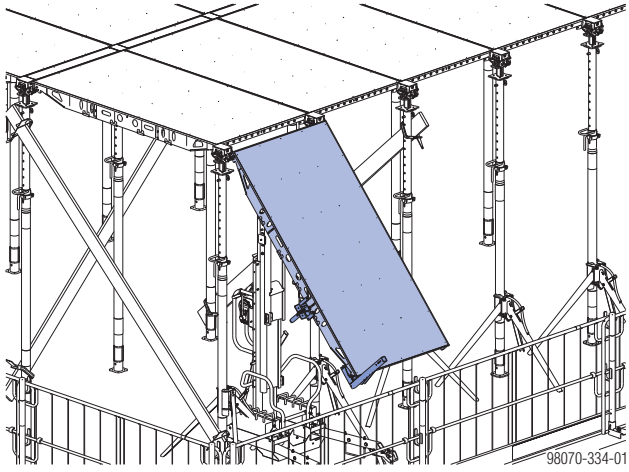
➤ Mount a 'Handrail-post shoe - short' and an edge head.



Close-up of 'Handrail-post shoe short'	Close-up of 'Edge head'
	

A Dokadek handrail-post shoe short
B Dokadek edge head
C Safety pin (vertical!)

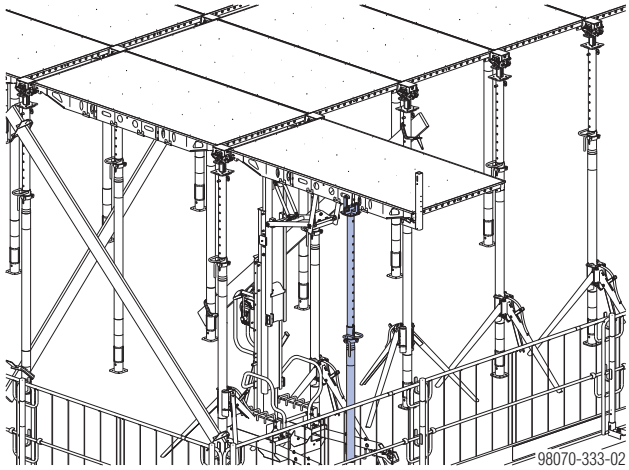
➤ Position the DekLift, crank up the panel to the desired height and engage it in the heads.



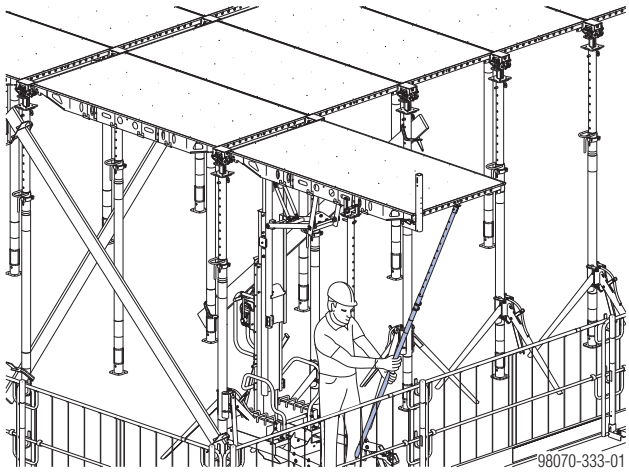
WARNING

➤ When putting up cantilevering panels, the Dokadek assembling tool must always be held by one person to prevent it tipping over.

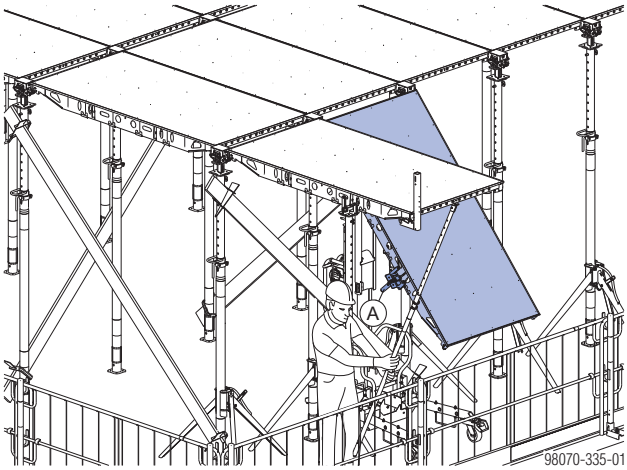
➤ Tilt the panel up and support it by placing a floor prop under the 'Edge head'.



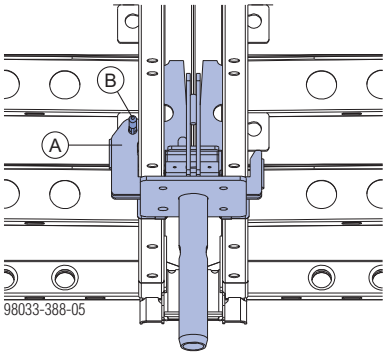
➤ Support the panel by fitting a Dokadek assembling tool under the middle of the outside cross profile, and secure the Dokadek assembling tool so that it cannot tip over.



➤ In the same way, use the DekLift to put up the next panels until only the planned infill zone is left unformed. However, an extra 'Edge head' is needed on the last panel (mount a 'Handrail-post shoe short' as necessitated by the permitted influence width).



Close-up of 'Edge head'



A Dokadek edge head
B Safety pin (vertical!)

Dokadek panels 0.81x2.44m can be used to optimise the infill width around columns.

The Dokadek panels 0.81x2.44m are mounted in the same way as the Dokadek panels 1.22x2.44m.

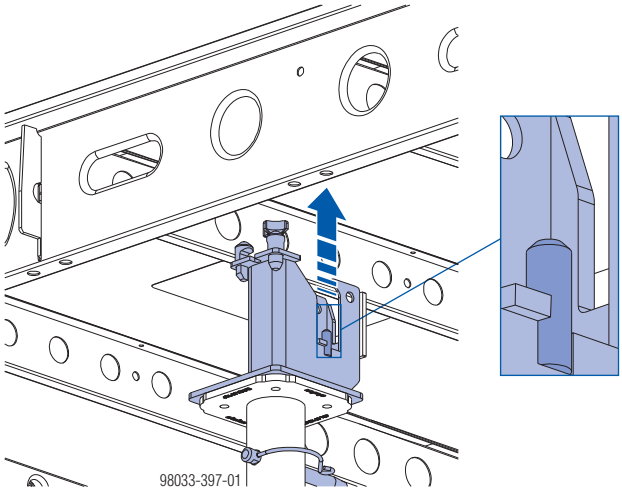
Adding to broadside of standard panels

NOTICE

➤ Props with a cross head should only be extended (by turning the adjusting nut) until the prop encounters resistance from above. The panel must NOT be raised.

➤ At the corners, use tripods to secure every floor prop where only 1 panel is resting on this prop's head.

