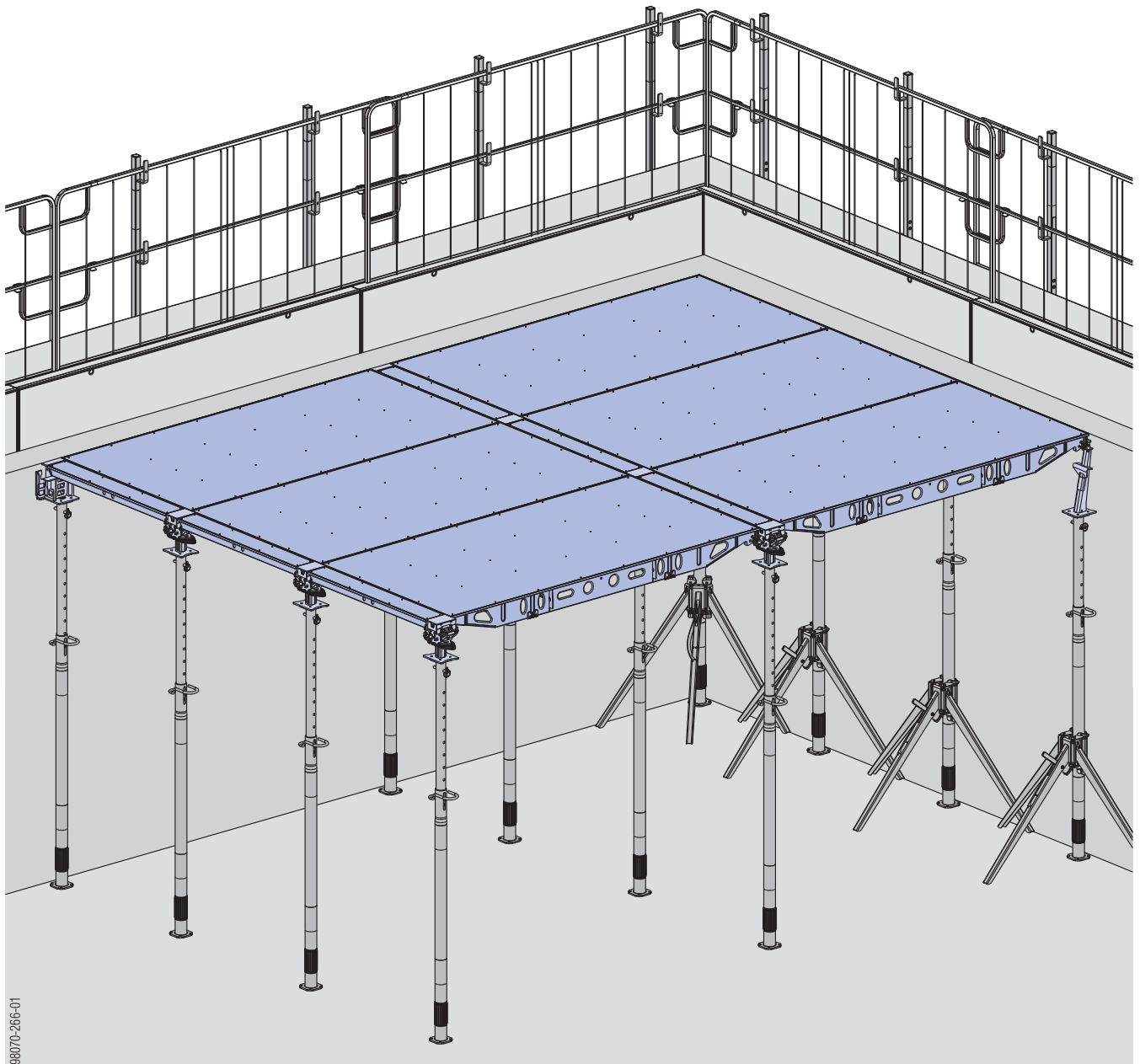


The Formwork Experts.

Panel floor formwork Dokadek 30 with drop head

User Information

Instructions for assembly and use (Method statement)



98070-266-01

Contents

4	Introduction
4	Elementary safety warnings
7	Services
8	Panel floor formwork Dokadek 30 with drop head
9	System overview
12	Instructions for assembly and use (Method statement)
12	Ground rules
21	Method statement overview
22	Operating with Dokadek assembling tool
32	Forming infill zones
46	Floor formwork around edges
56	Forming downstand beams
59	Additional areas of use
59	Sloping slabs
64	Additional precautions for slab thicknesses of up to 50 cm
68	Forming past room-high openings in walls
69	Using Doka floor props Eurex 20 top or Eurex 20 eco
72	General
72	Combining with other Doka systems
73	Transporting, stacking and storing
89	Cleaning and care of your equipment
91	Reshoring props, concrete technology and stripping out
94	Article list

Introduction

Elementary safety warnings

User target groups

- This booklet is aimed at all persons who will be working with the Doka product or system that it describes. It contains information on the standard design for setting up this system, and on correct, compliant utilisation of the system.
- All persons working with the product described herein must be familiar with the contents of this booklet and with all the safety instructions it contains.
- Persons who are incapable of reading and understanding this booklet, or who can do so only with difficulty, must be instructed and trained by the customer.
- The customer is to ensure that the information materials provided by Doka (e.g. User Information booklets, Instructions for Assembly and Use, Operating Instruction manuals, plans etc.) are up to date and available to all users, and that they have been made aware of them and have easy access to them at the usage location.
- In the relevant technical documentation and formwork utilisation plans, Doka shows the workplace safety precautions that are necessary in order to use the Doka products safely in the usage situations shown.
In all cases, users are obliged to ensure compliance with national laws, standards and regulations throughout the entire project and to take appropriate additional or alternative workplace safety precautions where necessary.

Hazard assessment

- The customer is responsible for drawing up, documenting, implementing and continually updating a hazard assessment at every job-site.
This booklet serves as the basis for the site-specific hazard assessment, and for the instructions given to users on how to prepare and utilise the system. It does not substitute for these, however.

Remarks on this booklet

- This document can be used as general Instructions for Assembly and Use (Method Statement) or be incorporated into site-specific Instructions for Assembly and Use (Method Statement).
- **The graphics, animations and videos in this document or app sometimes depict partially assembled assemblies and may require additional safety equipment and/or measures to comply with safety regulations.**
The customer must ensure all applicable regulations are complied with, even if they are not shown or implied in the graphics, animations and videos provided.
- **Individual sections contain further safety instructions and/or special warnings as applicable.**

Planning

- Provide safe workplaces for those using the formwork (e.g. for when it is being erected/dismantled, modified or repositioned etc). It must be possible to get to and from these workplaces via safe access routes!
- **If you are considering any deviation from the details and instructions given in this booklet, or any application which goes beyond those described in the booklet, then revised static calculations must be produced for checking, as well as supplementary assembly instructions.**

Regulations; industrial safety

- All laws, Standards, industrial safety regulations and other safety rules applying to the utilisation of our products in the country and/or region in which you are operating must be observed at all times.
- If a person or object falls against, or into, the side-guard component and/or any of its accessories, the component affected may only continue in use after it has been inspected and passed by an expert.

Rules applying during all phases of the assignment

- The customer must ensure that this product is erected and dismantled, reset and generally used for its intended purpose in accordance with the applicable laws, standards and rules, under the direction and supervision of suitably skilled persons. These persons' mental and physical capacity must not in any way be impaired by alcohol, medicines or drugs.
- Doka products are technical working appliances which are intended for industrial / commercial use only, always in accordance with the respective Doka User Information booklets or other technical documentation authored by Doka.
- The stability and load-bearing capacity of all components and units must be ensured during all phases of the construction work!
- Do not step on or apply strain to cantilevers, closures, etc. until suitable measures to ensure their stability have been correctly implemented (e.g. by tie-backs).
- Strict attention to and compliance with the functional instructions, safety instructions and load specifications are required. Non-compliance can cause accidents and severe injury (risk of fatality) and considerable damage to property.
- Sources of fire in the vicinity of the formwork are prohibited. Heaters are permissible only when used correctly and situated at a correspondingly safe distance from the formwork.
- Customer must give due consideration to any and all effects of the weather on the equipment and regards both its use and storage (e.g. slippery surfaces, risk of slipping, effects of the wind, etc.) and implement appropriate precautionary measures to secure the equipment and surrounding areas and to protect workers.
- All connections must be checked at regular intervals to ensure that they are secure and in full working order.
In particular threaded connections and wedged connections have to be checked and retightened as necessary in accordance with activity on the jobsite and especially after out-of-the-ordinary occurrences (e.g. after a storm).
- It is strictly forbidden to weld Doka products – in particular anchoring/tying components, suspension components, connector components and castings etc. – or otherwise subject them to heating.
Welding causes serious change in the microstructure of the materials from which these components are made. This leads to a dramatic drop in the failure load, representing a very great risk to safety.
It is permissible to cut individual tie rods to length with metal cutting discs (introduction of heat at the end of the rod only), but it is important to ensure that flying sparks do not heat and thus damage other tie rods.
The only articles which are allowed to be welded are those for which the Doka literature expressly points out that welding is permitted.

Assembly

- The equipment/system must be inspected by the customer before use, to ensure that it is in an acceptable condition. Steps must be taken to exclude components that are damaged, deformed, or weakened due to wear, corrosion or rot (e.g. fungal decay).
- Using our safety and formwork systems together with those of other manufacturers can create risks that may lead to injury and damage to property. This requires separate verification by the user.
- The equipment/system must be assembled and erected in accordance with the applicable laws, standards and rules by trained customer personnel whilst maintaining any applicable safety inspections that may be required.
- It is not permitted to modify Doka products; such modifications constitute a safety risk.

Closing the formwork

- Doka products and systems must be set up so that all loads acting upon them are safely transferred!

Pouring

- Do not exceed the permitted fresh-concrete pressures. Over-high pouring rates overload the formwork, cause greater deflection and risk breakage.

Stripping the formwork

- Do not strip out the formwork until the concrete has reached sufficient strength and the person in charge has given the order for the formwork to be stripped out!
- When stripping out the formwork, never use the crane to break concrete cohesion. Use suitable tools such as timber wedges, special pry-bars or system features such as Framax stripping corners.
- When stripping out the formwork, do not endanger the stability of any part of the structure, or of any scaffolding, platforms or formwork that is still in place!

Transporting, stacking and storing

- Observe all country-specific regulations applying to the handling of formwork and scaffolding. For system formwork the Doka slinging means stated in this booklet must be used – this is a mandatory requirement.

If the type of sling is not specified in this document, the customer must use slinging means that are suitable for the application envisaged and that comply with the regulations.

- When lifting, always make sure that the unit to be lifted and its individual parts can absorb the forces that occur.
- Remove loose parts or secure them so that they cannot slip out of position and drop.
- When lifting formwork or formwork accessories with a crane, no persons must be carried along, e.g. on working platforms or in multi-trip packaging.
- All components must be stored safely, following all the special Doka instructions given in the relevant sections of this document!

Maintenance

- Only original Doka components may be used as spare parts. Repairs may only be carried out by the manufacturer or authorised facilities.

Miscellaneous

The weights as stated are averages for new material; actual weights can differ, depending on material tolerances. Dirt accretions, moisture saturation, etc. can also affect weight.

We reserve the right to make alterations in the interests of technical progress.

Eurocodes at Doka

The permissible values stated in Doka documents (e.g. $F_{perm} = 70 \text{ kN}$) are not design values (e.g. $F_{Rd} = 105 \text{ kN}$)!

- It is essential to avoid confusing permissible values with design values!
- Doka documents will continue to state the permissible values.

Allowance has been made for the following partial factors:

- $\gamma_F = 1.5$
- $\gamma_{M, \text{timber}} = 1.3$
- $\gamma_{M, \text{steel}} = 1.1$
- $k_{mod} = 0.9$

Consequently, all the design values for an EC design calculation can be determined from the permissible values.

Symbols used

The following symbols are used in this document:



DANGER

This is a notifier drawing attention to an extremely dangerous situation in which non-compliance with this notifier will lead to death or severe, irreversible injury.



WARNING

This is a notifier drawing attention to a dangerous situation in which non-compliance with this notifier can lead to death or severe, irreversible injury.



CAUTION

This is a notifier drawing attention to a dangerous situation in which non-compliance with this notifier can lead to slight, reversible injury.



NOTICE

This is a notifier drawing attention to a situation in which non-compliance with this notifier can lead to malfunctions or damage to property.



Instruction

Indicates that actions have to be performed by the user.



Sight-check

Indicates that you need to do a sight-check to make sure that necessary actions have been carried out.



Tip

Points out useful practical tips.



Reference

Cross-references other documents.

Services

Support in every stage of the project

- Project success assured by products and services from a single source.
- Competent support from planning through to assembly directly on site.

Project assistance from start to finish

Every single project is unique and calls for individualised solutions. When it comes to the forming operations, the Doka team can help you with its consulting, planning and ancillary services in the field, enabling you to carry out your project effectively, safely and reliably. Doka assists you with individual consulting services and customised training courses.

Efficient planning for a safe project sequence

Efficient formwork solutions can only be developed economically if there is an understanding of project requirements and construction processes. This understanding is the basis of Doka engineering services.

Optimise construction workflows with Doka

Doka offers special tools that help you in designing transparent processes. This is the way to speed up pouring processes, optimise inventories and create more efficient formwork planning processes.

Custom formwork and on-site assembly

To complement its system formwork range, Doka offers customised formwork units. And specially trained personnel assemble load-bearing towers and formwork on site.

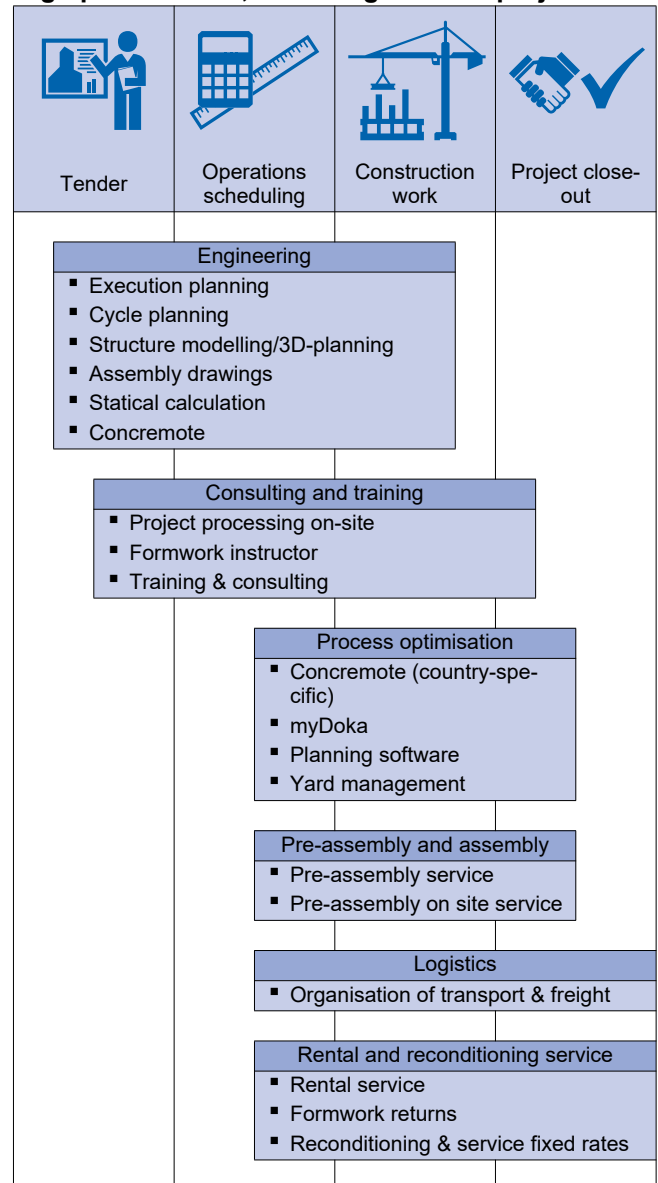
Just-in-time availability

Formwork availability is a crucial factor in realising your project on time and on budget. The worldwide logistics network puts the necessary formwork quantities on site at the agreed time.

Rental and reconditioning service

The formwork material needed for any particular project can be rented from Doka's high-performing rental park. Doka Reconditioning cleans and overhauls both client-owned equipment and Doka rental equipment.

High performance, in all stages of the project



Digital Services

for higher productivity in construction

From planning to completion of construction - with our digital services we want to set the pace for boosting productivity in construction. Our digital portfolio includes solutions for planning, procuring and managing to performing on site. Learn more about our digital offer at doka.com/digital.

Panel floor formwork Dokadek 30 with drop head

Extraordinarily fast forming

by integrating both the typical and infill zone

- The typical zones are formed simply by tilting up the beam-less panels, each of up to 3 m² in area
- The Dokadek XF drop head and additional closure panels make it possible to perform early stripping of the panels
- Meshes seamlessly with Dokaflex for time-saving closing of infill zones
- Can be connected directly to Dokaflex, permitting grid-independent adaptation to any layout
- Uncluttered logistics, as there are only two sizes of panel: 2.44 m x 1.22 m and 2.44 m x 0.81 m
- The intermeshing work sequence means both members of 2-man forming crews are always occupied

Extra-safe working

as the system is set up working from ground level

- Panels are erected from below, with no ladders or cranes needed
- Can be safely handled by only two people thanks to the ergonomically designed grip-holes in the edge-profiles
- The 2-stage lowering function and the built-in anti-liftout guard prevent panels accidentally falling off

Handling-method is easy to understand

because the process is logical

- No need to calculate or measure up, as the positions and numbers of props and panels are all made clear by the system
- Safe to operate, even for semi-skilled crew, as the sequence of worksteps is pre-defined
- Short introductory training times, as the system has only a small number of different parts
- 12 m² of Dokadek 30 can be horizontally repositioned on the Dekdrive – even through narrow doorways and access openings

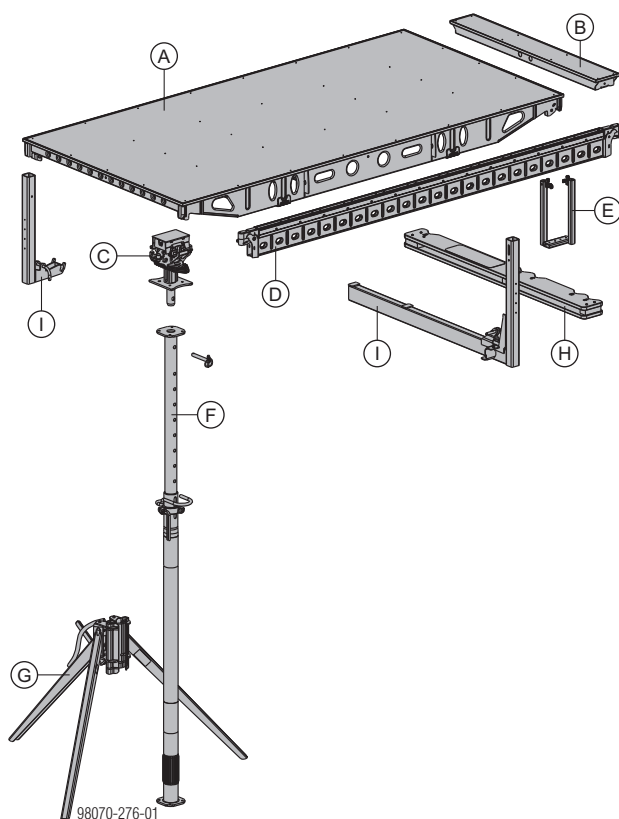


In addition to this document, also follow the directions in the following User Information booklets:

- Alternative methods of assembly
- Structure edge

System overview

Basic design concept

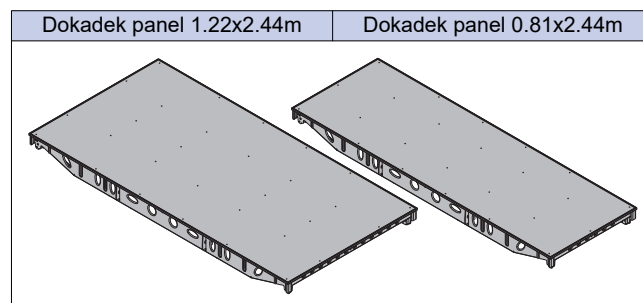


- A Dokadek panels
- B Dokadek closure panels
- C Dokadek heads
- D Dokadek infill beams
- E Dokadek suspension clamps H20
- F Doka floor props Eurex 30 top
- G Removable folding tripod
- H Dokadek wall clamps
- I Dokadek handrail-post shoes

The Dokadek 30 system components

Dokadek panels

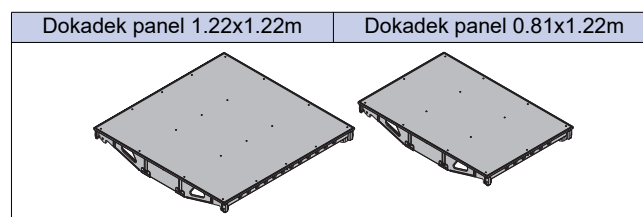
are galvanised, yellow coated steel frames with riveted 12 mm thick formwork sheets.



NOTICE

Impermissible areas of application for Dokadek panels 1.22x1.22m and 0.81x1.22m:

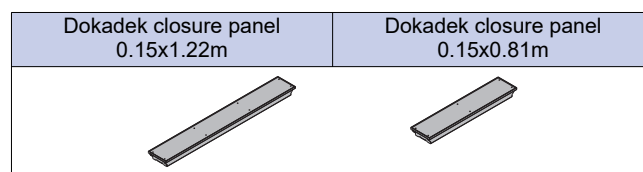
- use at the structure edge
- use with edge head, plumbing strut adapter or handrail-post shoe long



Can be used for purposes that include minimising the closure zone.

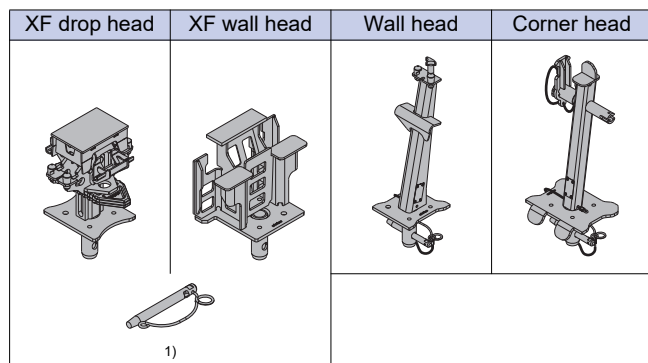
Dokadek closure panels

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



Dokadek heads

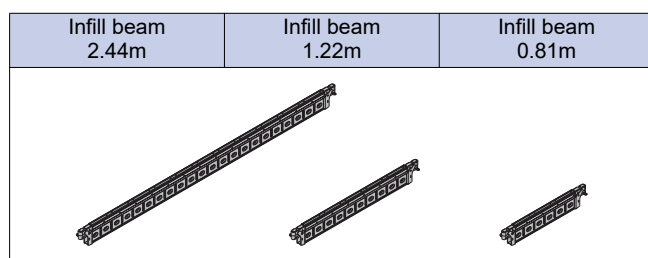
- for holding the Dokadek panels safely
- with a built-in anti-liftout guard for the Dokadek panels



1) Spring locked connecting pin D16 with eye not included with product

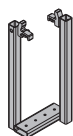
Dokadek infill beams

- for infilling along edges and around columns
- available for formwork-sheet thicknesses of 18mm, 21mm and 27mm
- delivered on Dokadek infill-beam pallets



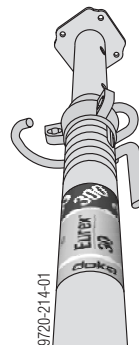
Dokadek suspension clamp H20

These are hooked into the infill beams and make it possible to transition from the Dokadek 30 system to the Dokaflex system.



Doka floor props Eurex 30 top

- DIB (German Institute of Construction Engineering) approval n° Z-8.311-905
- EN 1065-compliant floor prop



Their high load-bearing capacity is complemented by many practical details making them very easy to handle:

- numbered pegging holes, for easier height adjustment
- elbowed fastening clamps, reducing the risk of injury and making the props easier to operate
- special thread geometry, which makes the prop easier to release even when it is under high load



Follow the directions in the "Eurex top floor props" User Information booklet!



WARNING

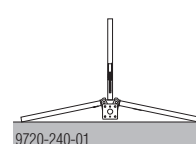
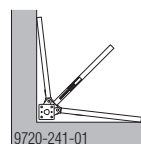
► It is **not permitted** to use the **Floor prop extension 0.50m**.

Removable folding tripod 'top'

- Set-up aid for floor props
- swing-out legs allow flexible placement in constricted situations such as along edges and in corners



Setting up tripods in corners or against walls



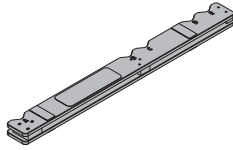
CAUTION

Not a substitute for the bracing necessary for load-bearing towers.

► Use as a set-up aid only!

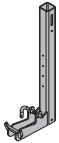
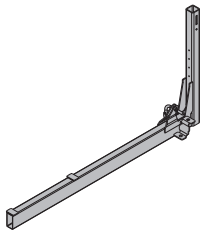
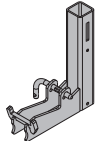
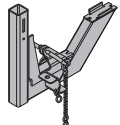
Dokadek wall clamp

- for holding floor props upright next to walls
- with an integrated template for measuring-up the right spacing of the floor props



Dokadek handrail-post shoes

These are used with Handrail posts XP 1.20m or 1.80m to set up guardrail systems on the narrowside and broadside of the Dokadek panel.

Handrail-post shoe short	Handrail-post shoe long
	
Dokadek handrail-post shoe short 1.20m	Dokadek handrail-post shoe long 1.20m
	

Instructions for assembly and use (Method statement)

Ground rules

Dokadek panels



NOTICE

Impermissible areas of application for Dokadek panels 1.22x1.22m and 0.81x1.22m:

- use at the structure edge
- use with edge head, plumbing strut adapter or handrail-post shoe long

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 - 32	—	Line 5
1.22x2.44m	—	> 30 - 50	Line 6
1.22x1.22m	32	> 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 props Eurex 30 top or Eurex 30 eco

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

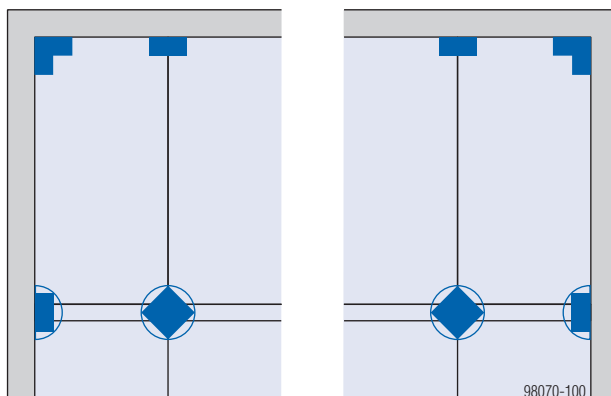
Dokadek heads



WARNING

- ▶ The Dokadek heads must always be fixed to the floor prop with the correct pin.
- ▶ Floor props with an XF wall head must not be used as temporary reshores.

Position of the Dokadek heads



Legend

XF drop head ¹⁾	XF wall head ¹⁾	Corner head	Wall head
¹⁾			

¹⁾ Spring locked connecting pin D16 with eye not included with product



NOTICE

When placing the panels onto the heads, make sure that the panels are correctly fixed in the heads.

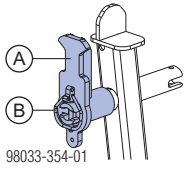
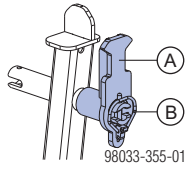
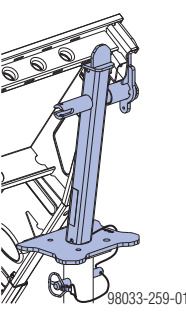
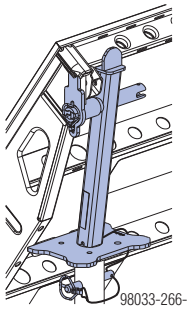
Installation examples

XF drop head	
98070-277-01 Used on Dokadek panel	
Wall head	XF wall head
98033-244-01 Used at narrow side of formwork	98070-277-02 Used at broadside of formwork



NOTICE

- The Dokadek XF drop head and Dokadek XF wall head must be in direct contact with the concrete (no thermal insulation in the way, for example).
- The Dokadek XF wall head is only suitable for holding Dokadek panels. It is not possible to engage infill beams.

Corner head	
Used in left-hand corner	Used in right-hand corner
 <p>98033-354-01</p> <p>Necessary position of the reversible arm (fix with linch pin 6x42mm)</p>	 <p>98033-355-01</p> <p>Necessary position of the reversible arm (fix with linch pin 6x42mm)</p>
 <p>98033-259-01</p>	 <p>98033-266-01</p>
<p>A Reversible arm</p> <p>B Linch pin 6x42mm</p>	

Doka floor props Eurex 30 top



WARNING

► Floor props must not be used extended to their full lengths!

This means that the props must be shortened, as follows, before being used:

- minus 25 cm when used with XF drop head or XF wall head
- minus 16 cm when used with support head
- minus 40 cm when used with corner head or wall head

Example: A Eurex 30 top 300 prop with an XF drop head is only allowed to be extended to max. 275 cm (for a max. room height of 300 cm).



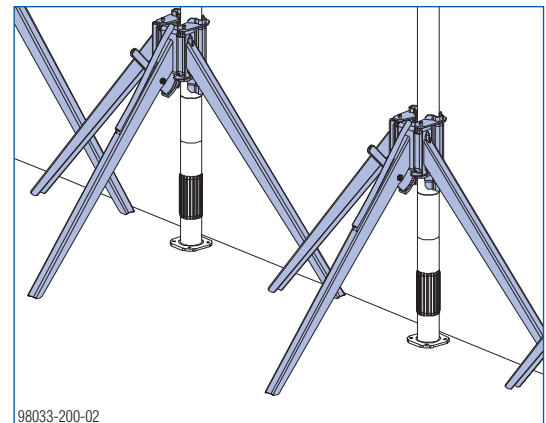
We recommend using props of the same type for the typical and infill zone, i.e. when combining Dokadek and Dokaflex.

Removable folding tripod 'top'



NOTICE

- Do not oil or grease wedged connections.



CAUTION

Risk of floor props tipping over when Dokadek panel is tilted up!

- Make sure that the Removable folding tripod is facing in the right direction.
- The leg with the clamping lever must be pointing in the longitudinal direction of the panels.
- Before anybody steps onto the formwork, check again to make sure that the props have been correctly fixed in the tripods.

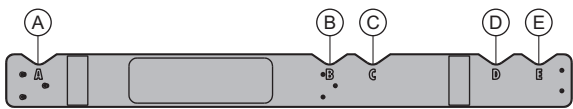


- Once the 1st row of panels has been fixed (e.g. with wall clamps) so that it cannot tip over, the Removable folding tripods can be removed.

However, before the formwork is stripped out, the Removable folding tripods MUST be put up again!

Dokadek wall clamp

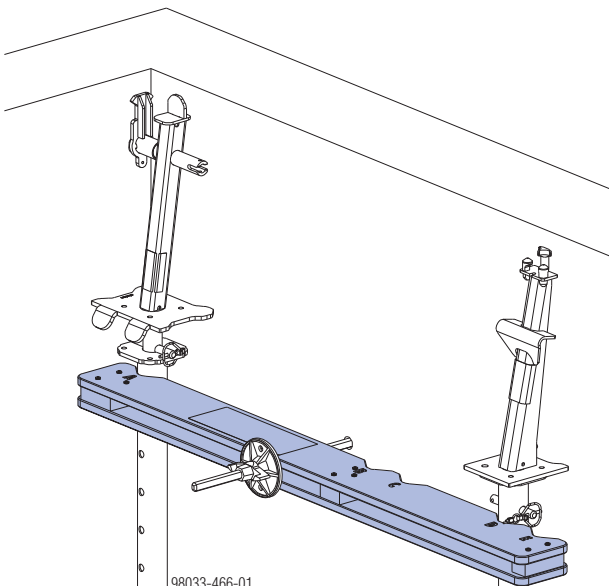
Determining the required spacing of the floor props



98033-258-01

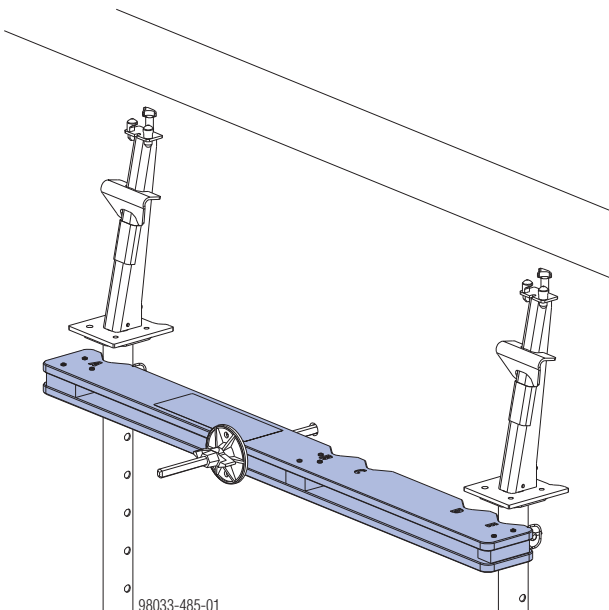
Head on 1st prop is in Position A.	Width of panel to be shored	Position of 2nd prop
Corner head	0.81 m	B
Wall head	0.81 m	C
Corner head	1.22 m	D
Wall head	1.22 m	E

Practical examples



98033-466-01

Starting in a corner (with Dokadek panel 1.22x2.44m)



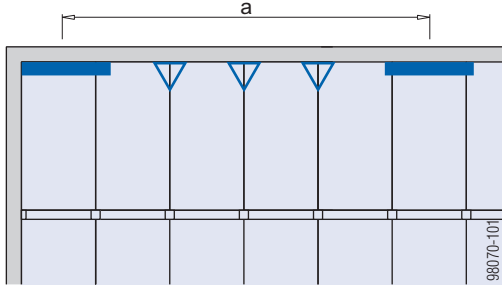
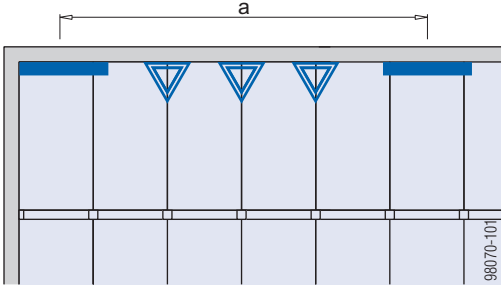
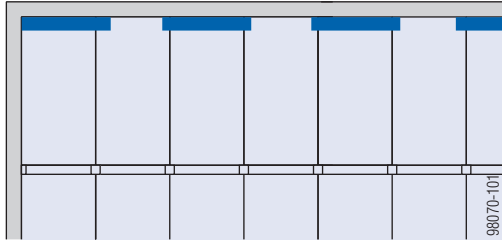
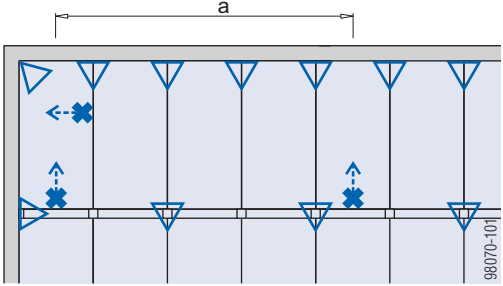
98033-485-01

Starting from a wall (with Dokadek panel 1.22x2.44m)

Stability of formwork





Stabilising the starting section during assembly

Starting from a wall

<p>Shoring height < 3.50 m</p> 	<p>Shoring height 3.50 - 4.00 m</p> 
<p>Shoring height > 4.00 m</p> 	<p>Special precautions e.g. if it is not possible to use a wall clamp.</p>  <p>Note: When the panels are being tilted up into the horizontal, the floor props must be given additional fixing to prevent them tipping over (i.e. the removable folding tripods alone are insufficient).</p>

a ... fixing point on 1st panel, every max. 7.50 m **and** on last panel

Legend

	Dokadek wall clamp
	Removable folding tripod top or eco (shoring height < 3.50 m)
	Removable folding tripod 1.20m (shoring height ≥ 3.50 m)
	Fixing point (e.g. with tie-back) Arrow = direction of the tie-back

Starting from middle of room

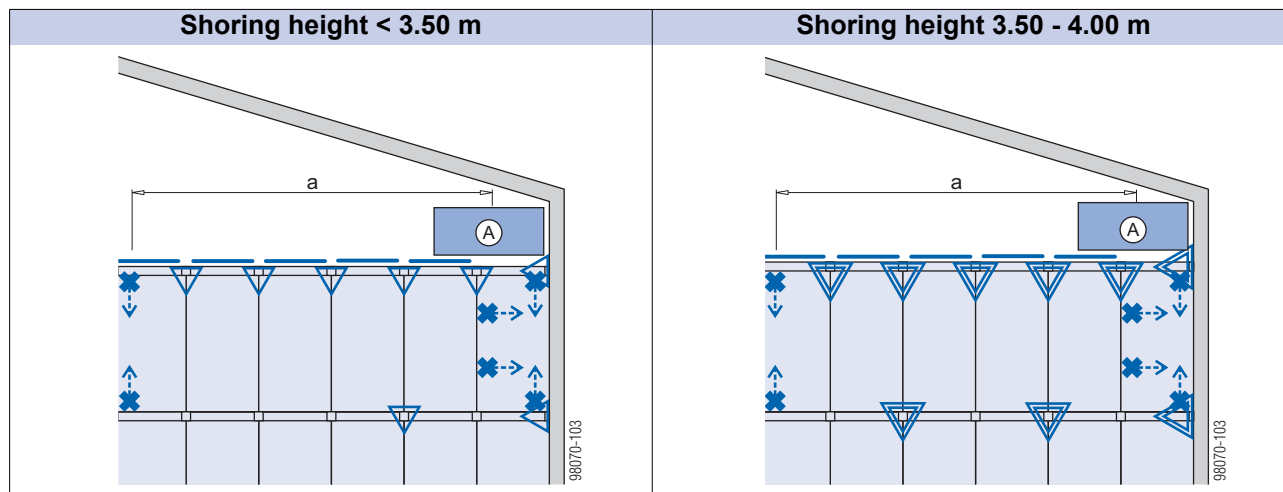
**NOTICE**

When starting from the middle of a room where it is possible to attach fixing points to the structure, you **MUST** proceed in the following order:

1. Put up the props and secure them so that they cannot fall over.
2. Engage infill beams into the system heads, to fix the props the correct distance apart.
3. Engage the first panel into the system heads.
4. Swing panel up.
5. Fix the panel.

