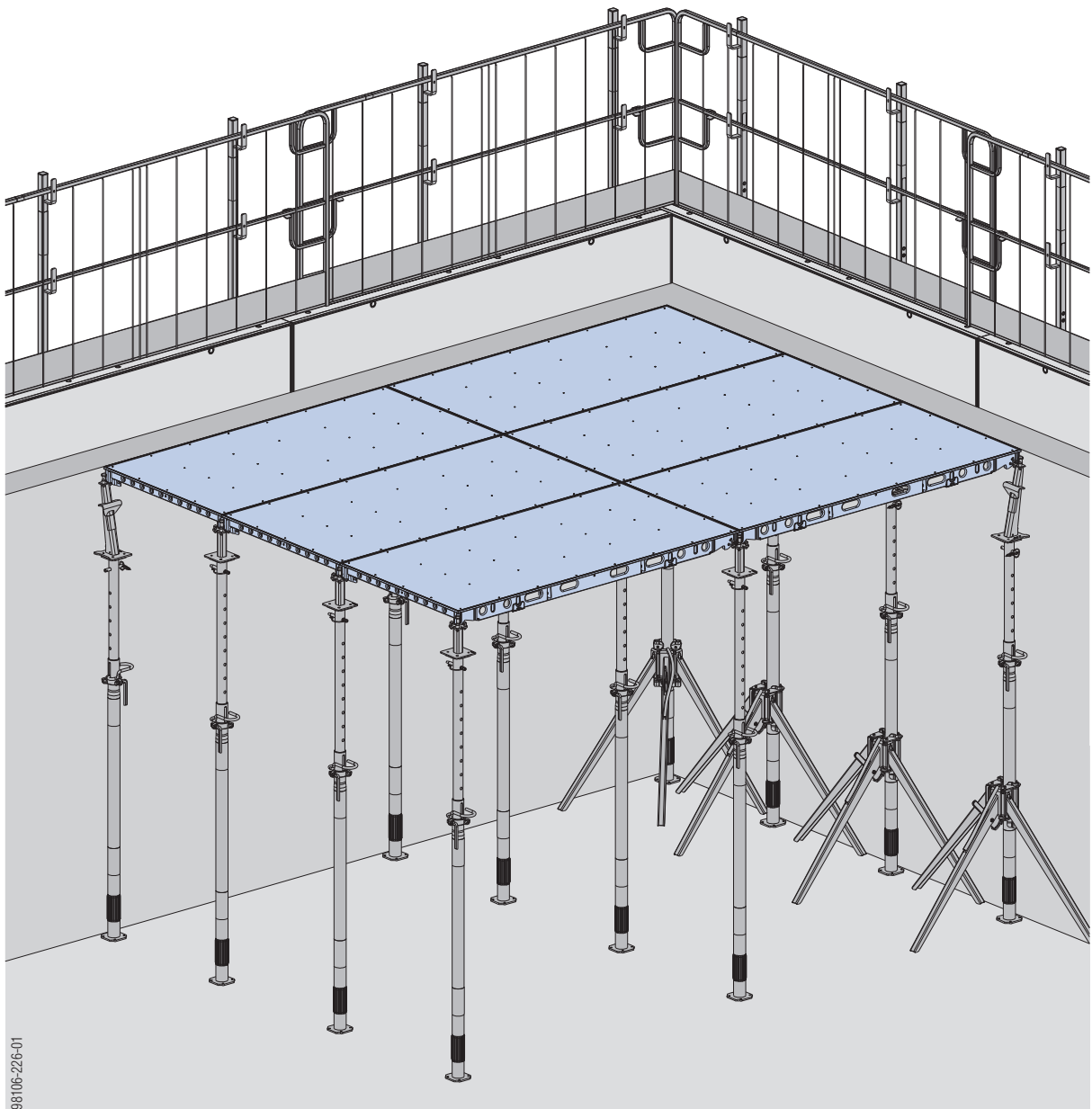


The Formwork Experts.

Panel floor formwork Dokadek 20

User Information

Instructions for assembly and use (Method statement)



98106-226-01

Contents

4	Introduction
4	Elementary safety warnings
7	Services
9	Panel floor formwork Dokadek 20
10	System overview
12	Instructions for assembly and use (Method statement)
12	Ground rules
20	Method statement overview
21	Operating with Dokadek 20 assembling tool
32	Operating with suspension tool
34	Forming infill zones
43	Floor formwork around edges
52	Early stripping without drop head without activation of the slab
54	Additional areas of use
54	Sloping slabs
58	Additional precautions for slab thicknesses of up to 50 cm
63	General
63	Transporting, stacking and storing
75	Cleaning and care of your equipment
77	Reshoring props, concrete technology and stripping out
80	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.

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.

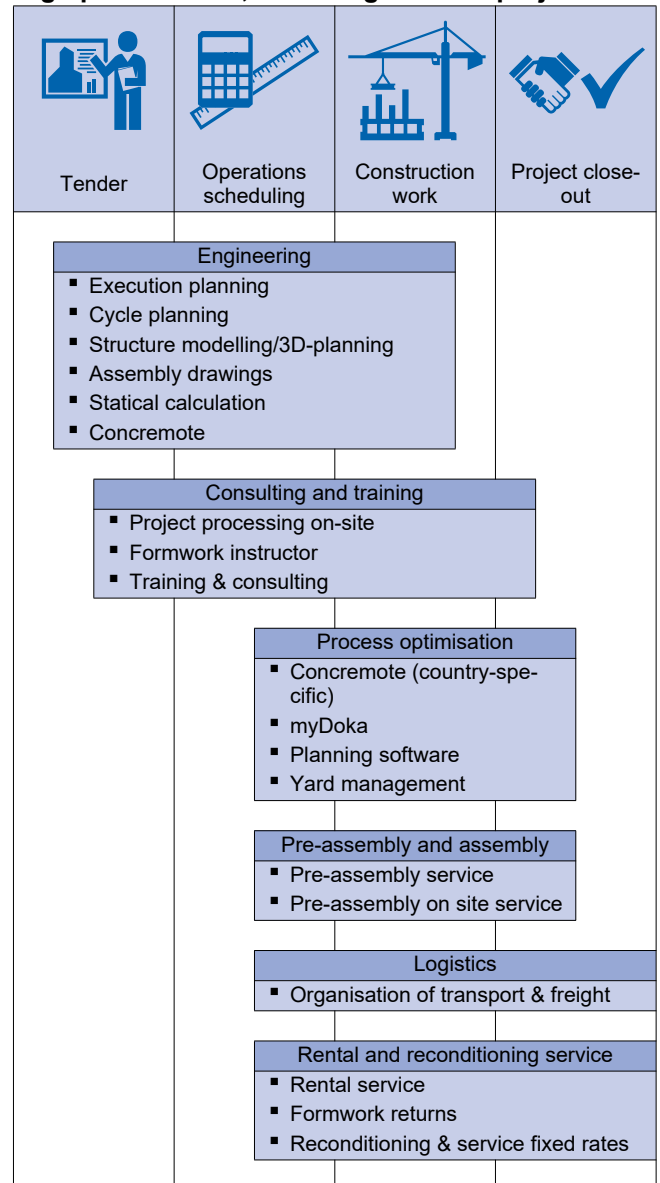
Just-in-time availability

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 20

The lightweight panel floor formwork for residential building construction in France

Dokadek 20, the beamless handset formwork with yellow coated frame and integrated sheet makes ergonomic forming possible. The system is designed for slab thicknesses up to 50 cm and floor-to-ceiling heights up to 3.74 m.

Safe working with optimised system properties

- Safe set up, working from floor level
- Safe dismantling, because the form-ply is integral to the panel
- Safe working in infill zones, with the Doka double alu beam tec-2 with a maximum distance of 13 cm.
- Heads with built-in anti-liftout guard prevent panels from accidentally falling off.
- Compatible with the Doka edge protection system XP, for high workplace safety.

Ergonomic working thanks to the system's very low weight

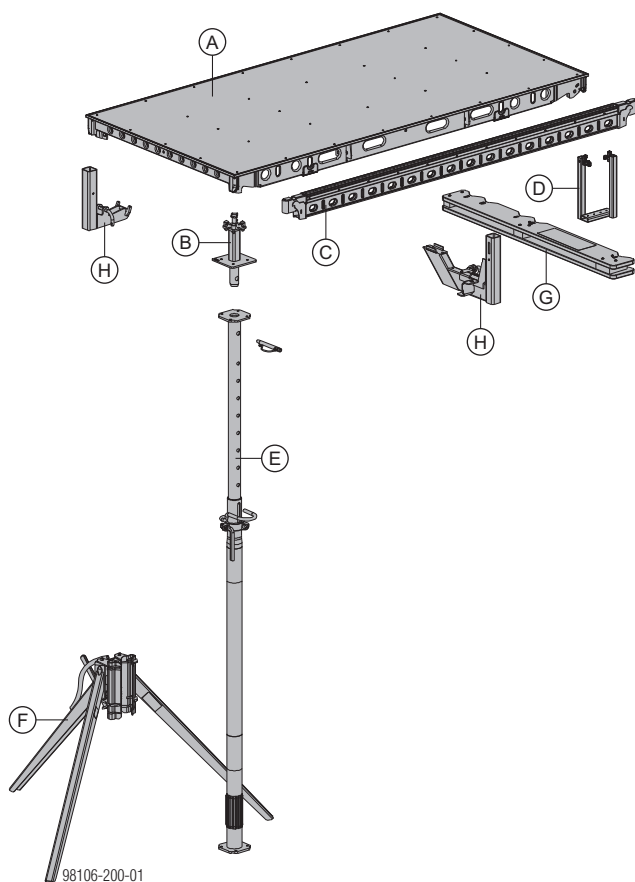
- Reduced system weight per square metre ensures high efficiency during formwork set-up and removal
- Low work-strain as the maximum weight to be lifted by one worker is only 17 kg
- Back-friendly working, with panels that can be tilted up easily from floor-level
- Ergonomic working, with a very limited amount of work performed above shoulder level during formwork set-up and removal

Rapid construction progress thanks to reduced set-up and take-down times

- High forming rate thanks to 2 m² large panels.
- Fast formwork set-up as hardly any crane-time is needed.
- Efficient solutions for infill zones deliver time savings.