➤ Shore the panels with floor props and cross heads at the required position.



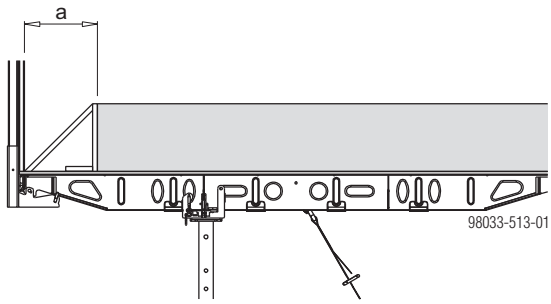
The lugs of the cross head must be seated in the two holes in the panel.

➤ All the other worksteps are the same as for adding cantilevering panels to the narrowsides of standard panels.

➤ For details on all other worksteps, see the section headed 'Operating with Dokadek assembling tool'.

Pouring

WARNING
Ensure correct direction of pouring!
➤ Always work outwards from the middle of the building towards the edge of the slab when pouring.



a ... 20 to 30 cm

NOTICE
Use of Dokadek panels 1.22x1.22m and 0.81x1.22m at structure edge not permitted.

Permitted slab thickness [cm][1)]

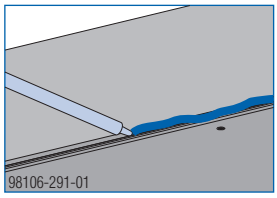
Panel size	**Without** additional precautions	**With** additional precautions[2)]	Flatness deviation as per DIN 18202, Table 3
1.22x2.44m	30	—	Line 6
1.22x2.44m	> 30 - 35	—	Line 5
1.22x2.44m	—	> 30 - 50	Line 6
1.22x1.22m	35	> 30 - 50	Line 5
0.81x2.44m	45	—	Line 6
0.81x2.44m	> 45 - 50	—	Line 5
0.81x2.44m	—	> 45 - 50	Line 6
0.81x1.22m	50	—	Line 6

[1)] when using Doka floor prop Eurex 30 top

[2)] see the section headed 'Additional precautions for slab thicknesses of up to 50 cm'.

To protect the surface of the form-facing, we recommend using a vibrator with a protective rubber cap.

PU foam (e.g. Hilti CF-FW 500 or Würth UNI PUR) can be used to seal any gaps between the formwork and the walls.



Stripping the formwork

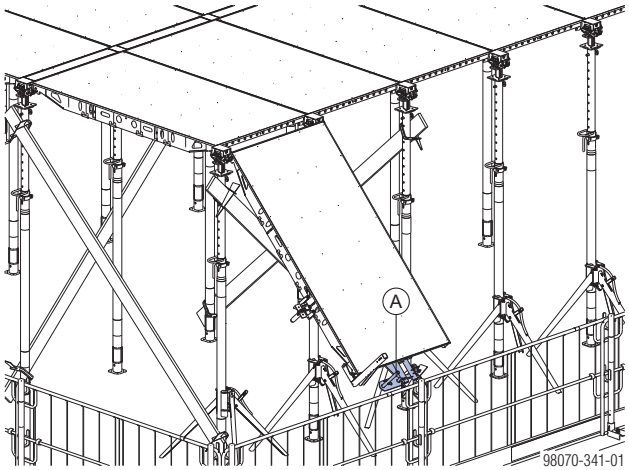
NOTICE
- Comply with the stipulated stripping times.
- Always strip out the formwork in reverse order.
- As well as the instructions given here, you must follow the instructions in the section headed 'Reshoring props, concrete technology and stripping out' in the 'Panel floor formwork Dokadek 30 with drop head' User Information booklet.

Additional precautions for slab thicknesses of up to 50 cm

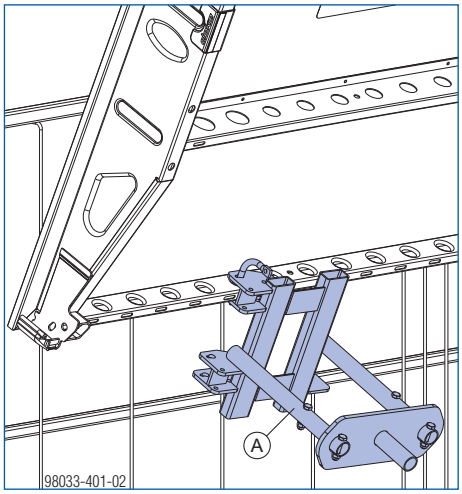
Mounting additional shores (at the structure edge)

For more information on assembly in the typical zone see the section headed 'Mounting additional shores' in the 'Panel floor formwork Dokadek 30 with drop head' User Information booklet.

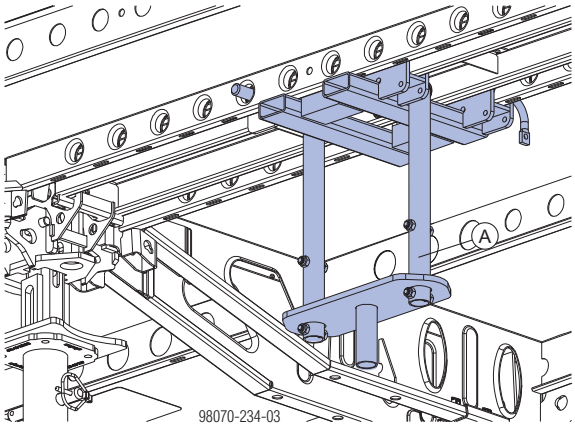
➤ After the panel has been engaged in the support heads, fit the front timber beam seat H20 to the middle of its end cross profile.



Close-up of timber beam seat H20



➤ After the panel has been tilted up and shored, fit the rear timber beam seat H20 to the middle of the other end cross profile, using e.g. a Platform stairway 0.97m.



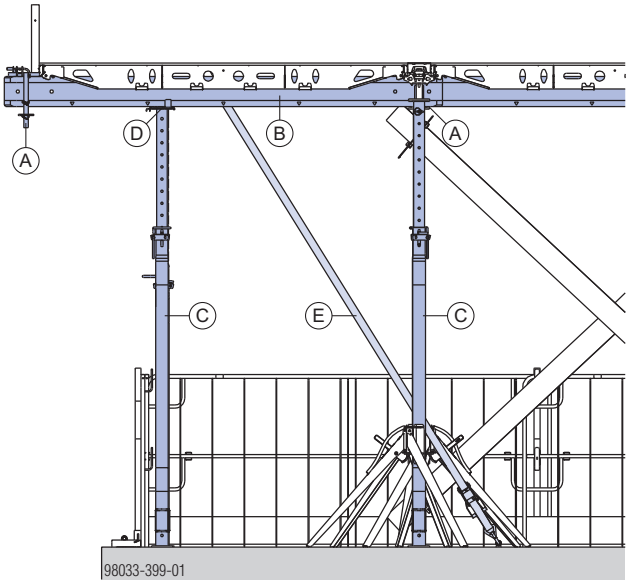
➤ Insert a Doka beam H20 so that it rests in the middle of the timber beam seats H20.