**CAUTION**

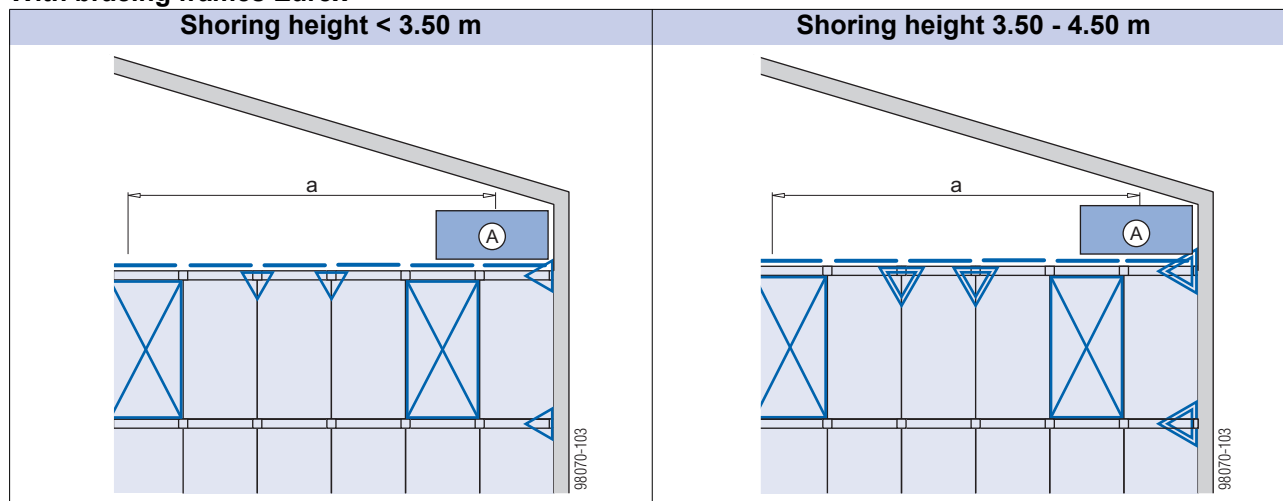
▶ When engaging and tilting up the panel, give the floor props additional fixing to prevent them tipping over (i.e. the removable folding tripods alone are insufficient).



a ... fixing point on 1st panel, every max. 7.50 m **and** on last panel

A Mobile scaffold tower, e.g. Wheel-around scaffold DF

With bracing frames Eurex



a ... 7.5 m and on last panel

A Mobile scaffold tower, e.g. Wheel-around scaffold DF

Legend

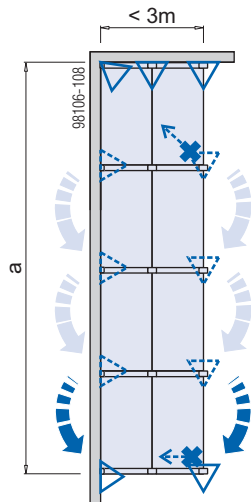
	Removable folding tripod top or eco (shoring height < 3.50 m)
	Removable folding tripod 1.20m (shoring height ≥ 3.50 m)
	Fixing point (e.g. with tie-back) Arrow = direction of the tie-back
	Dokadek infill beam
	Bracing frames Eurex with diagonal crosses

Note:

See the 'Structure edge (Panel floor formwork Dokadek 30 with drop head)' User Information booklet for information on how to start from the middle of the room if it is not possible to fix to the structure.

Rooms < 3 m wide

In rooms < 3 m wide, the removable folding tripods have to be offset in each new row of panels.



a ... fixing point on 1st panel, every max. 7.50 m **and** on last panel

Legend

Removable folding tripod top or eco



Fixing point (e.g. with tie-back)
Arrow = direction of the tie-back

Additional stabilisation during erection work**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).

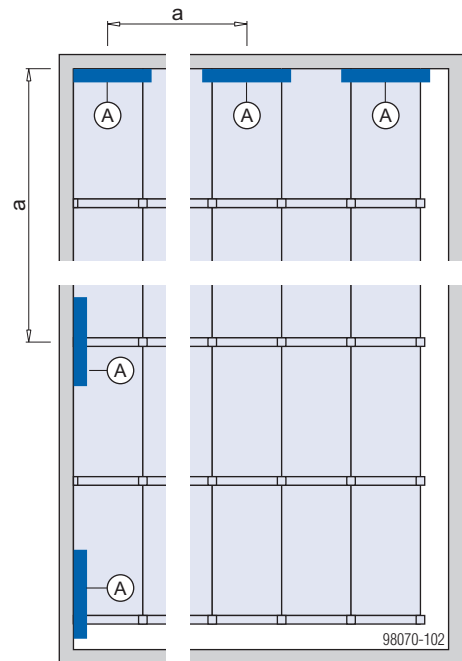
For details on how to make tie-backs with lashing straps, see the section headed 'Floor formwork around edges' and the 'Lashing strap 5.00m' User Information booklet.

- ▶ Formwork next to walls must be secured against tip-over as shown in the illustrations.



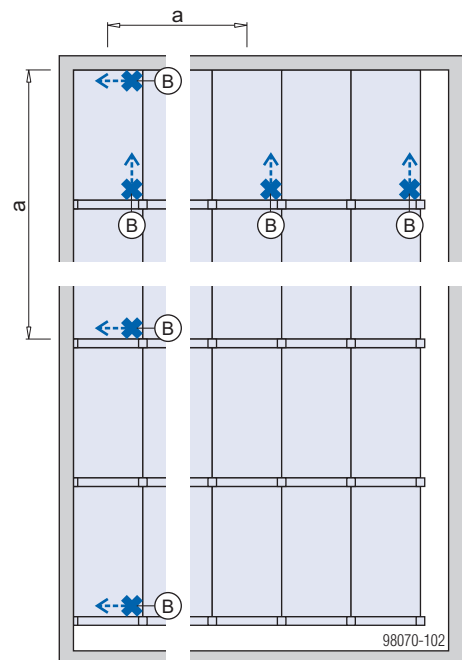
- ▶ Once the 1st row of panels has been fixed (e.g. with wall clamps) so that it cannot tip over, the Removable folding tripods can be removed.

However, before the formwork is stripped out, the removable folding tripods MUST be put up again!

Fixing point with wall clamps

a ... fixing-point on 1st panel, every max. 7.50 m **and** on last panel

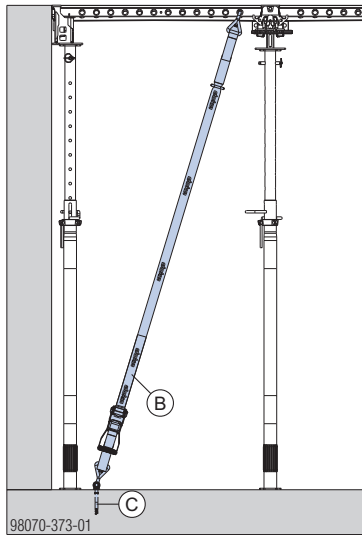
A Fixing point with wall clamps

Fixing point with lashing straps

a ... fixing-point on 1st panel, every max. 7.50 m **and** on last panel

B Fixing point using lashing straps
Arrow = direction of the tie-back

Practical example Tip-over protection using lashing straps

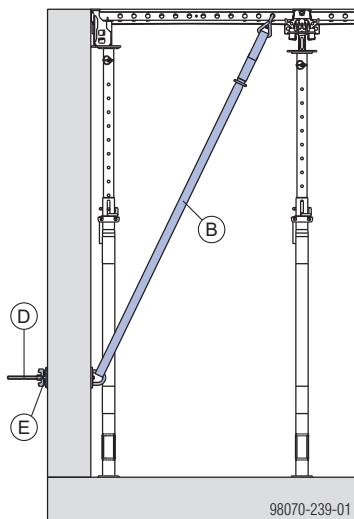


B Lashing strap 5.00m

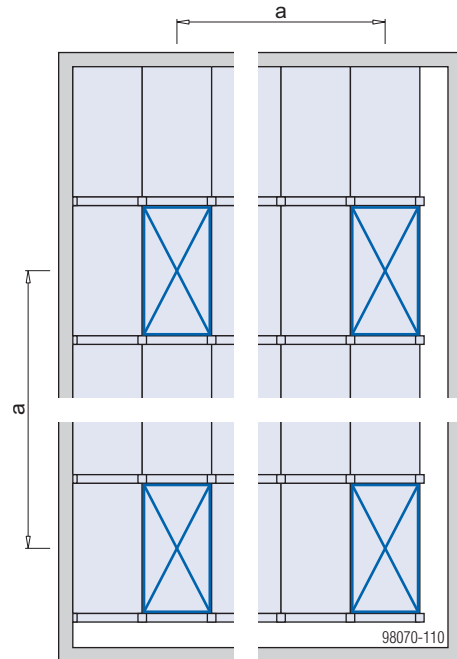
C Doka express anchor 16x125mm



- Up to a wall thickness of 40 cm, the Lashing strap (**B**) can also be fixed to a wall with a Lifting rod 15.0 (**D**) and a Super plate 15.0 (**E**) .



Fixing with Bracing frames Eurex



a ... max. 7.50 m **and** on last panel

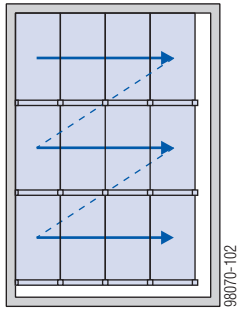
Legend



Bracing frames Eurex with diagonal crosses

Forming up and stripping out

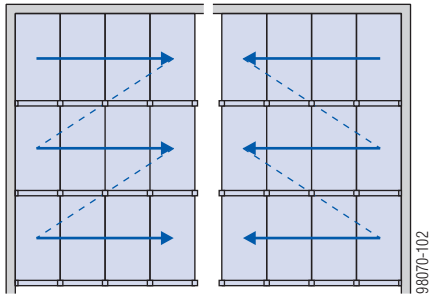
Direction of panel set-up



- 1) Start by setting up the panels row by row until only the planned infill zone is left unformed.
- 2) Then install the wall connections and fillers.

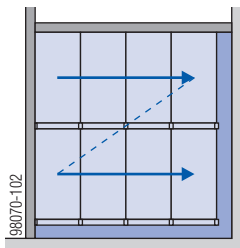


If necessary, you can start setting up the panels working from more than one side. The separate sections that have been formed with Dokadek are then joined by fillers (see the section headed 'Forming infill zones').



When setting up the formwork, check for any possible obstacles in the way when tilting up the panels, e.g. form-tie points of slab stop-ends.

In this case it is advisable to start setting up the formwork in the corner of an inside wall, and to create infill zones at the outside walls.



The formwork is stripped out in the same way, but in reverse order.

Ladder systems and working scaffolds

Platform stairway 0.97m

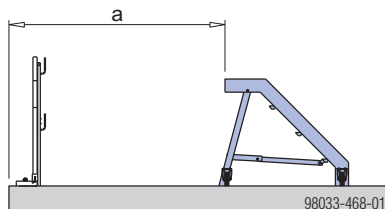


- wheel-around, fold-down platform stairway made of light alloy
- working heights of up to 3.00 m (max. standing height 0.97 m)
- Stair width: 1.20 m



NOTICE

- 2 platform stairways are needed for hanging the panels into place.
- Minimum distance **a** from drop-off edge: 2.00 m

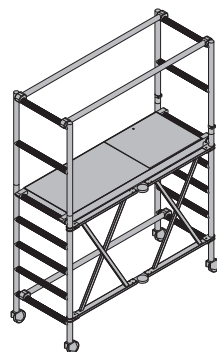


Max. load-bearing capacity: 150 kg



Follow all country-specific regulations!

Wheel-around scaffold DF



- collapsible wheel-around platform made of light alloy
- variable working heights of up to 3.50 m (max. platform height 1.50 m)
- width of scaffold: 0.75 m



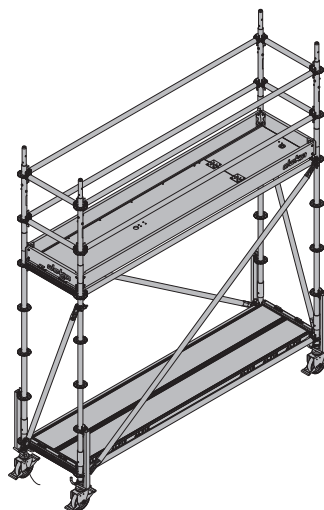
NOTICE

- The Wheel-around scaffold DF is not allowed to be used for mounting and dismounting the panels.
- 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.



Follow the directions in the User Information booklet!

Working scaffold Modul



- mobile working scaffold
- variable working heights of up to 3.50 m
- width of scaffold: 0.73 m
- length of scaffold: 2.07 m

Ballast weight needed¹⁾

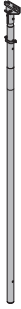
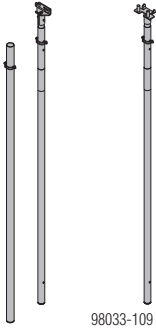
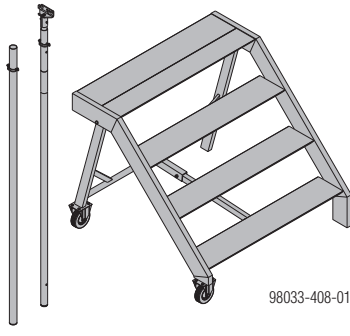
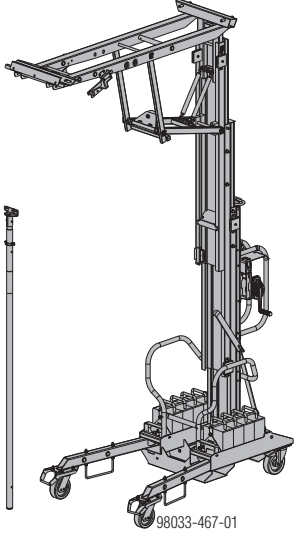
Standing height	Ballast weight
1.41 m	40 kg
1.91 m	100 kg

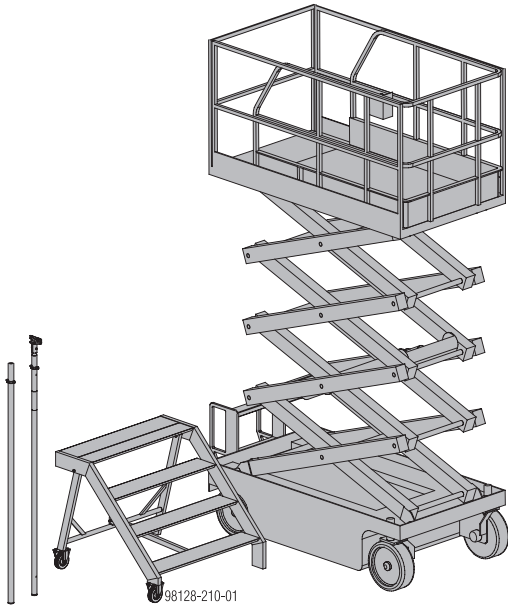
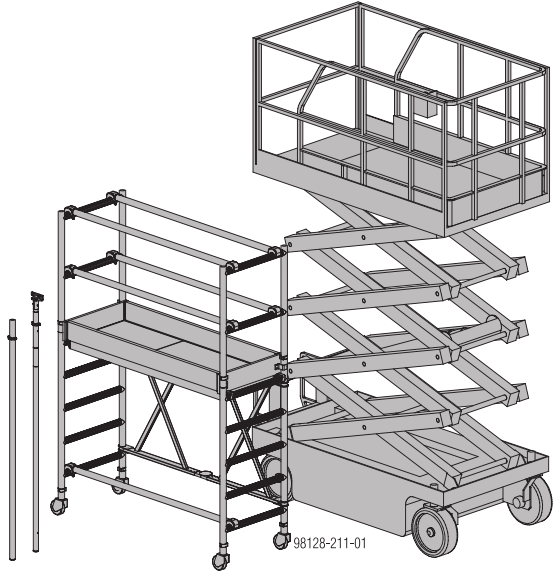
1) Precondition: max. distance of 25 cm between the working scaffold and the Dokadek panel



Follow the directions in the User Information booklet!

Method statement overview

Operating with assembling tool ²⁾ or suspension tool ³⁾			Operating with DekLift 4.50m + assembling tool ²⁾
<p>Working from the ground with assembling tool²⁾</p>  <p>Floor-to-ceiling height: from 2.10 m to approx. 3.50 m</p>	<p>Working from Platform stairway 0.97m¹⁾ with assembling tool²⁾</p>  <p>98033-109</p> <p>Floor-to-ceiling height: from 2.10 m to approx. 4.00 m</p>	<p>Working from Platform stairway 0.97m¹⁾ with assembling tool²⁾</p>  <p>98033-408-01</p> <p>Floor-to-ceiling height: from 2.10 m to approx. 4.20 m</p>	 <p>98033-467-01</p> <p>Floor-to-ceiling height: from 2.70 m to approx. 4.50 m</p>
<p>These methods of assembly are described in the 'Alternative methods of assembly (Panel floor formwork Dokadek 30)' User Information booklet.</p>			

Operating with assembling tool ²⁾ , platform stairway 0.97m ¹⁾ and scissor-lift working platform	Operating with assembling tool ²⁾ , Wheel-around scaffold DF and scissor-lift working platform
 <p>98128-210-01</p> <p>Floor-to-ceiling height: up to 5.50 m</p>	 <p>98128-211-01</p> <p>Floor-to-ceiling height: up to 6.00 m⁴⁾</p>
<p>These methods of assembly are described in the 'Alternative methods of assembly (Panel floor formwork Dokadek 30)' User Information booklet.</p>	

¹⁾ 2 platform stairways are needed for lifting the panels and hooking them into place.

²⁾ From room heights of 3.80 m upward, the assembling tool extension 2.00m is also needed.

³⁾ Head part painted yellow.

⁴⁾ For more information, please contact your Doka technician.

Operating with Dokadek assembling tool



NOTICE

- As well as the instructions given here, you must follow the instructions in the section headed 'Reshoring props, concrete technology and stripping out'.

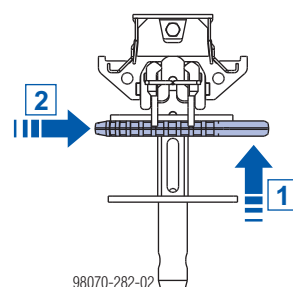


NOTICE

For manual transport, grip the floor prop only by the outer and inner tubes.



- Raise the lowering wedge of the XF drop head and knock it with the hammer to fix it.



WARNING

- Floor props must not be used extended to their full lengths!
See also the section headed 'Ground rules'.

- Roughly adjust the height of the floor prop, using the fastening clamp.

Closing the formwork

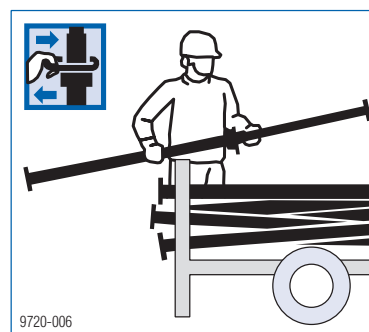
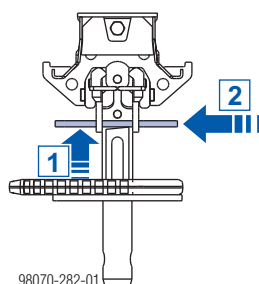
Preparations



- The fastening clamp (A) has to be pushed all the way into the floor prop.
- Adjusting nut (B) has to be tightened into contact with the fastening clamp.



- Set the **assembling tools** to the required length (= approx. room height). Min. 3 assembling tools needed per site-erection team.
From room heights of 3.80 m upward, the assembling tool extension 2.00m is also needed.
- Raise the sliding plate of the XF drop head and fix it in position.



Required length = room height minus 'a'

Dokadek head used		
XF drop head or XF wall head	Corner head	Wall head
 98070-200-01	 98033-280-02	 98033-280-03
a ... 25 cm	a ... 50.0 cm	a ... 50 cm
b ... Room height (e.g. with Eurex 30 top 300: max. 300 cm) (see the section headed 'Ground rules')		
c ... Extension length of floor prop		

The pegging holes are all numbered, which makes it easier to adjust the props to the same height.

- Fit the Dokadek head onto the floor prop and **secure it with the bolt**.

Putting up the 1st row of floor props

- ▶ Put up each removable folding tripod.



CAUTION

Risk of floor props tipping over when Dokadek panel is tilted up!

- ▶ Make sure that the Removable folding tripod is facing in the right direction.
- ▶ The leg with the clamping lever must be pointing in the longitudinal direction of the panels.
- ▶ Before anybody steps onto the formwork, check again to make sure that the props have been correctly fixed in the tripods.

- ▶ Put up floor props (complete with corner and wall heads) directly against the wall and secure them with Removable folding tripods.
- ▶ Refer to the wall clamp to find out how far apart the floor props have to be spaced.

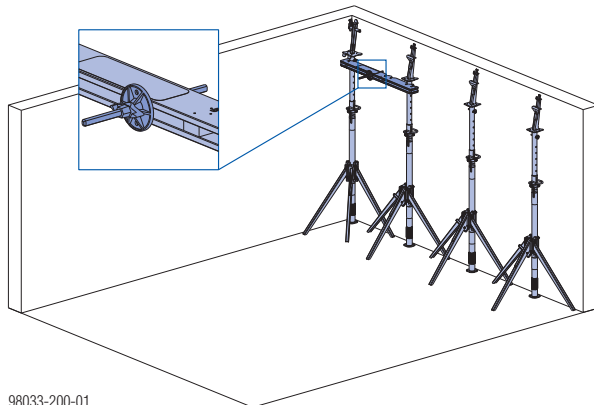


CAUTION

Risk of damage to the panel!

- ▶ Make sure that the tie-rod does not stick out too far from the wall clamp, as this would get in the way when the panel is lifted onto the heads.

- ▶ Adjust the 1st and 2nd floor props to the right height and fix them with a wall clamp to prevent them from tipping over. To do this, mount the wall clamp as high up the wall as possible, using a tie-rod and Super-plate. If there are tie-holes near the top of the wall, use these.

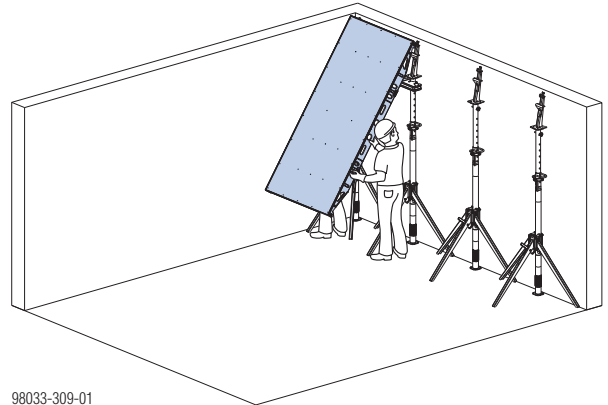


98033-200-01

Mounting the 1st row of panels

Mount the 1st panel

- ▶ Persons 1 and 2: Hook the panel onto the corner head and the wall head.

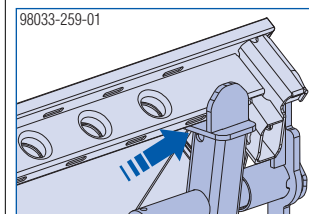


98033-309-01



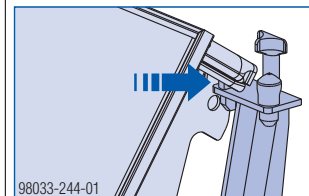
Make sure that the panel is correctly engaged in both heads.

Corner head



98033-259-01

Wall head



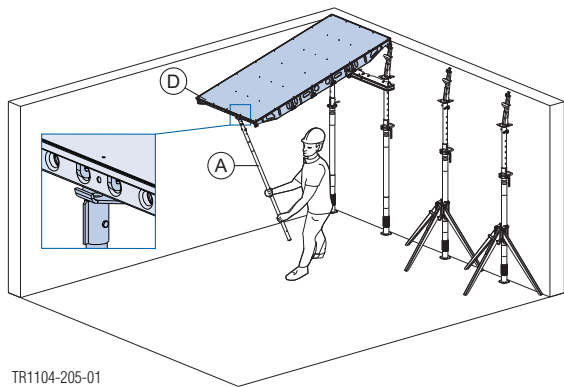
98033-244-01

- ▶ Person 1: Swing panel up.



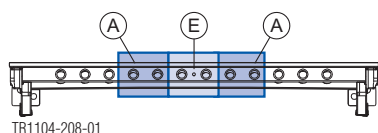
For greater room-heights, use an extra assembling tool (set to a shorter length) for tilting up the panel.

- Person 1: Position the assembling tool that is set to a shorter length off-centre in the outside cross profile of the panel and lift up the end for propping.



A Assembling tool set to shorter length, or Dokadek suspension tool

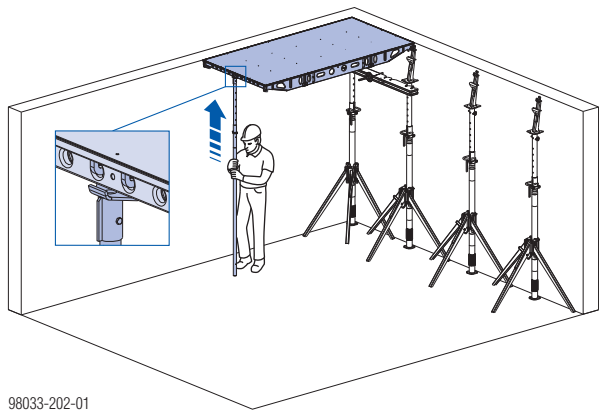
D Dokadek panel



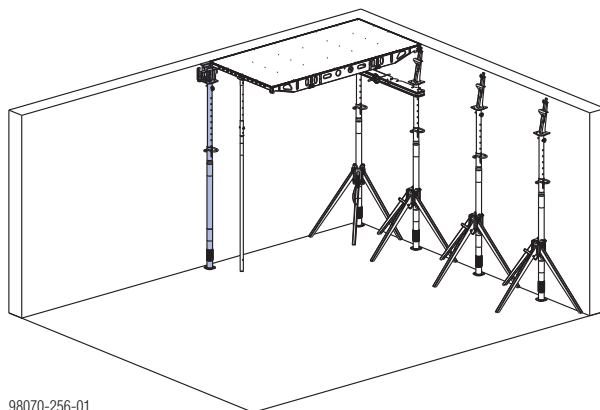
A Position of assembling tool set to shorter length, or Dokadek suspension tool

E Position of Dokadek assembling tool B

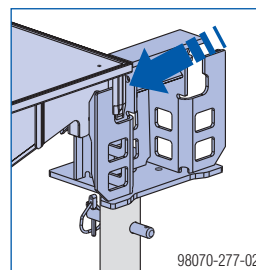
- Person 2: Hook the assembling tool into the middle of the outside cross profile of the panel, raise the panel and secure the assembling tool so that it can not tip over. (Max. inclination of the assembling tool with respect to the perpendicular: 5°)



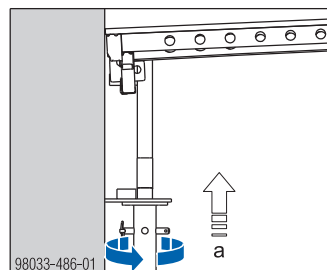
- Person 1: Place a floor prop (plus XF wall head) beneath the panel. The panel must still also be supported by the assembling tool.



Make sure that the panel is correctly engaged onto the pin of the XF wall head.



- Turn the adjusting nut on the floor prop to raise it and the corner head by 2 cm.

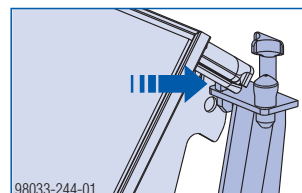


Mount further panels

- Persons 1 and 2: Hook the next panel into the heads.



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

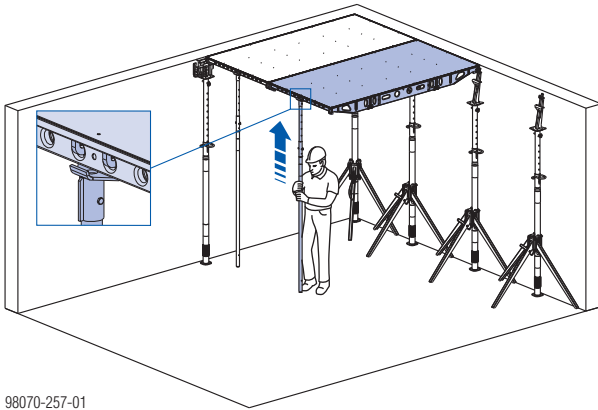


- Person 1: Tilt the panel up.

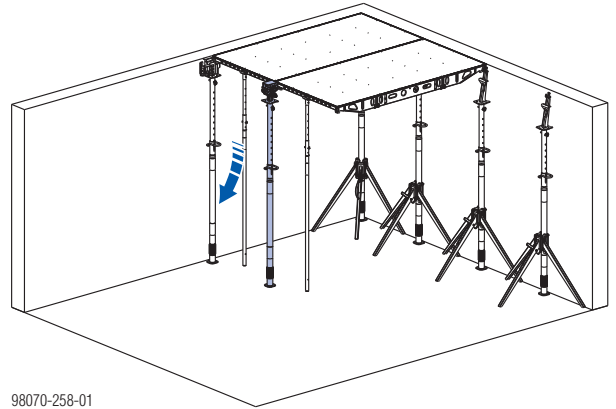


For greater room-heights, use an extra Dokadek assembling tool (set to a shorter length) for tilting up the panel.

- ▶ Person 2: 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.



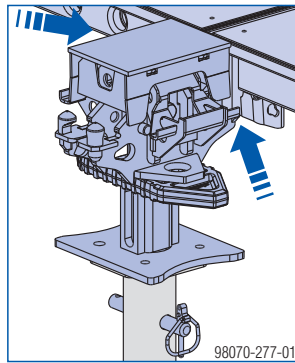
- ▶ Person 2: Remove the assembling tool from the 1st panel. The 2nd panel must still also be supported by the assembling tool. (max. inclination of the assembling tool with respect to the perpendicular: 5°)



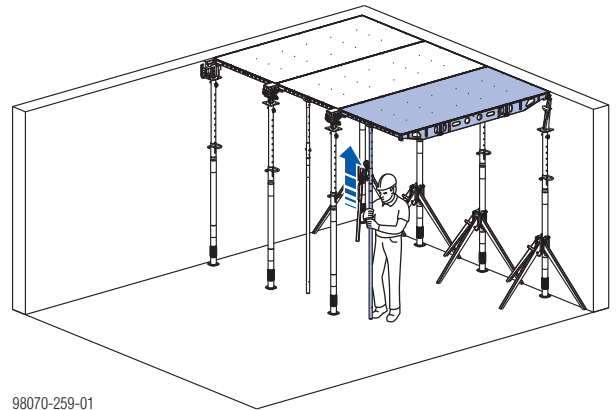
- ▶ Person 1: Place a floor prop (plus XF drop head) beneath both panels.



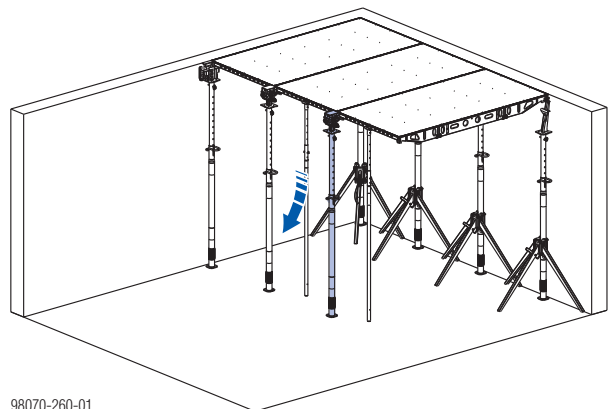
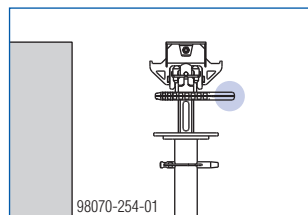
Make sure that the panels are correctly fitted onto the pins of the head.



- ▶ Set up further panels in the same way, until only the planned infill zone is left unformed. Ensure stability during the set-up operations (see the section headed 'Ground rules')!

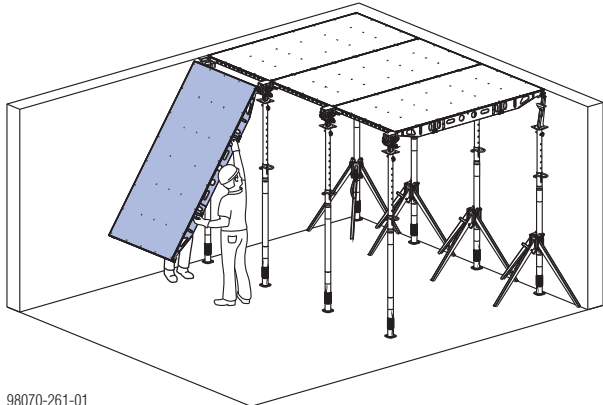


The XF drop heads next to infill zones must be turned inwards so that they can be knocked undone when the formwork is being stripped.



Putting up further rows of panels

- Set up further rows of panels in the same way, until only the planned infill zone is left unformed. Ensure stability during the set-up operations (see the section headed 'Ground rules')!

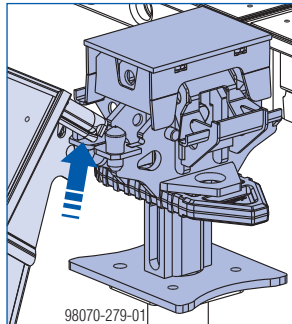


98070-261-01



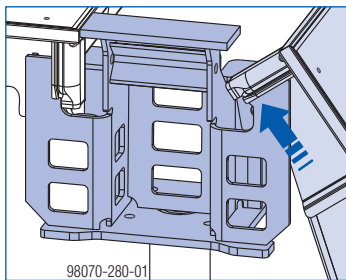
Make sure that the panel is correctly fitted in the two heads.

XF drop head



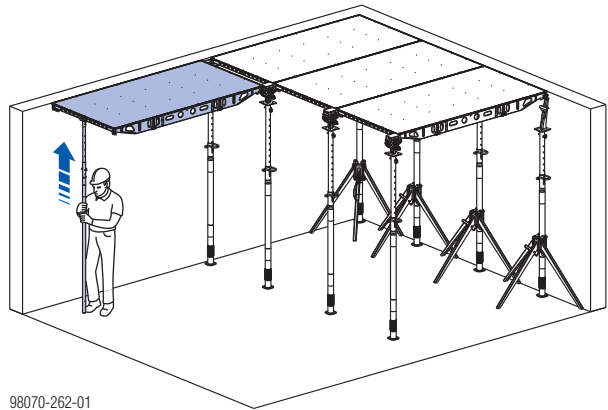
98070-279-01

XF wall head

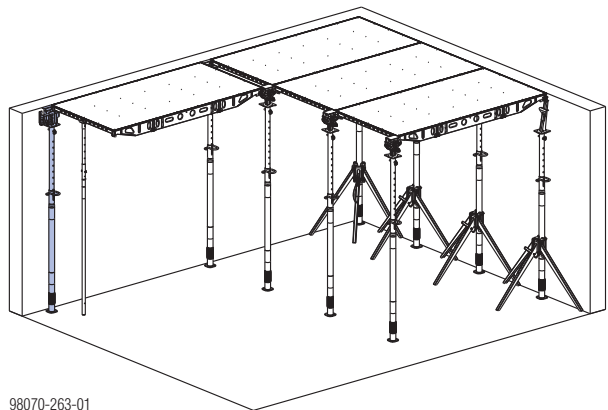


98070-280-01

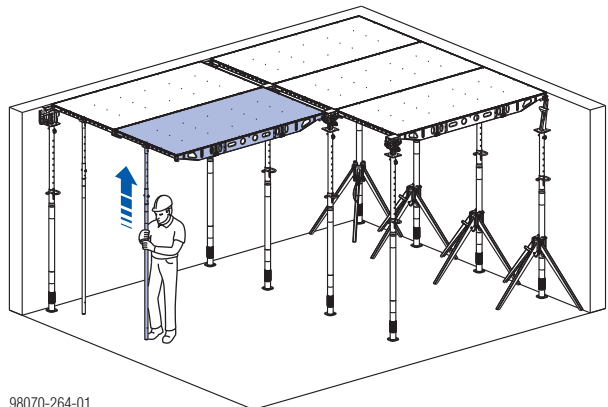
- Turn the adjusting nut on the floor prop to raise it and the XF wall head by 2 cm.



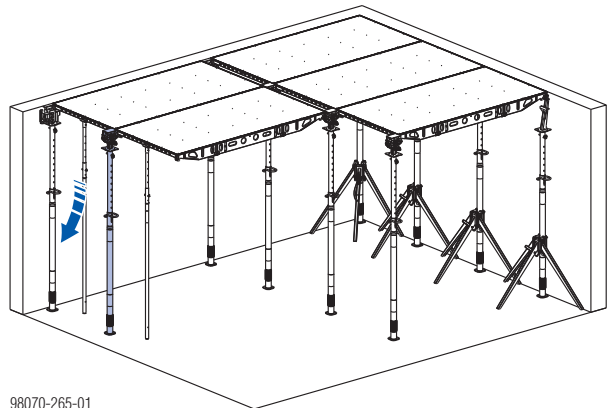
98070-262-01



98070-263-01



98070-264-01



98070-265-01

Mounting the bracing frames

The Bracing frames Eurex 1.22m and 0.81m fix the Doka floor props Eurex 20 and Eurex 30 and are a stable set-up aid - especially close to the edges of floor-slab formwork.