System overview

Basic design concept

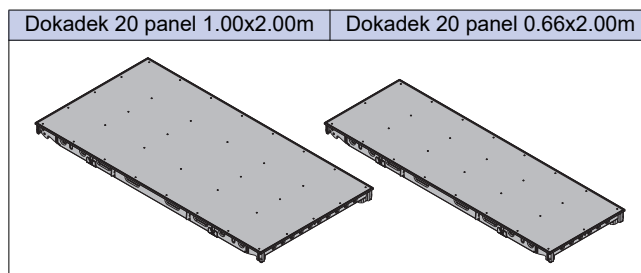


- A** Dokadek 20 panels
- B** Dokadek heads
- C** Dokadek 20 infill beam
- D** Dokadek 20 suspension clamp H20 or tec-2
- E** Doka floor props Eurex 20 top
- F** Removable folding tripod
- G** Dokadek 20 wall clamp
- H** Dokadek handrail-post shoes

The Dokadek 20 system components

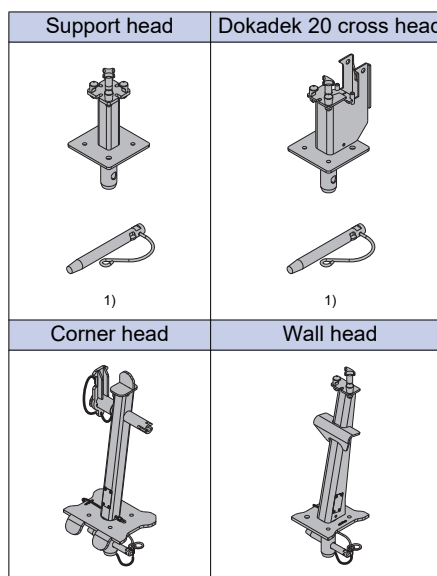
Dokadek panels

- galvanised, yellow coated steel frame with integrated formwork sheet
- delivered on Dokadek 20 panel pallets



Dokadek heads

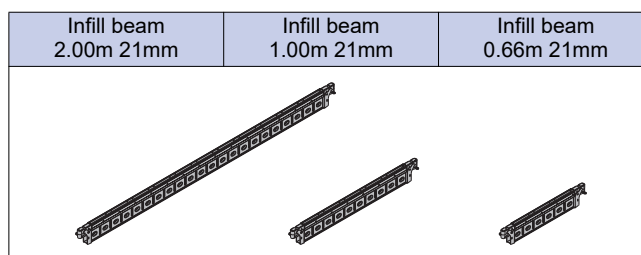
- for holding the Dokadek panels safely
- with a built-in anti-liftout guard for the Dokadek panels



¹⁾ Spring locked connecting pin 16mm not included with product

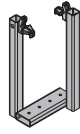
Dokadek 20 infill beam

- for infilling along edges and around columns
- available for a formwork-sheet thickness of 21mm
- delivered on Dokadek 20 infill beam pallets



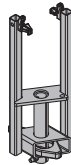
Dokadek 20 suspension clamp tec-2

These are hooked into the infill beams and make it possible to transition from the Dokadek 20 system to the Dokaflex tec-2 system.



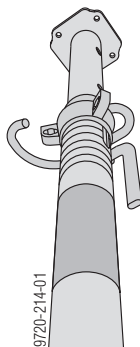
Dokadek 20 lowering clamp tec-2

These are hooked into the infill beam and enable the formwork in the infill zone to be lowered by 12 cm.



Doka floor props Eurex 20 top

- Approved in accordance with Z-8.311-905
- EN 1065-compliant floor prop



High load-bearing strength plus many practical details that help to make handling easier.

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



Follow the directions in the 'Floor prop Eurex top' User Information booklet.



WARNING

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

Note:

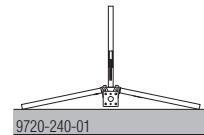
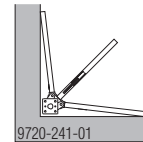
Panel floor formwork Dokadek 20 can also be propped with Doka floor props Eurex 30 top in any extension length.

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



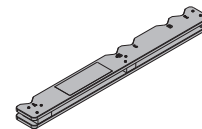
CAUTION

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

► Use as a set-up aid only!

Dokadek 20 wall clamp

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



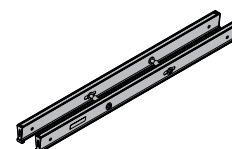
Dokadek handrail-post shoes

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.

Dokadek handrail-post shoe short 1.20m	Dokadek 20 handrail-post shoe long 1.20m

Doka double aluminium beam tec-2 1.95m

Are used for constructing closures at columns and closures of the Dokaflex tec-2 plus system.



Instructions for assembly and use (Method statement)

Ground rules

Dokadek 20 panels

Permitted slab thickness [cm]

Permitted slab thickness	Flatness deviation
≤ 20	l/500
> 20 - 25	l/400

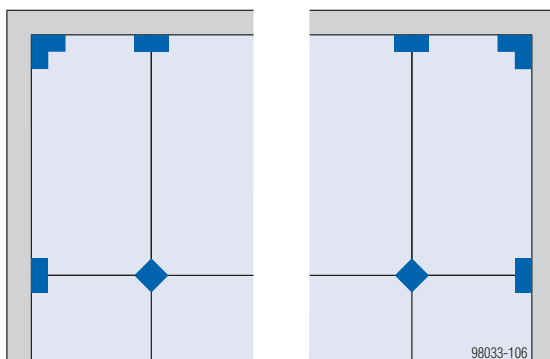
Dokadek heads



WARNING

► The Dokadek heads must always be fixed to the floor prop with the correct pin.

Position of the Dokadek heads



Legend

Support head	Corner head	Wall head
1)		

1) Spring locked connecting pin 16mm not included with product

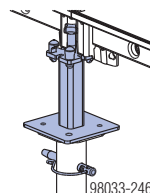


NOTICE

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

Installation examples

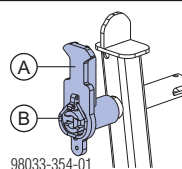
Support head



Spring locked connecting pin 16mm not included with product

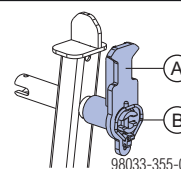
Corner head

Used in left-hand corner

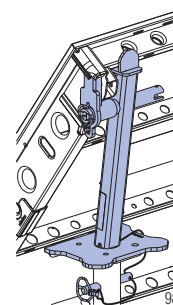
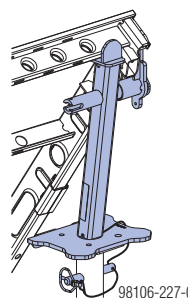


Necessary position of the reversible arm (fix with linch pin 6x42mm)

Used in right-hand corner



Necessary position of the reversible arm (fix with linch pin 6x42mm)

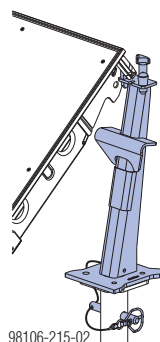


A Reversible arm

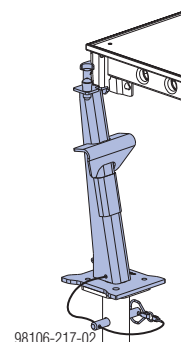
B Linch pin 6x42mm

Wall head

Used at narrow side of formwork



Used at broadside of formwork



Doka floor props Eurex 20 top



WARNING

- Floor props fitted with corner heads or wall heads must not be used extended to their full length!

This means that the props must be shortened by 24 cm before being used:

Example: Floor prop Eurex 20 top 300 with support head can be extended to max. 276 cm (for a max. floor-to-ceiling height of 324 cm).



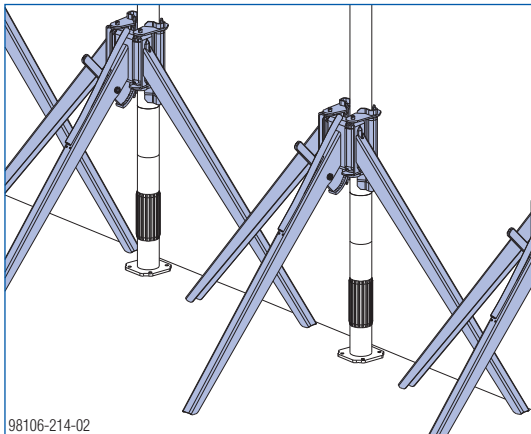
We recommend using props of the same type for the typical and infill zone, i.e. when combining Dokadek and Dokaflex.

Removable folding tripod 'top'



NOTICE

- Do not oil or grease the clamping mechanism of the removable folding tripod.



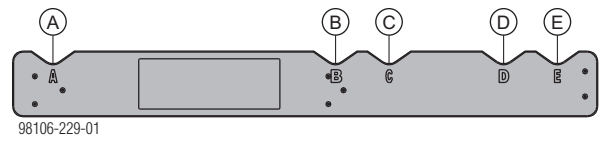
CAUTION

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.

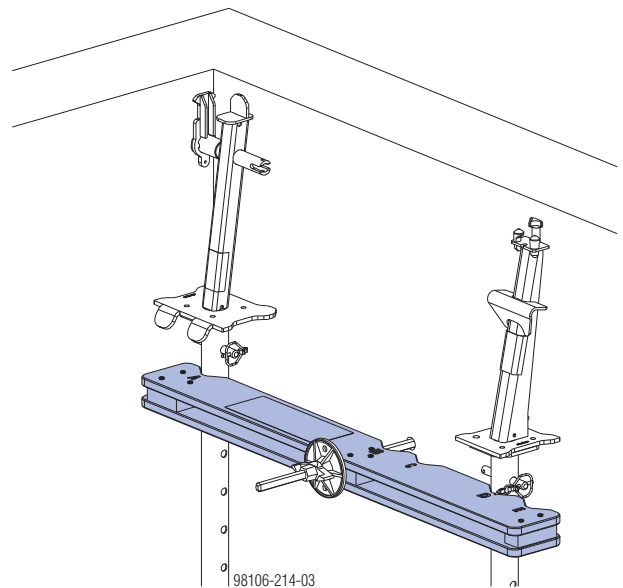
Dokadek 20 wall clamp

Determining the required spacing of the floor props

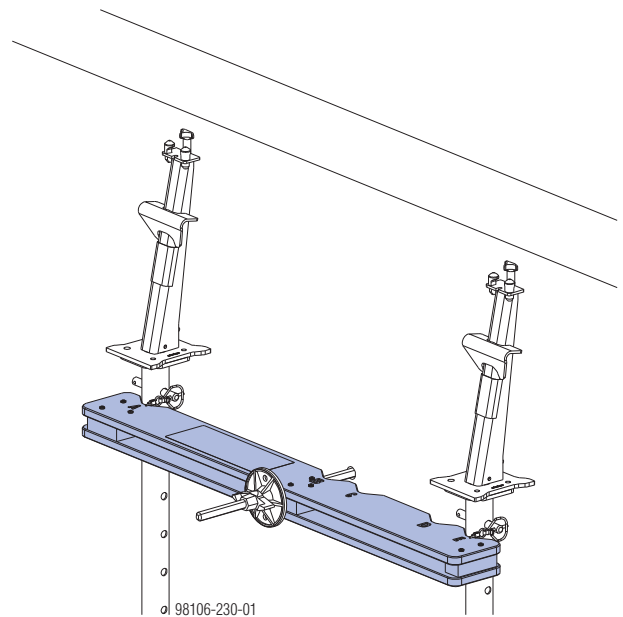


Head on 1st prop is in Position A.	Width of panel to be shored	Position of 2nd prop
Corner head	0.66 m	B
Wall head	0.66 m	C
Corner head	1.00 m	D
Wall head	1.00 m	E