NOTICE

➤ Only extend the floor props until they encounter resistance from above. The panel must not be raised.

➤ Fit a floor prop into the rear timber beam seat H20, and adjust it.

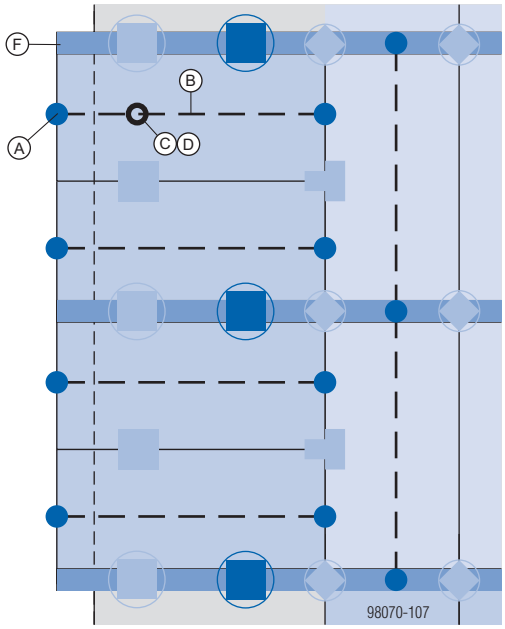
➤ Place a floor prop plus Supporting head H20 under the Doka beam H20 at the outer one-third point of the panel.



A	Timber beam seat H20
B	Doka beam H20
C	Doka floor prop Eurex 30 top
D	Supporting head H20
E	Tie-back

Shoring of closure panels

Additionally shore the closure panel 0.15x2.44m with a floor prop with XF drop head (RX).



A	Timber beam seat H20
B	Doka beam H20
C	Doka floor prop Eurex 30 top
D	Supporting head H20
F	Closure panel

Stripping the formwork

NOTICE

- Observe all stipulated stripping times!
- Always strip out the formwork in reverse order.
- As well as the instructions given here, you MUST follow the instructions in 'Reshoring props, concrete technology and stripping out'.

On slabs with thicknesses of between 30 cm and 45 cm, early removal of all the extra shores from the typical zone is permitted even in cases where service loads and live loads are present. The resulting prop loads are of max. 40 kN per prop, which is permissible for temporary reshores.

Minimum concrete strength required before the extra shores are removed: C8/10

WARNING

➤ Early stripping of slabs with thicknesses of between 45 cm and 50 cm is only permitted if there are **no service loads and live loads** on the freshly poured concrete floor-slab.

Service loads and live loads are permitted again once the reshoring props have been put up.

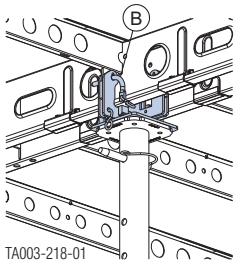
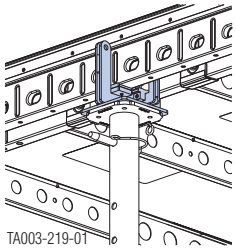
Variant 2 - Propping of the cantilevering panels at the middle point

Operating with assembling tool and personal fall-arrest system

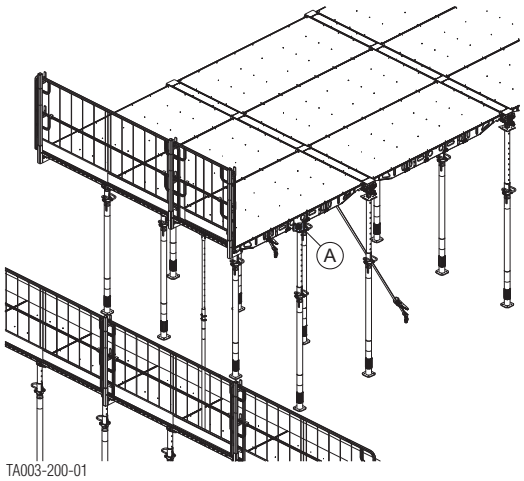
Ground rules

The Dokadek edge head is used for making a platform up to 1.0 m wide at the building edge with cantilevered Dokadek panels. In this configuration the Dokadek edge head supports the Dokadek panel at the middle, not at the one-third point.

Close-up of Dokadek edge head

Used at panel joint	Used with panel and infill beam
	

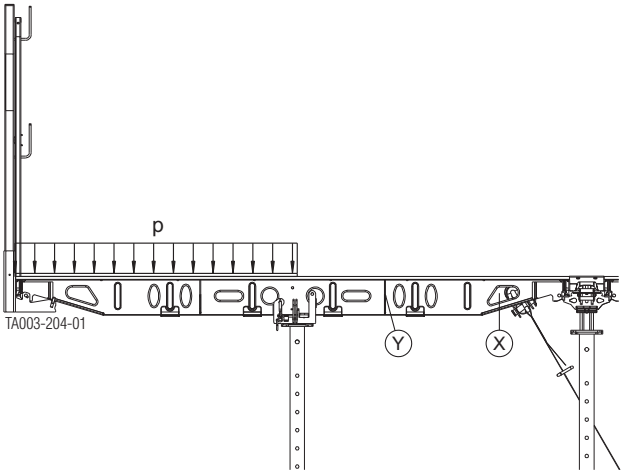
Practical example



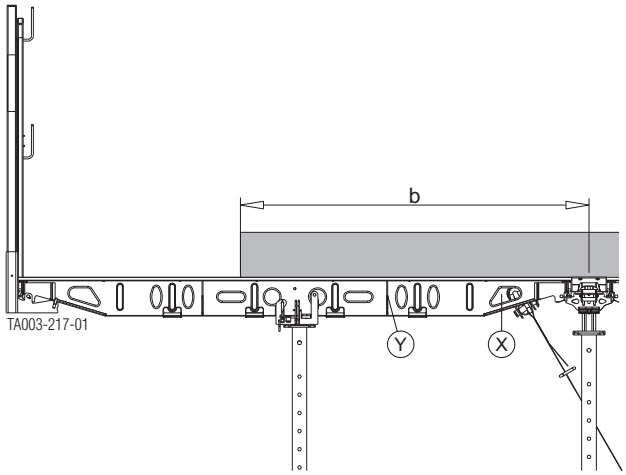
A Dokadek edge head

B Pin for fixing the edge head on the panel (included with product)

Permitted platform load p [kN/m²] on cantilevered panel (see table)