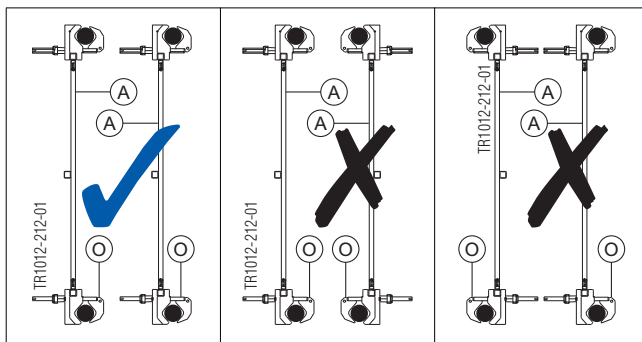
Features:

- Suitable for fixing to both the outer and inner tubes.
- Captively integrated quick-fixing mechanism for the Doka floor props
- Can be used in combination with diagonal crosses.
- On uneven surfaces (e.g. gravel fill of load-bearing capability), higher stability is ensured during assembly.



NOTICE

- Used as a set-up aid and takes horizontal loads during assembly.
- **Not suitable** for sustaining horizontal loads during pouring.
- All the floor props must be plumb.
- The prop holders on the bracing frames must always be pointing in the same direction.



A Bracing frame Eurex

O Prop holder with quick-fixing mechanism

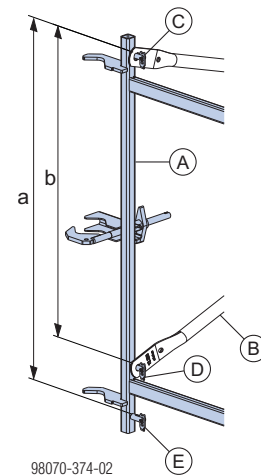
- Always set up the bracing frames such that the end with the two safety catches (D) and (E) is at the bottom (see Close-up A).
- It is not possible to use bracing frames directly alongside a wall.
- Use with Deklift only conditionally possible (because the bracing frame has to be removed briefly, particularly at the edge of the structure).

Area	Diagonal cross	Safety catch needed
Dokadek 30 typical zone with drop-head (Panel size 2.44m)	12.250	Pos. C+D
Dokadek 30 structure edge with drop-head (on narrow side only) (Panel size 2.44m)	9.175	Pos. C+D
Dokadek 30 typical zone with drop-head (Panel size 1.22m)	12.100	Pos. C+E



For special uses (e.g. in the infill zone), see the 'Dokaflex' User Information booklet for the necessary spacing of the bracing frames.

Close-up A



98070-374-02

a ... 101.9 cm
b ... 87.6 cm

A Bracing frame Eurex

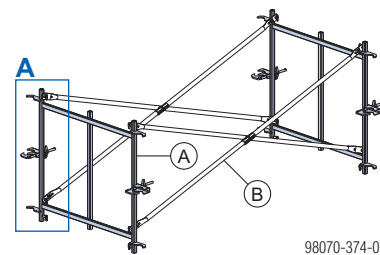
B Diagonal cross

C Safety catch 1

D Safety catch 2

E Safety catch 3

- Join both Bracing frames Eurex with diagonal crosses at top and bottom, and secure these with safety catches (Close-up A).

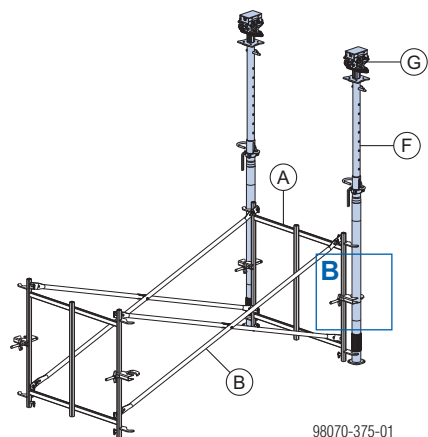


98070-374-01

A Bracing frame Eurex

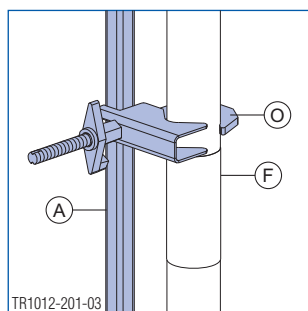
B Diagonal cross

- Fasten floor props to the bracing frame with the quick-fixing mechanism (Close-up B).



- A Bracing frame Eurex
- B Diagonal cross
- F Doka floor prop Eurex
- G Dokadek XF drop head

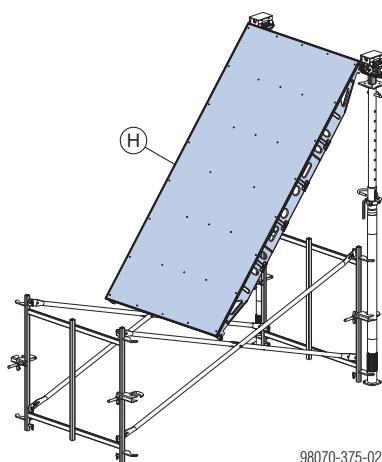
Close-up B – prop-holder



Quick-fixing mechanism closed

- A Bracing frame Eurex
- F Doka floor prop Eurex
- O Prop holder with quick-fixing mechanism

- Engage the Dokadek panel in the support heads.



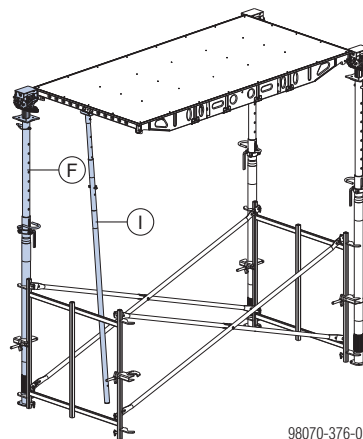
- H Dokadek panel



Make sure that the Dokadek panels have been hung into place (engaged) correctly.

- Tilt up the Dokadek panel with an assembling tool, and put a floor prop under one of the other corners.

- Attach the floor prop to the bracing frame with the quick-fixing mechanism (the assembling tool stays in place, as it still has a shoring function. Max. inclination of the assembling tool with respect to the perpendicular: 5°)



- F Doka floor prop Eurex
- I Assembling tool

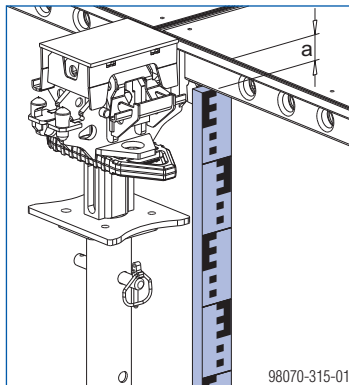
- For details on all other worksteps, see the section headed 'Operating with assembling tool'.
- For positions and numbers of frames see the 'Structure edge (Panel floor formwork Dokadek 30 with drop head)' User Information booklet.

Dismantling

- is carried out in the opposite order from assembly.

Levelling the formwork

- 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

Additional precautions for slab thicknesses of up to 50 cm

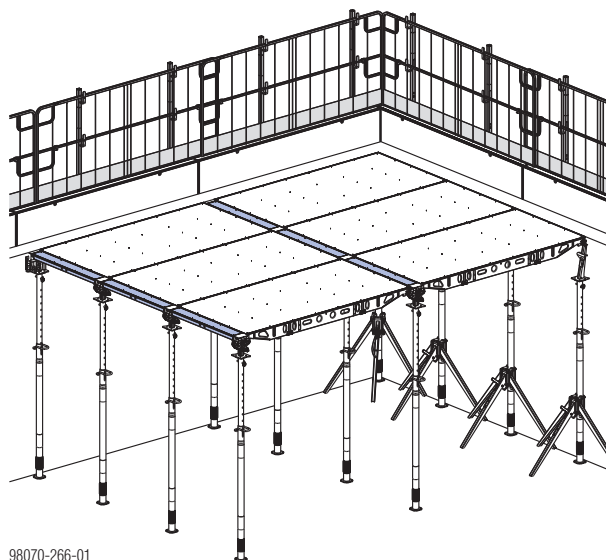
- See 'Additional precautions for slab thicknesses of up to 50 cm'.

Mounting guardrail systems

- See the section headed 'Guardrail systems on the formwork'.

Mounting closure panels

- Engage the closure panels onto the early-stripping heads from above.



Mounting fillers

- See the section headed "Forming infill zones".

Pouring

- Before pouring, recheck all floor props.



- The fastening clamp **(A)** has to be pushed all the way into the floor prop.
- Adjusting nut **(B)** has to be tightened into contact with the fastening clamp.



NOTICE

Impermissible areas of application for Dokadek panels 1.22x1.22m and 0.81x1.22m:

- use at the structure edge
- use with edge head, plumbing strut adapter or handrail-post shoe long

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 - 32	—	Line 5
1.22x2.44m	—	> 30 - 50	Line 6
1.22x1.22m	32	> 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 props Eurex 30 top or Eurex 30 eco

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.

Early stripping

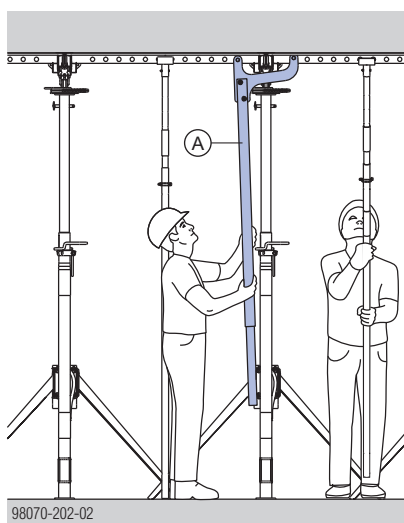


NOTICE

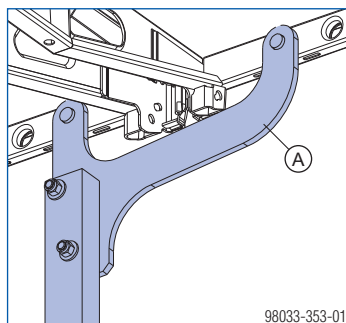
- Comply with the stipulated stripping times.
- Always strip out the formwork in reverse order.
- As well as the instructions given here, you must follow the instructions in the section headed 'Reshoring props, concrete technology and stripping out' in the 'Panel floor formwork Dokadek 30 with drop head'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



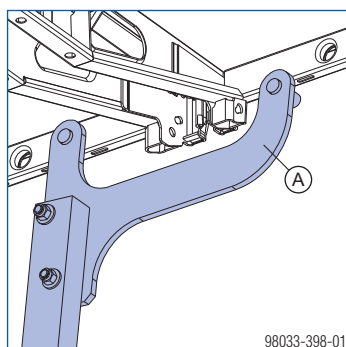
The Dokadek stripping tool (A) provides an easy, safe way of detaching panels from the concrete where necessary.



Used on Dokadek panels 1.22x2.44m



Used on Dokadek panels 0.81x2.44m



Preparations

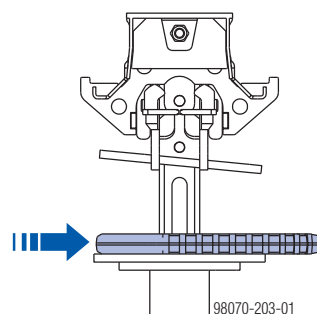


NOTICE

- Before stripping out the formwork, make sure that the floor props in the last row of panels to be removed are still fixed with Removable folding tripods and a wall clamp.
- Set the **Dokadek assembling tools** to the required length (= approx. room height). Min. 3 Dokadek assembling tools needed per site-erection team. From room heights of 3.80 m upward, the Dokadek assembling tool extension 2.00m is also needed.

Dismantling the floor props and 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.

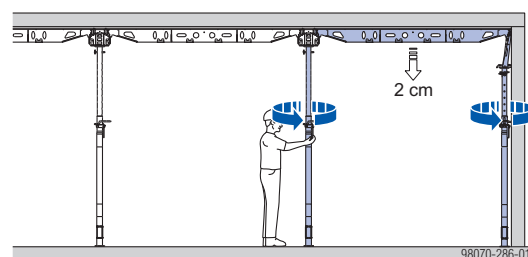


- Before lowering, clean the dirty baseplates of the drop heads!



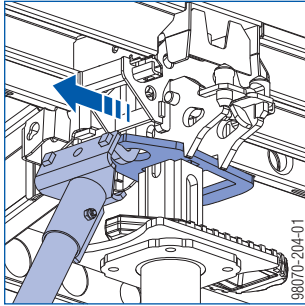
NOTICE

- Lower the floor props with a corner head, wall head or an XF wall head approx. 2 cm (approx. 1 turn of the adjusting nut).

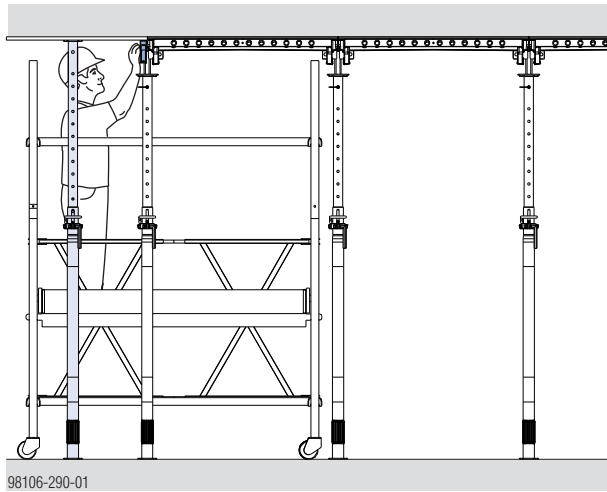


- The 1st person uses the 1st assembling tool to shore the panel to be stripped out. (Max. inclination of the assembling tool with respect to the perpendicular: 5°)
- Prop adjacent panel(s) with assembling tool(s). (Max. inclination of the assembling tool with respect to the perpendicular: 5°)

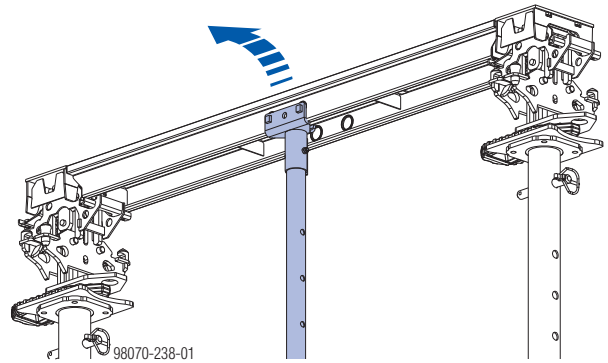
- 2nd person uses another assembling tool to release the sliding plates at the side of the 1st assembling tool (= 2nd lowering stage)



- Remove beams and sheets from the closure and infill zone.
Before doing this, secure any loose formwork beams and sheets so that they cannot drop off accidentally.



- Take out the closure panels using an assembling tool.



- Check that the swivel plate on the early-stripping head functions smoothly, ready for the next time of use (concrete spatter).

Cleaning the formwork

- See the section headed "Cleaning and care of your equipment".

Reshoring

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

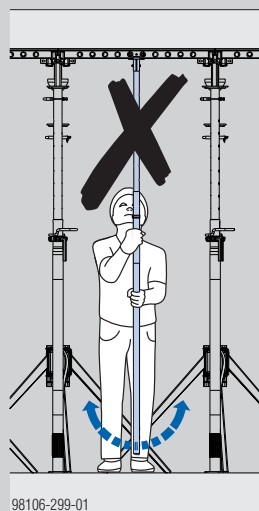


For further information, see the section headed 'Reshoring props, concrete technology and stripping out'.



CAUTION

- Use only the Dokadek stripping tool to release the panels from the concrete.



- Disengage the panel by lifting it out of the head with the 1st assembling tool.
- Using the 1st assembling tool, lower the panel until the 2nd person can take hold of it and tilt it all the way down.
- Disengage the panel and set it down on e.g. the DekDrive.
- Take down all the other panels in the same way.

Forming infill zones



NOTICE

- Ideally, fillers should be mounted from below (e.g. from a Wheel-around scaffold DF).
- If fillers have to be mounted from above, the crew must use a personal fall-arrest system (e.g. safety harness).
- Suitable anchorage points must be defined by an approved person appointed by the contractor.

Areas where infills may be needed:

- at wall connections
- between 2 Dokadek forming-sections
- around columns



WARNING

Falling hazard! Do not step onto loose sheets and infill beams!

- Only step onto these once the entire infill zone has been closed and secured by nailing!

Recommended nail lengths:

Sheet thickness of 18 mm: approx. 60 mm

Sheet thickness of 21 mm: approx. 65 mm

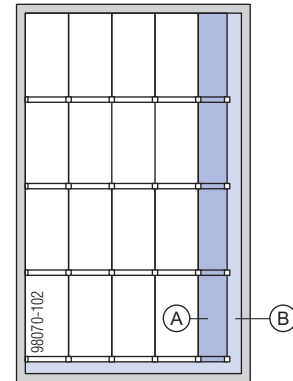
Sheet thickness of 27 mm: approx. 70 mm

Dokadek system components for infill zones

Dokadek panel 0.81x2.44m

If Dokadek panels 1.22x2.44m are combined with Dokadek panels 0.81x2.44m, the max. infill width can generally be reduced to 41 cm.

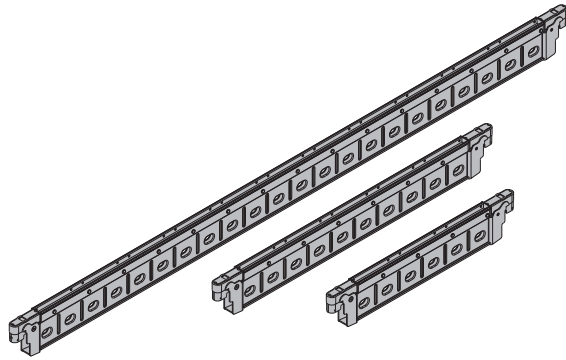
The Dokadek panels 0.81x2.44m are mounted in the same way as the Dokadek panels 1.22x2.44m.



A Dokadek panel 0.81x2.44m

B Infill zone (max. width 41 cm)

Dokadek infill beams



- Permitted moment: 5 kNm
- Permitted shear force: 11 kN
- Flexural stiffness EI: 320 kNm²
- Permissible imposed load where supported by floor prop in mid-span: 22 kN

Identification mark (D) on infill beam to show matching sheet thickness

Sheet thickness		
18 mm	21 mm	27 mm
98033-303-01	98033-303-02	98033-303-03

Adjusting the Dokadek infill beams

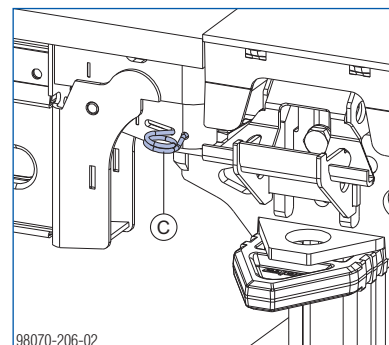
Area of use		Practical examples	
Infill zone around columns, using Dokadek infill beams	<p>Infill zone against a wall or around columns, using Doka beams H20: cheek plate at top, locking mechanism at top or bottom</p> 98070-206-01	98070-210-01	
	<p>▪ Infill beams used as primary beams: cheek plate at bottom, locking mechanism at bottom</p> 98070-207-01	98070-220-01	
	<p>▪ Infill beams used as secondary beams: cheek plate at bottom, locking mechanism at top</p> 98070-208-01		



WARNING

Risk of falling!

- In 'Area of use n° 1' (cheek plate at top) secure the infill beams against accidental lift-out using spring cotters (included with product).

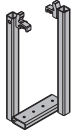


A Cheek plate (silver)

B Locking mechanism (red)

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

Dokadek suspension clamp H20



Perm. reaction force: 11 kN

Note:

The Suspension clamp H20 does not need to be supported by any extra floor prop.

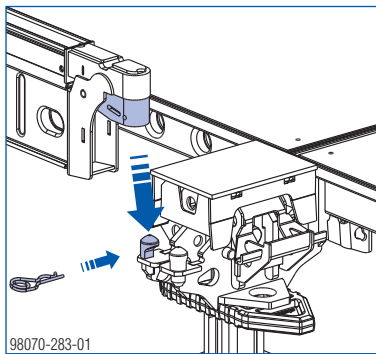
Infilling along wall connections

Variant 1: Infill width 'a' = 10 - 35 cm

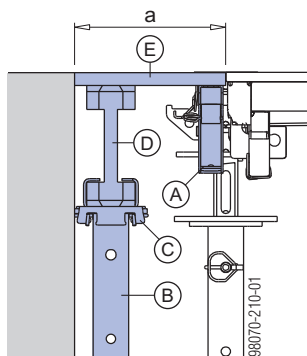
- Lengthwise infill 'a' = 10 - 25 cm
- Widthwise infill 'a' = 17 - 35 cm
- Max. spacing of infill props: 259 cm

Installation:

- Engage the infill beams onto XF drop heads (cheek plate at top) and secure them with spring cotters.



- Mount the closure panels.
- Mount the closures.



- A Dokadek infill beam
- B Doka floor prop Eurex 30 top + Removable folding tripod
- C Supporting head H20 DF
- D Doka beam H20, plank or squared timber (see table)
- E Formwork sheeting



NOTICE

Put up the intermediate props so that they force-fit. It is not allowed to make some props higher than others!

Necessary form-ply support (D)

	Lengthwise infill 'a'	Widthwise infill 'a'
Doka beam H20	from 17 cm	from 25 cm
Plank 4x20 cm	less than 17 cm	less than 25 cm

Variant 2: Infill width 'a' = 25 - 61 cm

- Lengthwise infill 'a' ≥ 25 cm
- Widthwise infill 'a' ≥ 35 cm

Max. infill width 'a' for slab thicknesses of up to 32 cm

Sheet thickness	Type of sheet	
	Doka formwork sheet 3-SO ¹⁾	Multi-ply formwork sheet ²⁾
18 mm	—	55 cm
21 mm	41 cm	61 cm
27 mm	61 cm	—

▪ max. spacing of infill props (Eurex 30): 259 cm

Max. infill width 'a' for slab thicknesses of up to 50 cm

Sheet thickness	Type of sheet	
	Doka formwork sheet 3-SO ¹⁾	Multi-ply formwork sheet ²⁾
18 mm	—	52 cm
21 mm	35 cm	58 cm
27 mm	52 cm	—

▪ max. spacing of infill props (Eurex 30): 259 cm

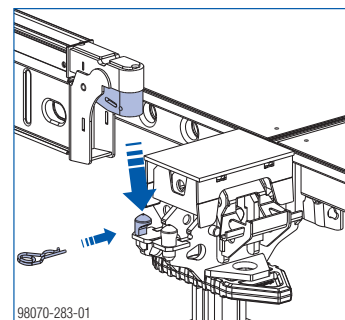
¹⁾ The computed values apply to the secondary (i.e. weaker) load-bearing direction, with the longitudinal direction of the sheet parallel to the edge of the floor-slab.

²⁾ Mean flexural modulus of elasticity where sheet moisture content is 10±2%: ≥ 5600 N/mm²

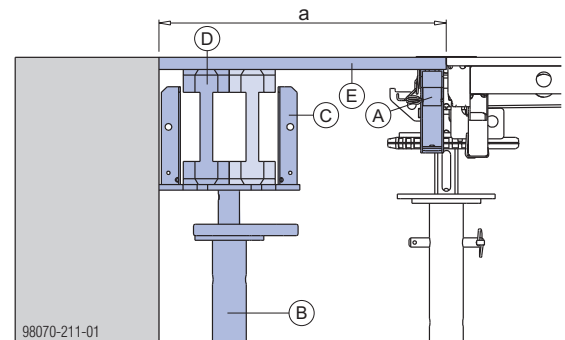
Characteristic flexural strength where sheet moisture content is 10±2%:
≥ 19 N/mm²

Installation:

- Engage the infill beams onto XF drop heads (cheek plate at top) and secure them with spring cotters.



- Mount the closure panels.
- Mount the closures.



- A Dokadek infill beam
- B Doka floor prop Eurex 30 top + Removable folding tripod
- C Lowering head H20
- D Doka beam H20 (telescoped)
- E Formwork sheeting

Variant 3: Infill width 'a' = 55 - 270 cm

Infill width 'a' for slab thicknesses of up to 32 cm

Primary beam	Infill width 'a'	Recommended secondary beam
1.10 m	55 - 100 cm	2.90 m
1.80 m	90 - 170 cm	
2.90 m	145 - 270 cm	

Eurex 30:

- max. prop spacing 'b': 75 cm
- max. primary-beam spacing: 259 cm
- max. secondary-beam spacing: 45 cm (Do not exceed the max. support centres of the formwork sheets!)
- for infill gaps 'a' ≥ 100 cm: intermediate prop (with Supporting head H20) is required

Infill width 'a' for slab thicknesses of up to 50 cm

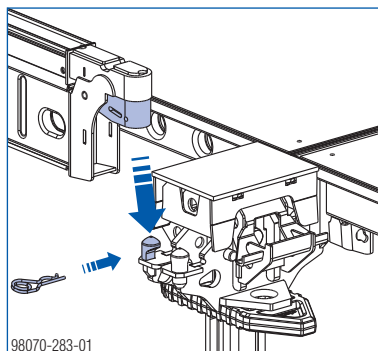
Primary beam	Infill width 'a'	Recommended secondary beam
1.10 m	55 - 100 cm	2.90 m
1.80 m	90 - 170 cm	
2.90 m	145 - 270 cm	

Eurex 30:

- max. prop spacing 'b': 50 cm
- max. primary-beam spacing: 259 cm
- max. secondary-beam spacing: 36 cm (Do not exceed the max. support centres of the formwork sheets!)
- for infill gaps 'a' ≥ 75 cm: intermediate prop (with Supporting head H20) is required

Installation:

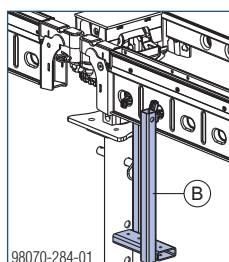
- Engage the infill beams onto XF drop heads (cheek plate at top) and secure them with spring cotters.



- Hook the suspension clamps into the infill beams as close to the floor props as possible.

Number of suspension clamps needed:

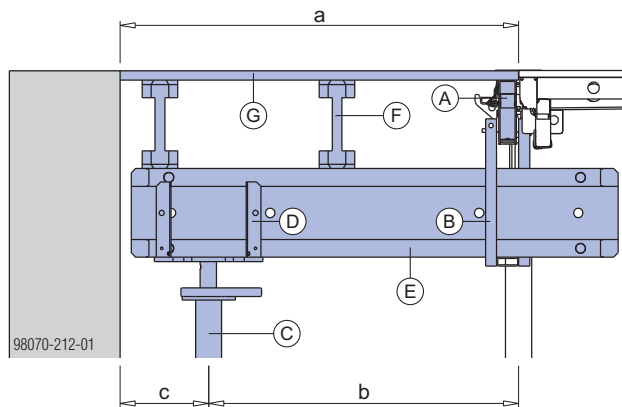
- next to every floor prop in the longitudinal direction
- next to every other floor prop in the transverse direction



- Mount the closure panels.

- Mount the closures.

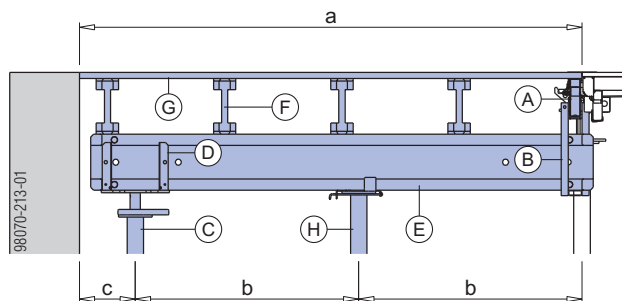
Practical example: Infill width 'a' ≤ 100 cm



b ... max. prop spacing: see tables

c ... 40 cm (up to slab thickness of 32 cm), 25 cm (slab thickness > 32 cm and up to 50 cm)

Practical example: Infill width 'a' > 100 cm (with intermediate prop)



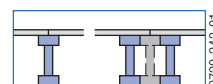
b ... max. prop spacing: see tables

c ... 40 cm (up to slab thickness of 32 cm), 25 cm (slab thickness > 32 cm and up to 50 cm)

- A** Dokadek infill beam
- B** Dokadek suspension clamp H20
- C** Doka floor prop Eurex 30 top + Removable folding tripod
- D** Lowering head H20
- E** Doka beam H20 as primary beam
- F** Doka beam H20 as secondary beam
- G** Formwork sheeting
- H** Intermediate prop with Supporting head H20 or Xtra head + Removable folding tripod



Place a beam (or double beam) wherever there is to be a joint between the panels.



NOTICE

Put up the intermediate props so that they force-fit. It is not allowed to make some props higher than others!

Dokadek infill-beam shoes

2 Dokadek infill-beam shoes 18mm or 21mm can be used in combination with a squared timber to create economical beams as an alternative to the conventional infill beams.

These beams can be used for closures of up to 50 cm at wall junctions in the Panel floor formwork Dokadek 30 system.

Features:

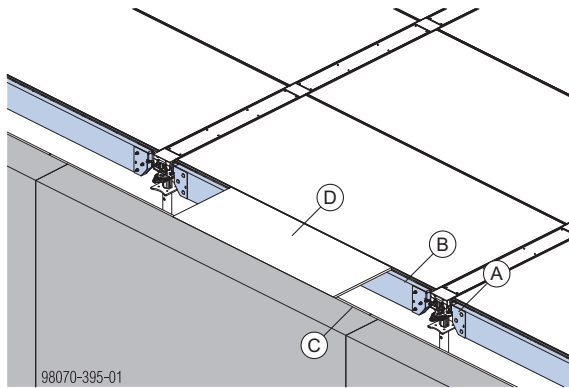
- For form-ply thicknesses of 18 mm and 21 mm
- Can be used with support head, wall head and XF drop head.
- The squared timber 200 x 40 mm is not included in the scope of supply!



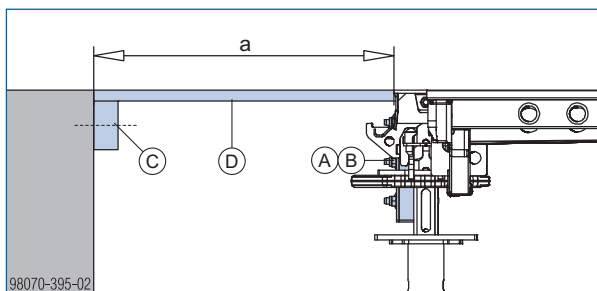
NOTICE

Use at the structure edge in combination with edge heads or XF edge heads is not possible!

Use with drop head



Close-up



a ... max. 45 cm (up to slab thickness of 35 cm)
... max. 36 cm (slab thickness > 35 cm and up to 50 cm)

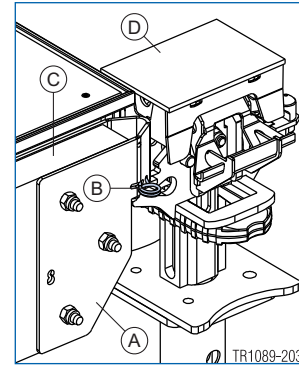
- A** Dokadek infill-beam shoe 18mm or 21mm
- B** Squared timber 200 x 40 mm
- C** Support timber (site-provided)
- D** Form-ply of 18mm or 21mm



WARNING

Falling hazard!

- When used on the XF drop head, secure the infill-beam shoe against accidental lift-out using a Spring cotter 6mm.



- A** Dokadek infill-beam shoe 18mm
- B** Spring cotter (included with product)
- C** Squared timber 200 x 40 mm site-provided
- D** Dokadek XF drop head

Assembly

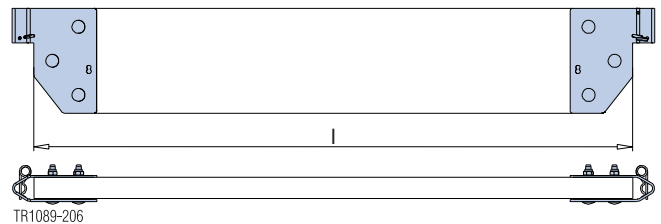
- Cut the squared timber to length (± 2 mm).



NOTICE

Squared timber sized 200 x 40 mm with a min. timber quality of C24 (rough-cut).

Dokadek panel length [m]	Squared timber cut to length 'l' [m]
0.81	0.718
1.22	1.128
2.44	2.348



- Push the infill-beam shoe all the way onto the squared timber until this rests against the inside of the shoe, and mark the 3 holes to be drilled and the bevel to be cut.
- Remove the infill-beam shoe, drill holes with a diameter of 12 mm and bevel the ends of the squared timber.
- Push the infill-beam shoe back on to the squared timber and fix it using the enclosed cup square bolts M10x65mm and hexagon nuts M10 (self-locking).



Make sure that the bolts are tight and fitted correctly!

Infilling between 2 Dokadek forming-sections

Variant 1: Infill width 'a' > 30 - 61 cm

Max. infill width 'a' for slab thicknesses of up to 32 cm

Sheet thickness	Type of sheet	
	Doka formwork sheet 3-SO ¹⁾	Multi-ply formwork sheet ²⁾
18 mm	—	55 cm
21 mm	41 cm	61 cm
27 mm	61 cm	—

Max. infill width 'a' for slab thicknesses of up to 50 cm

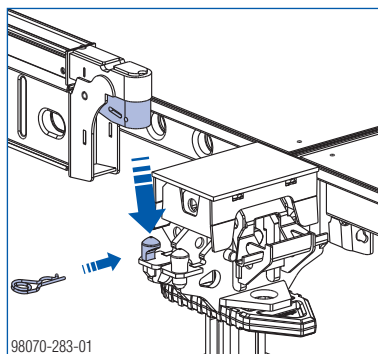
Sheet thickness	Type of sheet	
	Doka formwork sheet 3-SO ¹⁾	Multi-ply formwork sheet ²⁾
18 mm	—	52 cm
21 mm	35 cm	58 cm
27 mm	52 cm	—

¹⁾ The computed values apply to the secondary (i.e. weaker) load-bearing direction, with the longitudinal direction of the sheet parallel to the edge of the floor-slab.

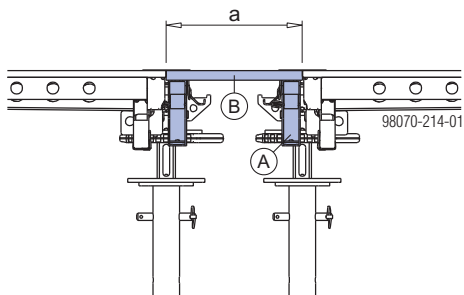
²⁾ Mean flexural modulus of elasticity where sheet moisture content is 10±2%: $\geq 5600 \text{ N/mm}^2$
Characteristic flexural strength where sheet moisture content is 10±2%:
 $\geq 19 \text{ N/mm}^2$

Installation:

- Engage the infill beams onto XF drop heads (cheek plate at top) and secure them with spring cotters.



- Mount the closures.



- A Dokadek infill beam
- B Formwork sheeting

Variant 2: Infill width 'a' = 55 - 270 cm

Infill width 'a' for slab thicknesses of up to 32 cm

Primary beam	Infill width 'a'	Recommended secondary beam
1.10 m	55 - 100 cm	2.90 m
1.80 m	90 - 170 cm	
2.90 m	145 - 270 cm	

Eurex 30:

- max. prop spacing 'b': 72 cm
- max. primary-beam spacing: 259 cm
- max. secondary-beam spacing: 45 cm
(Do not exceed the max. support centres of the formwork sheets!)
- for infill gaps 'a' $\geq 81 \text{ cm}$: intermediate prop (with Supporting head H20) is required

Infill width 'a' for slab thicknesses of up to 50 cm

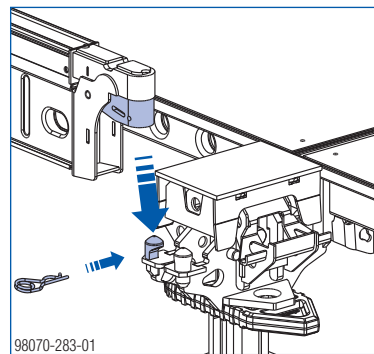
Primary beam	Infill width 'a'	Recommended secondary beam
1.10 m	55 - 100 cm	2.90 m
1.80 m	90 - 170 cm	
2.90 m	145 - 270 cm	

Eurex 30:

- max. prop spacing 'b': 47 cm
- max. primary-beam spacing: 259 cm
- max. secondary-beam spacing: 36 cm
(Do not exceed the max. support centres of the formwork sheets!)
- for infill gaps 'a' $\geq 72 \text{ cm}$: intermediate prop (with Supporting head H20) is required

Installation:

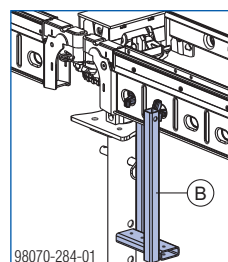
- Engage the infill beams onto XF drop heads (cheek plate at top) and secure them with spring cotters.



- Hook the suspension clamps into the infill beams as close to the floor props as possible.