Practical examples



Starting in a corner (with Dokadek panel 1.00x2.00m)



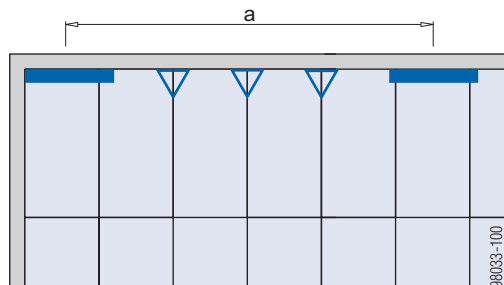
Starting from a wall (with Dokadek panel 1.00x2.00m)

Stability of formwork

Stabilising the starting section during assembly

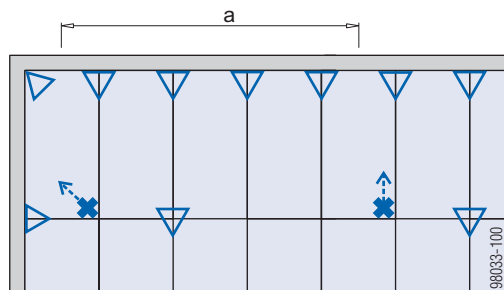
Starting from a wall

Shoring height < 3.30 m



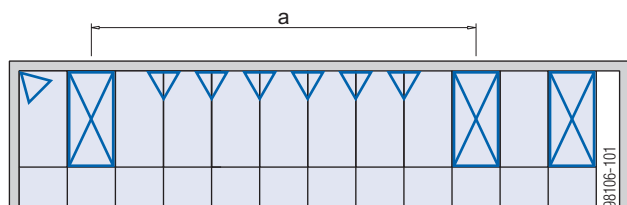
a ... fixing-point on 1st panel, every max. 8.00 m **and** on last panel

Special precautions e.g. if it is not possible to use a wall clamp.



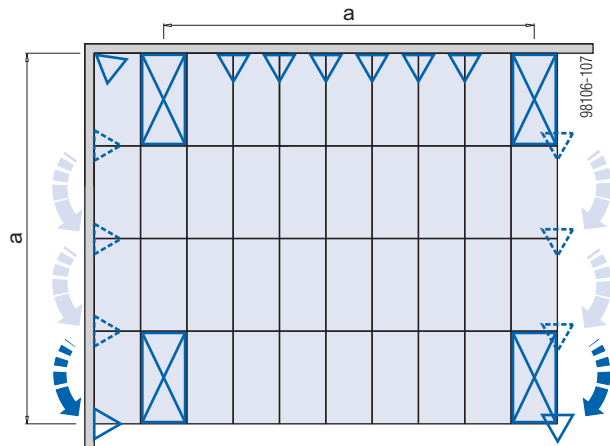
a ... fixing-point on 1st panel, every max. 8.00 m **and** on last panel

with Bracing frame Eurex 1.00m



a ... braced unit on 2nd panel, every max. 8.00 m **and** on last panel

with Bracing frame Eurex 1.00m > 3,30 - 3,74 m



Until the Bracing frame Eurex 1.00m is installed, in each new row of panels the removable folding tripods at the first panel and the last panel have to be repositioned.

Bracing frame used along a wall

Doka floor prop Eurex 20 top	Inner tube	Outer tube
250	✓	✓
300	✓	✓
350	✓	✓
400	✓	—
450	✓	—
550	—	—



CAUTION

▶ When engaging and tilting up the panel, give the floor props additional fixing – i.e. as well as with the removable folding tripods – to prevent them tipping over.

Legend

	Doka floor prop
	Removable folding tripod
	Fixing point (e.g. with tie-back) Arrow = direction of the tie-back
	Braced unit with Bracing frames Eurex 1.00m and Diagonal crosses 9.200

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:

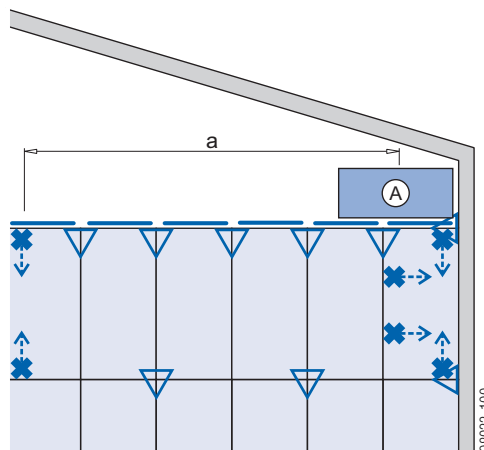
1. Put up the props and secure them so that they cannot fall over.
2. Engage infill beams into the system heads, to fix the props the correct distance apart.
3. Engage the first panel into the system heads.
4. Swing panel up.
5. Fix the panel.



CAUTION

▶ When engaging and tilting up the panel, give the floor props additional fixing – i.e. as well as with the removable folding tripods – to prevent them tipping over.




Shoring height < 3.30 m

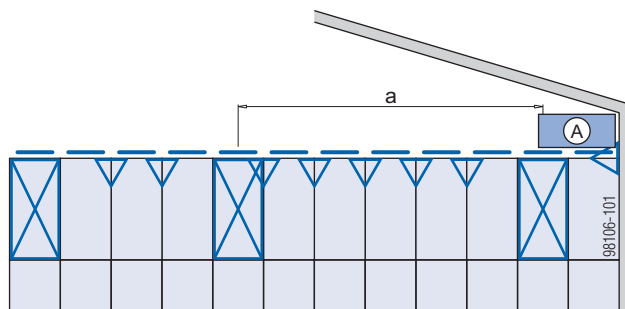


a ... fixing-point on 1st panel, every max. 8.00 m **and** on last panel

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

Legend






	Removable folding tripod
	Fixing point (e.g. with tie-back) Arrow = direction of the tie-back
	Dokadek infill beam

with Bracing frame Eurex 1.00m

a ... 8,00 m and on last panel

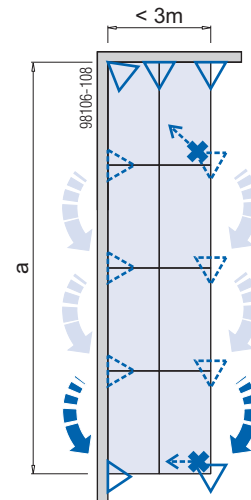
A Mobile scaffold tower, e.g. Wheel-around scaffold DF

Legend

	Removable folding tripod (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



Rooms < 3 m wide

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



a ... fixing-point on 1st panel, every max. 8.00 m **and** on last panel

Legend

	Removable folding tripod
	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, plumbing struts 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'.

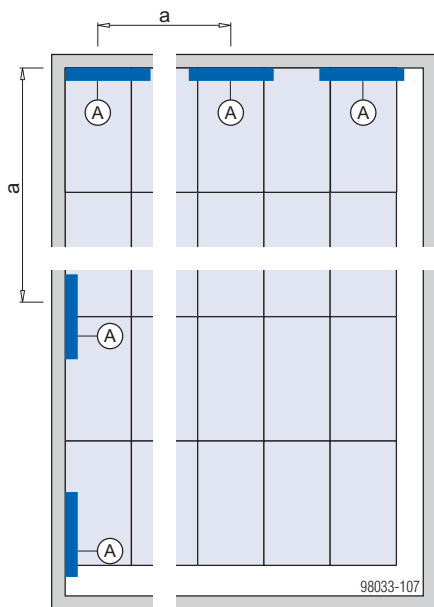
- ▶ Formwork next to walls must be secured against tip-over as shown in the illustrations (also during set-up).



- ▶ Once the 1st row of panels has been fixed (e.g. with wall clamps or lashing straps) 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!