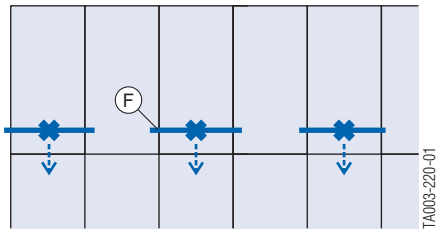
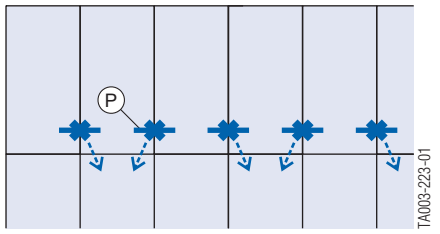
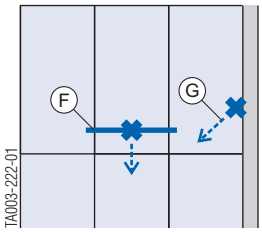
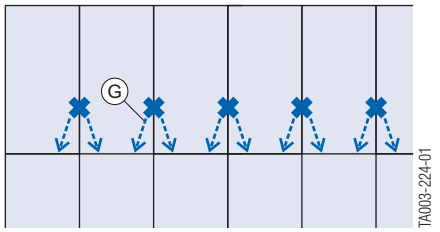
Permitted concrete load on cantilevered panel



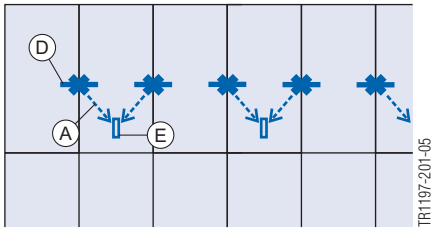
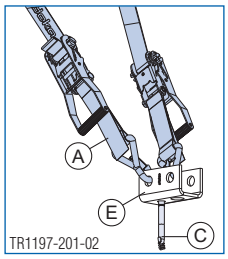
b ... max. 140 cm

X 1st grip hole

Y Stiffening plate at one-third point

	Variant 1	Variant 2
	Load Class 1. as defined in EN 12811	Load Class 2. as defined in EN 12811
	p ≤ 0.75 kN/m²	p ≤ 1.50 kN/m²
Attachment to grip hole	In this configuration, a scaffold tube 1.50m has to be tied back from the 1st grip hole in every second panel. Make sure that each scaffold tube is correctly positioned: The scaffold tube has to tie back the adjacent panel as well.	In this configuration a tie-back is required in the form of a scaffold tube 1.50m or a short tie rod 20.0 in the 1st grip hole at every joint between two panels. Make sure that the lashing straps are installed to left and right alternately.
		
	Max. back-stay force: 3.00 kN	Max. back-stay force: 5.00 kN
Attachment to stiffening plate	If necessary (for example close to the wall), the panel can also be tied back by means of the stiffening plate at the one-third point.	Alternatively, each panel can also be tied back twice by means of the stiffening plate at the one-third point.
		

F Scaffold tube 48.3mm 1.50m
G Lashing strap 5.00m
P Tie rod 20.0 or Scaffold tube 48.3mm 0.50m

	Variant 3
	Load Class 2. as defined in EN 12811
	Permitted platform load p ≤ 0,75 kN/m²
Attachment at the middle point	This variant requires a tie-back at every panel, with the tie-back looped round the Scaffold tube 0.50m at the middle point. The scaffold tubes can be tied back in pairs with lashing straps and anchored in bracing shoes.
	 
	Max. back-stay force: 5.00 kN

A Lashing strap 5.00m
C Doka express anchor 16x125mm
D Scaffold tube 48.3mm 0.50m
E Bracing shoe

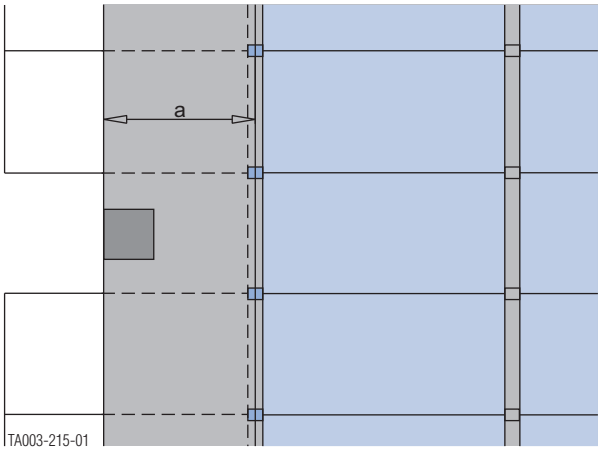
Permitted slab thickness [cm] without additional precautions

Panel size	Permitted slab thickness	Deflection as defined by DIN 18202
1.22x2.44m	30	Line 6
1.22x2.44m	> 30 - 32	Line 5
1.22x1.22m	32	Line 5
0.81x2.44m	45	Line 6
0.81x2.44m	> 45 - 50	Line 5
0.81x1.22m	50	Line 6

NOTICE

- This method must not be used for constructing outward-staggered floor-slabs.
- With the drop-head system it is not possible to change the direction of the panels at the structure edge.
- The outermost row of floor props must be at a distance of at least 10 cm from the slab edge.
- The last row of floor props with drop heads must be at a distance of 140 cm from the structure edge, so that the edge head can be installed centred underneath the cantilevered panel (platform width ≤ 1.0m).
- Use of Dokadek panels 1.22x1.22m and 0.81x1.22m at structure edge not permitted.

Diagrammatic floorplan



a ... 140 cm

Dokadek panels on lower level
slab between two levels
Dokadek panels on upper level

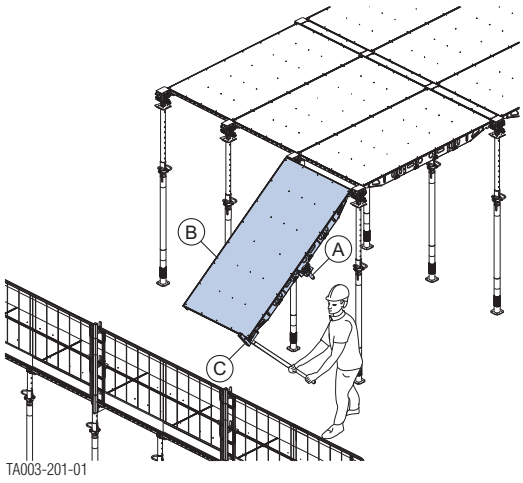
Closing the formwork

WARNING

➤ Before stepping on to the panels at the slab edge (which will act as the platform), make sure that the floor props with the Dokadek edge heads on the level below are not stress-relieved!