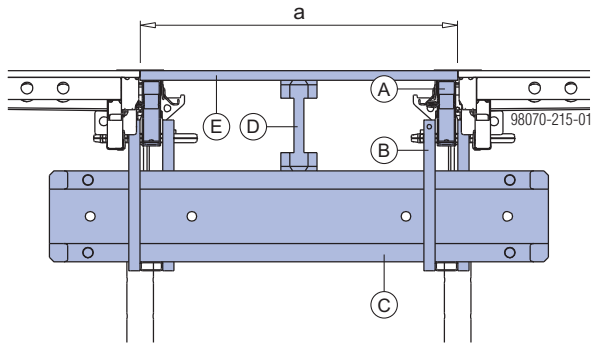
Number of suspension clamps needed:

- next to every floor prop in the longitudinal direction
- next to every other floor prop in the transverse direction

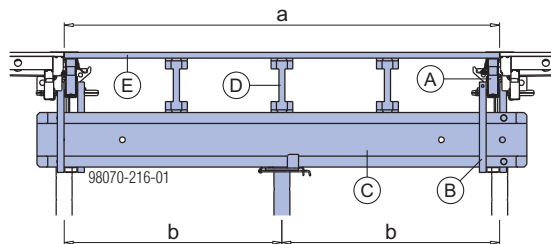


► Mount the closures.

Practical example: Infill width 'a' ≤ 81 cm



Practical example: Infill width 'a' > 81 cm (with intermediate prop)

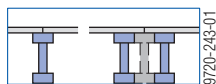


b ... max. prop spacing: see tables

- A Dokadek infill beam
- B Dokadek suspension clamp H20
- C Doka beam H20 as primary beam
- D Doka beam H20 as secondary beam
- E Formwork sheeting
- F Intermediate prop with Supporting head H20 or Xtra head + Removable folding tripod



Place a beam (or double beam) wherever there is to be a joint between the panels.

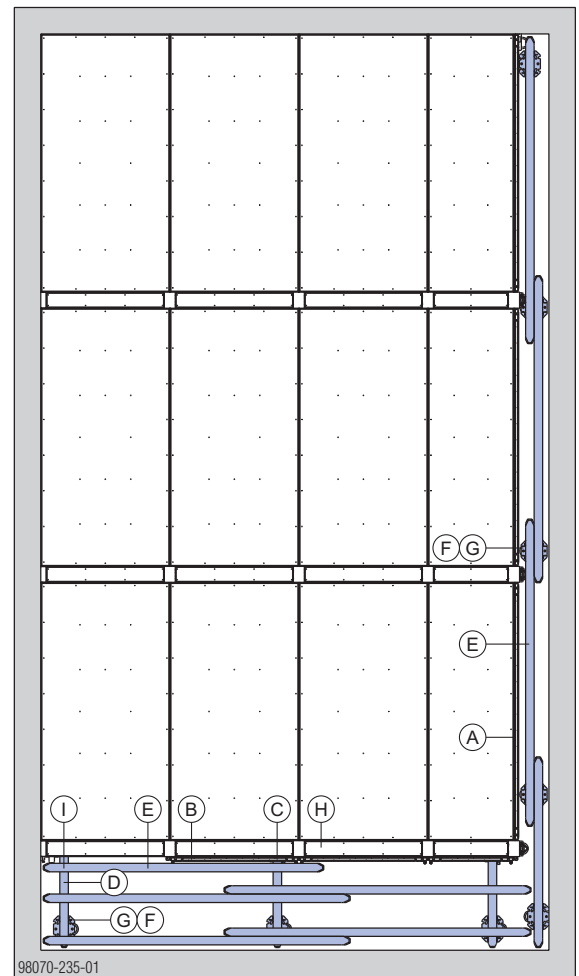


NOTICE

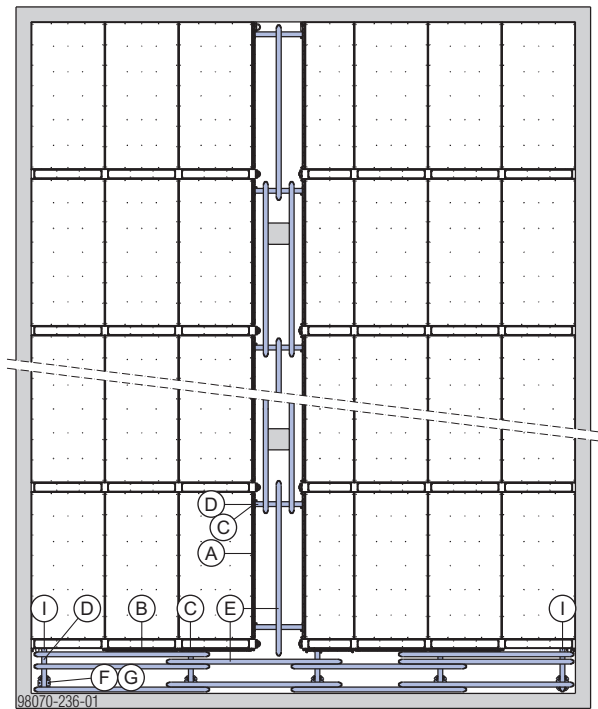
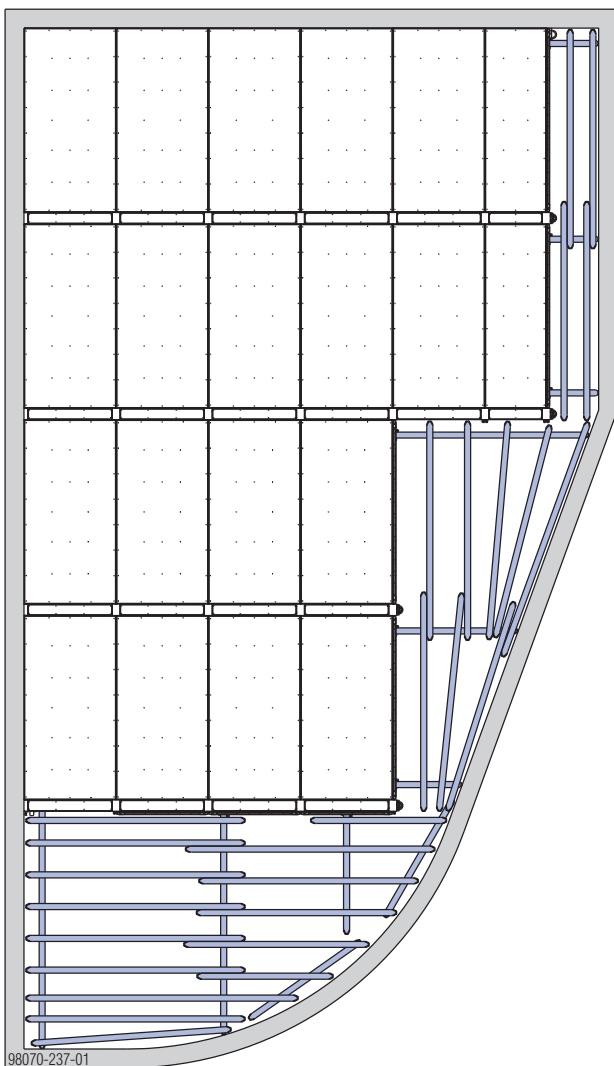
Put up the intermediate props so that they force-fit. It is not allowed to make some props higher than others!

Practical examples

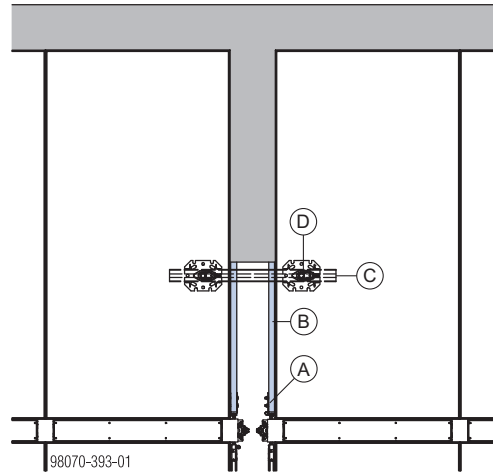
L-shaped infill zone



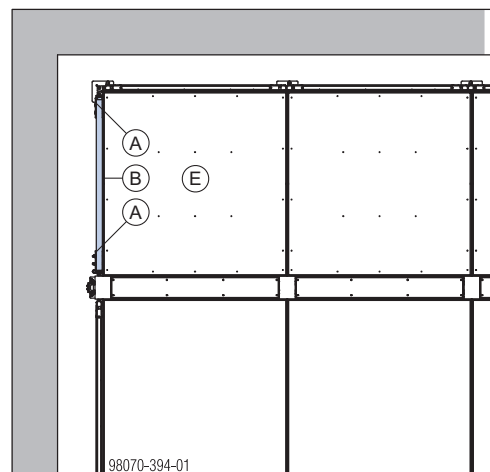
- A Dokadek infill beam 2.44m
- B Dokadek infill beam 1.22m or 0.81m
- C Dokadek suspension clamp H20
- D Doka beam H20 used as primary beam
- E Doka beam H20 used as secondary beam
- F Doka floor prop Eurex 30 top + Removable folding tripod
- G Lowering head H20
- H Dokadek closure panel
- I It is not possible to engage infill beams in the Dokadek XF wall heads. Therefore, instead of the Suspension clamp H20, the Doka beam H20 must be supported additionally with a floor prop, a Removable folding tripod and a Lowering head H20.

T-shaped infill zone**Adapting to difficult layout shapes**

Symbolic representation

Dokadek infill-beam shoes**at T-wall junctions**

- A** Dokadek infill-beam shoe 18mm or 21mm
- B** Squared timber 200 x 40 mm
- C** Doka beam H20
- D** Doka floor prop Eurex 30 top + Removable folding tripod top + Lowering head H20

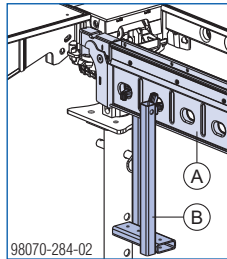
with Dokadek custom panels

- A** Dokadek infill-beam shoe 18mm or 21mm
- B** Squared timber 200 x 40 mm
- E** Dokadek custom panel

Infill zones around columns

using Dokadek infill beams and Doka beams H20

- ▶ Engage 2 infill beams 1.22m or 0.81m onto the XF drop heads in the transverse direction (cheek plate at top) and secure them with spring cotters.
- ▶ Hook 4 suspension clamps into the infill beams as close to the floor props as possible.



- ▶ Fit 2 Doka beams H20 into the suspension clamps, to serve as primary beams.
- ▶ e.g. with 1.22 m wide panels: place Doka beams H20 (e.g. Dokadek system beams H20 eco P 1.10m for a panel width of 1.22 m) onto the primary beams, in the transverse direction.



Place a beam (or double beam) wherever there is to be a joint between the panels.

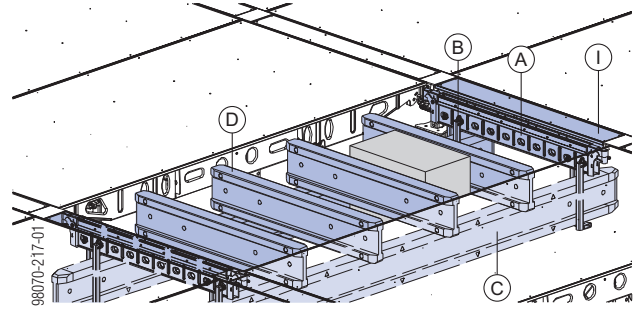


NOTICE

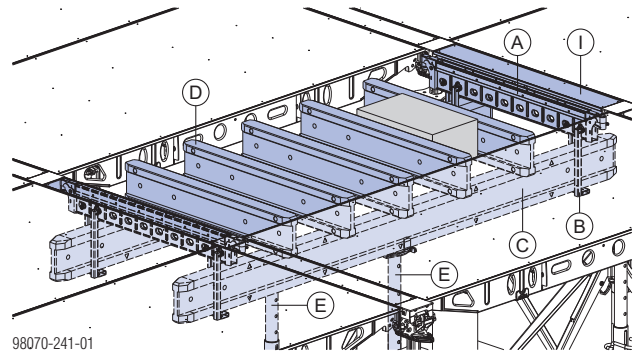
Put up the intermediate props so that they force-fit. It is not allowed to make some props higher than others!

Practical examples - Column located inside panel-field (variant 1)

Slab thickness ≤ 32 cm



Slab thickness > 32 cm



Slab thickness	Max. spacing of secondary beams	N° of extra shores per primary beam
≤ 32 cm	50 cm ¹⁾	—
> 32 cm	42 cm ¹⁾	1 (in mid-span)

¹⁾ Do not exceed the max. support centres of the formwork sheets!

A Dokadek infill beam 1.22m or 0.81m

B Dokadek suspension clamp H20

C Doka beam H20 2.90m as primary beam

D Doka beam H20 as secondary beam (e.g. Dokadek system beam H20 eco P 1.10m for a panel width of 1.22 m)

E Extra shore (in mid-span):

- Doka floor prop Eurex 30 top
- Supporting head H20 DF

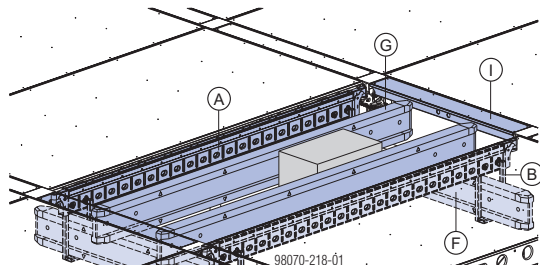
I Dokadek closure panel 0.15x1.22m or 0.15x0.81m

Practical examples - Column located inside panel-field (variant 2)

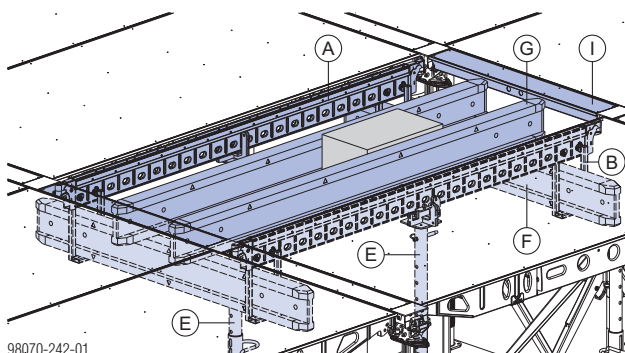


If necessary, the infill beams and Doka beams H20 can also be arranged the other way round, i.e. the Infill beams 2.44m on which the suspension clamps are mounted are fixed in the longitudinal direction.

Slab thickness ≤ 32 cm



Slab thickness > 32 cm



Slab thickness	Max. spacing of secondary beams	N° of extra shores per infill beam
≤ 32 cm	50 cm ¹⁾	—
> 32 cm	42 cm ¹⁾	1 (in mid-span)

¹⁾ Do not exceed the max. support centres of the formwork sheets!

A Dokadek infill beam 2.44m

B Dokadek suspension clamp H20

E Extra shore (in mid-span)

- Doka floor prop Eurex 30 top

- Dokadek edge head + Spring locked connecting pin 16mm

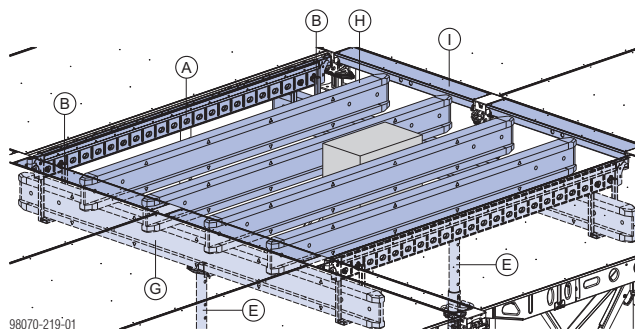
F Doka beam H20 as primary beam (e.g. Doka beam H20 1.80m for a panel width of 1.22 m)

G Doka beam H20 2.45m as secondary beam

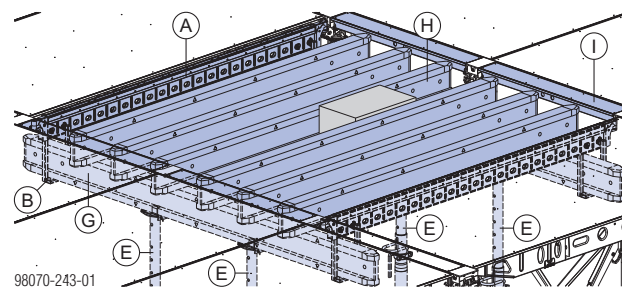
I Dokadek closure panel 0.15x1.22m or 0.15x0.81m

Practical examples - Column is exactly beneath the panel joint

Slab thickness ≤ 32 cm



Slab thickness > 32 cm



Slab thickness	Max. spacing of secondary beams	N° of extra shores per primary beam
≤ 32 cm	50 cm ¹⁾	1 (in mid-span)
> 32 cm	42 cm ¹⁾	2 (at the one-third points)

¹⁾ Do not exceed the max. support centres of the formwork sheets!

A Dokadek infill beam 2.44m

B Dokadek suspension clamp H20

E Extra shore:

- Doka floor prop Eurex 30 top

- Supporting head H20 DF

G Doka beam H20 as primary beam (e.g. Doka beam H20 2.90m for a panel width of 1.22 m)

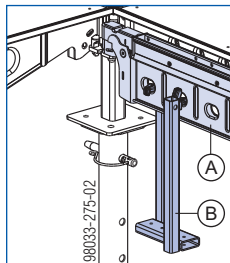
H Doka beam H20 2.45m as secondary beam

I Dokadek closure panel 0.15x1.22m or 0.15x0.81m

with Dokadek panel 1.22x1.22m or 0.81x1.22m, Dokadek infill beam and Doka beam H20

Note:

- The Dokadek support heads (**B**) have to be levelled approx. 5 mm lower than the other heads to avoid offsets.
- Set up the surrounding Dokadek panels 2.44m first, then engage the Dokadek panels 1.22m and swing them up into position.
- Engage the Dokadek panel 1.22x1.22m or 0.81x1.22m and swing it up into position in the longitudinal direction.
- Hook 2 Infill beams 1.22m or 0.81m into the support heads in the transverse direction (cheek plate at top).
- Hook 4 suspension clamps into the infill beams as close to the floor props as possible.

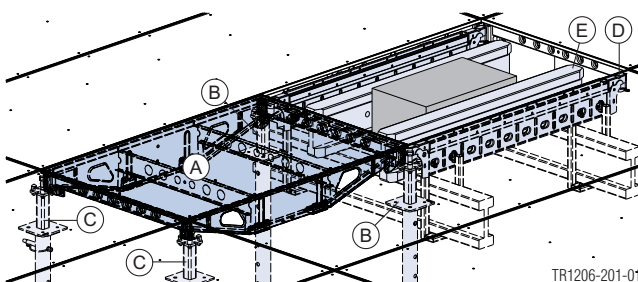


- Fit 2 Doka beams H20 into the suspension clamps, to serve as primary beams.
- Place Doka beams H20 onto these primary beams, in the transverse direction.



Up to a room height of 3.74 m, the suspension tool can be used for setting up and stripping out the panels from floor level.

Practical examples - Column located inside panel-field



Dokadek panel	Slab thickness	N° of extra shores per primary beam
1.22x1.22m	≤ 32 cm	—
0.81x1.22m	≤ 50 cm	—

A Dokadek panel 1,22x1,22m or 0,81x1,22m

B Dokadek support head + Doka floor prop Eurex 30 top (in the middle of the closure)

C Dokadek support head + Doka floor prop Eurex 30 top (at the inter-panel joint)

D Dokadek infill beam 1.22m

E Doka beam H20 as secondary beam

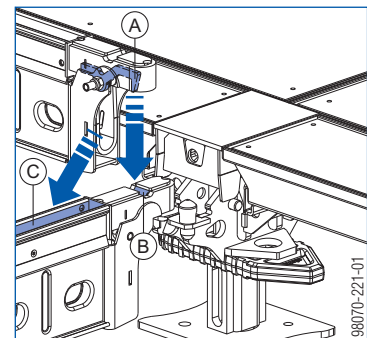
using Dokadek infill beams

- Engage 2 Infill beams 2.44m onto the XF drop heads in the longitudinal direction (cheek plate and locking mechanism at bottom).
- Place Infill beams 1.22m (or 0.81m, if appropriate) on the underlying Infill beams 2.44m in the transverse direction (cheek plate at bottom, locking mechanism at top).

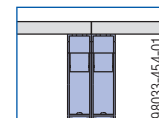


Position (**A**) of the locking mechanism of the transverse Infill beam 1.22m or 0.81m:

- at all 4 corners, in the recesses (**B**) on the Infill beams 2.44m
- between these, in the profile slots (**C**) on the Infill beams 2.44m



Be sure to place 2 infill beams wherever there is to be a joint between the panels.

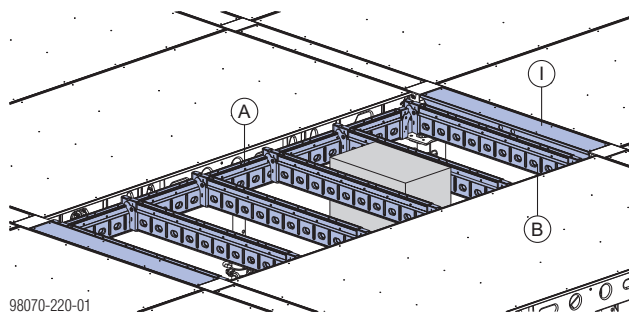


NOTICE

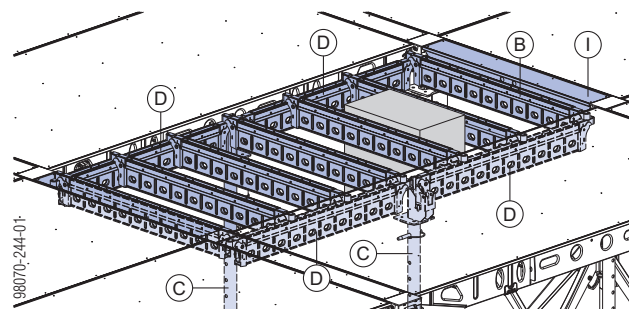
Put up the intermediate props so that they force-fit. It is not allowed to make some props higher than others!

Practical examples - Column located inside panel-field (variant 1)

Slab thickness ≤ 32 cm



Slab thickness > 32 cm



Slab thickness	Max. spacing of secondary beams	N° of extra shores
≤ 32 cm	50 cm ¹⁾	—
> 32 cm	42 cm ¹⁾	1

¹⁾ Do not exceed the max. support centres of the formwork sheets!

A Dokadek infill beam 2.44m

B Dokadek infill beam 1.22m or 0.81m

C Extra shore:

- Doka floor prop Eurex 30 top
- Dokadek cross head + Spring locked connecting pin 16mm

D Dokadek infill beams 1.22m (4 in all)

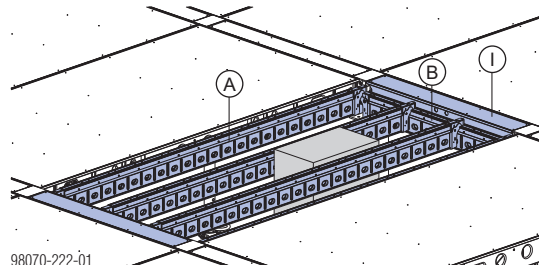
I Dokadek closure panel 0.15x1.22m or 0.15x0.81m

Practical examples - Column located inside panel-field (variant 2)

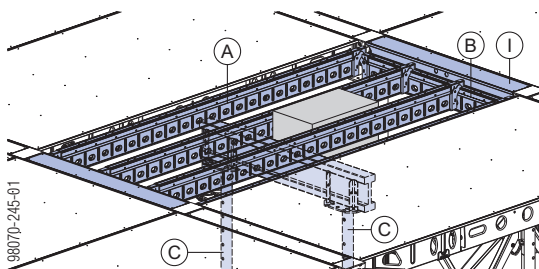


If necessary, the infill beams can also be arranged the other way round, i.e. the Infill beams 2.44m are laid onto the underlying Infill beams 1.22m or 0.81m.

Slab thickness ≤ 32 cm



Slab thickness > 32 cm



Slab thickness	Max. spacing of secondary beams	N° of extra shores on infill beams
≤ 32 cm	50 cm ¹⁾	—
> 32 cm	42 cm ¹⁾	1 (in mid-span)

¹⁾ Do not exceed the max. support centres of the formwork sheets!

A Dokadek infill beam 2.44m

B Dokadek infill beam 1.22m or 0.81m

C Extra shore for Dokadek infill beam 2.44m (Pos. A):

- Doka floor prop Eurex 30 top
- Removable folding tripod top
- Lowering head / 4-way head H20
- Doka beam H20 1.25m when using Dokadek panels 1.22x2.44m

I Dokadek closure panel 0.15x1.22m or 0.15x0.81m

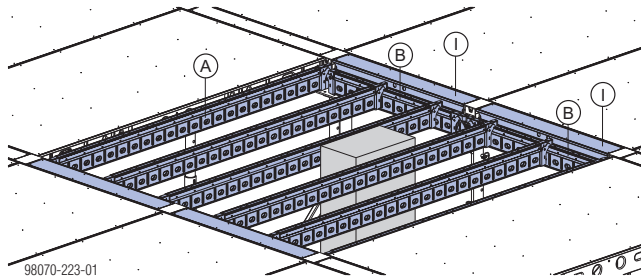


NOTICE

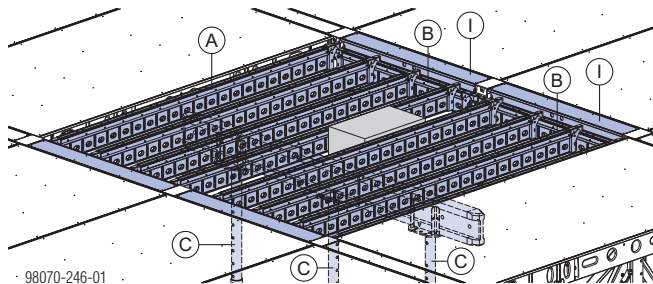
The extra prop must only be used for Dokadek infill beams 2.44m, and not for Dokadek panels.

Practical examples - Column is exactly beneath the panel joint

Slab thickness ≤ 32 cm



Slab thickness > 32 cm



Slab thickness	Max. spacing of secondary beams	N° of extra shores on infill beams
≤ 32 cm	50 cm ¹⁾	—
> 32 cm	42 cm ¹⁾	1

¹⁾ Do not exceed the max. support centres of the formwork sheets!

A Dokadek infill beam 2.44m

B Dokadek infill beam 1.22m or 0.81m

C Extra shore for Dokadek infill beam 2.44m (Pos. A):

- Doka floor prop Eurex 30 top
- Removable folding tripod top
- Lowering head / 4-way head H20
- Intermediate prop with Supporting head H20 DF
- Doka beam H20 2.45m when using Dokadek panels 1.22x2.44m

I Dokadek closure panel 0.15x1.22m or 0.15x0.81m



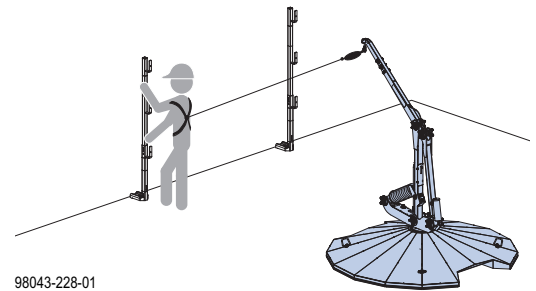
NOTICE

The extra prop must only be used for Dokadek infill beams 2.44m, and not for Dokadek panels.

FreeFalcon



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



Symbolic representation



WARNING

Risk of falling at open edges!

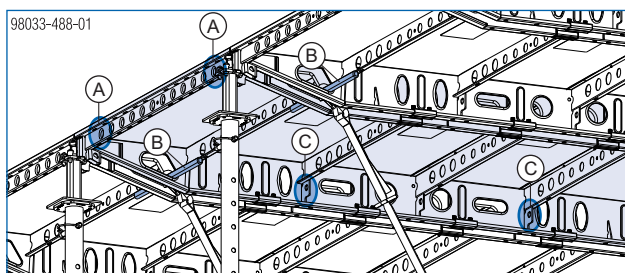
- ▶ The crew must use personal fall-arrest systems (e.g. safety harnesses) until all fall protection has been installed.
- ▶ Suitable anchorage points must be defined by an approved person appointed by the contractor.



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

Floor formwork around edges

with Lashing strap 5.00m and Doka express anchor 16x125mm



Permissible tie-back force [kN]

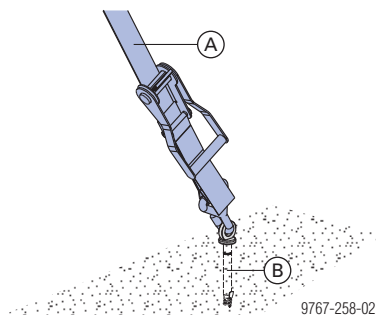
A	Anchorage point in frame profile for longitudinal and transverse tie-backs	5 kN
B	Tie rod 20.0 in panel joint for longitudinal tie-back	5 kN
C	Anchorage point at the one-third point for longitudinal and transverse tie-backs	2.5 kN

WARNING

- Do NOT exceed the permitted tie-back angle and tie-back force, so as to prevent damage to the Dokadek panel and to ensure that all forces from horizontal loads can be transferred in conformity with EN 12812.
- Use tie-backs to transfer horizontal forces. These forces can also be transferred into existing structural members such as concrete columns or walls.

NOTICE

- Only attach the Lashing strap 5.00m to the points shown above and tension it in the required direction of the profile.
- It is forbidden to fix tie-backs to the inside cross-profiles!
- Prepare an anchorage point in the ground with the Doka express anchor.
- Attach the lashing strap and tighten it.



A Lashing strap 5.00m

B Doka express anchor 16x125mm

The **Doka express anchor** can be re-used many times over.

Permitted load in 'green' (new) concrete and in cured C20/25 concrete with a characteristic cube compressive strength of $f_{ck,cube} \geq 14 \text{ N/mm}^2$:
 $F_{perm.} = 5.0 \text{ kN}$ ($R_d = 7.5 \text{ kN}$)



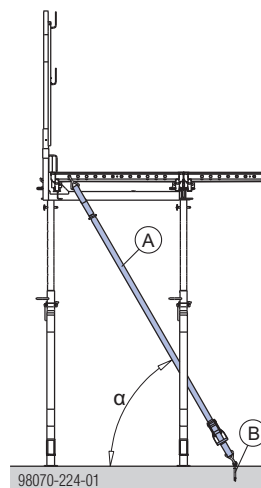
Follow the 'Doka express anchor 16x125mm' Fitting Instructions or the 'Lashing strap 5.00m' User Information booklet!

Always perform a static check if other-make heavy-duty dowels are used to fabricate anchorages in the floor slab.

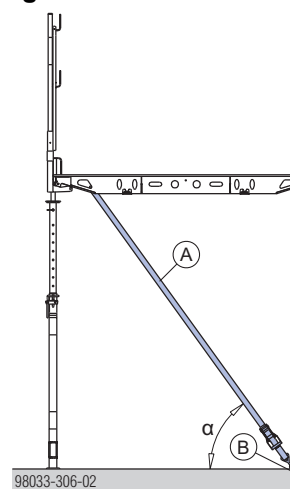
Follow the manufacturers' applicable fitting instructions.

Practical examples

Tie-back in transverse direction



Tie-back in longitudinal direction



α ... Bracing angle approx. 60°

A Lashing strap 5.00m

B Doka express anchor 16x125mm

C Tie rod 20.0

Guardrail systems on the formwork



CAUTION

- ▶ The handrail-post shoe short and handrail-post shoe long may only be used in combination with the Handrail post XP 1.20m.
- ▶ The Handrail-post shoe short 1.20m may only be used in combination with the Handrail post XP 1.20m or 1.80m.
- ▶ Use of Handrail post shoe long 1.20m with Handrail post XP 1.80m not permitted.



NOTICE

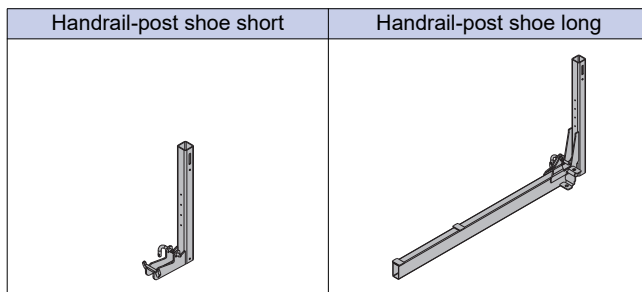
- Ideally, guardrail systems etc. should be mounted from below (e.g. using a Wheel-around scaffold DF).
- When mounting/dismounting edge protection from above, the crew must use a personal fall-arrest system (e.g. safety harness).
- Suitable anchorage points must be defined by an approved person appointed by the contractor.



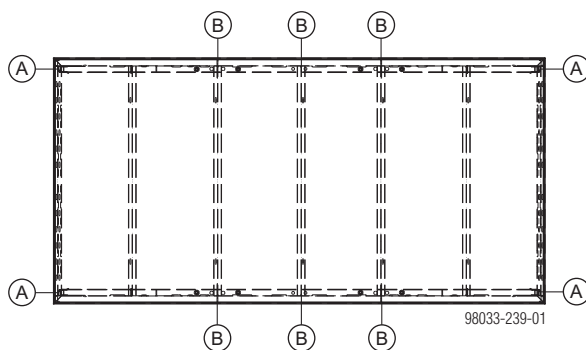
Follow the directions in the 'Edge protection system XP' User Information booklet.

Guardrail system with transfer of concreting loads

The Dokadek handrail-post shoes are fixed to defined positions on the previously-mounted Dokadek panel. They are used for holding Handrail posts XP 1.20m.



Possible fixing points for the handrail-post shoes



A Dokadek handrail-post shoe short

B Dokadek handrail-post shoe long

Permitted influence width [cm] of the handrail-post shoes for slab thicknesses of up to 32 cm (without additional precautions)

Dynamic pressure q [kN/m ²]	Safety barrier			
	Guardrail board 15 cm	Guard-rail board 20 cm	Scaffold tube 48.3mm	Protective grating XP 2.70x1.20m
With concrete load				
0.2	137	137	137	137
Without concrete load				
0.2	259	259	259	259
0.6	259	137	259	259
1.1	137	—	259	259
1.3	—	—	259	244

Permitted influence width [cm] of the handrail-post shoes for slab thicknesses of up to 50 cm (with additional precautions)

Dynamic pressure q [kN/m ²]	Safety barrier		
	Guardrail board 15 cm ¹⁾	Guard-rail board 20 cm	Protective grating XP 2.70x1.20m
With concrete load			
0.2	137 ¹⁾	137	137
Without concrete load			
0.2	259 ¹⁾	259	259
0.6	259 ¹⁾	137	259
1.1	137 ¹⁾	—	259
1.3	—	—	244

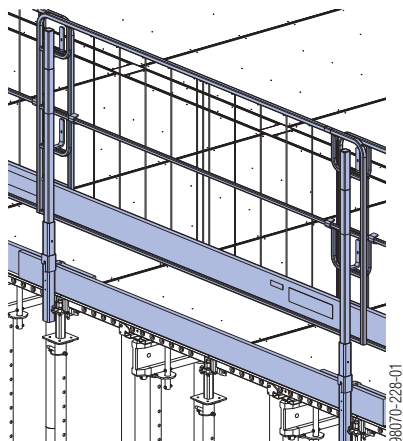
¹⁾ Guard-rail boards 15 cm are only permitted up to a slab thickness of 45 cm.



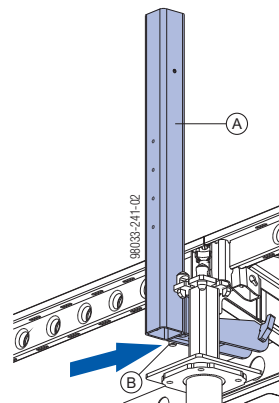
- The span of the handrail posts is roughly equal to the influence width if
 - they are evenly spaced
 - the guardrail boards are either continuous or are jointed at the handrail posts, and
 - there are no cantilevering projections
- The wind conditions likely to be encountered in Europe, in accordance with EN 13374, are largely recognised by the dynamic pressure $q=0.6 \text{ kN/m}^2$ (highlighted grey in the tables).

**NOTICE**

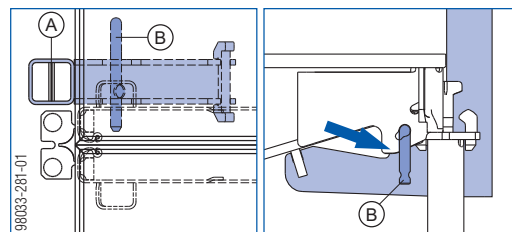
For slab thicknesses > 30 cm, raise the Protective grating XP into the position shown here, so as to obtain the required railing height after pouring.

**Attaching a 'Handrail-post shoe - short'****NOTICE**

- When using handrail-post shoes short, you must use Dokadek support heads around the slab edges instead of Dokadek XF drop heads.
- Working from below, push the handrail-post shoe short onto the longitudinal profile of the Dokadek panel and fix it with bolts (these are included in the scope of supply of the handrail-post shoe short).

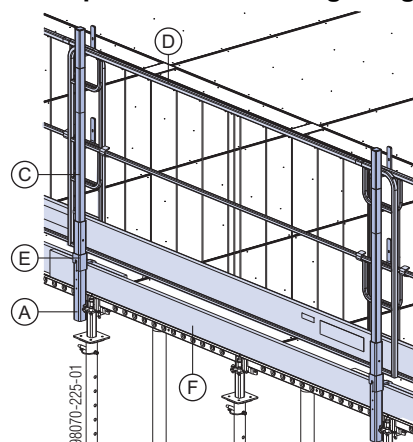


Make sure that the handrail-post shoe short (A) and the bolt (vertical!) (B) are in the correct position!



Animation: <https://player.vimeo.com/video/263298687>

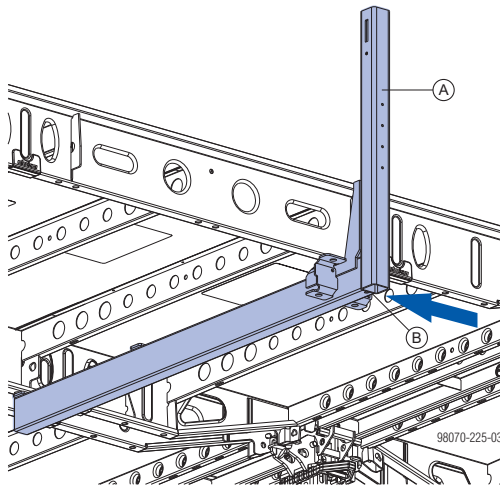
- Push on the Handrail post XP 1.20m until it locks ('Easy-Click' function).
- Mount the sideguards.