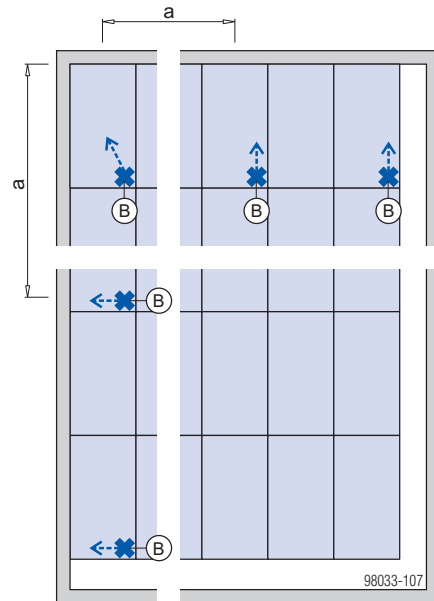
Fixing point with wall clamps



a ... fixing-point on 1st panel, every max. 8.00 m **and** on last panel

A Fixing point with wall clamps

Fixing point with lashing straps

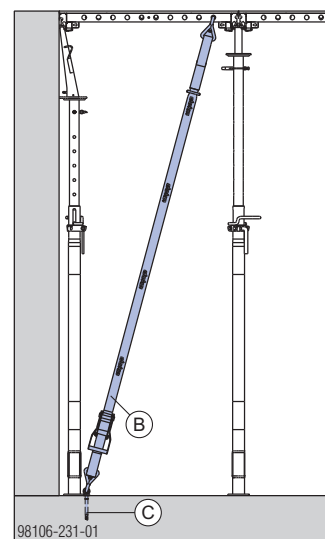


a ... fixing-point on 1st panel, every max. 8.00 m **and** on last panel

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

Practical example

Tip-over protection using lashing straps

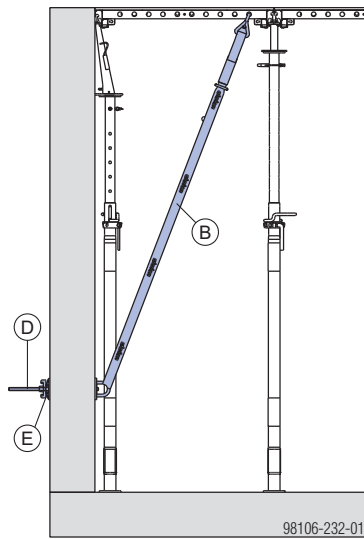


B Lashing strap 5.00m

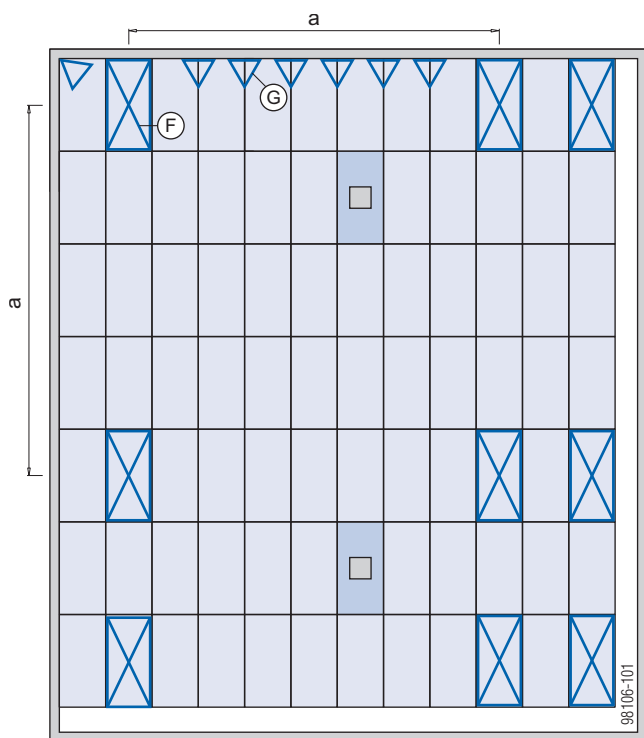
C Doka express anchor 16x125mm



- 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 ... braced unit on 2nd panel, every max. 8.00 m **and** on last panel

F Braced unit with Bracing frames Eurex 1.00m and Diagonal crosses 9.200

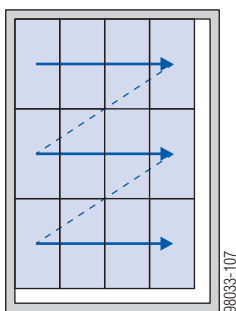
G Removable folding tripod

Note:

It is not possible to start with a bracing frame in the corner.

Forming up and stripping out

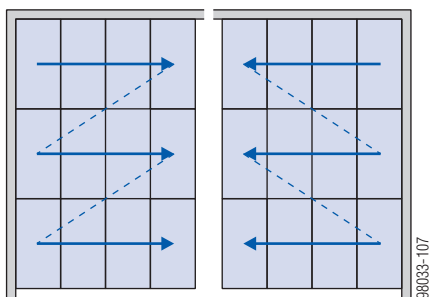
Direction of panel set-up



- 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.

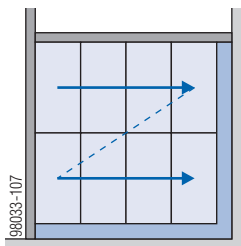


If necessary, you can start setting up the panels working from more than one side. The separate sections that have been formed with Dokadek are then joined by fillers (see the section headed 'Forming infill zones').



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.

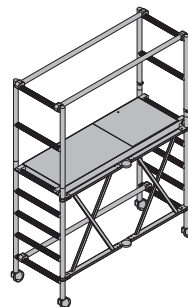
In this case it is advisable to start setting up the formwork in the corner of an inside wall, and to create infill zones at the outside walls.



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

Ladder systems and working scaffolds

Wheel-around scaffold DF



- collapsible wheel-around platform made of light alloy
- variable working heights of up to 3.50 m
- width of scaffold: 0.75 m
- length of scaffold: 1.80 m



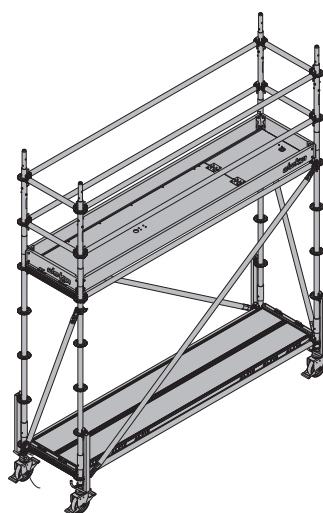
NOTICE

- 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



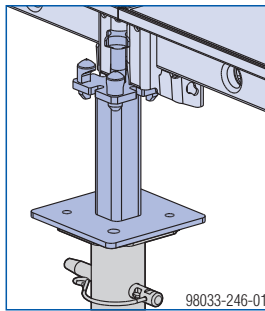
- mobile working scaffold
- variable working heights of up to 3.50 m
- width of scaffold: 0.73 m
- length of scaffold: 2.07 m



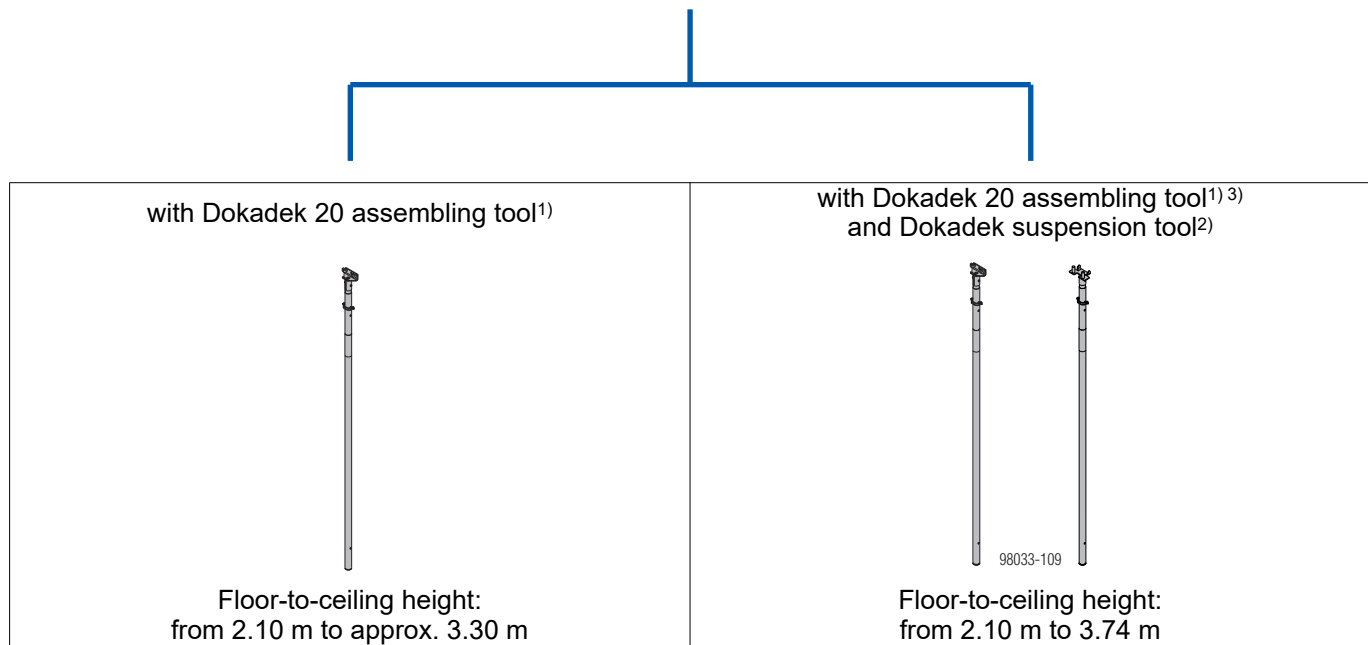
Follow the directions in the User Information booklet!

Method statement overview

Panel floor formwork Dokadek 20



Working from ground level



¹⁾ Head part painted blue

²⁾ Head part painted yellow

³⁾ From room heights of 3.30 m upward, the assembling tool B is needed.

Operating with Dokadek 20 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.



- Set the **assembling tools** to the required length (= approx. room height). Min. 3 assembling tools needed per site-erection team.

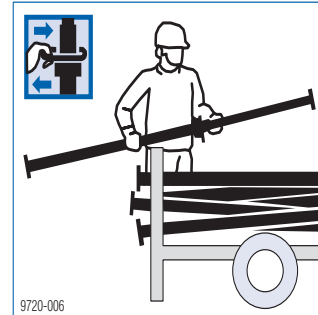


WARNING

- Floor props fitted with corner heads or wall heads must not be used extended to their full length!

This means that the props must be shortened by 24 cm before being used.

- 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.



Required length = room height minus 'a'

Dokadek head used		
Support head	Corner head	Wall head
a ... 25 cm	a ... 50 cm	a ... 50 cm
b ... Room height (e.g. with Eurex 20 top 300: max. 324 cm)		
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 a spring locked connecting pin**.

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!

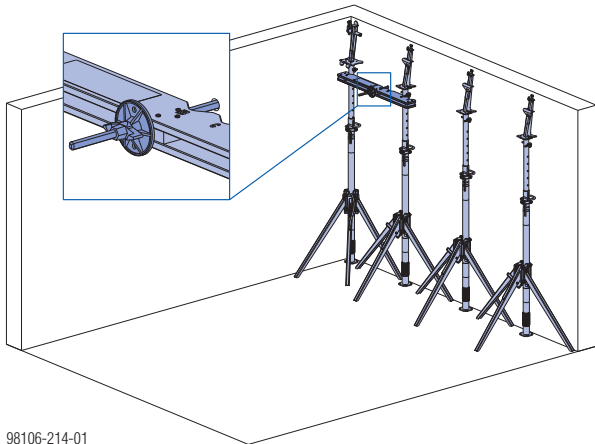
- Make sure that the Removable folding tripod is facing in the right direction.
- The leg with the clamping lever must be pointing in the longitudinal direction of the panels.
- Before anybody steps onto the formwork, check again to make sure that the props have been correctly fixed in the tripods.
-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

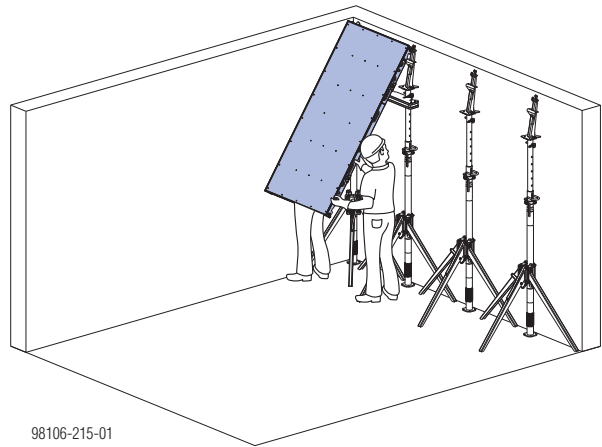


98106-214-01

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.