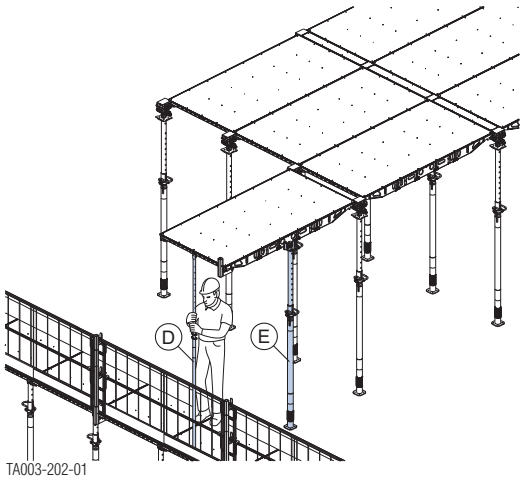
➤ Mount the Dokadek edge head and the Dokadek handrail-post shoe short on the Dokadek panel.

➤ Engage the Dokadek panel in the heads and use the assembling tool to lift the free end up to the horizontal.



A Dokadek edge head
B Dokadek panel
C Dokadek handrail-post shoe short

➤ Secure the assembling tool so that it cannot fall and pin the floor prop into the Dokadek edge head with Spring locked connecting pins 16mm.



D Dokadek assembling tool B
E Doka floor prop Eurex

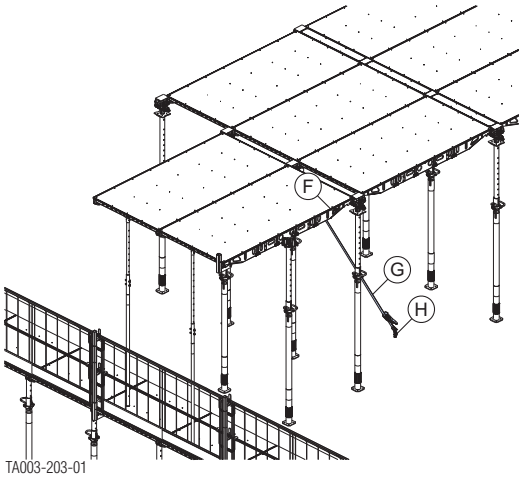
WARNING

Risk of panels tipping over!

➤ Do not remove the assembling tool until after the tie-back has been installed and secured!

➤ Mount the next panel in the same way. If necessary, mount handrail post shoes on the Dokadek panel.

➤ Install tie-backs in accordance with the platform load (see the section headed 'Ground rules'.



F Scaffold tube 48.3mm 1.50m
G Lashing strap 5.00m
H Doka express anchor 16x125mm

➤ Mount further panels in the same way. If necessary, mount handrail post shoes on the Dokadek panel.

WARNING

➤ No-one is allowed to step on to the formwork area before all safety measures have been compiled with and all panels and infill areas securely stayed.

➤ Use appropriate personal fall-arrest system equipment when installing the handrail posts and protective gratings!

NOTICE

➤ The lashing straps are allowed to be temporarily released while the panels are being levelled.

However, the lashing straps may only be released one at a time.

➤ Level the panels.

➤ Mount Handrail posts XP and Protective gratings XP on the formwork.

➤ Install infill zones and lay intermediate panels in position.

Mounting fillers between the cantilevering panels

WARNING

➤ Secure cantilevered slab formwork to prevent lift-out and overturning.

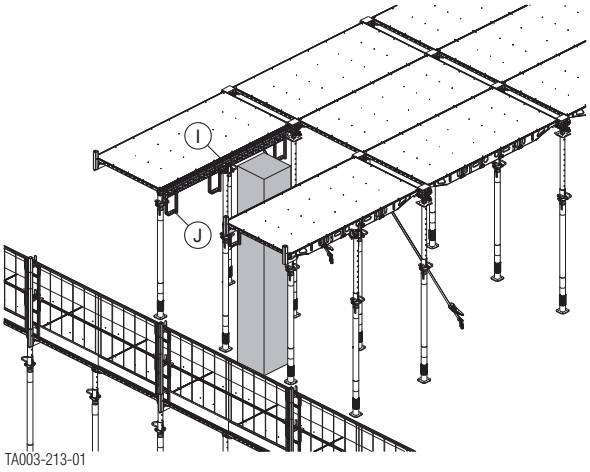
➤ Secondary beams with stop-end formwork must be secured against horizontal pull-out.

➤ In addition, if necessary, put up a protection platform on the structure (e.g. Folding platform K).
Risk of infill beams toppling!

➤ Use spring cotters to secure the infill beams to the heads.

➤ Engage Infill beams 2.44m in the heads and secure each infill beam with spring cotters to prevent lift-out.

➤ Hook 4 suspension clamps into the infill beams as close to the floor props as possible. Hook 2 suspension clamps into the infill beam, in the outermost position.

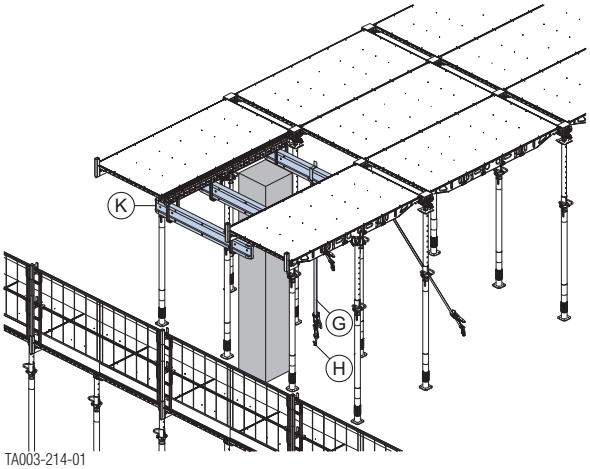


I Dokadek infill beam 2.44m
J Dokadek suspension clamp H20

➤ First engage the inner primary beam in the suspension clamps.

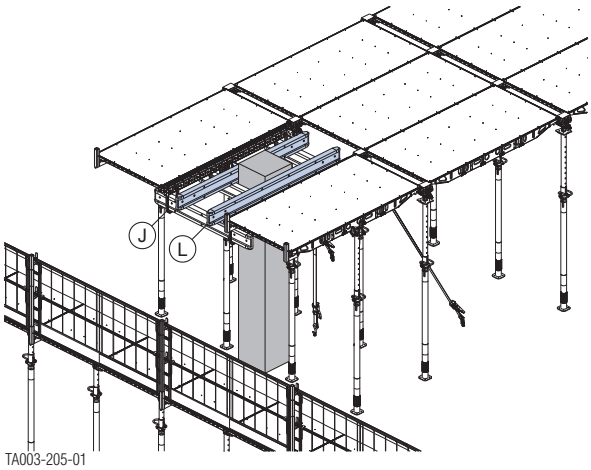
➤ Pass the lashing strap round the primary beam and tie it back vertically with an express anchor.

➤ Then engage the remaining two primary beams.



G Lashing strap 5.00m
H Doka express anchor 16x125mm
K Doka beam H20 used as primary beam (e.g. 1.80m)

➤ Mount Doka beams H20 as secondary beams.