Practical example with Protective grating XP

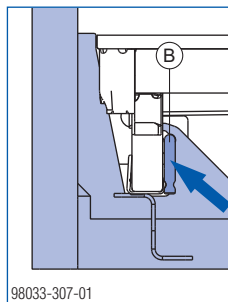
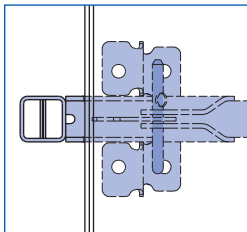
- A Dokadek handrail-post shoe short
- B Pin
- C Handrail post XP 1.20m
- D Protective grating XP 2.70x1.20m
- E Toeboard holder XP 0.60m
- F Toeboard

Attaching a 'Handrail-post shoe - long'

- ▶ Working from below, push the handrail-post shoe long onto the longitudinal profile of the Dokadek panel, in the transverse direction, and fix it to the cross profile with bolts (these are included in the scope of supply of the handrail-post shoe long).



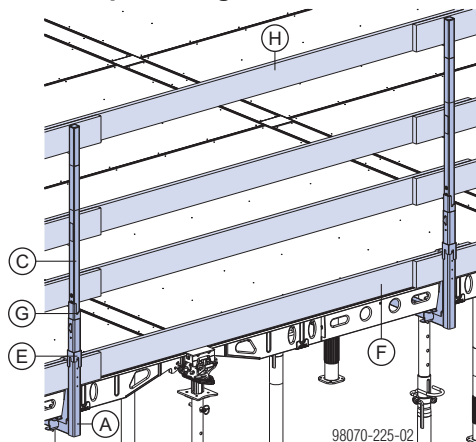
Make sure that the bolt (B) is in the vertical position!



Animation: <https://player.vimeo.com/video/263298834>

- ▶ Push on the Handrail post XP 1.20m until it locks ('Easy-Click' function).
- ▶ Mount the sideguards.

Practical example with guardrail boards



A Dokadek handrail-post shoe long

B Pin

C Handrail post XP 1.20m

E Toeboard holder XP 0.60m

F Toeboard

G Toeboard holder XP 1.20m

H Guardrail boards

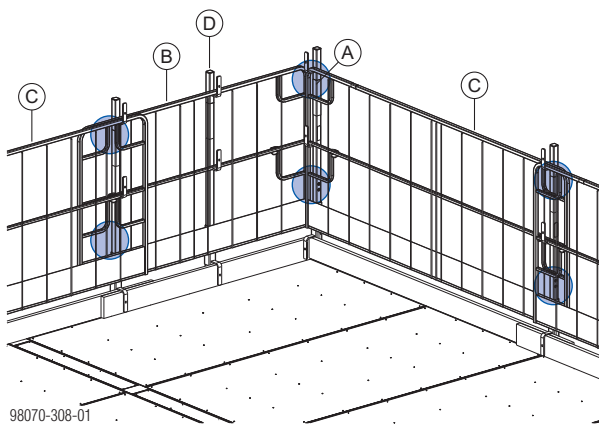
Guardrail systems at corners



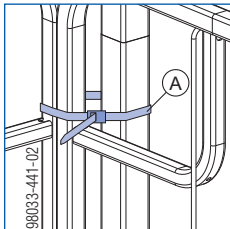
NOTICE

- In corner zones, the Protective gratings XP must be attached to the Handrail posts XP with cable ties or binding wire (see the blue markings in the examples illustrated here). It is not permitted to use the Velcro® fastener 30x380mm.
- On the broadside of the panel, the first grating to be placed (starting from the corner) must always be a Protective grating XP 2.00m. After this, Protective gratings XP 2.70m can be used.
- For slab thicknesses > 32 cm, an extra Toeboard holder XP must be mounted on the corner Handrail post XP.

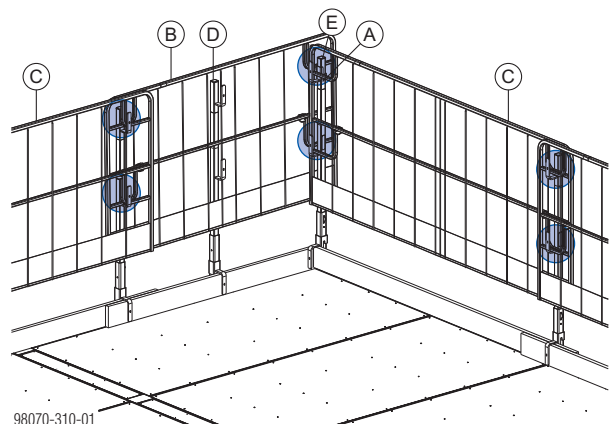
Practical example for slab thickness ≤ 32 cm



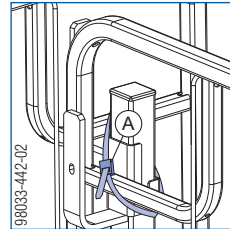
Close-up: attachment method



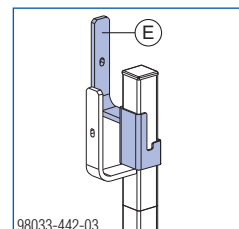
Practical example for slab thickness > 32 cm



Close-up: attachment method



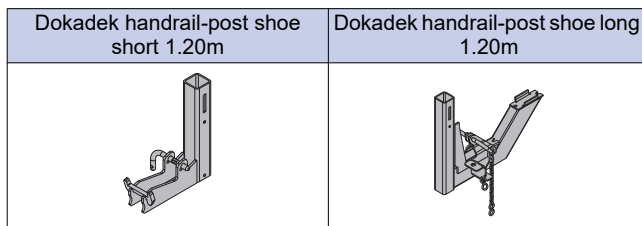
Close-up: extra Toeboard holder XP 1.20m



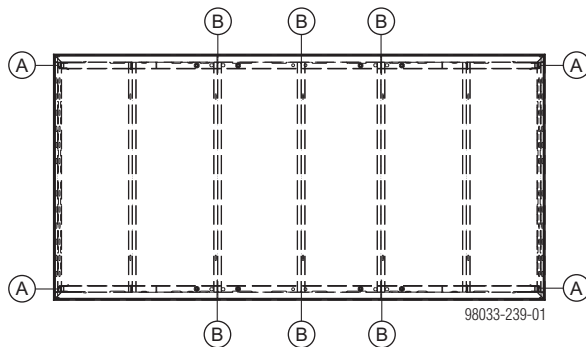
- A Attached with cable tie or binding wire
- B Protective grating XP 2.00x1.20m
- C Protective grating XP 2.70x1.20m
- D Handrail post XP 1.20m
- E Toeboard holder XP 1.20m

Guardrail system without transfer of concreting loads

The Dokadek handrail-post shoes 1.20m are fixed to defined positions on the previously-mounted Dokadek panel. They are used for holding Handrail posts XP 1.20m or 1.80m.



Possible fixing points for the handrail-post shoes



A Dokadek handrail-post shoe short 1.20m

B Dokadek handrail-post shoe long 1.20m



Follow the directions in the 'Edge protection system XP' User Information booklet.



CAUTION

➤ When using the Handrail-post shoe short and Handrail-post shoe long 1.20m with a Handrail post XP 1.20m, allowance must be made for a walkway at least 60 cm in width in accordance with DIN 4420. Consequently, use of the Handrail-post shoe short 1.20m and a Handrail post XP 1.20m is not permitted on cantilevered panels at the edge of the structure.

Note:

The information stated here is compliant with the German DIN standards and the rules set out by the German Employers Liability Insurance Association for the Construction Industry and consequently, they are particularly applicable within Germany. However, this ruling can be used as a recommendation in other countries, unless other, stricter national regulations apply. It is the responsibility of the national organisation in the country in question to establish whether this is the case.

Permitted influence width [cm] of the handrail-post shoes with Handrail posts XP 1.20m

Dynamic pressure q [kN/m ²]	Safety barrier			
	Guardrail board 15 cm ¹⁾	Guardrail board 20 cm ¹⁾	Scaffold tube 48.3mm	Protective grating XP 2.70x1.20m
	Without concrete load			
0.2	259	259	259	259
0.6	259	137	259	259
1.1	137	—	259	259
1.3	—	—	259	244

¹⁾ Minimum thickness 3 cm for influence width greater than 137 cm.

Permitted influence width [cm] of the Handrail-post shoe short 1.20m with Handrail post XP 1.80 m

Dynamic pressure q [kN/m ²]	Safety barrier			
	Guardrail board 15 cm ¹⁾	Guardrail board 20 cm ¹⁾	Scaffold tube 48.3mm	Protective gratings XP 2.70x1.20m + 2.70x0.60m
	Without concrete load			
0.2	259	244	259	259
0.6	259	137	259	259
1.1	122	61	259	259
1.3	61	61	259	244

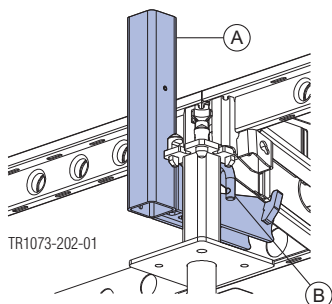
¹⁾ Minimum thickness 3 cm for influence width greater than 137 cm.



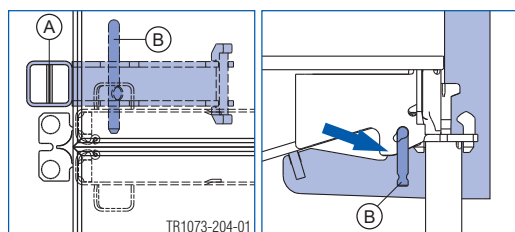
- The span of the handrail posts is roughly equal to the influence width if
 - they are evenly spaced
 - the guardrail boards are either continuous or are jointed at the handrail posts, and
 - there are no cantilevering projections.
- The wind conditions likely to be encountered in Europe, in accordance with EN 13374, are largely recognised by the dynamic pressure $q=0.6 \text{ kN/m}^2$ (highlighted grey in the tables).

Secure the Dokadek handrail-post shoe short 1.20m

- ▶ Working from below, push the handrail-post shoe short 1.20m onto the longitudinal profile of the Dokadek panel and fix it with bolts (these are included in the scope of supply of the handrail-post shoe short).



Make sure that the handrail-post shoe short **(A)** and the bolt (vertical!) **(B)** are in the correct position!

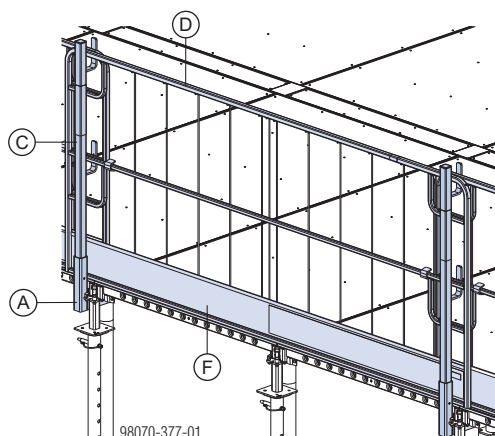


Animation:

<https://player.vimeo.com/video/263298915>

- ▶ Push on the Handrail post XP 1.20m until it locks ('Easy-Click' function).
- ▶ Mount the sideguards.

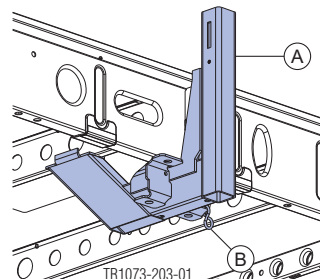
Practical example with Protective grating XP



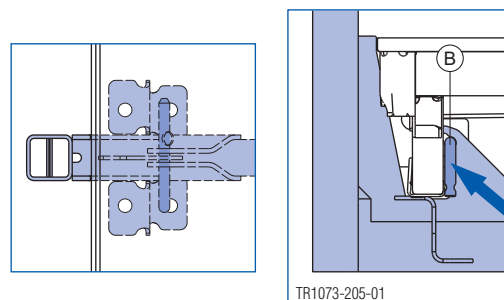
- A** Dokadek handrail-post shoe short 1.20m
- B** Pin
- C** Handrail post XP 1.20m
- D** Protective grating XP 2.70x1.20m
- F** Toeboard

Secure the Dokadek handrail-post shoe long 1.20m

- ▶ Working from below, push the handrail-post shoe long 1.20m onto the longitudinal profile of the Dokadek panel, in the transverse direction, and fix it to the cross profile with bolts (these are included in the scope of supply of the handrail-post shoe long).



Make sure that the bolt **(B)** is in the vertical position!

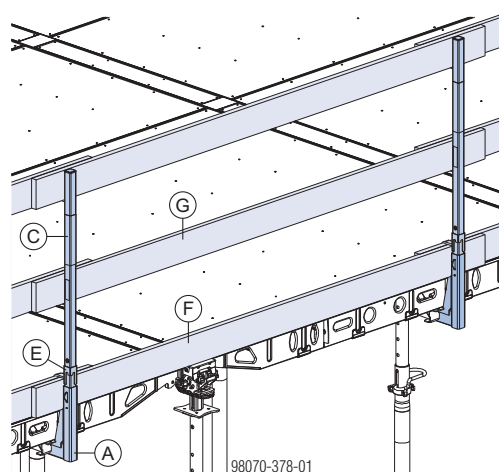


Animation:

<https://player.vimeo.com/video/263299062>

- ▶ Push on the Handrail post XP 1.20m until it locks ('Easy-Click' function).
- ▶ Mount the sideguards.

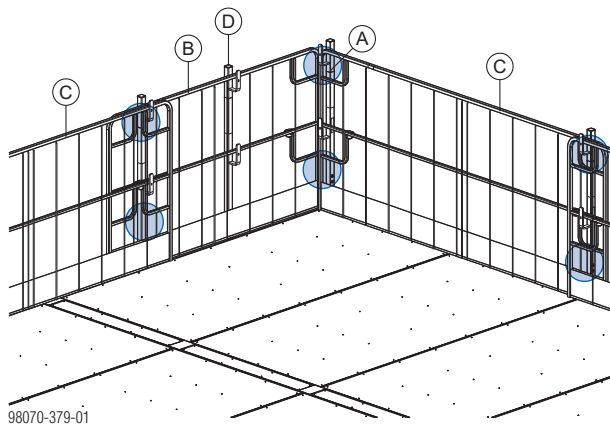
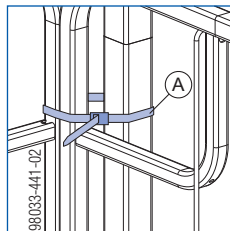
Practical example with guardrail boards



- A** Dokadek handrail-post shoe long 1.20m
- B** Pin
- C** Handrail post XP 1.20m
- E** Toeboard holder XP 1.20m
- F** Toeboard
- G** Guardrail boards

Guardrail systems at corners**NOTICE**

- In corner zones, the Protective gratings XP must be attached to the Handrail posts XP with cable ties or binding wire (see the blue markings in the examples illustrated here). It is not permitted to use the Velcro® fastener 30x380mm.
- On the broadside of the panel, the first grating to be placed (starting from the corner) must always be a Protective grating XP 2.00m. After this, Protective gratings XP 2.70m can be used.

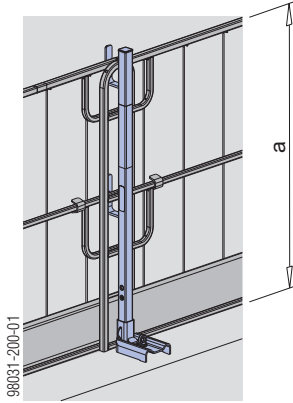
**Close-up showing how fastened:**

- A** Attached with cable tie or binding wire
- B** Protective grating XP 2.00x1.20m
- C** Protective grating XP 2.70x1.20m
- D** Handrail post XP 1.20m

Fall-arrest systems on the structure

Handrail post XP 1.20m

- Attached with Screw-on shoe XP, railing clamp, Handrail-post shoe or Step bracket XP
- Protective grating XP, guardrail boards or scaffold tubes can be used as the safety barrier



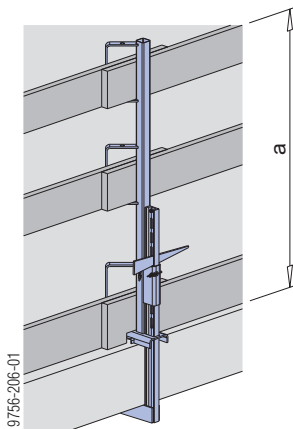
a ... > 1.00 m



Follow the directions in the 'Edge protection system XP' User Information booklet!

Handrail clamp S

- Attached with integral clamp
- Guard-rail boards or scaffold tubes can be used as the safety barrier



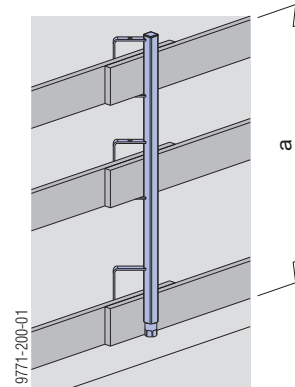
a ... > 1.00 m



Follow the directions in the "Handrail clamp S" User information!

Handrail post 1.10m

- Fixed in a Screw sleeve 20.0 or Attachable sleeve 24mm
- Guard-rail boards or scaffold tubes can be used as the safety barrier



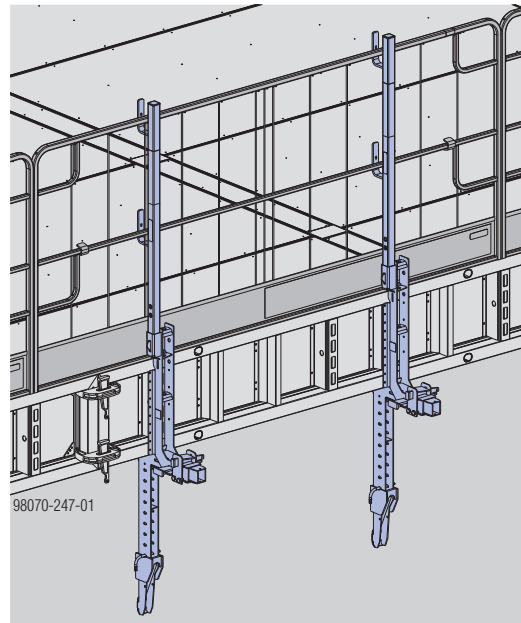
a ... > 1.00 m



Follow the directions in the 'Handrail post 1.10m' User Information!

Doka floor end-shutter clamp

- Slab stop-ends and fall-arrest barriers in one system



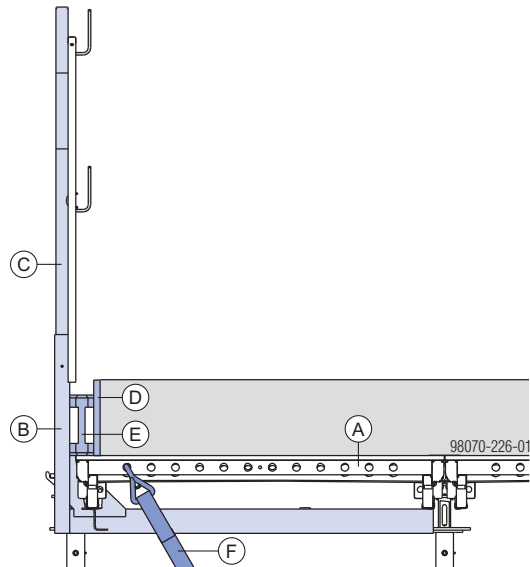
Follow the directions in the "Doka floor end-shutter clamp" User Information booklet!

Slab stop-ends

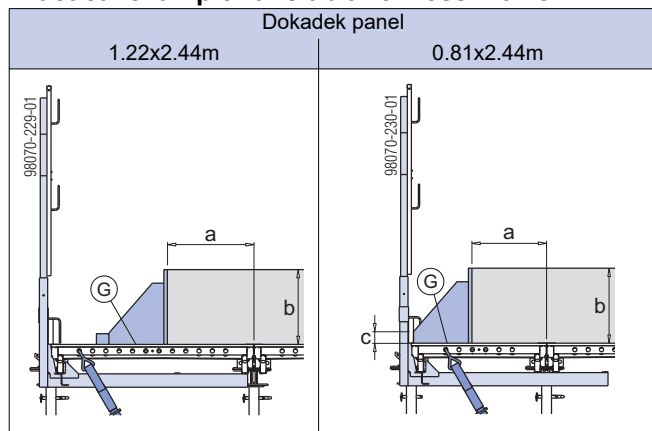
Permissible influence width of the Dokadek handrail-post shoes with slab stop-ends: 137 cm

in the longitudinal direction

Practical example for slab thickness ≤ 32 cm



Practical example for slab thickness > 32 cm

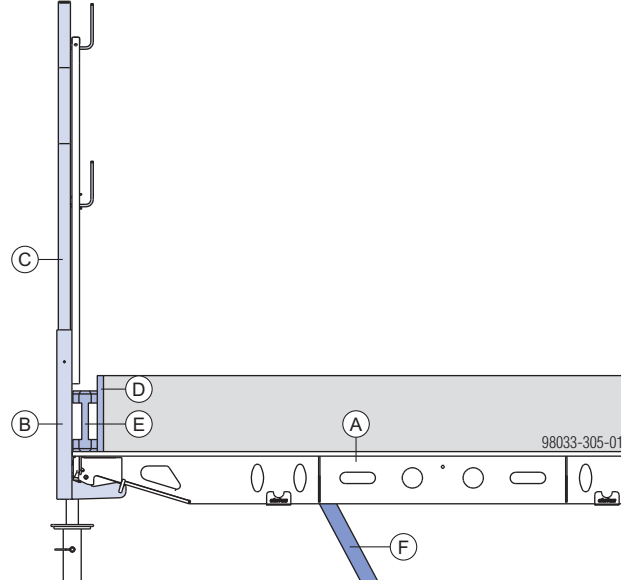


b ... max. 50 cm
c ... max. 5 cm

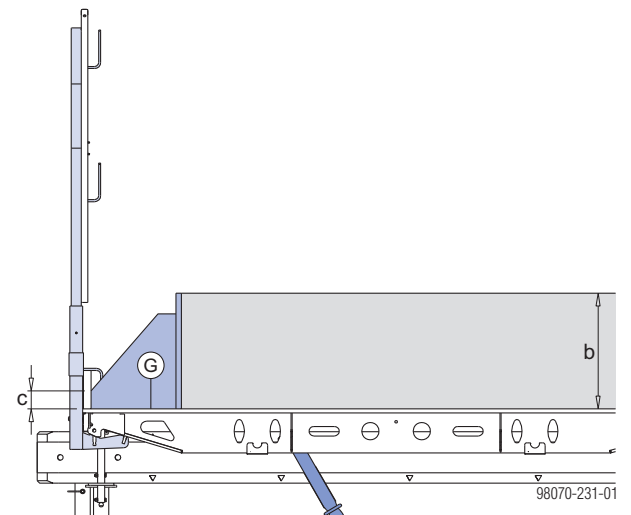
Dokadek panel	Max. projecting concrete cover on Dokadek panel a [cm]	Max. slab thickness b [cm]
1.22x2.44m	52	50
0.81x2.44m	All remainder of panel	45

in the transverse direction

Practical example for slab thickness ≤ 32 cm



Practical example for slab thickness > 32 cm



b ... max. 50 cm
c ... max. 5 cm

- A** Dokadek panel
- B** Dokadek 'handrail-post shoe long' or 'handrail-post shoe short'
- C** Handrail post XP 1.20m
- D** Formwork sheeting
- E** Doka beam H20
- F** Lashing strap 5.00m
- G** Spax screws for attaching the stop-end to the Dokadek panel

Forming downstand beams

Forming drop beams with Dokadek 30 panels



WARNING

- ▶ Transfer of horizontal loads as defined by EN 12812 must be catered for by other measures (e.g. by transferring loads into the structure or using tie-backs).



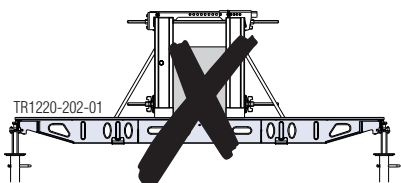
NOTICE

- Throughout assembly and dismantling of the formwork, it is essential that adequate fall protection is in place at all times. For example, a wheel-around working scaffold.
- Follow all country-specific regulations.

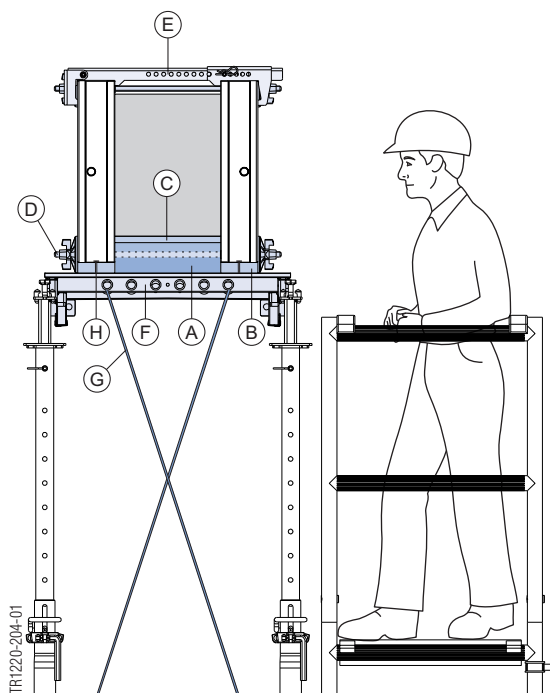


NOTICE

- For forming drop beams, only use the Dokadek panel in the longitudinal direction.



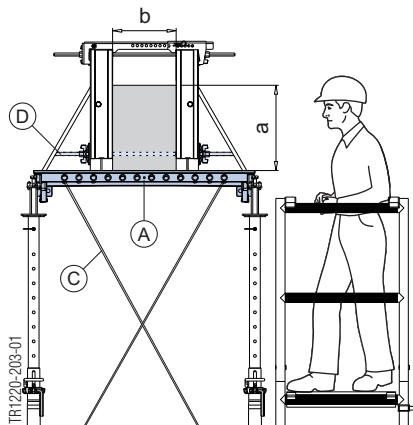
- Centre the drop beam on the panel.
- Allow up to 3 mm extra height for the side formwork.
- Install bracing frames or crossed tie-backs to ensure stability of assembly.
- Handrail-post shoes long are not allowed, because it is not permissible to introduce forces from the side formwork.
- If form-tie points in the drop beam are not allowed, squared timbers have to be placed alongside each other in virtually full-surface contact (see illustration below).



- A** Squared timber (site-provided)
- B** Squared timber min. 4 cm (site-provided)
- C** Formwork sheeting
- D** Tie rod 15.0 + Super plate 15.0
- E** Framax head anchor
- F** Dokadek panel
- G** Lashing strap
- H** Nail

Drop-beam not integrated into the slab

Drop-beam height up to 50 cm without additional formwork sheeting



a ... max. drop-beam height 50 cm

b ... max. drop-beam width 60 cm

A Dokadek Panel panel 1.22x2.44m or 0.81x2.44m

C Lashing strap

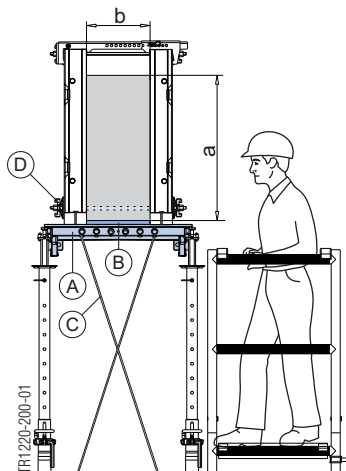
D Tie rod 15.0 + Super plate 15.0

Drop-beam height > 50 cm to 100 cm with additional formwork sheeting



NOTICE

- The Dokadek panel 1.22x2.44m must not be used for forming drop beams of 50 cm to 100 cm high.



a ... max. drop-beam height 100 cm

b ... max. drop-beam width 45 cm

A Dokadek panel 0.81x2.44m

B Formwork sheeting (must be used)

C Lashing strap

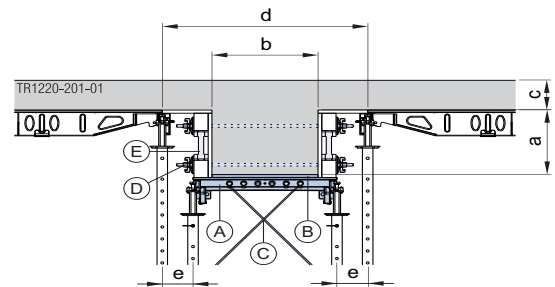
D Tie rod 15.0 + Super plate 15.0

Drop-beam integrated into the floor-slab



NOTICE

- The Dokadek panel 1.22x2.44m must not be used for forming drop beams integrated into the slab.
- Additional formwork sheeting must be used.
- Secure the Doka beam H20 in position, for example by nailing.
- Position the structure for forming the drop beam symmetrically on the Dokadek panel.



a ... drop-beam height

b ... drop-beam width

c ... height of floor-slab

d ... max. 116 cm

e ... max. 17.5 cm

A Dokadek panel 0.81x2.44m

B Formwork sheeting (must be used)

C Lashing strap

D Tie rod 15.0 + Super plate 15.0

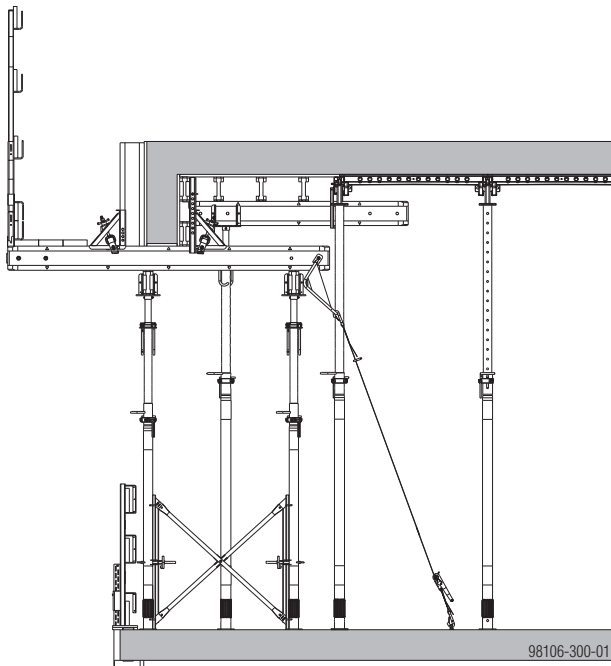
E Doka beam H20

Drop beam	with slab 20 cm	with slab 30 cm
max. height 'a'	45 cm	35 cm
max. width 'b'	≤ 60 cm	≤ 60 cm

Forming drop beams in combination with Dokaflex

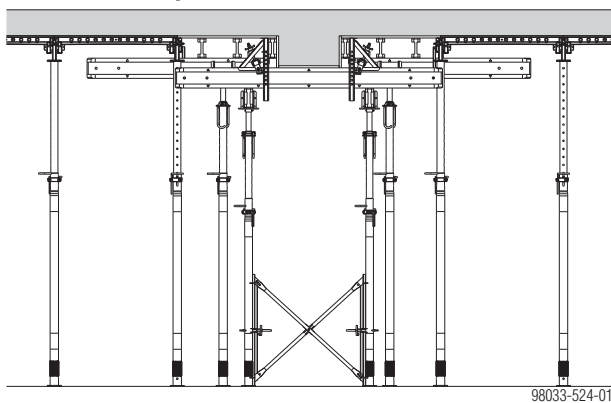
Practical example 1

Practical example with bracing frame



Practical example 2

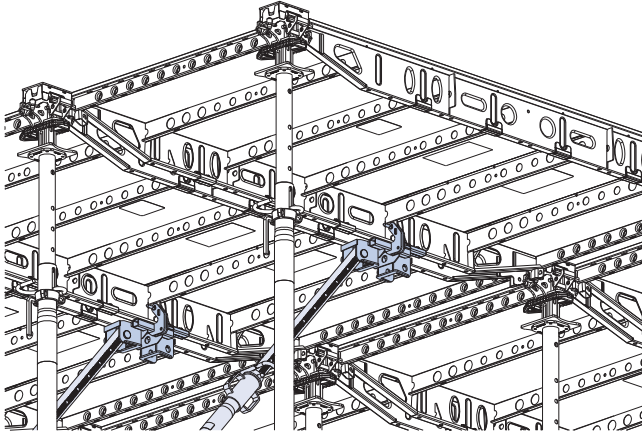
Practical example with Dokaflex



Additional areas of use

Sloping slabs

The Dokadek plumbing-strut connector is used for transferring horizontal loads via plumbing struts in situations where Panel floor formwork Dokadek 30 is being used to form e.g. sloping slabs, or sections of slab along exposed (= no side wall) structure-edges.



98070-362-01

Permitted compressive force: 13.5 kN

Permitted tensile force: 5 kN

Features:

- For connecting Plumbing struts 340 IB and Plumbing struts 540 IB.
- For use at slab-edges instead of tie-backs (e.g. Lashing strap 5.00m).



CAUTION

► If the slab is inclined a separate structural-design appraisal is needed, and the necessary additional precautions (e.g. plumbing struts) must be defined.



NOTICE

Transfer of horizontal loads from the following points must be ensured by the plumbing strut connector:

- imperfection
- inclinations
- work operations
- props not vertical
- concrete pressure
- wind



NOTICE

Take the angle of inclination of the working surface into account for the edge protection system! (See EN 13374).



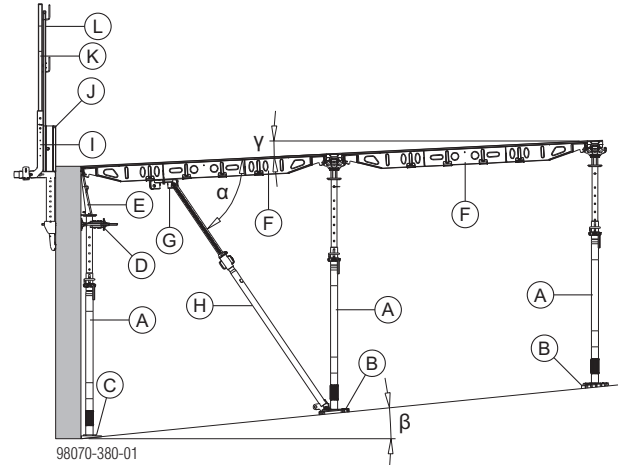
Compensating plates can be used to compensate for floor-slab angles of inclination up to 16 % in all directions.



Follow the directions in the 'Doka express anchor 16x125mm' Fitting Instructions!

Forming inclined floor-slabs

Usage situation A: Doka floor props are in the vertical



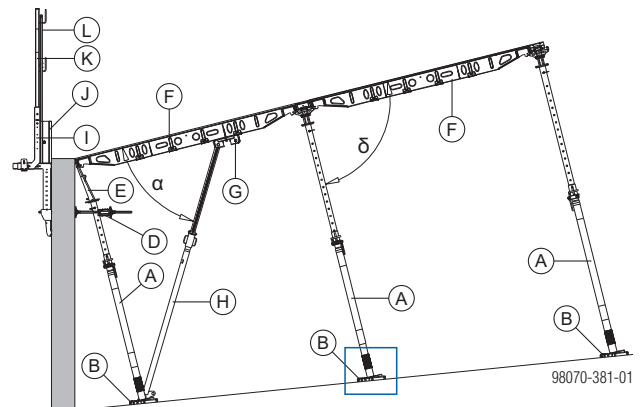
98070-380-01

α ... approx. 60°

β ... max. 16%

γ ... max. 5% without drop head and max. 3% with drop-head (in both the longitudinal and transverse directions)

Usage situation B: Doka floor props are at 90° to the formwork plane



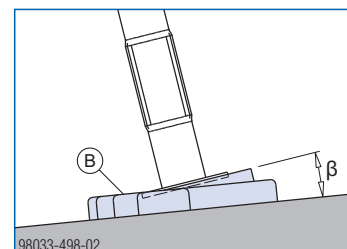
98070-381-01

98070-381-01

α ... approx. 60°

δ ... 90°

Close-up of compensating plate



98033-498-02

β ... max. 16%

A Doka floor prop Eurex

B Compensating plate

- C Wooden wedge
- D Dokadek wall clamp
- E Dokadek wall head
- F Dokadek panel
- G Dokadek plumbing-strut connector
- H Plumbing strut 340 IB or Plumbing strut 540 IB
- I Doka floor end-shutter clamp
- J Framax Xlife panel
- K Handrail post XP 1.20m
- L Protective grating XP 2.70x1.20m

**NOTICE**

Because the floor props are out-of-vertical, additional horizontal forces occur!

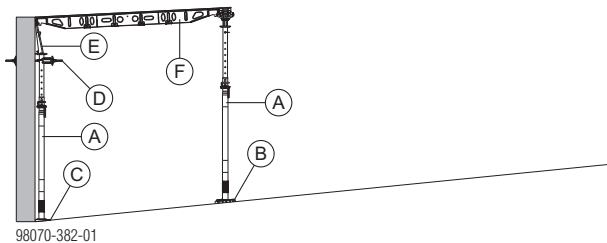
Closing the formwork

**NOTICE**

Ensure the stability of all components and units during all phases of the construction work!

E.g. usage situation A:

- Set up the Doka floor props and use compensating plates to plumb the props. Use wooden wedges close to the edge of the slab where space is restricted.
- Use Dokadek wall clamps to secure the floor props against tip-over.
- Fit a Dokadek wall head.
- Engage the panel, raise the free end and fix it.