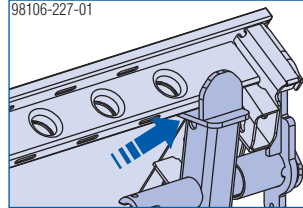
98106-215-01



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

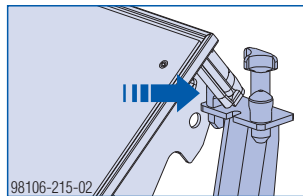
Corner head

98106-227-01

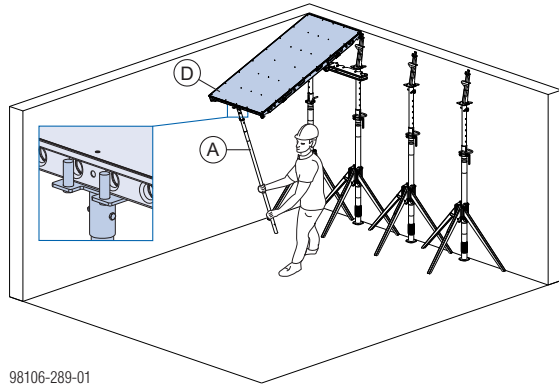


Wall head

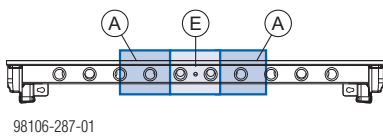
98106-215-02



- Person 1: Position the suspension tool off-centre in the outside cross profile of the panel and lift up the end for propping.



98106-289-01

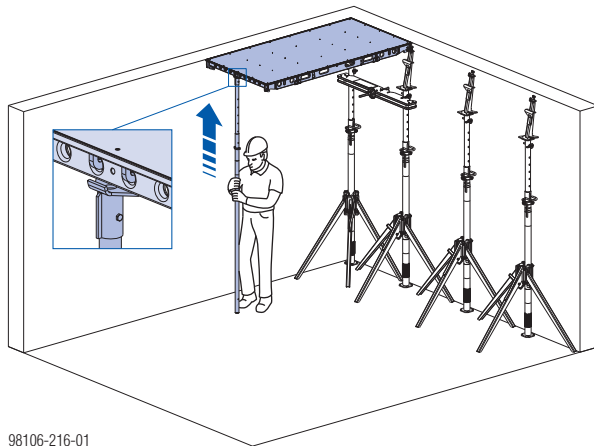
A Dokadek suspension tool**D** Dokadek panel

98106-287-01

A Position of Dokadek suspension tool**E** Position of Dokadek assembling tool B

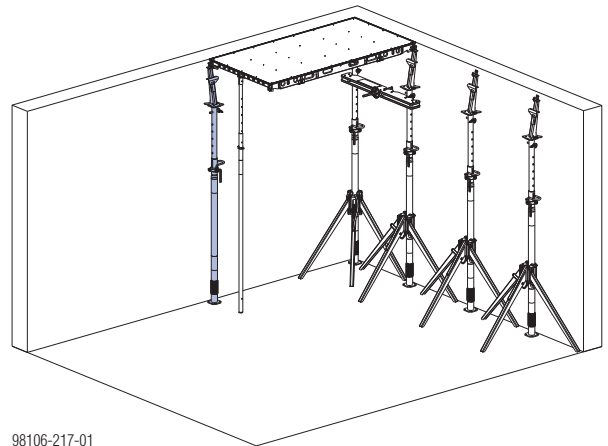
For greater room-heights, use an extra assembling tool (set to a shorter length) for tilting up the panel.

- 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.



98106-216-01

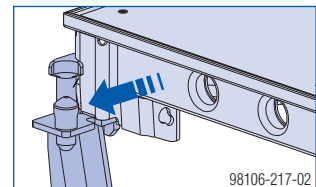
- Person 1: Place a floor prop (plus wall head) beneath the panel. The panel must still also be supported by the assembling tool. (Max. inclination of the assembling tool with respect to the perpendicular: 5°)



98106-217-01

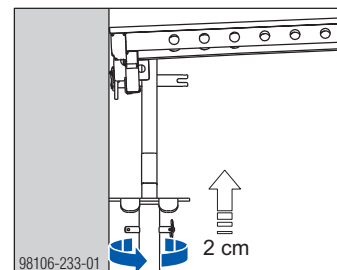


Make sure that the panel is correctly fitted onto the pin of the head.



98106-217-02

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



98106-233-01

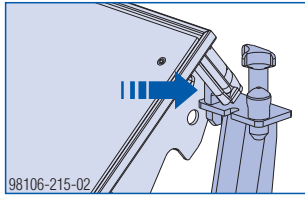
2 cm

Mount further panels

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



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

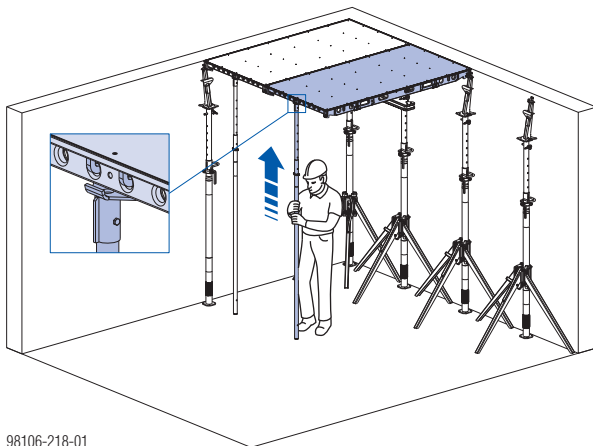


- Person 1: Swing panel up.



The outer tube 2m of the assembling tool has to be removed for pivoting the panels in the 1st row up to the horizontal.

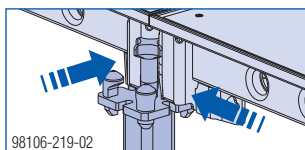
- Person 2: Hook the assembling tool into the middle of the outside cross profile of the panel, raise the panel and secure the assembling tool so that it cannot tip over.



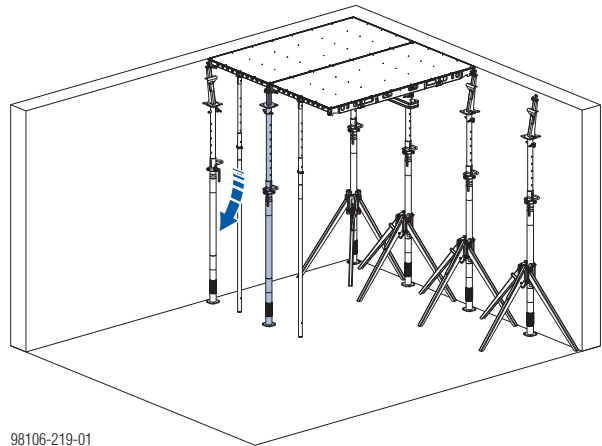
- Person 1: Place a floor prop (plus Support head) beneath both panels.



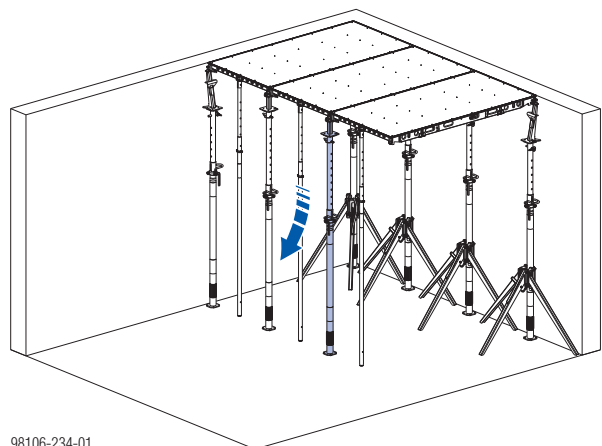
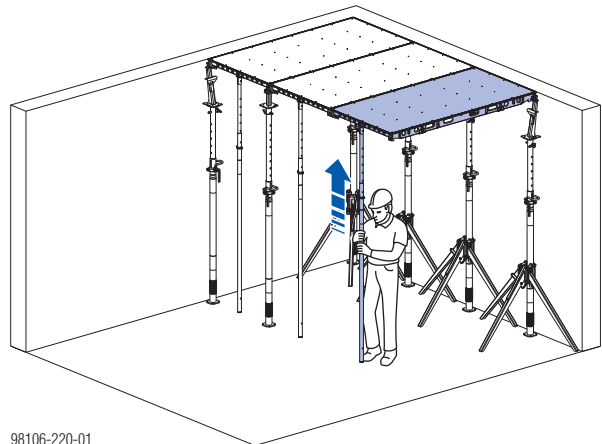
Make sure that the panels are correctly fitted onto the pins of the head.



- 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°)

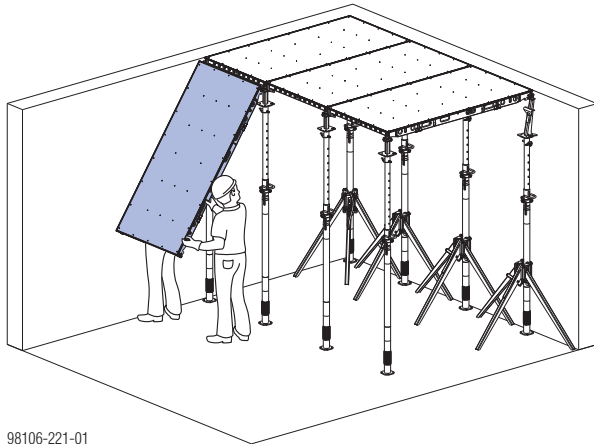


- Set up further panels in the same way, until only the planned infill zone is left unformed. Ensure stability during the set-up operations (see the section headed 'Ground rules')!



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')!

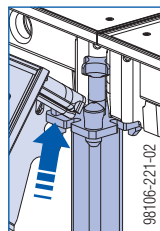


98106-221-01



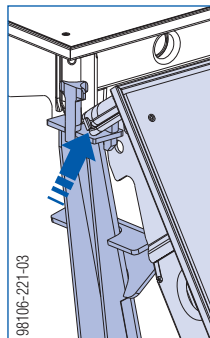
Make sure that the panel is correctly engaged in both heads.