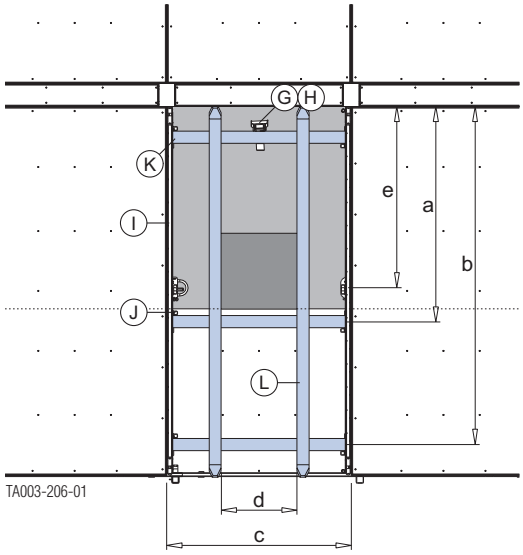
J Dokadek suspension clamp H20

L Doka beam H20 as secondary beam (e.g. 2.45m)

To make the sheets easier to strip, it is recommended to nail them to the infill beams only.

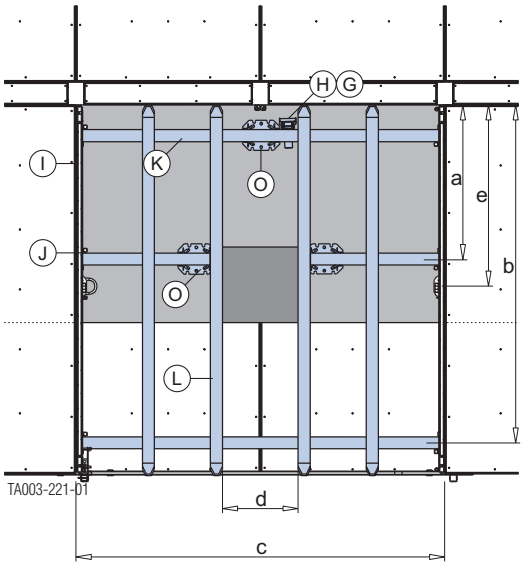
➤ Mount the fillers.

Close-up plan view



	Designation	Dimensions [cm]
a	Position of middle primary beam	153
b	Position of outer primary beam	224
c	Max. infill width without centred additional prop	≤ 122
d	Max. spacing of secondary-beams	depends on form-ply
e	Position of floor prop with main beam head	122

Close-up of floorplan, column at joint between two panels



	Designation	Dimensions [cm]
a	Position of middle primary beam	as close as possible to the middle of the column
b	Position of outer primary beam	224
c	Max. infill width (1 centred extra prop at the rear primary beam)	≤ 244
d	Max. spacing of secondary-beams	depends on form-ply
e	Position of floor prop with main beam head	122

G Lashing strap 5.00m

H Doka express anchor 16x125mm

I Dokadek infill beam 2.44m

J Dokadek suspension clamp H20

K Doka beam H20 used as primary beam (e.g. 1.80m)

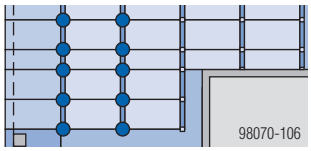
L Doka beam H20 used as secondary beam (e.g. 2.45m)

O Doka 4-way head

Early stripping

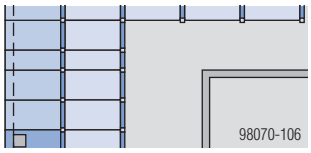
WARNING

- ➤ Do not release the sliding plates of the remaining XF drop heads (see blue marks in the sketch below) (= 2nd lowering stage), and do not back off the floor props.
- ➤ Formwork panels at the slab edge must be stripped one panel at a time. Immediately put up reshoring for each panel in turn as stripping proceeds.
- ➤ No temporary reshores must be put beneath the closure panels.
- ➤ Strip all panels before pouring the next slab up.
- ➤ Then back off the floor props with drop heads or replace them with temporary reshores.

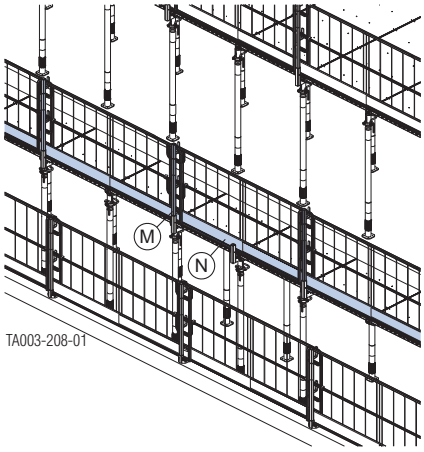


WARNING

- ➤ The panels at the slab edge must remain in place (see illustration).



➤ Move the guardrail system back from the slab formwork to the edge of the structure.



M Handrail post XP

N Protective grating XP

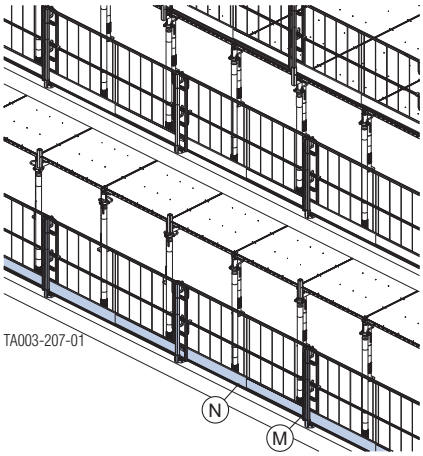
➤ Put up temporary reshoring in the infill zone.

➤ Strip the infill zone.

NOTICE

- ➤ Use appropriate personal fall-arrest system equipment when removing the guardrail system.

➤ Remove the guardrail system at the edge of the structure in the area of the panel to be stripped out.



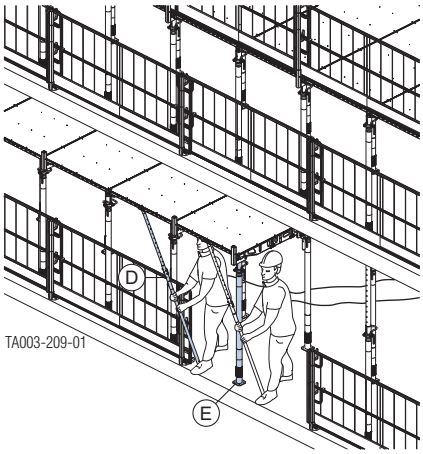
M Handrail post XP

N Protective grating XP

NOTICE

- ➤ Always comply with the country-specific safety regulations!

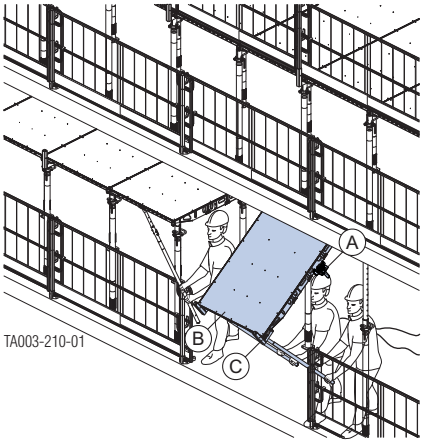
➤ Secure two adjacent panels with assembling tools and remove the corresponding floor props.