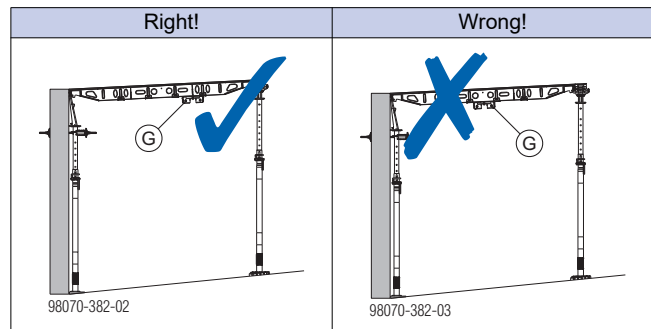


- A Doka floor prop Eurex
- B Compensating plate
- C Wooden wedge
- D Dokadek wall clamp
- E Dokadek wall head
- F Dokadek panel

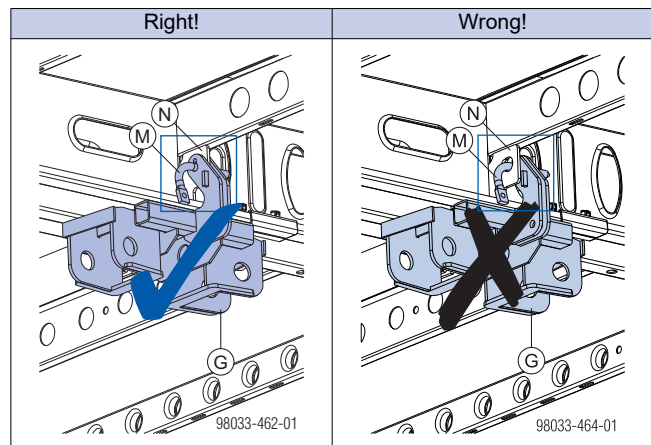
How to mount the Dokadek plumbing-strut connector

**NOTICE**

The plumbing-strut connector is only allowed to be fitted 1/3 of the way along the Dokadek panel.

**G Dokadek plumbing strut connector**

- Pull both fastening bolts out of the stand-by position.
- Fit the plumbing-strut connector onto the longitudinal girder of the panel.
- Pin the connector to the transverse stiffening plates of the panel with the fastening bolts.

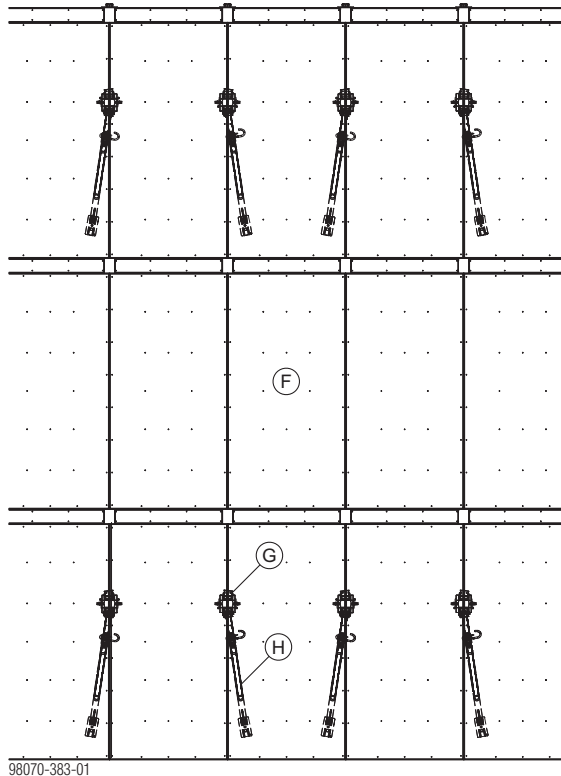
**M Safety pin****N Transverse stiffening plate**

Correct arrangement of plumbing-strut connectors in free-standing systems



NOTICE

- Fit additional plumbing-strut connectors as statically required.
- On free-standing systems, make sure that the plumbing-strut connectors are fitted facing in alternate directions.



F Dokadek panel

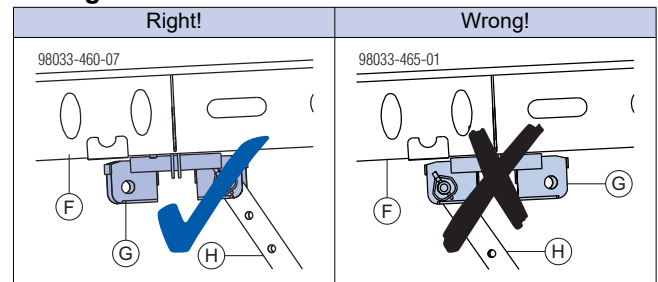
G Dokadek plumbing strut connector

H Plumbing strut 340 IB or Plumbing strut 540 IB

Attaching the plumbing strut

- Take the fastening bolt out of the plumbing strut.
- Attach the plumbing strut in either the longitudinal or transverse direction, depending on the inclination of the slab.

In longitudinal direction:

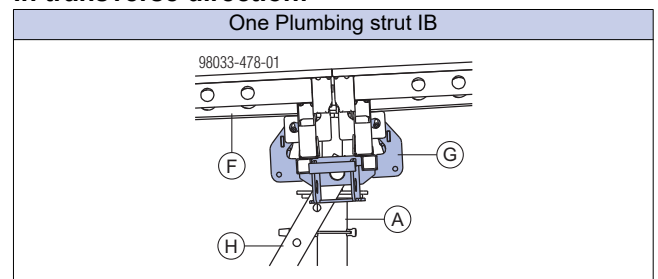


F Dokadek panel

G Dokadek plumbing strut connector

H Plumbing strut 340 IB or Plumbing strut 540 IB

In transverse direction:



A Doka floor prop Eurex

F Dokadek panel

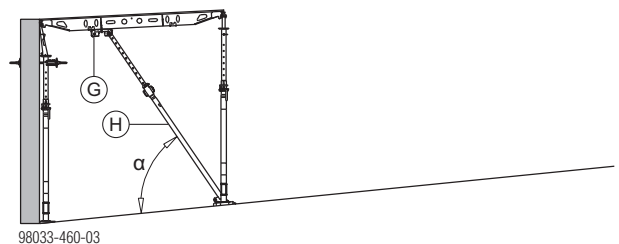
G Dokadek plumbing strut connector

H Plumbing strut 340 IB or Plumbing strut 540 IB

- Pin the plumbing strut onto the plumbing-strut connector with the fastening bolt.

Animation: <https://player.vimeo.com/video/258967173>

- Extend the plumbing strut to the desired length.
- Fix the plumbing strut to the floor with a Doka express anchor.



α ... approx. 60°

G Dokadek plumbing strut connector

H Plumbing strut 340 IB or Plumbing strut 540 IB



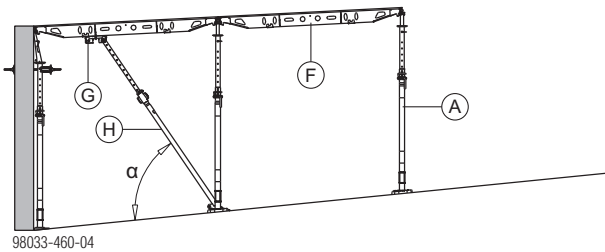
NOTICE

When extending the Plumbing strut IB, only turn the adjusting nut until the strut encounters resistance from above. The panel must not be raised.



Follow the directions in the 'Doka express anchor 16x125mm' Fitting Instructions!

► Put up further panels.



α ... approx. 60°

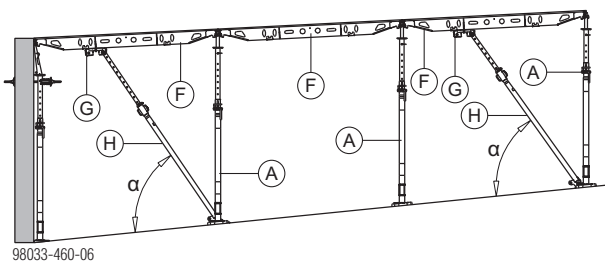
A Doka floor prop Eurex

F Dokadek panel

G Dokadek plumbing strut connector

H Plumbing strut 340 IB or Plumbing strut 540 IB

- Then fit plumbing-strut connectors as needed.
- Pin a plumbing strut to each connector and fix each strut to the floor with a Doka express anchor.



α ... approx. 60°

A Doka floor prop Eurex

F Dokadek panel

G Dokadek plumbing strut connector

H Plumbing strut 340 IB or Plumbing strut 540 IB

Pouring

- Before pouring, recheck all floor props.



- The fastening clamp (**A**) has to be pushed all the way into the floor prop.
- Adjusting nut (**B**) has to be tightened into contact with the fastening clamp.

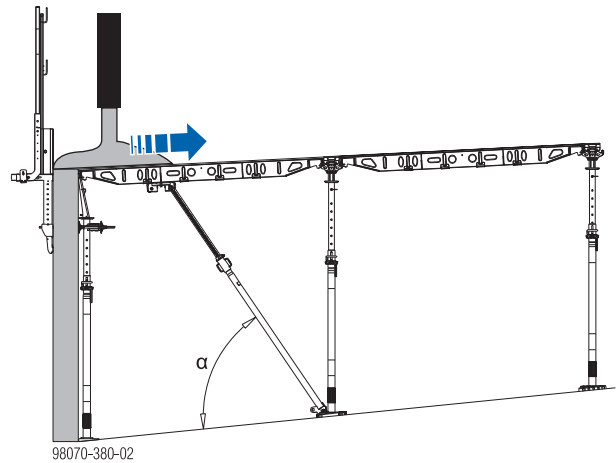


98017-202-01



WARNING

- Only start pouring on a supported panel-field.
- Make sure that pouring is carried out in the correct direction (from 'bottom to top')!



Stripping the formwork

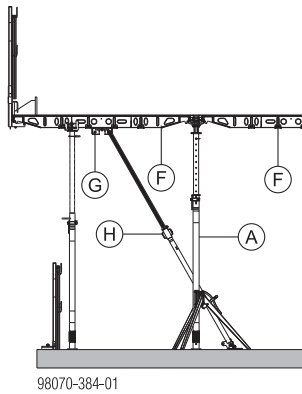


NOTICE

- Comply with the stipulated stripping times.
- Always strip out the formwork in reverse order.
- As well as the instructions given here, the section headed 'Reshoring props, concrete technology and stripping out' must also be observed.

Forming at slab-edges

Usage situation C:



A Doka floor prop Eurex

F Dokadek panel

G Dokadek plumbing strut connector

H Plumbing strut 340 IB or Plumbing strut 540 IB

Note:

A Dokadek plumbing-strut connector can be mounted 1/2-way along the Dokadek panel and used – together with a plumbing strut – as a tie-back.



Follow the directions in the 'Structure edge (Panel floor formwork Dokadek 30)' User Information booklet.

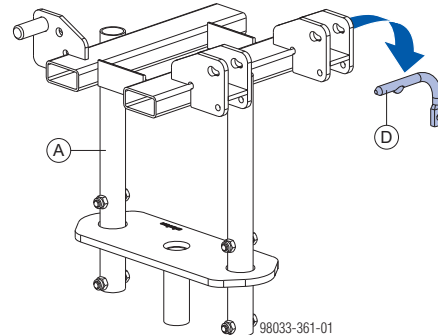
Additional precautions for slab thicknesses of up to 50 cm

Mounting additional shores (in the typical zone)

Mounting the Timber beam seat H20 (in the typical zone)

at a panel joint

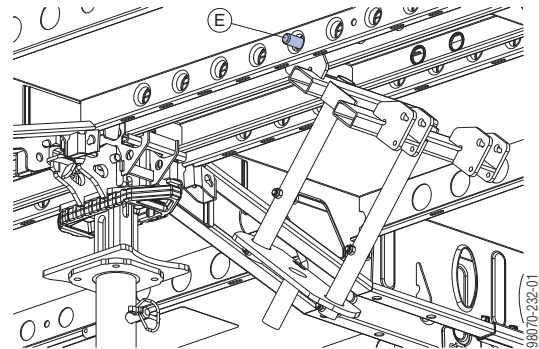
- Remove the safety pin of the Timber-beam seat H20, from its stand-by position.



A Timber-beam seat H20

D Safety pin

- Mount the Timber-beam seat H20 to the middle of the cross profile of the panel. To do this, insert a d16mm bolt into the 2nd hole of the cross profile (from the middle) of one of the two panels.



E Bolt, d16mm

98070-234-02

A Timber-beam seat H20

B Doka beam H20 (recommended length: 2.90m)

C Doka floor prop Eurex 30 top

Permitted slab thickness [cm] with additional precautions

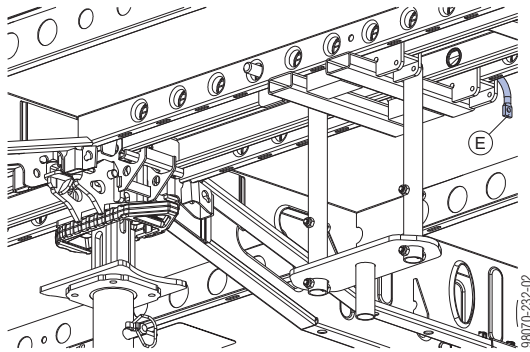
Panel size	Floor prop Eurex 30	Flatness deviation as per DIN 18202, Table 3
1.22x2.44m	> 30 - 50	Line 6
0.81x2.44m	> 45 - 50	Line 6



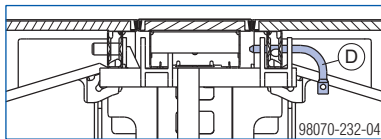
NOTICE

The additional propping is mounted AFTER the formwork has been secured against tip-over.

- ▶ Tilt up the Timber-beam seat H20 and fix it in the cross profile of the other panel, with the safety pin.



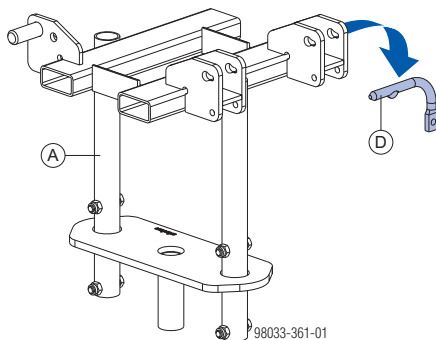
Close-up of safety pin



D Safety pin

on an edge panel

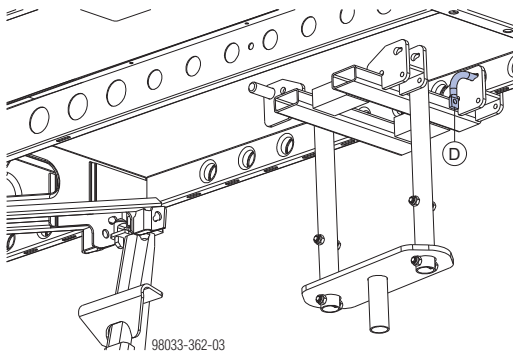
- ▶ Remove the safety pin of the Timber-beam seat H20, from its stand-by position.



A Timber-beam seat H20

D Safety pin

- ▶ Mount the Timber-beam seat H20 to the middle of the cross profile of the panel. To do this, fix the safety pin in the 2nd hole of the cross profile (from the middle).



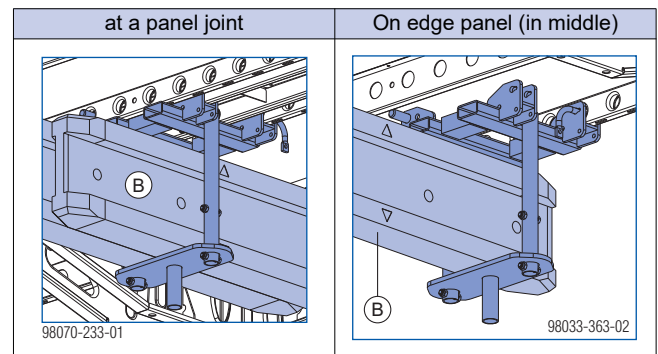
D Safety pin

Inserting Doka beams H20



NOTICE

- ▶ When beams need to be telescoped past each other, always do this in the same Timber beam seat H20.
- ▶ At the edge of the formwork, the single beam must be resting in the middle of the Timber beam seat H20, and touching the wall.
- ▶ Use the Alu beam fork H20 to insert the Doka beams H20 into the Timber beam seats.



B Doka beam H20 (recommended length: 2.90m)

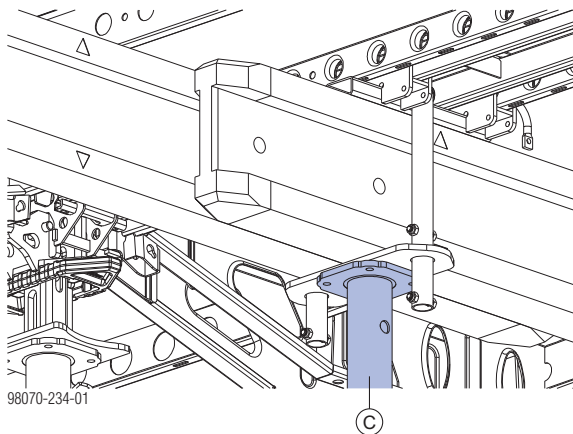
Animation: <https://player.vimeo.com/video/258743381>

Fitting the floor props




NOTICE

- The Doka beams H20, the Timber-beam seat H20 and the Dokadek panel must be form-locked.
 - The ends of the beams must be resting solidly on the Timber-beam seats H20.
 - Secure – with tripods – the standard-system floor props that have only 1 panel resting on the heads.
 - When extending the props, only turn the adjusting nut until the prop encounters resistance from above. The panel must NOT be raised.
- Roughly adjust the height of the floor props, using the fastening clamp.
 - Fit the floor prop into the Timber-beam seat H20, and adjust it.



C Doka floor prop Eurex 30 top

- After fitting all the floor props, raise the Doka beams H20 by turning the adjusting nut on each prop.
- 
 ➤ Do not fit and extend the floor props until the reinforcement has been placed. This lessens the risk of panels being lifted out of the Dokadek heads.

Mounting additional shores (at the structure edge)



For more information, see the 'Structure edge (Panel floor formwork Dokadek 30 with drop head)' User Information booklet.

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.

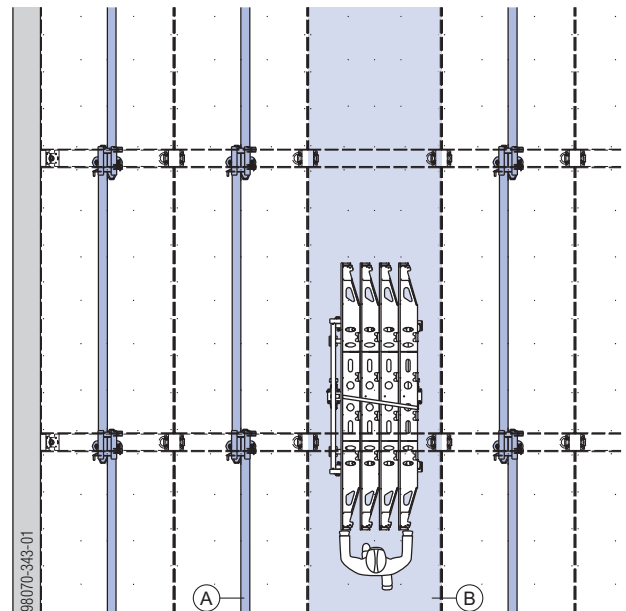
Service loads and live loads are permitted again once the reshoring props have been put up.

Creating an access alley

Practical example for a panel width of 1.22m

To make it easier to transport the panels to their next usage location (e.g. with the DekDrive), it is permitted to remove 1 row of extra shores.

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



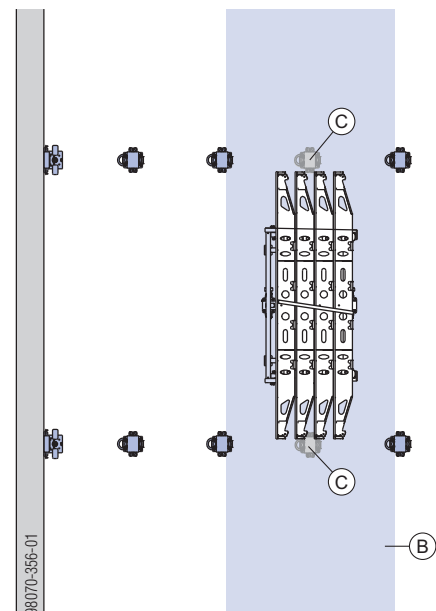
A Extra shore

B Access alley

Practical example for a panel width of 0.81m

To make it easier to transport the panels to their next usage location (e.g. with the DekDrive), it is permitted to remove 1 row of temporary reshores after stripping the panels.

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



B Access alley

C Floor props for temporary reshoring

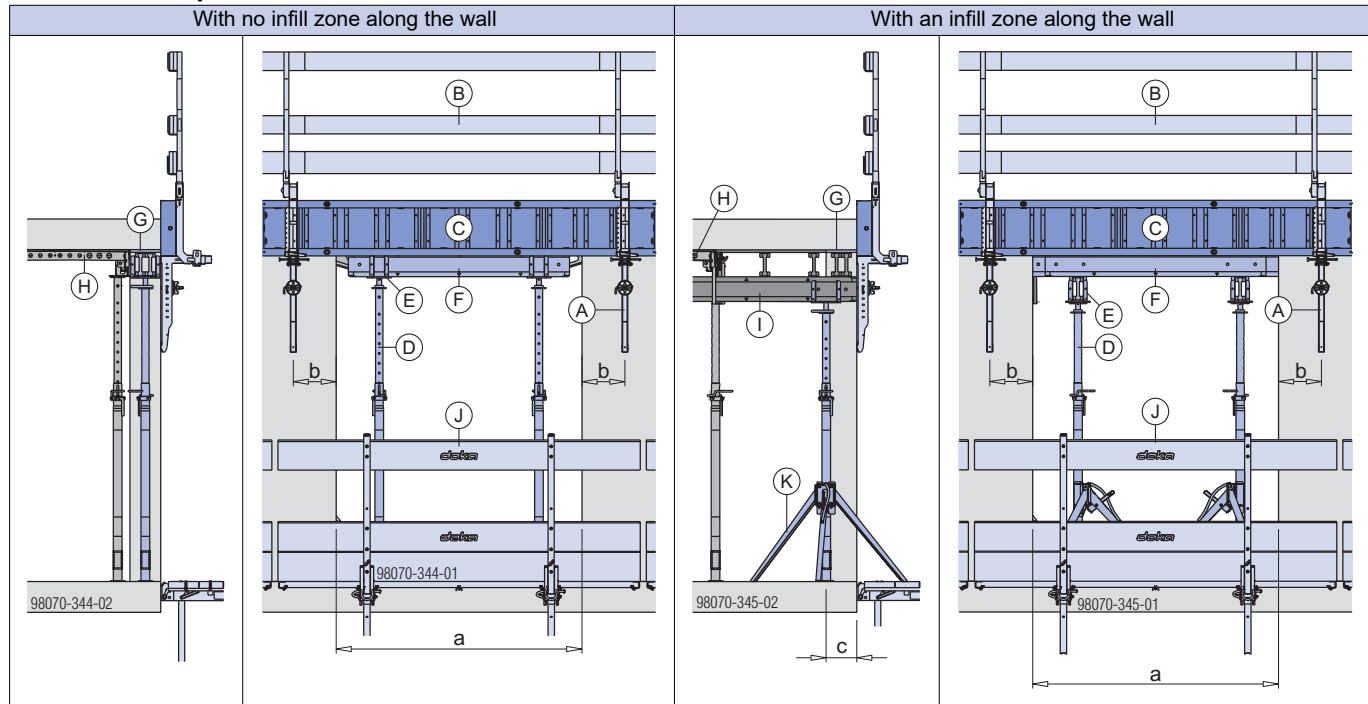
Forming past room-high openings in walls

Where necessary, the slab-forming operations can also incorporate room-high wall openings.



Follow the directions in the 'Doka floor end-shutter clamp' User Information booklet!

Practical examples



a ... see the 'Doka floor end-shutter clamp' User Information booklet

b ... min. 15 cm

c ... 25 cm

- A** Doka floor end-shutter clamp
- B** Guardrail system
- C** Slab stop-end
- D** Doka floor prop Eurex 30 top
- E** Lowering head H20
- F** Doka beam H20 top
- G** Formwork sheet (nailed-on)
- H** Dokadek panel
- I** Infill zone
- J** Folding platform K or protection platform
- K** Removable folding tripod



- The Doka floor end-shutter clamp can be fixed to the wall by the Bridge edge beam anchor 30kN 15.0.
- Large box-outs can be formed as described in the 'Structure edge (Panel floor formwork Dokadek 30 with drop head)' User Information booklet.

Using Doka floor props Eurex 20 top or Eurex 20 eco



WARNING

- In the typical and infill zones, and/or when mixing Dokadek and Dokaflex, the props used must all be of the same type.
- It is forbidden to use the Doka floor prop Eco 20!
- Additional measures, such as those described in the section headed 'Additional precautions for slab thicknesses of up to 50 cm', are forbidden!

Note:

The table takes account of the props' higher load-bearing capacity when their extension-length is reduced; for this reason, it is only valid for the room heights and types of props specified.



Follow the directions in the 'Doka floor prop Eurex 20 top 700' User Information booklet and, for room heights greater than 4.50 m, in the 'Alternative methods of assembly (Panel floor formwork Dokadek 30 with drop head)' User Information booklet!

Permitted slab thicknesses [cm]

Room height [m]	Eurex 20													
	250		300		350		400		450 ¹⁾		550		700	
	Panel		Panel		Panel		Panel		Panel		Panel		Panel	
	1.22m	0.81m	1.22m	0.81m	1.22m	0.81m	1.22m	0.81m	1.22m	0.81m	1.22m	0.81m	1.22m	0.81m
7.1													24.2	39.1
7.0													25.4	40.8
6.9													26.5	42.3
6.8													27.9	44.2
6.7													29.3	46.0
6.6													30.6	47.9
6.5														49.9
6.4														
6.3														
6.2														
6.1														
6.0														
5.9														
5.8														
5.7														
5.6														
5.5													32.0	50.0
5.4														
5.3														
5.2														
5.1														
5.0														
4.9														
4.8														
4.7											32.0	50.0		
4.6									23.2	37.8				
4.5									24.6	39.6				
4.4									26.3	42.0				
4.3									28.0	44.3				
4.2									29.5	46.4				
4.1									31.0	48.4				
4.0							22.0	36.1						
3.9							23.8	38.6						
3.8							25.9	41.4						
3.7							27.9	44.1						
3.6							29.8	46.8						
3.5					19.6	32.8	31.3	49.0	32.0	50.0				
3.4					21.3	35.1								
3.3					23.1	37.6								
3.2					25.2	40.4								
3.1					27.1	43.1	32.0	50.0						
3.0			18.4	31.1	28.2	44.6								
2.9			19.7	33.0	29.2	46.0								
2.8			21.6	35.6	30.4	47.6								
2.7			23.8	38.6	31.8	49.6								
2.6			25.1	40.3	32.0	50.0								
2.5	17.4	29.7	26.0	41.6										
2.4	18.5	31.2	27.0	43.0										
2.3	18.8	31.7	28.3	44.8										
2.2	18.9	33.7												
2.1	19.2	33.7												
2.0														
1.9														
1.8														

Allow for deflections as per DIN 18218 (see 'Ground rules').

¹⁾ available only in the Eurex 20 eco version

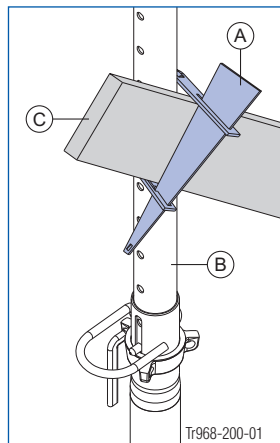
Bracing clamp B

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 20

C Plank

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

Eurex 20	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
150	—	✓	—	✓	✓	✓	✓	✓	✓	✓	✓	✓
250	—	✓	—	✓	✓	✓	✓	✓	✓	✓	✓	✓
300	—	✓	—	✓	✓	✓	✓	✓	✓	✓	✓	✓
350	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
400	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
450	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
550	✓	✓	✓	✓	✓	✓	✓	—	✓	—	✓	—

Legend:

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



For bracing possibilities of the Doka floor prop Eurex 20 top 700, see the 'Doka floor prop Eurex 20 top 700' User Information booklet.

General

Combining with other Doka systems

Dokaflex 30 tec and Dokaflex

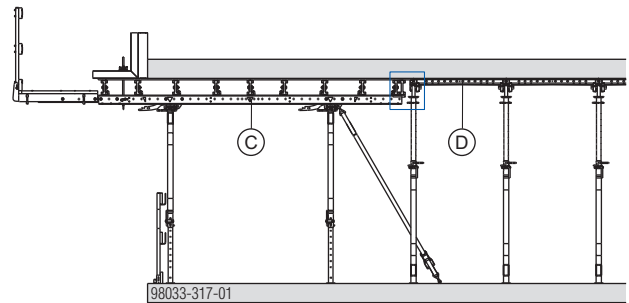
Dokaflex is the fast and versatile floor-slab formwork for any layout - also for drop beams, stepped floors and filigree slabs. Because the quantities can easily be computed using a slide-rule, no detailed formwork planning work is needed. Any type of form-facing can be used, enabling all architectural wishes regarding the concrete surface to be met.



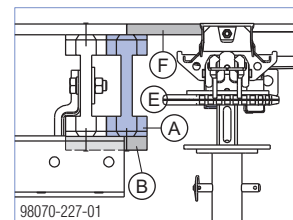
For more information, please refer to the 'Dokaflex 30 tec' and 'Dokaflex' User Information booklets.

Dokamatic and Dokaflex tables

The Doka tables are pre-assembled, and save on both labour and crane time. With the DoKart, the tables can easily be wheeled across to their next location by just one man working on his own. The system is optimised to give the very shortest forming-times on large areas, and copes well even with varying structural-design and geometrical requirements.



Close-up of extra beam:



- A** Doka beam H20
- B** Nailing board (provided at site)
- C** Dokamatic table
- D** Dokadek panel
- E** Dokadek infill beam
- F** Formwork sheeting



NOTICE

The beam **(A)** must be pre-mounted!



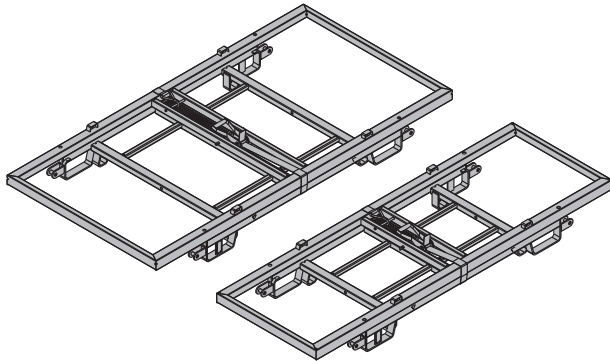
For more information, see the "Dokamatic table" and "Dokaflex table" User Information booklets.

Transporting, stacking and storing

Utilise the benefits of Doka multi-trip packaging on your site.

Multi-trip packaging such as containers, stacking pallets and skeleton transport boxes keep everything in place on the site, minimise time wasted searching for parts, and streamline the storage and transport of system components, small items and accessories.

Dokadek panel pallets



Storage and transport device for Dokadek panels.

- durable
- stackable



CAUTION

- Observe the maximum number of Dokadek panels (see tables).
- It is forbidden to stack panels of different widths on the same pallet.



NOTICE

- The type plate must be in place and clearly legible.
- Load the items centrally.

Dokadek panels	
1.22x2.44m 0.81x2.44m	1.22x1.22m 0.81x1.22m
 98033-288-01	 98033-528-02

h ... max. stack height (see tables)

Dokadek panel pallet 1.22x2.44m

	Dokadek panel	
	1.22x2.44m	1.22x1.22m
Max. n° of panels	11	12 (2x6)
Max. stack height h [cm]	215	128
Max. load	650 kg (1430 lbs)	
Permitted imposed load:	1450 kg (3200 lbs)	

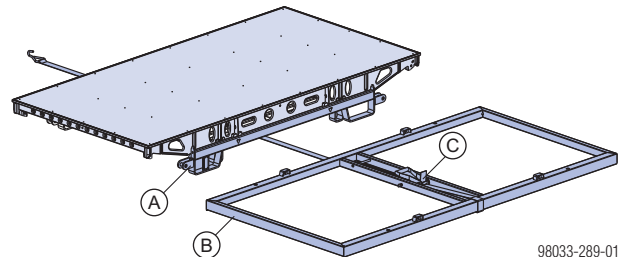
Dokadek panel pallet 0.81x2.44m

	Dokadek panel	
	0.81x2.44m	0.81x1.22m
Max. n° of panels	11	12 (2x6)
Max. stack height h [cm]	215	128
Max. load	550 kg (1210 lbs)	
Permitted imposed load:	1250 kg (2755 lbs)	

Stacking the panels

Dokadek panels 1.22x2.44m or 0.81x2.44m

- Undo the lashing strap and remove the cover.
- Set down the 1st panel on the middle of the pallet.



98033-289-01

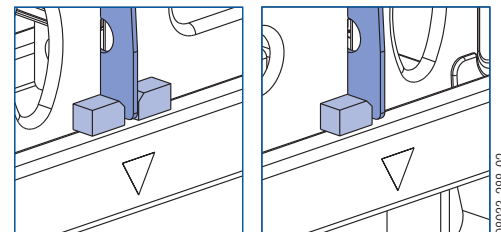
A Pallet

B Cover (unlosable)

C Lashing strap

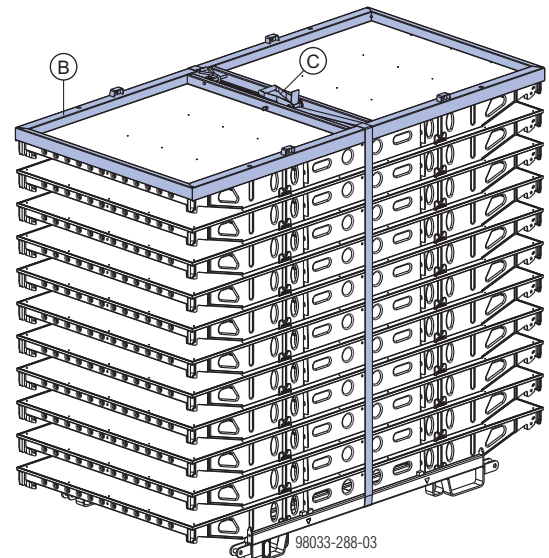


Make sure that the panel is correctly positioned!



98033-288-02

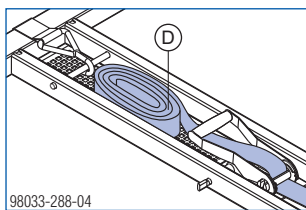
- Set down further panels, exactly over one another.
- Place the cover over the top panel and tighten the stack with the lashing strap.



98033-288-03



- We recommend using a standard platform ladder to make it easier to operate the lashing strap.
- Coil up the end of the lashing strap and put it in the storage tray (D) .



98033-288-04

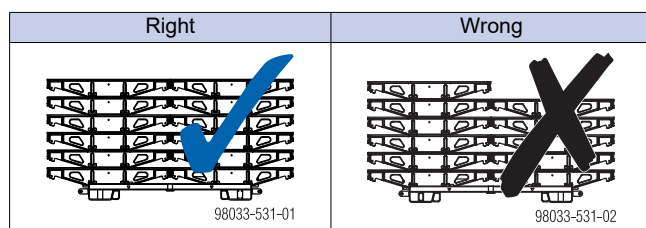
Dokadek panels 1.22x1.22m or 0.81x1.22m

The Dokadek supporting timber 1.73m (HT) acts as a support for the Dokadek 30 panels 1.22x1.22m and 0.81x1.22m in Dokadek panel pallets (2 supporting timbers per panel pallet).



WARNING

- Always stack the panels on the pallet in pairs.



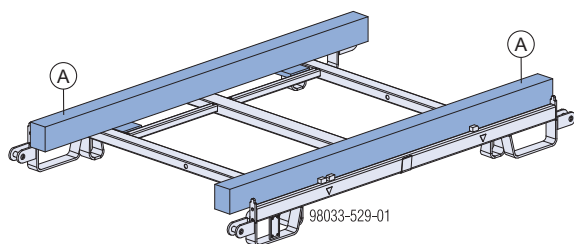
Illustrations without pallet covers



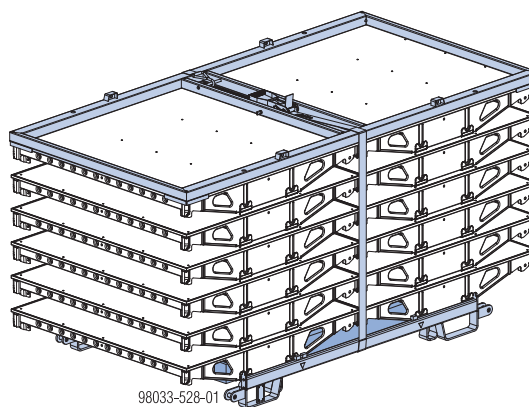
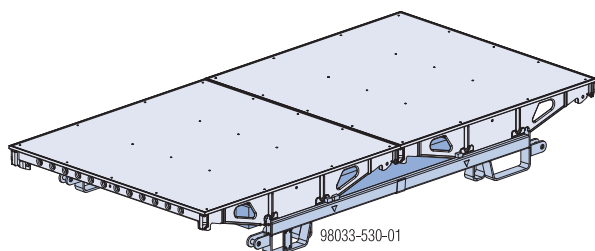
NOTICE

- 2 supporting timbers are needed per pallet.
- Store the panel pallet and supporting timbers separately.

All the other work steps are the same as for large-sized panels.