Support head

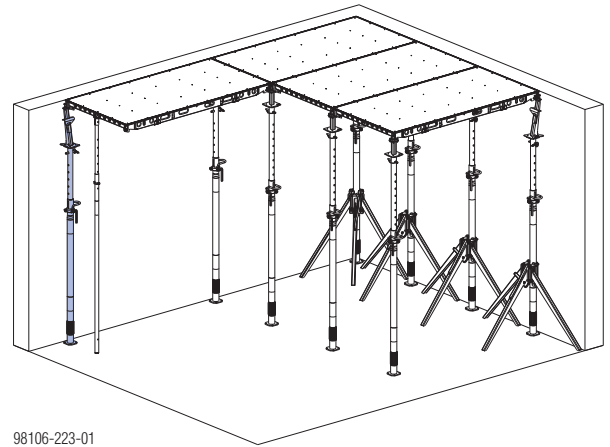


98106-221-02

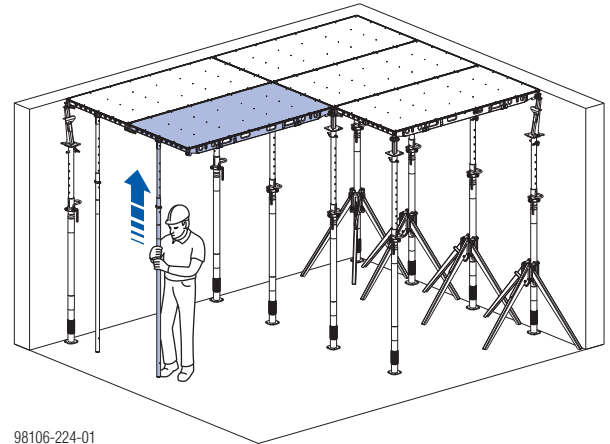
Wall head



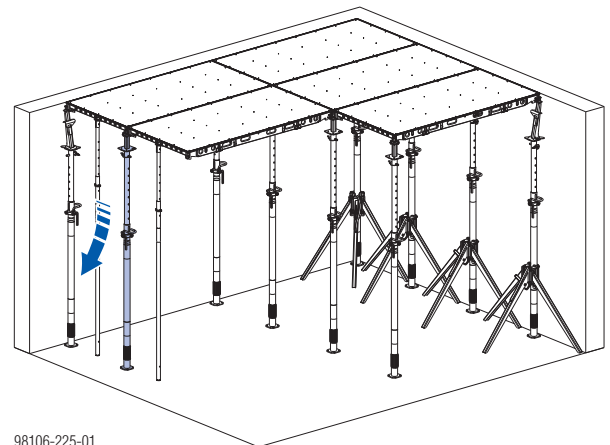
98106-221-03



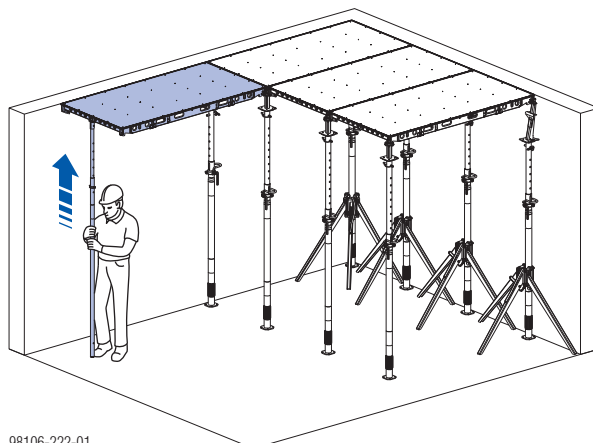
98106-223-01



98106-224-01



98106-225-01



98106-222-01

Mounting the bracing frames

The Bracing frame Eurex 1.00m fixes the Doka floor props Eurex 20 and Eurex 30 and is a stable set-up aid - especially close to the edges of floor-slab formwork.

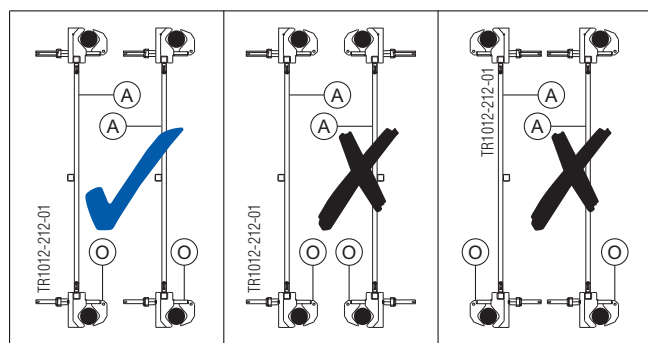
Features:

- 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 9.200.
- 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.



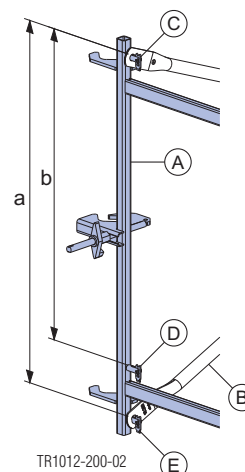
A Bracing frame Eurex 1.00m

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 lengthways directly along a wall.

Area	Diagonal cross	Safety catch needed
Typical zone, Dokadek 20	9.200	Pos. C+D
Dokadek 20 with wall head	9.200	Pos. C+E

Close-up A



TR1012-200-02

a ... 98.3 cm

b ... 80.3 cm

A Bracing frame Eurex 1.00m

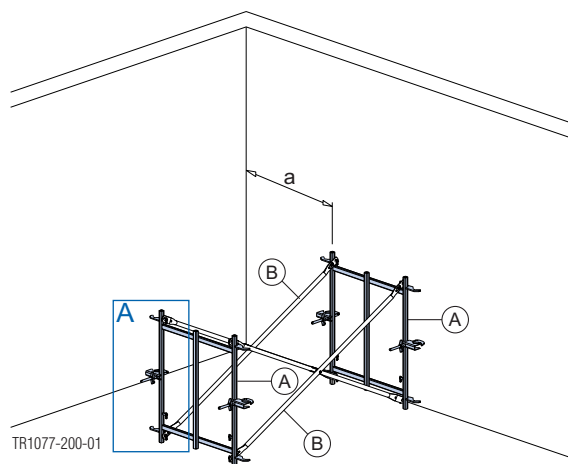
B Diagonal cross 9.200

C Safety catch 1

D Safety catch 2

E Safety catch 3

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



TR1077-200-01

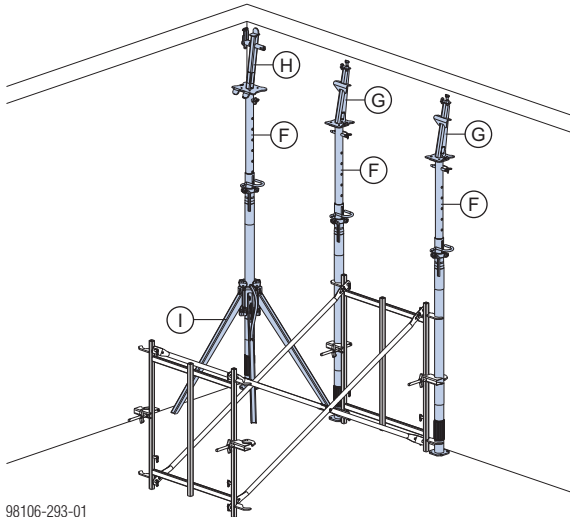
a ... 1.00 m (Dokadek 20 panel 1.00x2.00m)
or 0.66 m (Dokadek 20 panel 0.66x2.00m)

A Bracing frame Eurex 1.00m

B Diagonal cross 9.200

- Place the floor prop (plus corner head) in the corner and secure it with a removable folding tripod.

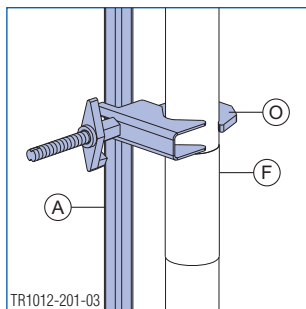
- ▶ Insert the floor props (plus wall head) into the prop holder on the bracing frame, and fix it in place (see Close-up B).



98106-293-01

- F** Doka floor prop Eurex
- G** Dokadek wall head
- H** Dokadek corner head
- I** Removable folding tripod

Close-up B – prop-holder

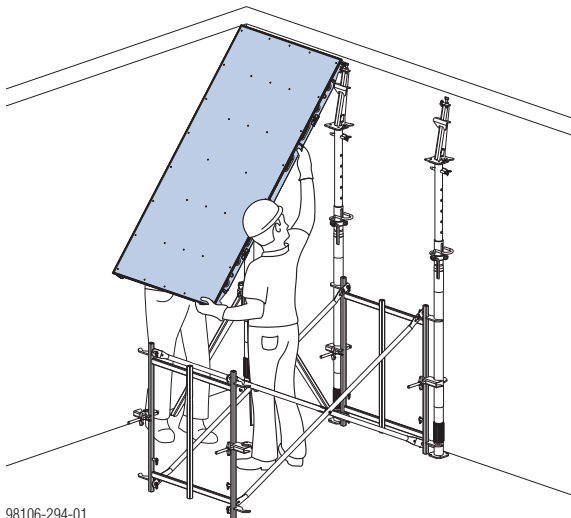


TR1012-201-03

Quick-fixing mechanism closed

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

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

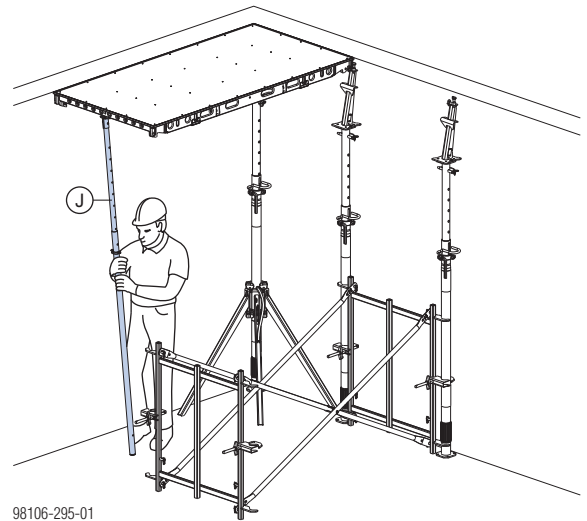


98106-294-01



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

- ▶ Person 1: Hook the assembling tool into the middle of the outside cross profile of the panel, raise the panel and hold the assembling tool securely in position so that it cannot tip over.