D Dokadek assembling tool B

E Doka floor prop Eurex

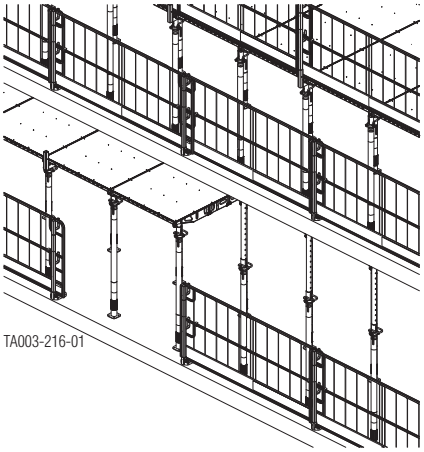
➤ Position another assembling tool underneath the panel to be stripped out. Lower the panel, remove the mounted parts and install temporary reshoring.



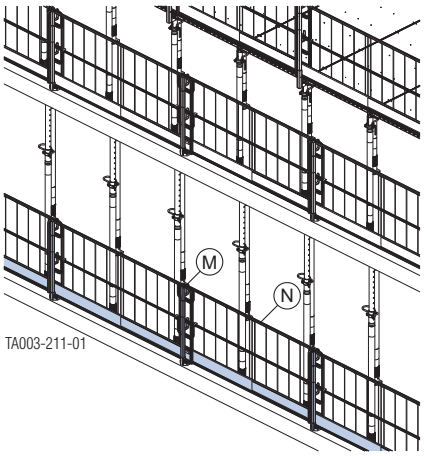
A	Dokadek edge head
B	Dokadek panel
C	Dokadek handrail-post shoe short

➤ Put the guardrail system back into position at the edge of the structure and disengage the panel.

➤ Disengage the guardrail system at the next panel for removal.



➤ Continue this procedure for removing further panels and installing temporary reshoring.



M	Handrail post XP
N	Protective grating XP
O	Temporary reshoring

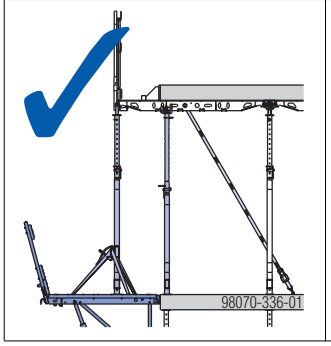
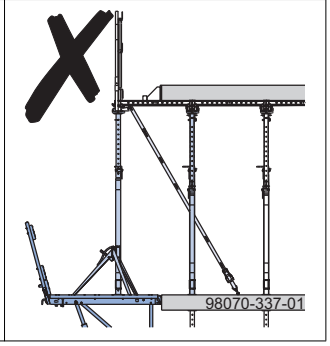
Variant 3 - Propping the cantilevering panels on Folding platform K

Folding platform K

At the structure edge, cantilevering Dokadek panels with floor props can also be supported on Folding platforms K where needed.

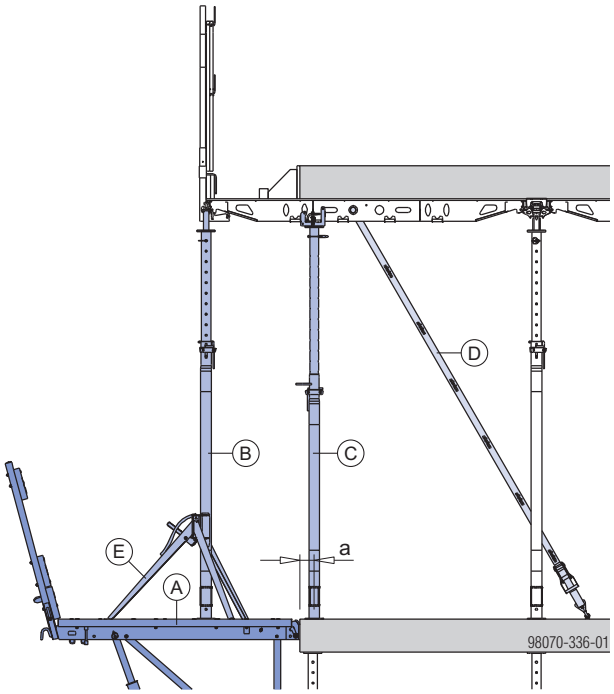
WARNING

- Only lengthways cantilevering panels may be shored on the Folding platforms K.

Right!	Wrong!
	

WARNING

- The floor props on the Folding platform K are only for use as a set-up aid, and not for transferring loads.
- The loads which occur as a result of concreting must be transferred by way of the floor props and edge heads at one of the propping points (outside one-third point, middle point or inside one-third point) of the Dokadek panel (minimum distance **a** from edge: 10 cm).
  Always use only the next propping point toward the inside for this purpose.
- This method must not be used for constructing outward-staggered floor-slabs (e.g. balconies).



a ... min. 10 cm

A	Doka folding platform K
B	Doka floor prop Eurex 30 top + Dokadek support head (as set-up aid only)
C	Doka floor prop Eurex 30 top + Dokadek edge head
D	Tie-back
E	Removable folding tripod top

Closing the formwork

- ➤ Put up the formwork in the typical zone, level it and tie it down.
- ➤ Engage the cantilevering panel in the support heads.
- ➤ Install edge head.
- ➤ Hook the assembling tool into the middle of the outside cross profile of the panel, raise the panel and secure the assembling tool so that it cannot tip over.
- ➤ Support the 1st panel on the Folding platform K with a support head and floor prop, and secure the prop with a Removable folding tripod.
- ➤ Engage the next panel.
- ➤ Mount an edge head, and then tilt the panel up.
- ➤ Support the panels on the Folding platform K with a support head and floor prop.

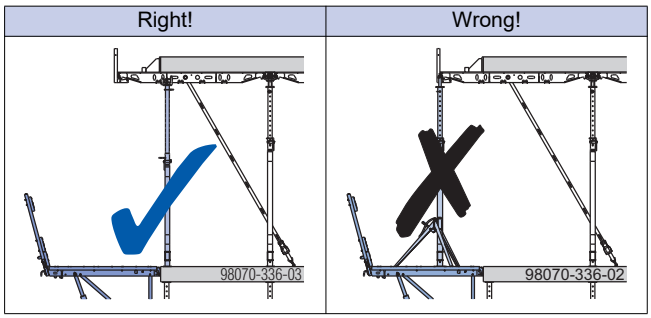
NOTICE

- ➤ Secure – with tripods – the floor props that have only 1 panel resting on the heads.