A Dokadek supp. timber 1.73 (HT)



Dokadek panel pallet as a storage unit

Max. number of units on top of one another

N° of Dokadek panels in the pallet	Outdoors (on the site)	Indoors
	Floor gradients up to 3%	Floor gradients up to 1%
Dokadek panel 1.22x2.44m or 0.81x2.44m		
≤ 6	1	3
> 6	1	2
Dokadek panel 1.22x1.22m or 0.81x1.22m		
≤ 12	1	3

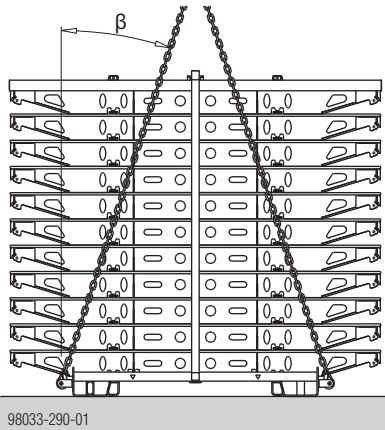
Dokadek panel pallet as a transport device

Suitable transport appliances:

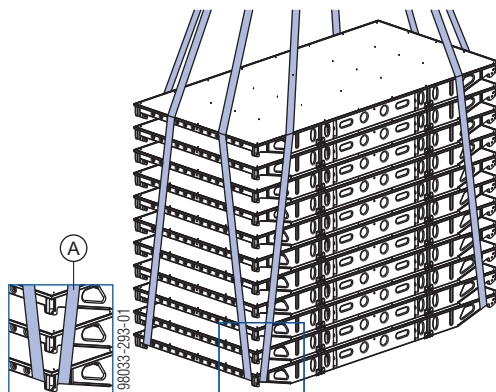
- crane
- forklift truck
- pallet stacking truck
- Attachable wheelset

Lifting by crane**NOTICE**

- Multi-trip packaging items may only be lifted one at a time.
- Secure the stack of panels with the cover and the lashing strap.
- Use a suitable crane suspension tackle (do not exceed permitted load capacity).
- Spread angle β max. 30°!



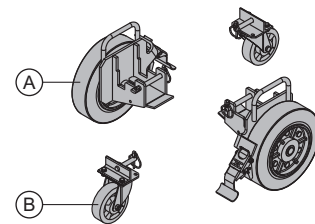
- Lifting the panels without a panel pallet is only allowed using 4 separate lifting slings, with a protective sleeve (A) over every corner.

**Shifting with forklift or pallet stacking truck****NOTICE**

- Multi-trip packaging items may only be lifted one at a time.
- Load the items centrically.
- Secure the stack of panels with the cover and the lashing strap.

Shifting with Attachable wheelset

The 'Attachable wheelset' turns the panel pallet into a fast and manoeuvrable transport device.

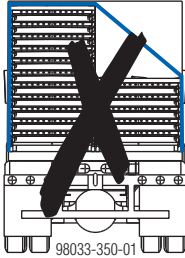


Correct loading of trucks (lorries)

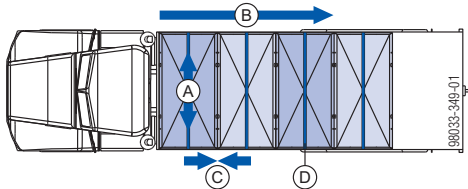


NOTICE

- **Ideally**, arrange the Dokadek panel pallets **at right-angles to the cargo floor. (A)**
If the stacks are not of the same height, then the panels **must always be arranged at right angles to the cargo floor.**



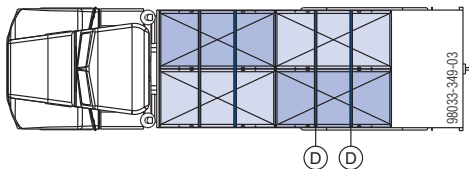
- Load the truck from front to back with Dokadek panel pallets. **(B)**
- Arrange the Dokadek panel pallets so that they are positively locked. **(C)**
- Secure every Dokadek panel pallet with a lashing strap. **(D)**



Animation:

<https://player.vimeo.com/video/256036570>

- If the pallets have to be loaded lengthways to the cargo floor, secure each pair of Dokadek panel pallets with 2 lashing straps. **(D)**



Animation:

<https://player.vimeo.com/video/256029891>

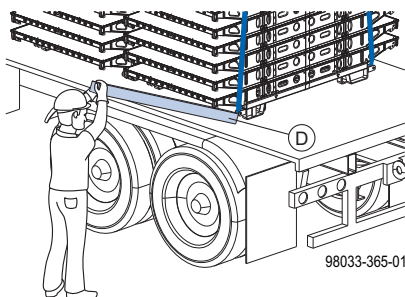


With closely stacked panel bundles:

- ▶ lever-up a panel bundle (e.g. with a squared timber **(D)**), to make a space for threading in the slings.

Caution!

Always make sure that the panel bundle remains stable!



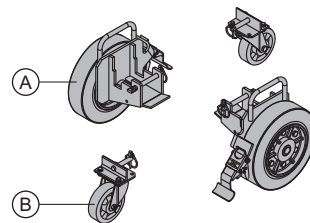
Wooden pallet 1.20x0.80m (HT)

Is used for packaging and storing Dokadek panels 1.22x1.22m or 0.81x1.22m.

1.22x1.22m	0.81x1.22m
Number of panels per unit	
6	
Max. number of units on top of one another	
Outdoors (on the site) max. floor gradient of 3%	
1	
Indoors max. floor gradient of 1%	
4	3
A Wooden pallet 1.20x0.80m (HT)	
B Crate cover 1.20x0.80m (HT)	
C Strapping tape	

Attachable wheelset

Product description



A 2 heavy-duty wheels

B 2 swivel casters

The Attachable wheelset turns the panel pallet into a fast and manoeuvrable transport device.

Suitable for drive-through access openings > 150 cm.



NOTICE

- When the panel pallet is parked or is being shifted by crane or forklift, always apply the fixing brake.
- When setting down a panel pallet with loosely stacked panels, secure these against wind liftout (e.g. by strapping them together).

Wheeling



NOTICE

- Max. gradient of floor 3%.
- Max. travel speed: 4 km/h (walking pace)
- Either close structure openings with decking of adequate strength secured so that it cannot slip out of place, or cordon off the openings with edge railings of adequate strength!
- Keep the travel route clean and free of any obstacles.
- It is forbidden to use any other mechanical assistance for the travelling operation!
- It is forbidden to wheel panel pallets that have been stacked on top of one another!
- Where necessary, secure loosely stacked panels so that they cannot slip.

Lifting by crane

The Attachable wheelset can stay fixed to the Dokadek panel pallet while it is being lifted.



NOTICE

- Secure the stack of panels with the cover and the lashing strap.

► Before attaching the lifting chain, check that:

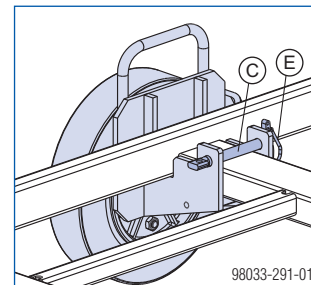


- the fixing brake is applied
- lynch pins have been fitted to the fastening bolts of the heavy-duty wheels and the swivel casters.

Assembly

Heavy-duty wheel

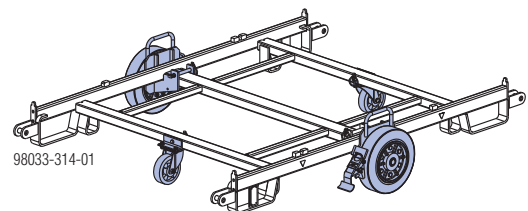
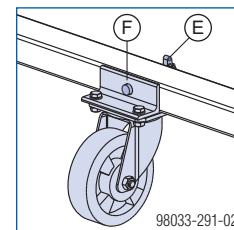
- Apply the fixing brake on the heavy-duty wheel.
- Working from below, push the heavy-duty wheel onto the longitudinal profile of the panel pallet and fix it in place with a fastening bolt and lynch pin.



If necessary, the braking force can be adjusted with the setting screw (w/f 24).

Swivel caster

- Working from the outside, push the wheel-pin of the swivel caster into the hole in the cross profile, and secure it with a lynch pin.



A Heavy-duty wheel

B Swivel caster

C Fastening bolt

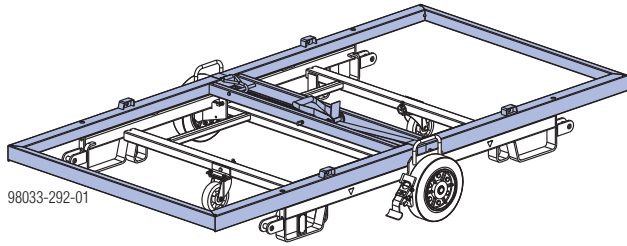
E Lynch pin

F Wheel-pin

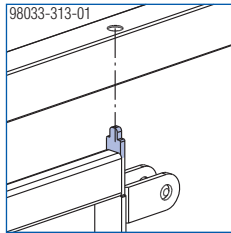
Animation: <https://player.vimeo.com/video/262156196>

Variant 1: Panels stacked loosely

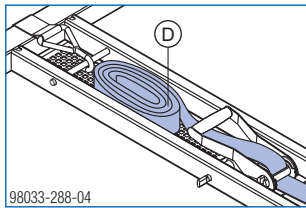
- Place the cover on the panel pallet and tighten it with the lashing strap.



Make sure it is in the correct position!



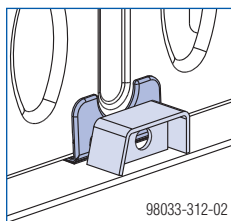
Coil up the end of the lashing strap and put it in the storage tray (D) .



- Place the 1st panel on the middle of the cover.

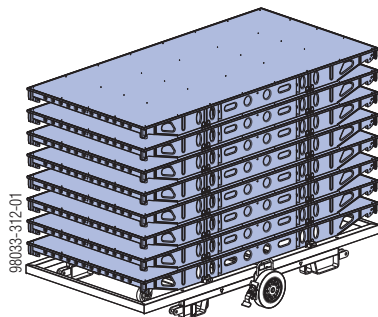


Make sure it is in the correct position!

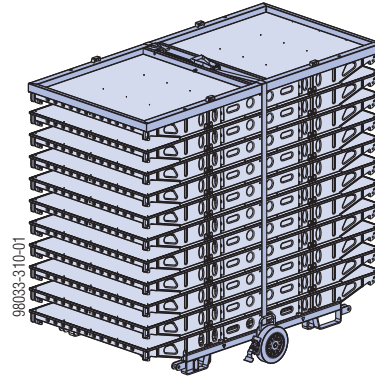


- Max. number of loose Dokadek panels: 8 units

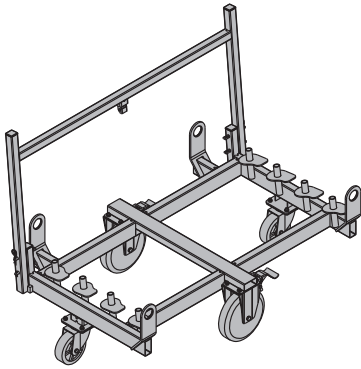
- Set down further panels, exactly over one another.

**Variant 2: Panels secured and stacked with the cover and the lashing strap**

- See the section headed 'Dokadek panel pallets'

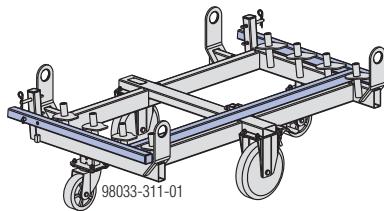


DekDrive



Transport device for Dokadek panels

- durable
- stackable
- suitable for drive-through access openings > 90 cm.
- state in which delivered and transported: railing folded down



Max. number of Dokadek panels: 4

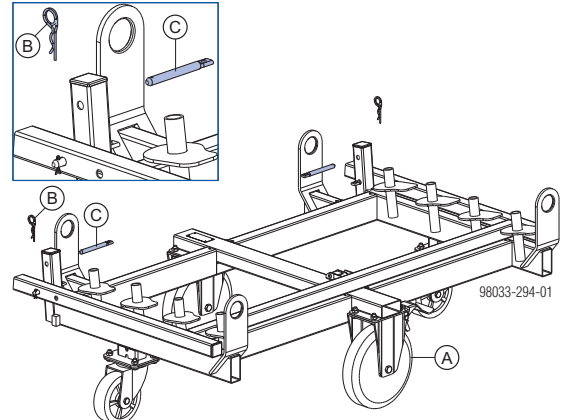


NOTICE

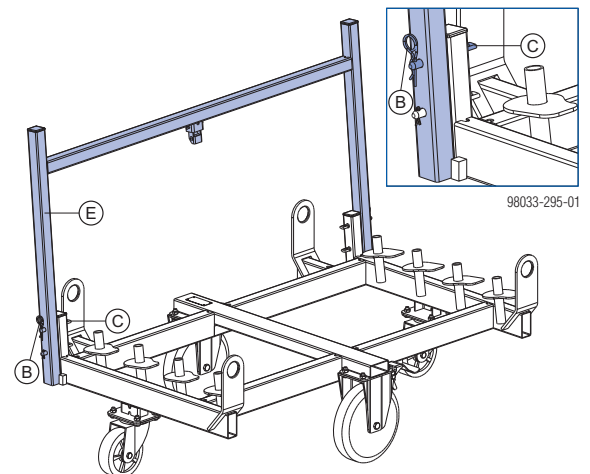
- The type plate must be in place and clearly legible.
- Load the items centrically.
- It is allowed to stack panels of different widths.
- Not suitable for use as a storage unit.
- When the DekDrive is parked or is being crane-lifted, always apply the fixing brake.
- Always secure the panels with webbing.

Loading the DekDrive

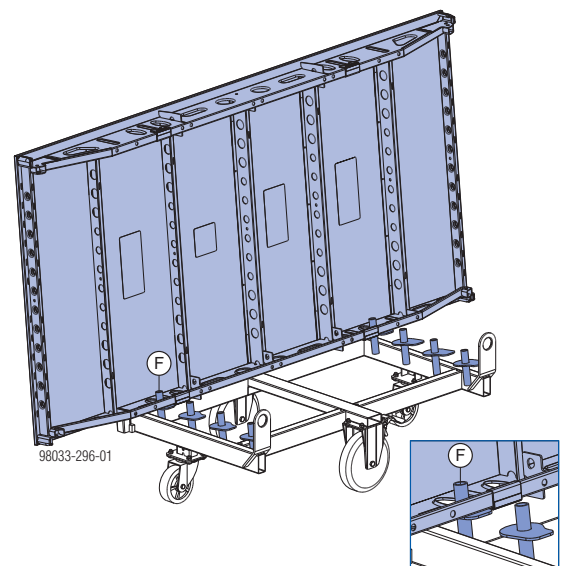
- Apply the fixing brake on the heavy-duty wheel.
- Remove the top spring cotters and self-locking pins, at both ends of the DekDrive.



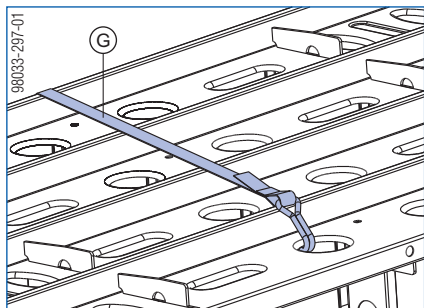
- Tilt up the railing and secure it at both ends with self-locking pins and spring cotters.



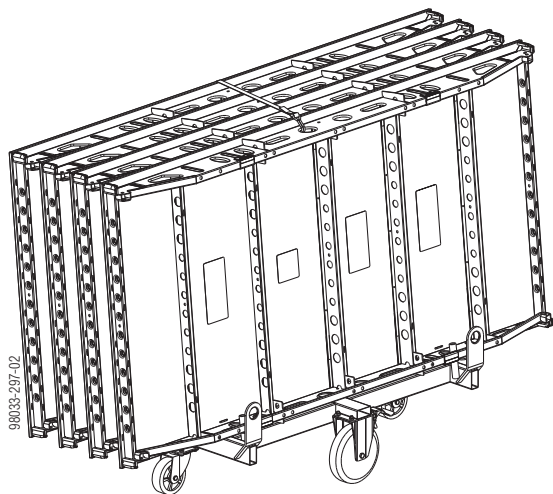
- Starting at the railing side, push the Dokadek panels centrally onto the holding pins (always with the formwork sheeting toward the railing).



- Secure the panels with webbing. Fit the hook into one of the openings in the longitudinal profile of the front (i.e. outermost) panel, and tighten the webbing.



- A Heavy-duty wheel
- B Spring cotter
- C Self-locking pin
- E Railing
- F Holding pin
- G Webbing



Animation: <https://player.vimeo.com/video/262155511>

Wheeling



NOTICE

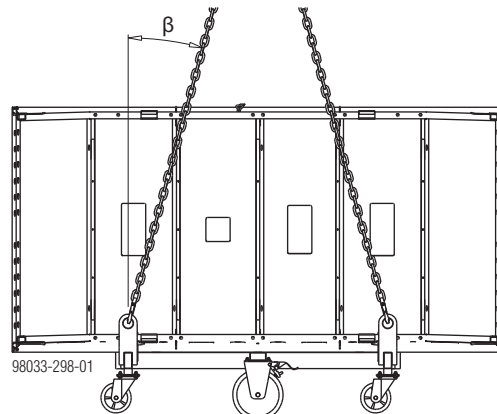
- Max. gradient of floor 3%.
- Max. travel speed: 4 km/h (walking pace)
- Either close structure openings with decking of adequate strength secured so that it cannot slip out of place, or cordon off the openings with edge railings of adequate strength!
- Keep the travel route clean and free of any obstacles.
- It is forbidden to use any other mechanical assistance for the travelling operation!

Lifting by crane



NOTICE

- Use a suitable crane suspension tackle (do not exceed permitted load capacity), e.g.: Doka 4-part chain 3.20m
- DekDrives may only be lifted one at a time.
- Spread angle β max. 30°!



- Before attaching the lifting chain, check that:



- the fixing brake is applied

Alternative transport options

With timber trolley

A standard timber trolley provides a safe and easy way of moving Dokadek panels without any great physical effort.

Features:

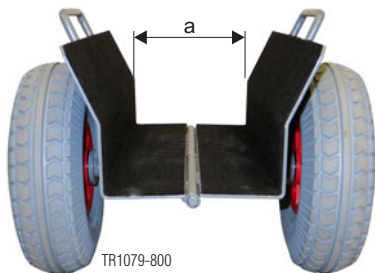
- Clamping jaws
- Clamping sides, felt-padded on inside
- The weight of the material being transported securely closes the clamping mechanism

Designation: M-Timber trolley 170mm-CT

Weight: 7.0 kg

Dimensions:

39 x 31 x 35 cm (L x W x H) width including wheels



Max. load: 300 kg

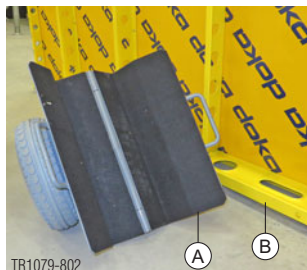
State during transport



A M-Timber trolley 170 mm-CT

How to load

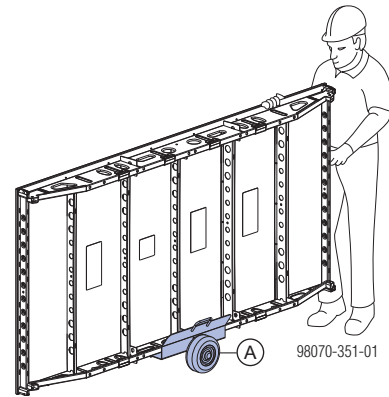
- Position the Timber trolley beside the Dokadek panel, midway along the panel.



A M-Timber trolley 170 mm-CT

B Dokadek panel

- Lift one end of the Dokadek panel, lower the panel centred on to the Timber trolley and wheel it to the desired location.

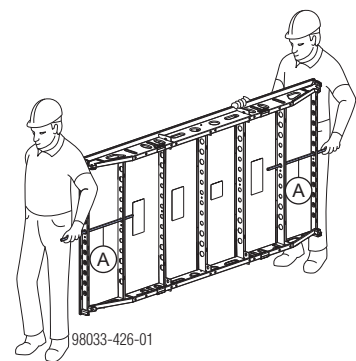


A M-Timber trolley 170 mm-CT

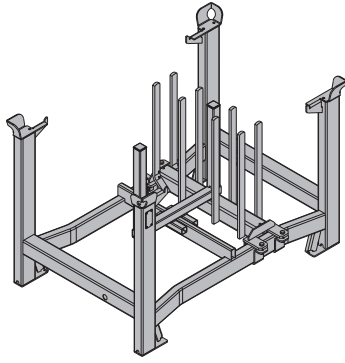
Manual transport



With the aid of 2 tie rods (each min. 1.00 m long) **(A)**, Dokadek panels can also be transported easily by hand.



Dokadek infill-beam pallet



Storage and transport device for Dokadek infill beams:

- durable
- stackable
- Infill beams 2.44m and 1.22m are supplied ex-works in the Dokadek infill-beam pallet, while Infill beams 0.81m are supplied in the Doka multi-trip transport box 1.20x0.80m.

Max. number of Dokadek infill beams: 44

Max. load-bearing capacity: 800 kg

Permitted imposed load: 5900 kg

Using the Dokadek infill-beam pallet as a storage unit

Max. n° of units on top of one another

Outdoors (on the site) Floor gradients up to 3%	Indoors Floor gradients up to 1%
2	6
It is not allowed to stack empty pallets on top of one another!	



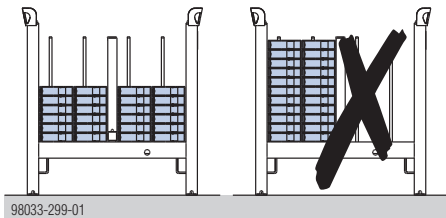
NOTICE

- Stacked multi-trip boxes or pallets must have the heaviest boxes at the bottom and the lightest at the top.
- **How to use with Bolt-on castor set B:**
 - Always apply the fixing brake when the container is 'parked'.
 - When Doka stacking pallets are stacked, the bottom pallet must NOT be one with a bolt-on castor set mounted to it.

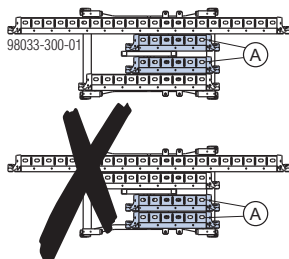


NOTICE

- Load Infill beams 2.44m and 1.22m onto the pallet centrally, so that they are braced against the uprights of the pallet.
- Stacked multi-trip boxes or pallets must have the heaviest boxes at the bottom and the lightest at the top.
- Always stack in complete layers.



- It is permitted to stack infill beams of different lengths on the same pallet.
 - When the pallet is transported by lorry, Infill beams 0.81m (A) must be stacked on the inside.



- Before the infill beams are transported by lorry, they must be firmly connected to the pallet, e.g. by bundling with steel strapping.
- The type plate must be in place and clearly legible.

Using the Dokadek infill-beam pallet as a transport device

Suitable transport appliances:

- crane
- forklift truck
- pallet stacking truck
- Bolt-on castor set B



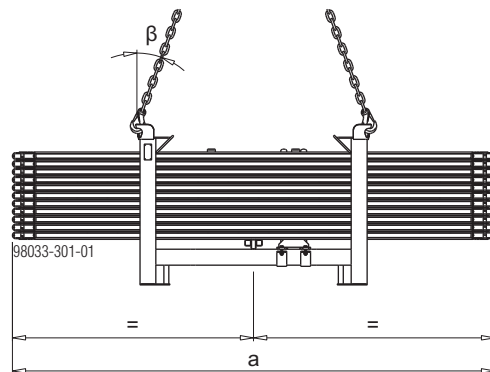
Follow the directions in the "Bolt-on castor set B" Operating Instructions!

Lifting by crane



NOTICE

- Multi-trip packaging items may only be lifted one at a time.
- Use a suitable crane suspension tackle (e.g. Doka 4-part chain 3.20m). Do not exceed the permitted load-bearing capacity.
- Load the items centrally.
- When lifting stacking pallets to which Bolt-on castor sets B have been attached, you must also follow the directions in these Operating Instructions!
- Spread angle β max. 30°!



a ... 244 cm or 122 cm

Repositioning by forklift truck or pallet stacking truck



NOTICE

- Load the items centrally.

Transporting Bracing frames Eurex



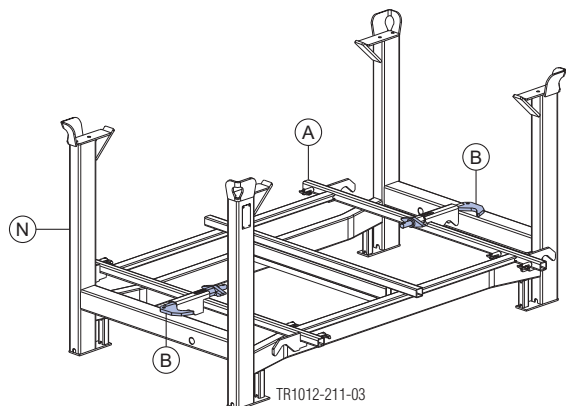
NOTICE

It is not allowed to mix different sizes of bracing frames!

Loading the pallet

e.g. Bracing frame Eurex 1.22m

- Turn the prop-holders (= the quick-fixing mechanisms) by 90°, fix them and place the frame into the Doka stacking pallet (see Close-up C).

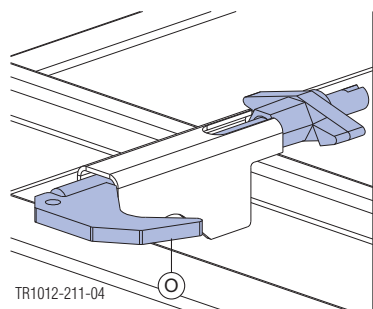


A Bracing frame Eurex

B Prop-holder (= quick-fixing mechanism)

N Doka stacking pallet 1.55x0.85m

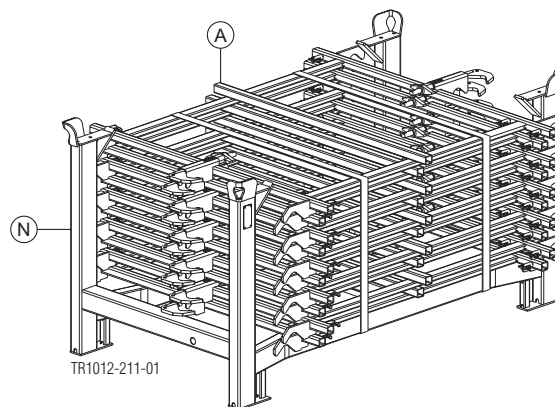
Close-up C



O Prop-holder (= quick-fixing mechanism)

- Stack the other bracing frames alternate ways round (as shown in Close-up D).

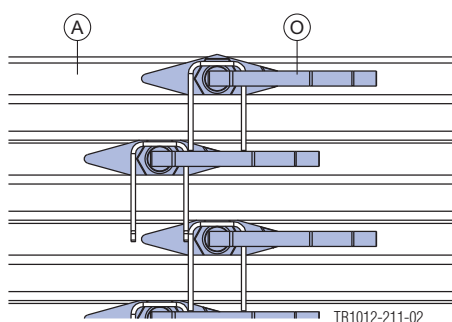
- Fasten the load to the stacking pallet so that it cannot slide or tip out.



A Bracing frame Eurex

N Doka stacking pallet 1.55x0.85m

Close-up D



O Prop-holder (= quick-fixing mechanism)

Load quantities

Bracing frame Eurex	Doka stacking pallet	Units
1.22m	1.55x0.85m	10
0.81m	1.20x0.80m	

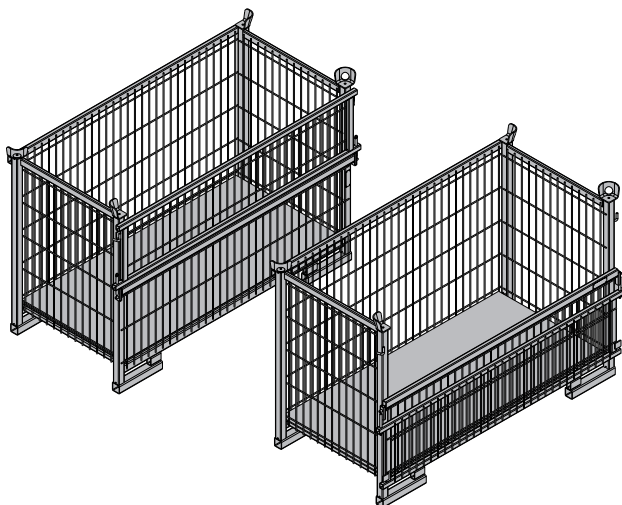


Follow the directions in the 'Bolt-on castor set B' Operating Instructions!

Animation: <https://player.vimeo.com/video/262344460>

Doka skeleton transport box 1.70x0.80m

Storage and transport device for small items



Max. load-bearing capacity: 700 kg (1540 lbs)
Permitted imposed load: 3150 kg (6950 lbs)

To make the Doka skeleton transport box easier to load and unload, one of its sidewalls can be opened.

Using Doka skeleton transport boxes 1.70x0.80m as storage units

Max. n° of units on top of one another

Outdoors (on the site) Floor gradients up to 3%	Indoors Floor gradients up to 1%
2	5
It is not allowed to stack empty pallets on top of one another!	



NOTICE

Stacked multi-trip boxes or pallets must have the heaviest boxes at the bottom and the lightest at the top.

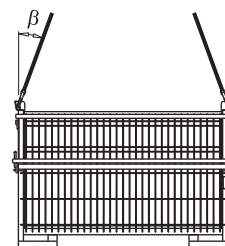
Using Doka skeleton transport boxes 1.70x0.80m as transport devices

Lifting by crane



NOTICE

- Multi-trip packaging items may only be lifted one at a time.
- Only lift the boxes when their sidewalls are closed!
- Use a suitable crane suspension tackle (e.g. Doka 4-part chain 3.20m).
Do not exceed the permitted load-bearing capacity.
- Spread angle β max. 30°!



9234-203-01

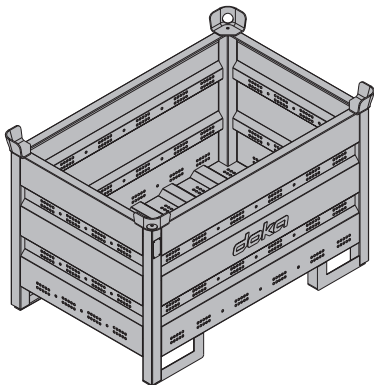
Repositioning by forklift truck or pallet stacking truck

The forks can be inserted under either the broadside or the narrowside of the containers.

Doka multi-trip transport box

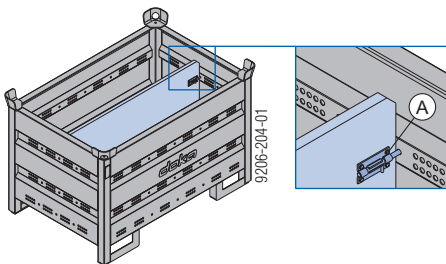
Storage and transport device for small items

Doka multi-trip transport box 1.20x0.80m



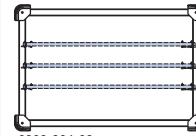
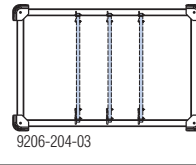
Max. carrying capacity: 1500 kg (3300 lbs)
Permitted imposed load: 7850 kg (17300 lbs)

Different items in the Doka multi-trip transport box can be kept separate with the **Multi-trip transport box partitions 1.20m or 0.80m**.

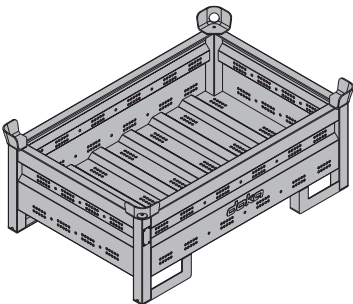


A Slide-bolt for fixing the partition

Possible ways of dividing the box

Multi-trip transport box partition	in the longitudinal direction	in the transverse direction
1.20m	max. 3 partitions	-
0.80m	-	max. 3 partitions
		

Doka multi-trip transport box
1.20x0.80mx0.41m



Max. carrying capacity: 750 kg (1650 lbs)
Permitted imposed load: 7200 kg (15870 lbs)

Using Doka multi-trip transport boxes as storage units

Max. n° of units on top of one another

Outdoors (on the site)		Indoors	
Floor gradients up to 3%		Floor gradients up to 1%	
Doka multi-trip transport box 1.20x0.80m		Doka multi-trip transport box 1.20x0.80m	
1.20x0.80x0.41m		1.20x0.80x0.41m	
3	5	6	10
It is not allowed to stack empty pallets on top of one another!			



NOTICE

Stacked multi-trip boxes or pallets must have the heaviest boxes at the bottom and the lightest at the top.

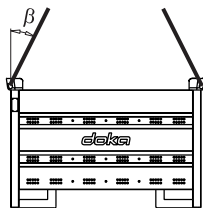
Using Doka multi-trip transport boxes as transport devices

Lifting by crane



NOTICE

- Multi-trip packaging items must be lifted individually.
- Use a suitable crane lifting tackle (e.g. Doka 4-part chain 3.20m). Do not exceed the permitted load-bearing capacity.
- Spread angle β max. 30°!



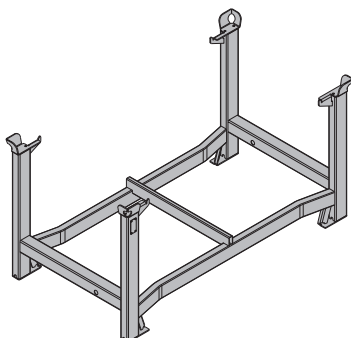
9206-202-01

Repositioning by forklift truck or pallet stacking truck

The forks can be inserted under either the broadside or the narrowside of the containers.

Doka stacking pallet 1.55x0.85m and 1.20x0.80m

Storage and transport devices for long items.



Max. carrying capacity: 1100 kg (2420 lbs)
Permitted imposed load: 5900 kg (12980 lbs)

Using Doka stacking pallets as storage units

Max. n° of units on top of one another

Outdoors (on the site) Floor gradients up to 3%	Indoors Floor gradients up to 1%
2	6
It is not allowed to stack empty pallets on top of one another!	



NOTICE

- Stacked multi-trip boxes or pallets must have the heaviest boxes at the bottom and the lightest at the top.
- How to use with Bolt-on castor set B:**
 - Always apply the fixing brake when the container is 'parked'.
 - When Doka stacking pallets are stacked, the bottom pallet must NOT be one with a bolt-on castor set mounted to it.

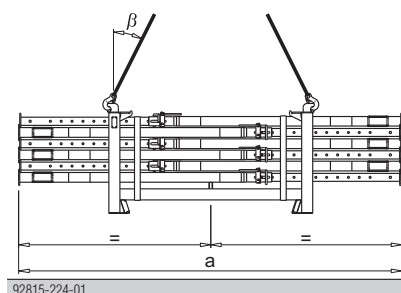
Using Doka stacking pallets as transport devices

Lifting by crane



NOTICE

- Multi-trip packaging items may only be lifted one at a time.
- Use a suitable crane suspension tackle (e.g. Doka 4-part chain 3.20m). Do not exceed the permitted load-bearing capacity.
- Load the items centrally.
- Fasten the load to the stacking pallet so that it cannot slide or tip out.
- Spread angle β max. 30°!



92815-224-01

	a
Doka stacking pallet 1.55x0.85m	max. 4.5 m
Doka stacking pallet 1.20x0.80m	max. 3.0 m

Repositioning by forklift truck or pallet stacking truck

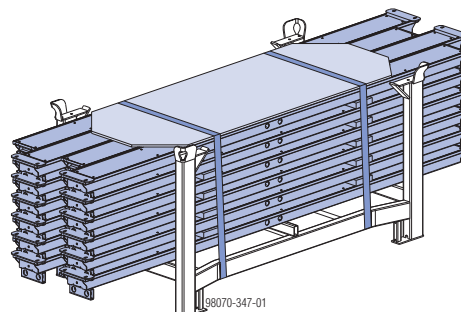


NOTICE

- Load the items centrally.
- Fasten the load to the stacking pallet so that it cannot slide or tip out.

Dokadek closure panel 0.15x2.44m

Dokadek closure panels 0.15x2.44m are supplied ex-works in the Doka stacking pallet 1.55x0.85m.



98070-347-01

Max. number of Dokadek closure panels 0.15x2.44m:
24

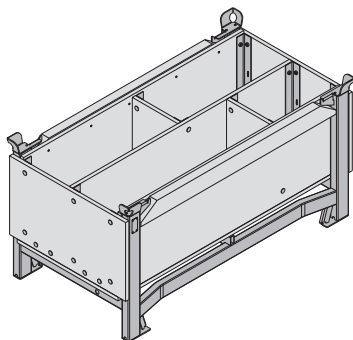
Note:

Wooden strips or anti-slip mats must be added in between the rows of panels.

Put a wooden cover on top of the stack and bundle the whole stack together.

Doka accessory box

Storage and transport device for small items



Max. carrying capacity: 1000 kg (2200 lbs)

Permitted imposed load: 5530 kg (12191 lbs)

Doka accessory boxes as storage units

Max. n° of units on top of one another

Outdoors (on the site) Floor gradients up to 3%	Indoors Floor gradients up to 1%
3	6
It is not allowed to stack empty pallets on top of one another!	



NOTICE

- Stacked multi-trip boxes or pallets must have the heaviest boxes at the bottom and the lightest at the top.
- How to use with Bolt-on castor set B:**
 - Always apply the fixing brake when the container is 'parked'.
 - When Doka stacking pallets are stacked, the bottom pallet must NOT be one with a bolt-on castor set mounted to it.

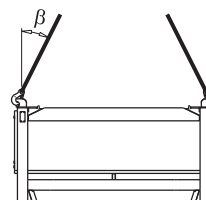
Doka accessory box as transport devices

Lifting by crane



NOTICE

- Multi-trip packaging items must be lifted individually.
- Use a suitable crane lifting tackle (e.g. Doka 4-part chain 3.20m). Do not exceed the permitted load-bearing capacity.
- Spread angle β max. 30°!