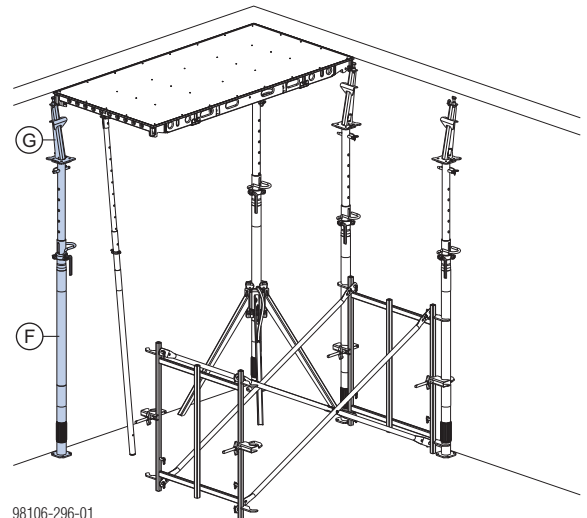
98106-295-01

- J** Dokadek 20 assembling tool



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

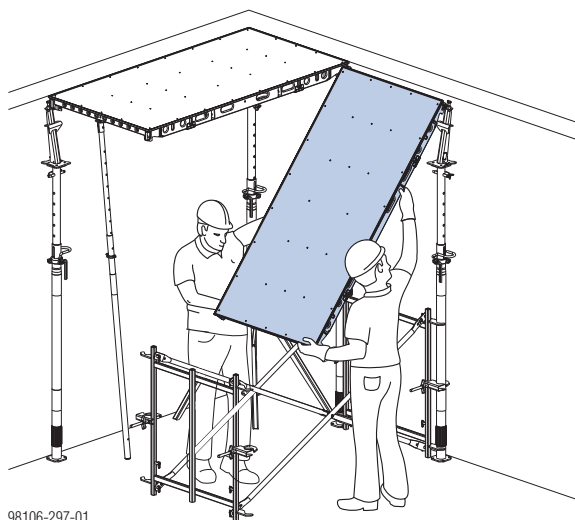
- ▶ Person 2: Place a floor prop (plus wall head) beneath the panel. The panel must still also be supported by the assembling tool. (max. inclination of the assembling tool with respect to the perpendicular: 5°)



98106-296-01

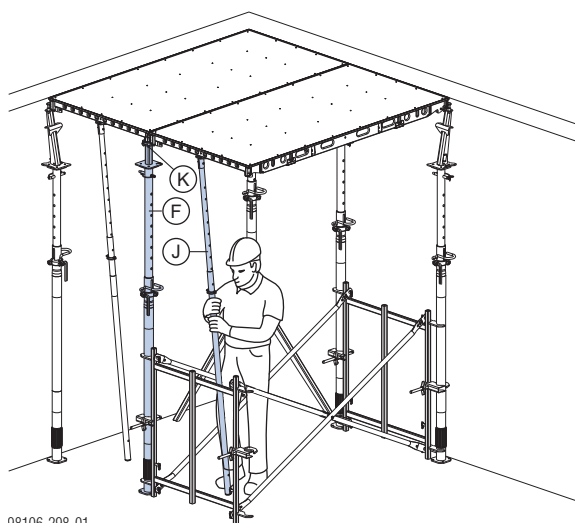
- F** Doka floor prop Eurex
- G** Dokadek wall head

- Persons 1 and 2: Hang the panel into place.



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

- Person 1: Hook the assembling tool into the middle of the outside cross profile of the panel, raise the panel and hold the assembling tool securely in position so that it cannot tip over.
- Put up another floor prop (plus support head) under the panel, and secure the prop to the bracing frame.

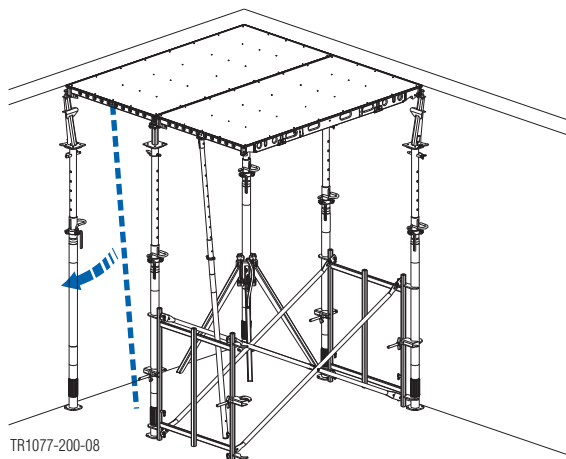


F Doka floor prop Eurex

J Dokadek 20 assembling tool

K Dokadek support head

- Remove the assembling tool and mount further panels.



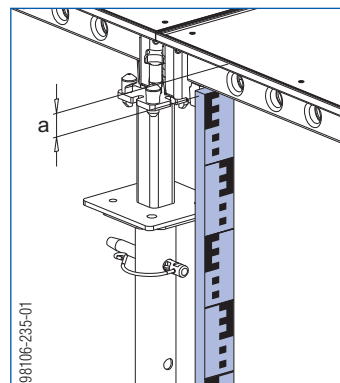
- For details on all other worksteps, see the section headed 'Operating with assembling tool'.
- See the sections headed 'Ground rules', 'Additional stabilisation during erection work' for details of the positions and numbers of frames.

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 cm, with reference to the frame cross-profile).



a ... 6 cm

Mounting guardrail systems

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

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.



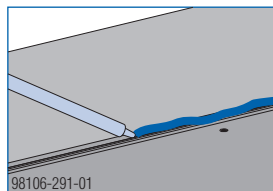
Permitted slab thickness [cm]

Permitted slab thickness	Flatness deviation
≤ 20	l/500
> 20 - 25	l/400

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



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



Stripping the formwork

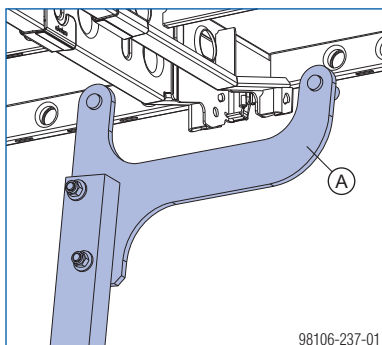
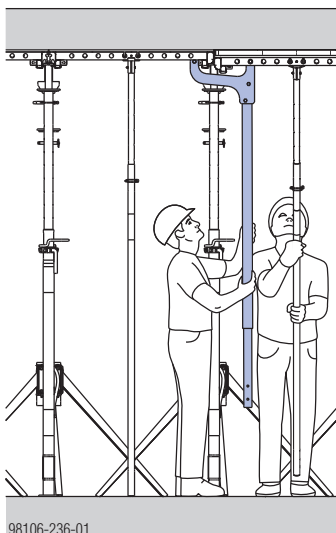


NOTICE

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



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

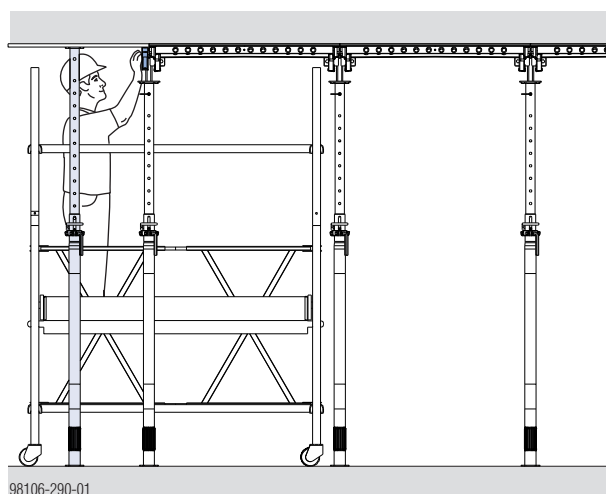


Preparations



NOTICE

- Before striking the formwork, make sure that the floor props in the last row of panels to be struck are still fixed with Removable folding tripods and a wall clamp.
- Set the **assembling tools** to the required length (= approx. room height). Min. 3 assembling tools needed per site-erection team.
- Secure the panels so that they cannot suddenly drop.
- Lower the floor formwork in the infill zone (floor props underneath infill beams approx. 2 cm).
- Remove the Doka double alu beams tec-2 and Doka beams H20.
- Remove the infill beams, for example using a working scaffold for access.



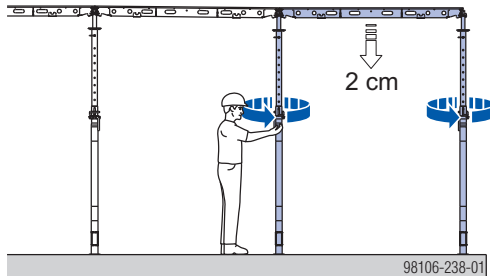
- Remove the panels.

Dismantling the floor props and panels



NOTICE

- Loosen the adjusting nut with a blow of the hammer and turn the floor prop to lower it.
- Lower the props in the first row of panels to be stripped out, by approx. 2 cm (= approx. 1 turn of the adjusting nut).



- Place assembling tools beneath the 1st and 2nd panels. (Max. inclination of the assembling tool with respect to the perpendicular: 5°)
- Remove the 1st and 2nd floor props and place them in a stacking pallet.



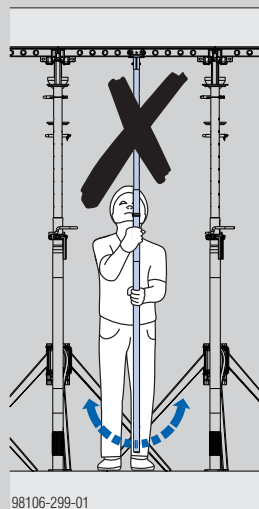
NOTICE

- Bring the floor prop into a horizontal position.
- If necessary, open the fastening clamp and push the inner tube into the outer tube.
- Lay the floor prop on the stacking pallet.



CAUTION

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



- Using the assembling tool, lower the panel until the 2nd person can take hold of it and tilt it all the way down.
- Lift the panel off the prop-heads and set it down.
- Place the assembling tool beneath the 3rd panel, remove the 3rd floor prop and place it in the stacking pallet. (Max. inclination of the assembling tool with respect to the perpendicular: 5°)
- Unhook the 2nd panel and place it on a panel pallet.
- Take down all the other panels in the same way.

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

Operating with suspension tool

The Dokadek suspension tool is for lifting and engaging Dokadek panels. It ensures safe and ergonomic set-up and striking of the panels even at high floor-to-ceiling heights.