- ➤ Place floor props under the edge heads.
- ➤ Level the floor-slab formwork in the edge zone. Important: When extending props that have an edge head, turn the adjusting nut until the prop encounters resistance from above!
- ➤ Mount tie-downs and take suitable precautions to prevent the formwork being lifted out by e.g. wind (see the section headed 'Floor formwork around edges' in the 'Panel floor formwork Dokadek 30 with drop head' User Information booklet).
- ➤ Put up the guardrail system; wear a personal fall-arrest system (e.g. safety harness) when doing this.

Stripping the formwork

- ➤ Take down the guardrail system; wear a personal fall-arrest system (e.g. safety harness) when doing this.
- ➤ Remove the tie-backs and the formwork lift-out precautions.
- ➤ Start by removing the floor props that have a support head, and only then remove the props that have an edge head.

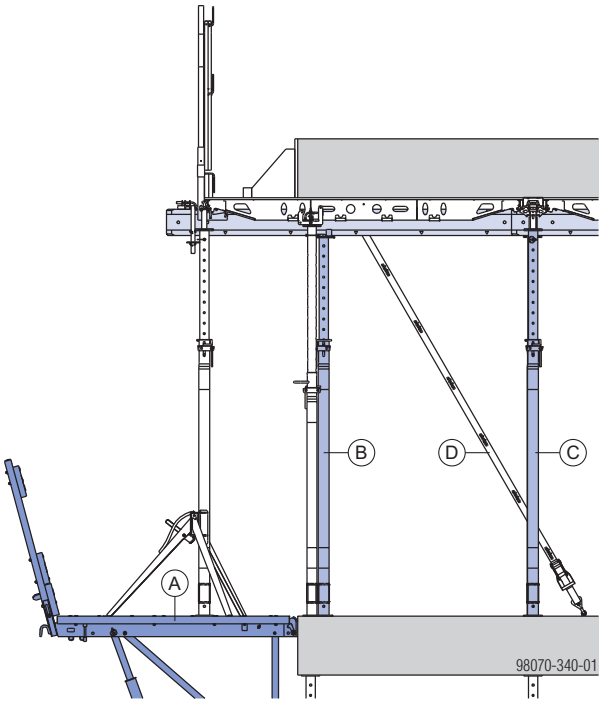


- ➤ Tilt down the panels.

See the section headed 'Early stripping'.

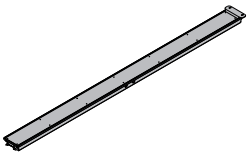
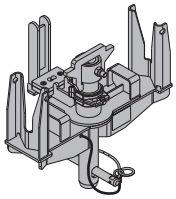
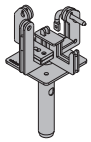
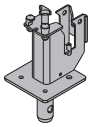
Slab thicknesses >30 cm

Same procedure as described under the heading 'Additional precautions for slab thicknesses of up to 50 cm'.



a ... min. 10 cm

A	Doka folding platform K
B	Doka floor prop Eurex 30 top + Supporting head H20
C	Doka floor prop Eurex 30 top
D	Tie-back

	[kg]	Article N°
Dokadek closure panel 0.15x2.44m Dokadek-Zwischenelement 0,15x2,44m Galvanised Painted yellow 	**10.5**	**586552000**
Dokadek XF edge head 18mm **Dokadek XF edge head 21mm** Dokadek XF-Randkopf Galvanised Height: 32 cm 	**7.5** **7.4**	**586547000** **586548000**
Dokadek edge head 18mm **Dokadek edge head 21mm** **Dokadek edge head 27mm** Dokadek-Randkopf Galvanised Height: 36 cm 	**4.0** **3.9** **3.8**	**586544000** **586545000** **586546000**
Dokadek cross head Dokadek-Kreuzkopf Galvanised Height: 32 cm 	**2.6**	**586543000**
Spring locked connecting pin D16 with eye Federbolzen D16 mit Auge Galvanised Length: 16 cm 	**0.27**	**586564000**

[kg]	Article N°

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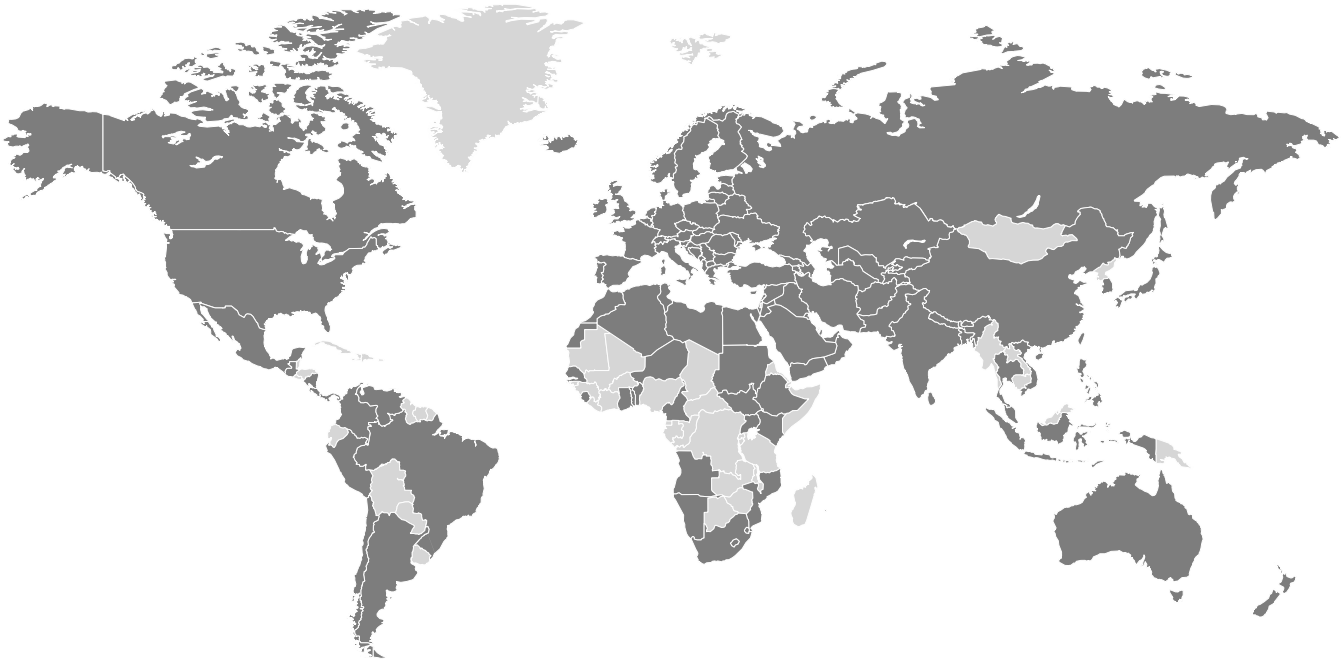

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