92816-206-01

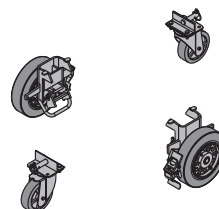
Repositioning by forklift truck or pallet stacking truck

The forks can be inserted under either the broadside or the narrowside of the containers.

Bolt-on castor set B

The Bolt-on caster set B turns the stacking pallet into a fast and manoeuvrable transport trolley.

Suitable for drive-through access openings > 90 cm.



The Bolt-on caster set B can be mounted to the following multi-trip packaging items:

- Dokadek infill-beam pallet
- Doka accessory box
- Doka stacking pallets



Follow the directions in the Operating Instructions!

Cleaning and care of your equipment

The **special coating on the Xlife sheet** greatly reduces the amount of cleaning that is needed.



WARNING

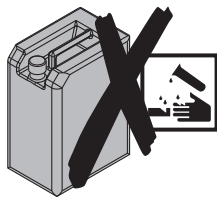
► Risk of slippage when surface is wet!

Cleaning



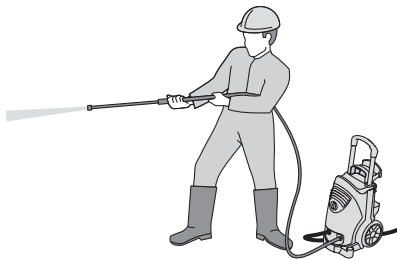
NOTICE

- Immediately after pouring:
 - Remove any blobs of concrete from the back-face of the formwork, using water (without any added sand).
- Immediately after stripping the formwork
 - Clean the formwork with a high-pressure washer and a concrete scraper.
- Do not use any chemical cleaning agents!



Cleaning equipment

High-pressure spray cleaner

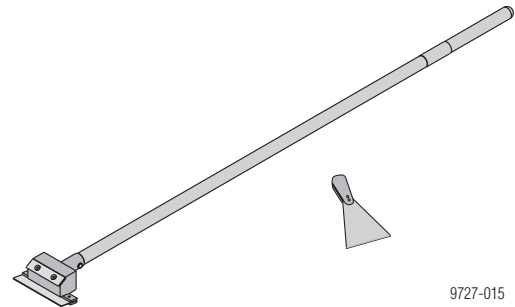


NOTICE

- Appliance pressure rating: 200 to max. 300 bar
- Keep the water-jet the correct distance from the formwork, and move it at the right speed:
 - The higher the pressure, the further away from the formwork you must keep the jet and the faster you must move it across the surface.
- Do not aim the jet at one place for too long.
- Make only moderate use of the jet around the silicone sealing strip:
 - If the pressure is too high, this will damage the silicone sealing strip.
 - Do not aim the jet at one place for too long.

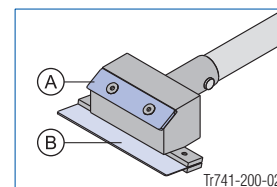
Concrete scraper

For removing any concrete remnants, we recommend using a **Double scraper Xlife** and a spatula.

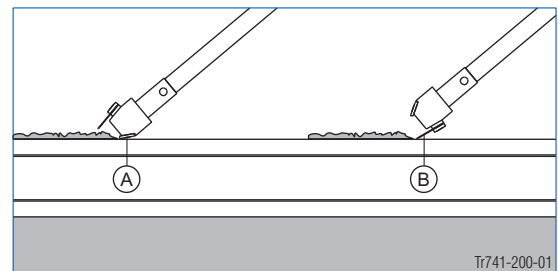


9727-015

Functional description:



Tr741-200-02



Tr741-200-01

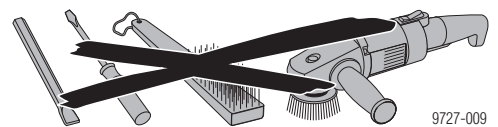
A Blade for dealing with heavy soiling

B Blade for dealing with slight soiling



NOTICE

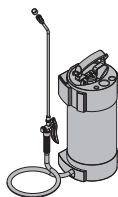
Do not use pointed or sharp objects, wire brushes, abrasive disks or cup brushes.



9727-009

Release agents

Doka-Trenn or Doka-OptiX is applied using the Doka release-agent sprayer.



Follow the directions in the 'Doka release-agent sprayer' Operating Instructions and on the containers of release agent.



NOTICE

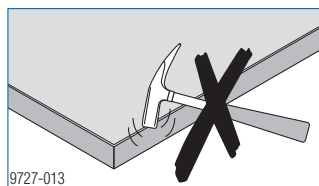
- Before every pour:
 - Apply release agent to the formwork sheet and the end faces **extremely thinly, evenly** and **in a continuous layer**.
- Make sure there are no drips of release-agent running down the formwork sheet.
- Applying too much release agent will spoil the concrete finish.



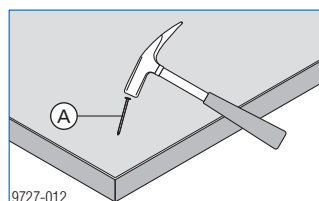
To determine the right dosage and to make sure that you are using the agent correctly, test it on less important parts of the structure first.

Care

- No hammer-blows to the frame profiles



- Do not use nails on the formwork that are longer than 60 mm



A max. l=60 mm

- Never push over panels or allow them to fall
- Do not use the panels as a climbing aid.



Reshoring props, concrete technology and stripping out



Follow the directions in the Calculation Guide entitled 'Stripping out formwork from floors in building construction', and/or ask your Doka technician.

When is the right time for early striking?

In early striking using 'Dokadek 30 with drop head', the formwork is removed and the props remain in place under the floor-slab as shoring.

In the typical zone, early striking (stripping) can be carried out from a relatively early stage, even after only very low concrete strengths have been reached.

The precondition for this is the presence of an upper reinforcement layer (minimum reinforcement is sufficient) to sustain the stresses occurring above the props.

Minimum compressive strength of concrete: C8/10

Before the next floor-slab is poured, the floor props must be completely stress-relieved, so that they can be subsequently re-used as temporary reshores.



After the load has been taken off the floor props, turn them by 90°. The offset impression in the concrete on the underside of the slab makes it easy to tell which floor props have already had the load removed from them.

When is the right time for stress-release?

The concrete strength that must be achieved before stress-release will depend upon the load factor α . This can be read off from the following table.

Load factor α

This is calculated by:

$$\alpha = \frac{DL_{\text{concrete}} + LL_{\text{construction state}}}{DL_{\text{concrete}} + DL_{\text{finishing}} + LL_{\text{final state}}}$$

Slab thickness 'd' [m]	Dead load DL_{concrete} [kN/m ²]	Load factor α			
		LL _{final state}			
		2.00 kN/m ²	3.00 kN/m ²	4.00 kN/m ²	5.00 kN/m ²
0.14	3.50	0.67	0.59	0.53	0.48
0.16	4.00	0.69	0.61	0.55	0.50
0.18	4.50	0.71	0.63	0.57	0.52
0.20	5.00	0.72	0.65	0.59	0.54
0.22	5.50	0.74	0.67	0.61	0.56
0.25	6.25	0.76	0.69	0.63	0.58
0.30	7.50	0.78	0.72	0.67	0.62
0.35	8.75	0.80	0.75	0.69	0.65

Valid for a finishing-load $DL_{\text{finishing}} = 2.00 \text{ kN/m}^2$ and a live load in the early-stripped state of $LL_{\text{construction state}} = 1.50 \text{ kN/m}^2$

DL_{concrete} : calculated with $\gamma_{\text{concrete}} = 25 \text{ kN/m}^3$
 $DL_{\text{finishing}}$: load for floor finish, etc.

Example: Slab thickness 0.20 m with a final live load of 5.00 kN/m² results in a load factor α of 0.54.

This means that stress-release can take place as soon as the concrete has reached 54% of its 28-day strength. The load-bearing capacity will then correspond to that of the finished structure.



NOTICE

If the floor props are not stress-relieved, meaning that the slab has not been activated, then the props will remain loaded with the dead weight of the floor-slab.

When the floor above is concreted, this may lead to a doubling of the load that is being applied to the floor props.

The floor props are not designed to cope with such an overload, and the result may be damage to the formwork, the floor props and the structure.

Why put up temporary reshores?

After the formwork has been stripped and the slab has been stress-relieved or dismantled, the slab is able to bear its dead load and live loads resulting from the construction state, but not the concreting loads from subsequent floor-slabs.

The temporary reshoring serves to support the floor-slab and distribute the concreting loads across several floors.

Positioning the reshoring props correctly

Reshoring props have the job of spreading loads between the new floor-slab and the floor beneath it. The load distribution will depend on the relationship between these two floor-slabs and their rigidity.



NOTICE

Ask an expert!

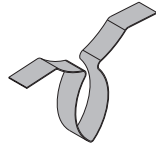
As a rule, the question of using reshoring props should be referred to the responsible experts (e.g. structural engineers), regardless of the information given above.

Observe all local standards and regulations!



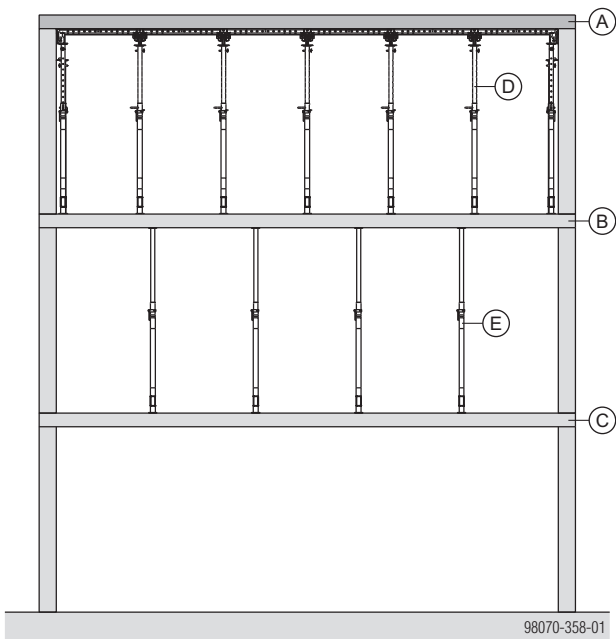
The **Floor prop spring clamp** provides extra stability of the floor prop.

- This accessory reduces the risk of the floor prop tipping over when the load on it is relieved in the course of construction work.



- The spring clamp is designed to be pushed into the top end of the inner tube of the floor prop.

Practical example



A Slab 3

B Slab 2 (50% of concreting load)

C Slab 1 (50% of concreting load)

D Floor-slab formwork (100% of concreting load)

E Reshoring props (50% of concreting load)

- After the required concrete strength has been reached, remove the floor props with XF drop heads of slab 2, and put up reshoring props.
- Pour slab 3.
Slabs 1 and 2 are completely stress-relieved and carry 100% of their own weight + 50% of the concreting load.
- When stripping the formwork, release the load from the floor props evenly and gradually, in order to prevent overloading.

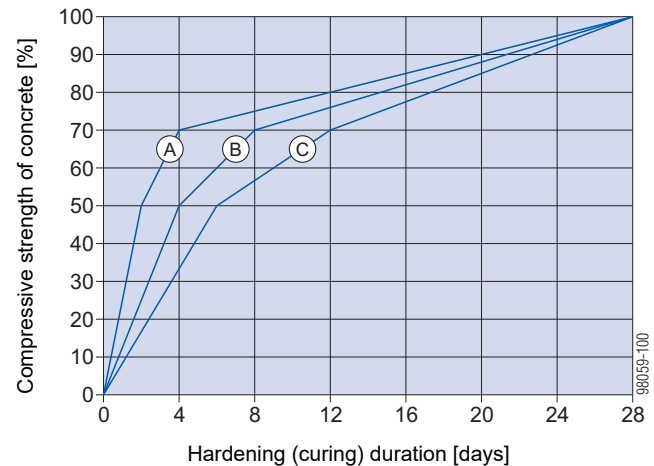
Strength development in the new concrete

Rough reference values can be found in DIN 1045-3:2008, Table 2. The length of time until 50 percent of the final (28-day) strength is reached can be read off from this Table as a function of the temperature and the type of concrete.

The values are only valid if the concrete is given correct, appropriate curing throughout the entire period.

For a concrete with medium strength development, the following inferred diagram may thus be used.

Concrete-strength development – medium



A $\vartheta \geq 15^\circ$

B $\vartheta \geq 10^\circ$

C $\vartheta \geq 5^\circ$

Deflection of the new concrete

The concrete's modulus of elasticity develops faster than compressive strength. At 60 % of its compressive strength f_{ck} , the concrete has already reached approximately 90% of its modulus of elasticity $E_{c(28)}$.

The increase in the elastic deformation taking place in the new concrete is thus only negligible.

The creep deformation, which only finally ceases after several years, is several times more than the elastic deformation.

Early striking – e.g. after 3 days instead of 28 – thus only leads to an increase in the total deformation of less than 5%.

The part of this deformation accounted for by creep deformation, however, may be anything between 50% and 100% of the standard value, due to such variable influences as the strength of the aggregates, and the atmospheric humidity. This means that the total deflection of the floor-slab is practically independent of the time at which the formwork was struck.

Cracks in new concrete

The bonding strength between the reinforcement steel and the concrete develops more rapidly in the new concrete than does its compressive strength. This means that early stripping does not have any negative influence upon the size and distribution of cracks on the tension side of reinforced concrete constructions.

Other cracking phenomena can be countered effectively by appropriate curing methods.

Curing of new concrete

New site-placed concrete is exposed to influences which may cause cracking and slow down its strength development:

- premature drying
- over-rapid cooling in the first few days
- excessively low temperatures or frost
- mechanical damage to the surface of the concrete
- hydration heat
- etc.

The simplest precaution is to leave the formwork on the concrete surface for longer. As well as the familiar extra curing measures, this measure should be carried out in any case.

Removing the load from the formwork from wide-spanned floor-slabs with support centres of over 7.5m

In the case of thin, wide-spanned concrete floor-slabs (e.g. in multistorey car parks), the following points must be remembered:

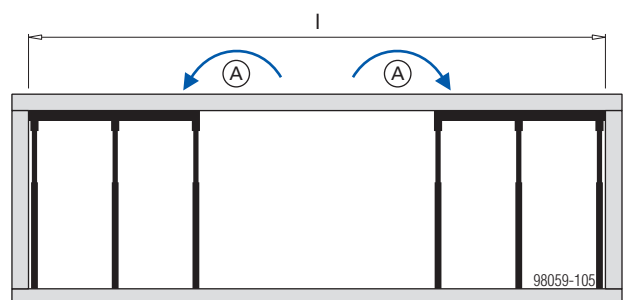
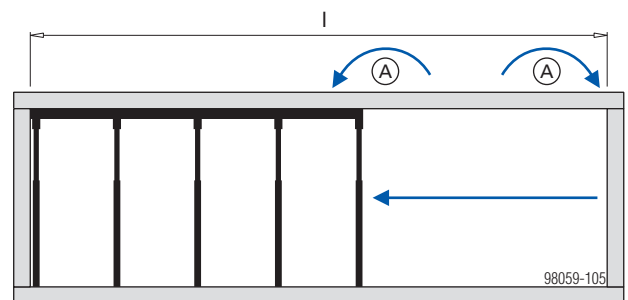
- When the formwork beneath these floor-slab spans is released (i.e. when the load is taken off the floor props), the floor props that are still in place are briefly subjected to additional loads. This may lead to overloading, and to the floor props being damaged.
- Please consult your Doka technician.



NOTICE

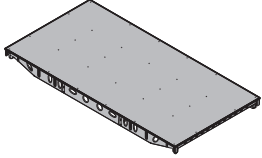
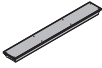
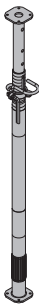
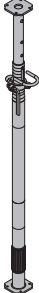
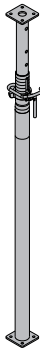
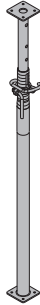


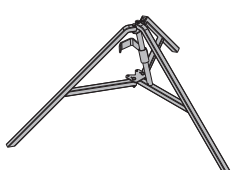
As a basic rule:



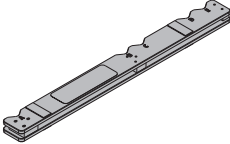
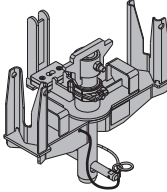
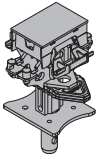

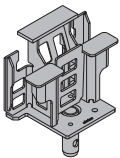
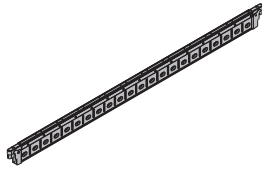


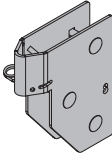
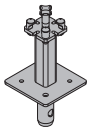
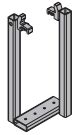

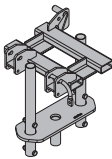
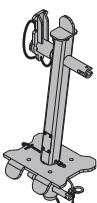
- Stress-release should always be carried out working **from one side towards the other, or from the middle of the floor slab (mid-span) towards the slab-edges**. For wide spans, this procedure **MUST** be followed!
- Stress-release must **NEVER** be carried out **from both sides towards the middle!**


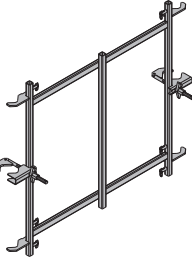
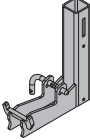
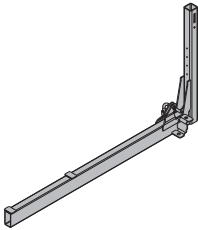

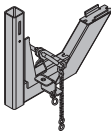
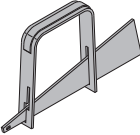
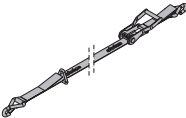


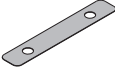

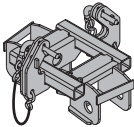
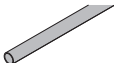
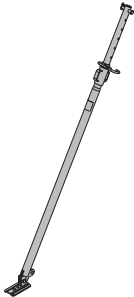


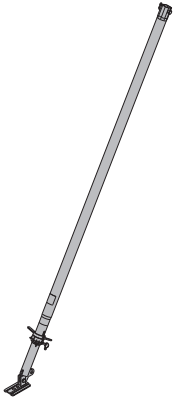
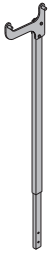
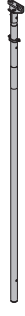


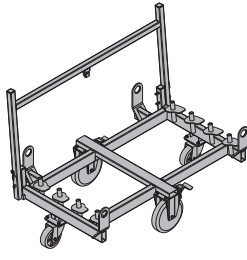
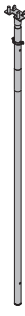
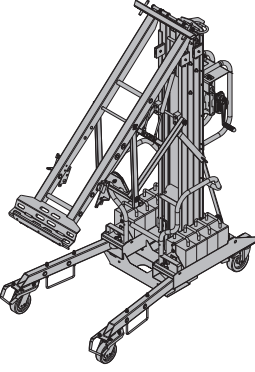

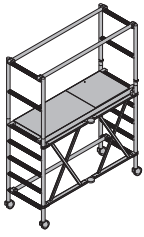
l ... Effective floor-slab spans of 7.50 m and over

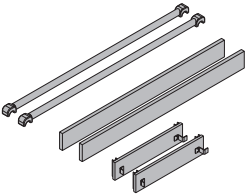
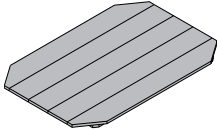
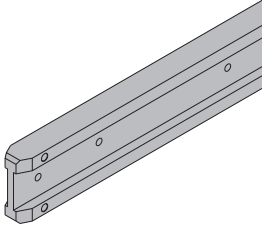
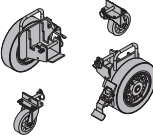
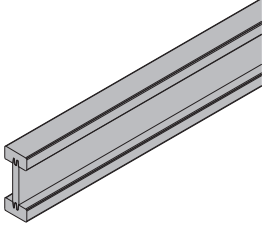
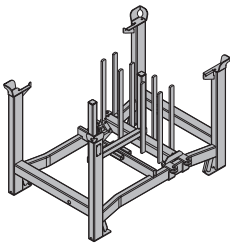
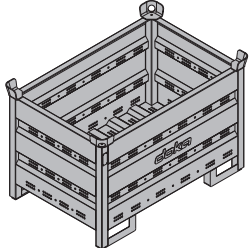
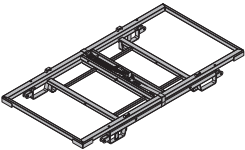
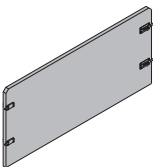
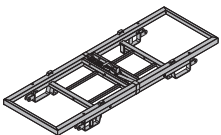
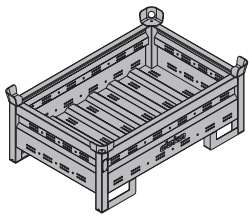
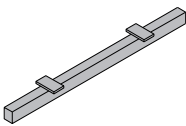
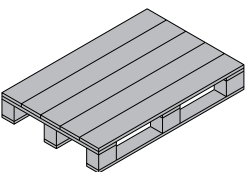
A Load redistribution

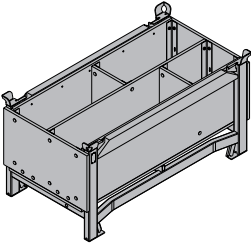
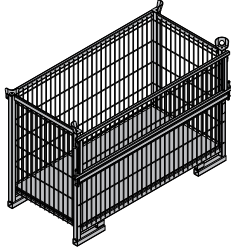
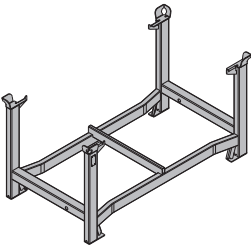
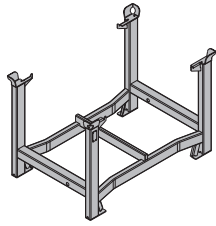
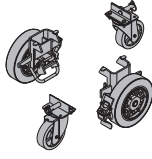
	[kg]	Article N°		[kg]	Article N°
Dokadek panel 1.22x2.44m Dokadek panel 0.81x2.44m Dokadek panel 1.22x1.22m Dokadek panel 0.81x1.22m Dokadek-Element	49.9 40.1 27.0 22.0	586501000 586502000 586566000 586567000		Galvanised Painted yellow	
Dokadek closure panel 0.15x2.44m Dokadek closure panel 0.15x1.22m Dokadek closure panel 0.15x0.81m Dokadek-Zwischelement	10.5 4.8 3.0	586552000 586507000 586508000		Galvanised Painted yellow	
Doka floor prop Eurex 30 top 250 Length: 148 - 250 cm Doka floor prop Eurex 30 top 300 Length: 173 - 300 cm Doka floor prop Eurex 30 top 350 Length: 198 - 350 cm Doka floor prop Eurex 30 top 400 Length: 223 - 400 cm Doka floor prop Eurex 30 top 450 Length: 248 - 450 cm Doka floor prop Eurex 30 top 550 Length: 303 - 550 cm Doka-Deckenstütze Eurex 30 top	12.8 16.4 20.7 24.6 29.1 38.6	586092400 586093400 586094400 586095400 586119400 586129000		Galvanised	
Doka floor prop Eurex 20 top 250 Length: 148 - 250 cm Doka floor prop Eurex 20 top 300 Length: 173 - 300 cm Doka floor prop Eurex 20 top 350 Length: 198 - 350 cm Doka floor prop Eurex 20 top 400 Length: 223 - 400 cm Doka floor prop Eurex 20 top 550 Length: 298 - 550 cm Doka floor prop Eurex 20 top 700 Length: 383 - 700 cm Doka-Deckenstütze Eurex 20 top	12.7 14.3 17.4 21.6 32.3 48.0	586086400 586087400 586088400 586089400 586090400 586139000		Galvanised	
Doka floor prop Eurex 30 eco 250 Length: 148 - 250 cm Doka floor prop Eurex 30 eco 300 Length: 173 - 300 cm Doka floor prop Eurex 30 eco 350 Length: 198 - 350 cm Doka floor prop Eurex 30 eco 400 Length: 223 - 400 cm Doka floor prop Eurex 30 eco 450 Length: 248 - 450 cm Doka-Deckenstütze Eurex 30 eco	12.8 16.3 20.7 24.2 28.5	586000000 586001000 586002000 586003000 586004000		Galvanised	
Doka floor prop Eurex 20 eco 250 Length: 148 - 250 cm Doka floor prop Eurex 20 eco 300 Length: 173 - 300 cm Doka floor prop Eurex 20 eco 350 Length: 198 - 350 cm Doka floor prop Eurex 20 eco 400 Length: 223 - 400 cm Doka floor prop Eurex 20 eco 450 Length: 248 - 450 cm Doka floor prop Eurex 20 eco 550 Length: 298 - 550 cm Doka-Deckenstütze Eurex 20 eco	11.5 14.0 16.9 20.5 24.1 32.0	586270000 586271000 586272000 586273000 586275000 586276000		Galvanised	
Removable folding tripod top Stützbein top	12.0	586155500		Galvanised Height: 80 cm Delivery condition: folded closed	
Removable folding tripod Stützbein	15.6	586155000		Galvanised Height: 80 cm Delivery condition: folded closed	
Removable folding tripod eco Stützbein eco	9.4	586294000		Galvanised Height: 67.5 cm Delivery condition: folded closed	

	[kg]	Article N°		[kg]	Article N°
Removable folding tripod 1.20m Stützbein 1,20m  Galvanised Height: 120 cm Delivery condition: folded closed	20.7	586145000	Dokadek wall head Dokadek-Wandkopf  Galvanised Height: 56 cm	4.3	586536000
Dokadek wall clamp Dokadek-Wandhalter  Dark brown Length: 138 cm	4.5	183063000	Dokadek XF edge head 18mm Dokadek XF edge head 21mm Dokadek XF-Randkopf  Galvanised Height: 32 cm	7.5 7.4	586547000 586548000
Dokadek XF drop head Dokadek XF-Falkopf  Galvanised Height: 33 cm	9.4	586505000	Floor prop spring clamp Federklammer Deckenstütze  Galvanised	0.08	586169000
Dokadek XF wall head Dokadek XF-Wandkopf  Galvanised Height: 33 cm	6.3	586542000	Dokadek infill beam 2.44m 18mm Dokadek infill beam 1.22m 18mm Dokadek infill beam 0.81m 18mm Dokadek infill beam 2.44m 21mm Dokadek infill beam 1.22m 21mm Dokadek infill beam 0.81m 21mm Dokadek infill beam 2.44m 27mm Dokadek infill beam 1.22m 27mm Dokadek infill beam 0.81m 27mm Dokadek-Ausgleichsträger  Galvanised	16.9 8.7 6.0 16.6 8.5 6.0 16.7 8.6 5.7	586509000 586510000 586511000 586512000 586513000 586514000 586515000 586516000 586517000
Spring locked connecting pin D16 with eye Federbolzen D16 mit Auge  Galvanised Length: 16 cm	0.27	586564000			
Fastening bolt D16/130 Absteckbolzen D16/130  Galvanised	0.24	586533000	Dokadek infill-beam shoe 18mm Dokadek infill-beam shoe 21mm Dokadek-Ausgleichsträgerschuh  Galvanised Height: 20 cm	1.7 1.8	586568000 586569000
Dokadek support head Dokadek-Auflagerkopf  Galvanised Height: 33 cm	2.4	586506000	Dokadek suspension clamp H20 Dokadek-Einhänggebügel H20  Galvanised Width: 15 cm Height: 35 cm	1.6	586518000
Spring locked connecting pin 16mm Federbolzen 16mm  Galvanised Length: 15 cm	0.25	582528000	Dokadek timber beam seat H20 Dokadek-Trägeraufnahme H20  Galvanised Height: 35 cm	5.8	586550000
Dokadek corner head Dokadek-Eckkopf  Galvanised Height: 54 cm	5.6	586539000			

	[kg]	Article N°		[kg]	Article N°
Dokadek handrail-post shoe short Dokadek-Stirngeländerschuh <div>  <div> Galvanised Length: 23 cm Height: 56 cm </div> </div>	4.3	586519000	Bracing frame Eurex 1.22m Bracing frame Eurex 0.81m Aufstellrahmen <div>  <div> Galvanised Height: 111 cm </div> </div>	16.0 14.5	586557000 586558000
Dokadek handrail-post shoe short 1.20m Dokadek-Stirngeländerschuh 1,20m <div>  <div> Galvanised Length: 23 cm Height: 27 cm </div> </div>	3.0	586598000			
Dokadek handrail-post shoe long Dokadek-Längsgeländerschuh <div>  <div> Galvanised Length: 125 cm Height: 66 cm </div> </div>	10.1	586520000	Diagonal cross 9.175 Diagonal cross 12.100 Diagonal cross 12.250 Diagonalkreuz <div>  <div> Galvanised Delivery condition: folded closed </div> </div>	6.1 4.6 8.3	582334000 582610000 582616000
Dokadek handrail-post shoe long 1.20m Dokadek-Längsgeländerschuh 1,20m <div>  <div> Galvanised Length: 47 cm Height: 37 cm </div> </div>	5.7	586560000	Bracing clamp B Verschwertungsklammer B <div>  <div> Painted blue Length: 36 cm </div> </div>	1.4	586195000
Lashing strap 5.00m Zurrgurt 5,00m <div>  <div> Yellow </div> </div>	2.8	586018000	Brace stirrup 8 Spannbügel 8 <div>  <div> Galvanised Width: 19 cm Height: 46 cm Width-across: 30 mm </div> </div>	2.7	582751000
Doka express anchor 16x125mm Doka-Expressanker 16x125mm <div>  <div> Galvanised Length: 18 cm Follow the directions in the "Fitting instructions"! </div> </div>	0.31	588631000	Safety plate for brace stirrup 8 Sicherungsblech für Spannbügel 8 <div>  <div> Red Length: 23 cm </div> </div>	0.05	582753000
Doka coil 16mm Doka-Coil 16mm <div>  <div> Galvanised Diameter: 1.6 cm </div> </div>	0.009	588633000	Dokadek plumbing strut connector Dokadek-Justierstützenanschluss <div>  <div> Galvanised Length: 28.5 cm Width: 26 cm Height: 16.6 cm </div> </div>	4.1	586537000
Scaffold tube 48.3mm 0.50m Gerüstrohr 48,3mm 0,50m <div>  <div> Galvanised </div> </div>	1.7	682026000	Plumbing strut 340 IB Justierstütze 340 IB <div>  <div> Galvanised Length: 190.8 - 341.8 cm </div> </div>	16.7	588696000

	[kg]	Article N°		[kg]	Article N°
Plumbing strut 540 IB Justierstütze 540 IB  Galvanised Length: 310.5 - 549.2 cm	30.7	588697000	Dokadek stripping tool Dokadek-Ausschalwerkzeug  Powder-coated yellow Length: 212 cm	5.0	586541000
Dokadek assembling tool B Dokadek-Montagestange B  Aluminium Length: 215 - 387 cm	3.1	586540000	Dokadek stripping tool extension 1.50m Dokadek-Ausschalwerkzeugverlängerung 1,50m  Powder-coated yellow	3.1	586559000
Dokadek assembling tool extension 2.00m Dokadek-Montagestangenverlängerung 2,00m  Aluminium	1.5	586538000	DekDrive DekDrive  Galvanised Length: 145 cm Width: 88 cm Height: 108 cm Delivery condition: folded closed	57.9	586526000
Dokadek suspension tool Dokadek-Einhängestange  Aluminium Head part yellow Length: 215 - 386 cm	3.1	586562000	DekLift 4.50m DekLift 4,50m  Galvanised Follow the directions in the "Operating Instructions"!	368.0	586553000
			CE		
			Platform stairway 0.97m Podesttreppe 0,97m  Aluminium Width: 121 cm Pay attention to the national, technical safety regulations!	23.5	586555000
			Wheel-around scaffold DF Mobilgerüst DF  Aluminium Length: 185 cm Width: 80 cm Height: 255 cm Delivery condition: separate parts	44.0	586157000

	[kg]	Article N°		[kg]	Article N°
Wheel-around scaffold DF accessory set Zubehörset Mobilgerüst DF	13.3	586164000	Crate cover 1.20x0.80m (HT) Kistendeckel 1,20x0,80m (HT)	10.5	176124000
 <p>Aluminium Timber parts varnished yellow Length: 189 cm</p>			 <p>Height: 3.6 cm</p>		
Dokadek system beam H20 eco P 1.10m Dokadek-Systemträger H20 eco P 1,10m	5.8	189959000	Attachable wheelset Aufsteck-Radsatz	27.3	586525000
 <p>Varnished yellow</p>			 <p>Galvanised</p>		
Doka beam H20 eco P 1.10m Doka-Träger H20 eco P 1,10m	5.8	189958000	Dokadek infill beam pallet Dokadek-Ausgleichsträgerpalette	62.0	586528000
 <p>Varnished yellow</p>			 <p>Galvanised Length: 119 cm Width: 79 cm Height: 81 cm</p>		
Multi-trip packaging			Doka multi-trip transport box 1.20x0.80m Doka-Mehrwegcontainer 1,20x0,80m	70.0	583011000
Dokadek panel pallet 1.22x2.44m Dokadek-Elementpalette 1,22x2,44m	75.0	586523000	 <p>Galvanised Height: 78 cm</p>		
 <p>Galvanised Height: 26 cm</p>			Multi-trip transport box partition 0.80m Multi-trip transport box partition 1.20m Mehrwegcontainer Unterteilung	3.7 5.5	583018000 583017000
Dokadek panel pallet 0.81x2.44m Dokadek-Elementpalette 0,81x2,44m	66.0	586524000	 <p>Steel parts galvanised Timber parts varnished yellow</p>		
 <p>Galvanised Height: 26 cm</p>			Doka multi-trip transport box 1.20x0.80x0.41m Doka-Mehrwegcontainer 1,20x0,80x0,41m	42.5	583009000
Dokadek supp. timber 1.73m (HT) Dokadek-Unterlagsholz 1,73m (HT)	5.7	176179000	 <p>Galvanised</p>		
 <p>Width: 18 cm Height: 11.8 cm</p>					
Wooden pallet 1.20x0.80m (HT) Holzpalette 1,20x0,80m (HT)	26.5	176125000			
 <p>Height: 17.6 cm</p>					

	[kg]	Article N°		[kg]	Article N°
Doka accessory box Doka-Kleinteilebox <div>  <p> Timber parts varnished yellow Steel parts galvanised Length: 154 cm Width: 83 cm Height: 77 cm </p> </div>	106.4	583010000			
Doka skeleton transport box 1.70x0.80m Doka-Gitterbox 1,70x0,80m <div>  <p> Galvanised Height: 113 cm </p> </div>	87.0	583012000			
Doka stacking pallet 1.55x0.85m Doka-Stapelpalette 1,55x0,85m <div>  <p> Galvanised Height: 77 cm </p> </div>	41.0	586151000			
Doka stacking pallet 1.20x0.80m Doka-Stapelpalette 1,20x0,80m <div>  <p> Galvanised Height: 77 cm </p> </div>	38.0	583016000			
Bolt-on castor set B Anklemm-Radsatz B <div>  <p>Painted blue</p> </div>	33.6	586168000			

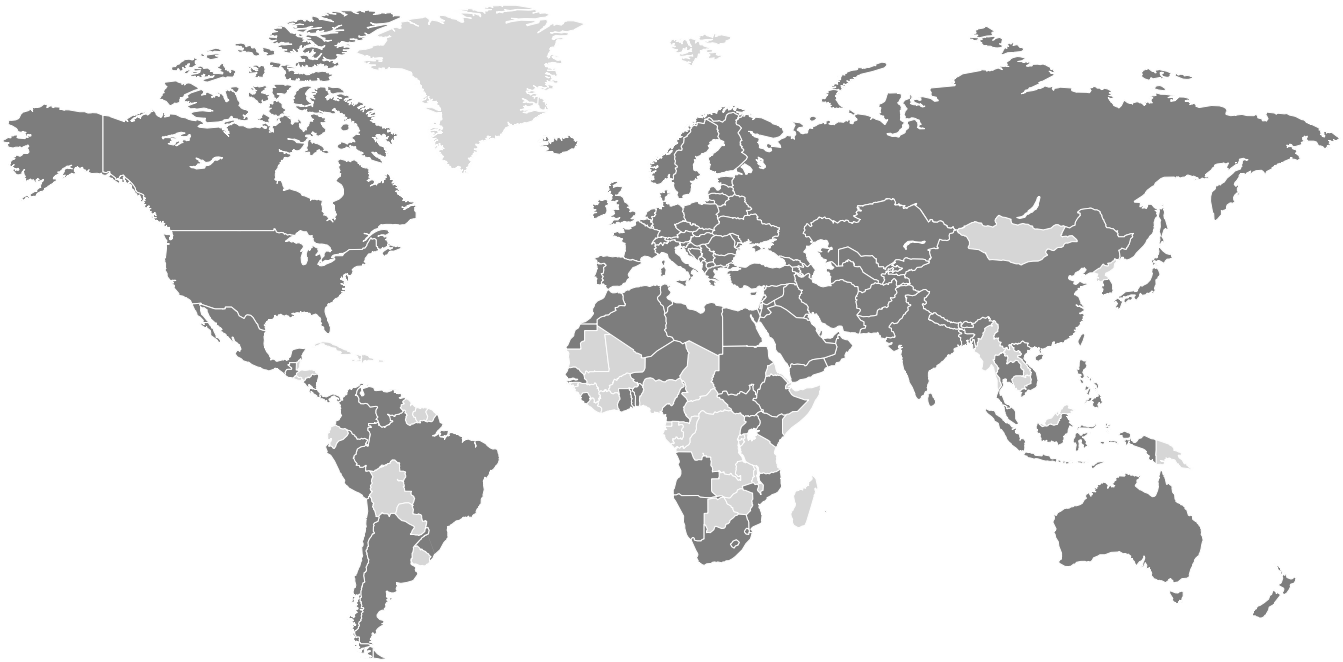
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