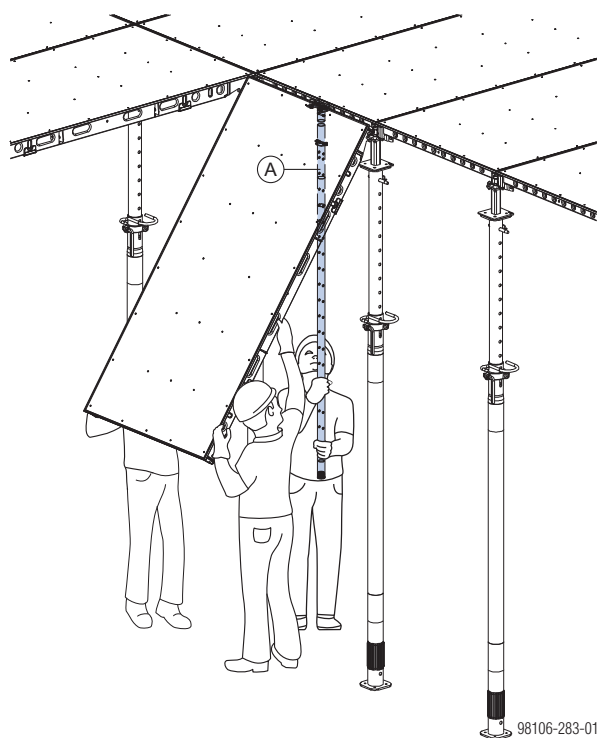
Note:

The Dokadek suspension tool is not a substitute for the Dokadek 20 assembling tool or the Dokadek assembling tool B.

Features:

- Usable from floor level at floor-to-ceiling heights up to 3.74 m.
- Panels beside the wall can be pre-lifted in preparation for propping. The Dokadek assembling tool B is the only permissible tool for use when propping the panels.
- Installation of the Doka floor props with Dokadek heads (support head) can be assisted with the suspension tool.

Practical example

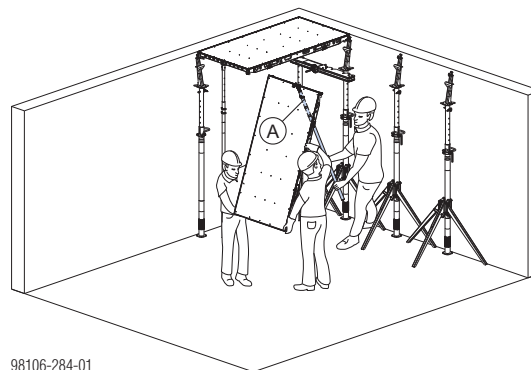


A Dokadek suspension tool

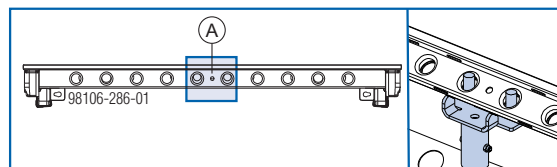
The person with the suspension tool uses it to guide the panel and to take some of the weight.

Closing the formwork

- ▶ Adjust the Dokadek suspension tool to the required length (= approx. floor-to-ceiling height minus 1.00 m).
- ▶ Persons 1 and 2: Lift the panel off the floor.

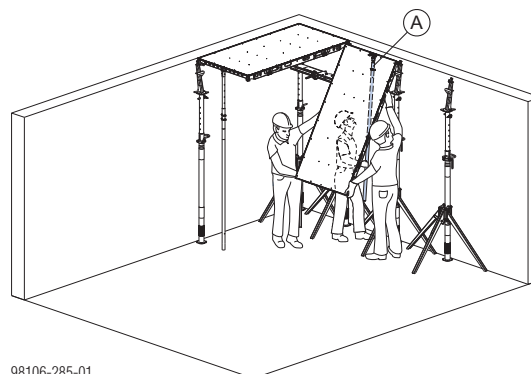


- ▶ Person 3: Engages the panel at the midway point with the Dokadek suspension tool.



A Position of Dokadek suspension tool

- ▶ Persons 1, 2 and 3: Hook the panel into the heads.



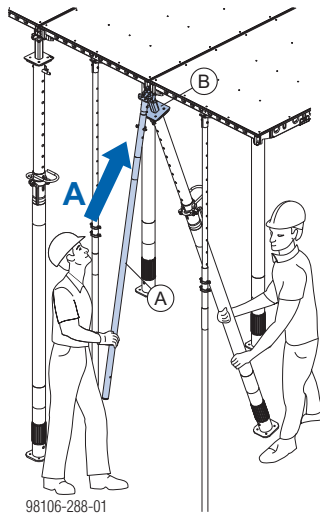
A Dokadek suspension tool



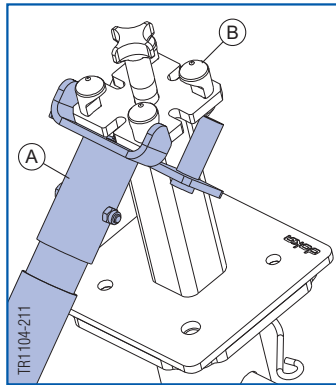
Make sure that the panel is correctly fitted onto the pin of the head.

Installation situation, floor prop with head

Engagement of the Dokadek heads with suspension tool.



Close-up A



Stripping the formwork

► In reverse sequence.

Forming infill zones



NOTICE

- Fillers should be mounted from below (e.g. from a Wheel-around scaffold DF).

Areas where infills may be needed:

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

Note:

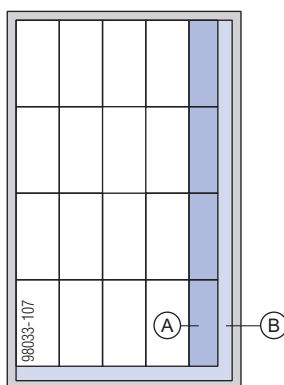
We recommend a nail length of 50 mm for securing loose sheets at infill beams and at Doka double alu beams tec-2.

Dokadek 20 system components for infill zones

Dokadek 20 panel 0.66x2.00m to reduce the widthways infill zone

If Dokadek 20 panels 1.00x2.00m are combined with Dokadek 20 panels 0.66x2.00m, the max. infill width can generally be reduced to 33.3 cm.

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

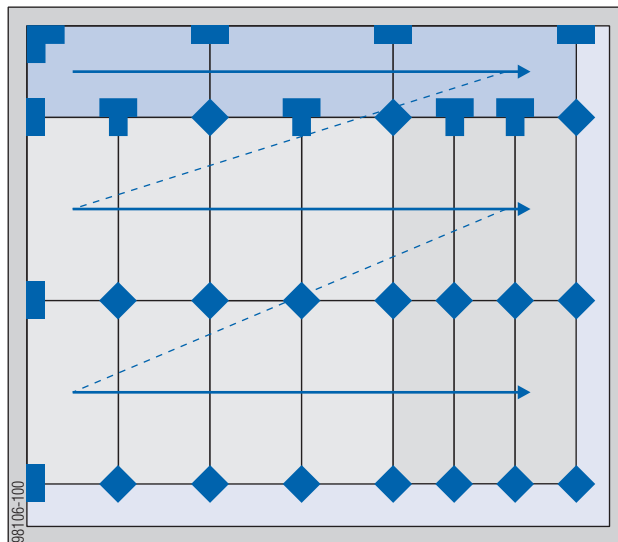


A Dokadek 20 panel 0.66x2.00m

B Closure width (max. 33.3 cm)

Dokadek 20 cross head to reduce the lengthways infill zone

The width of the infill zone can be reduced by turning the panels in the first row. The Dokadek 20 cross head is used for this purpose.



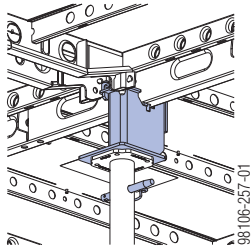
Legend

Support head	Corner head	Wall head	Dokadek 20 cross head
1)			1)

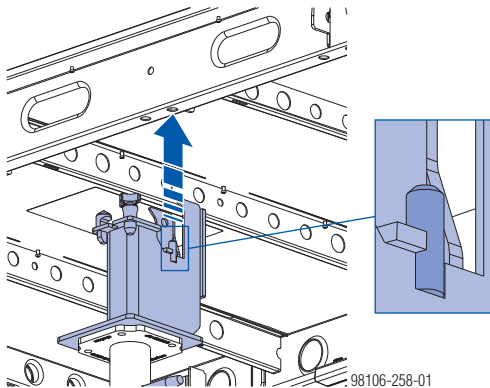
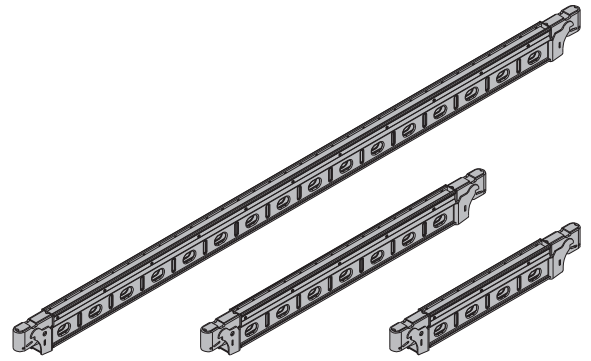
1) Spring locked connecting pin 16mm not included with product

Installation of Dokadek 20 cross head**NOTICE**

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



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

**Dokadek 20 infill beam**

- Permitted moment: 3 kNm
- Permitted shear force: 11 kN
- Flexural rigidity EI: 115 kNm²
- Permissible imposed load where supported by floor prop in mid-span: 10 kN

Dokadek 20 suspension clamp tec-2

Perm. reaction force: 11 kN

Note:

The Suspension clamp tec-2 does not need to be supported by any extra floor prop.

Dokadek 20 lowering clamp tec-2

Perm. reaction force: 11 kN

Note:

The Lowering clamp tec-2 does not need to be supported by any extra floor prop.

Form-facing

Infill zones can be faced quickly and economically with Doka formwork sheets 3-SO 21mm 200/100cm.

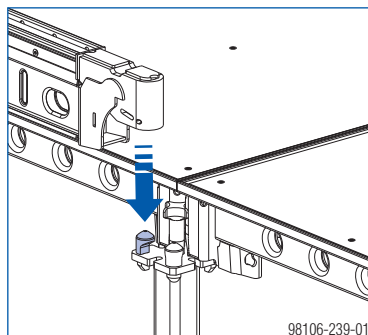
Infilling along wall connections

Version 1: Infill width 'a' = 17 - 36 cm

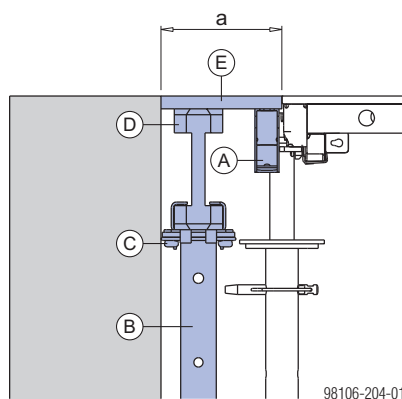
- Max. spacing of infill props (Eurex 20): 200 cm

Installation:

- Hook the infill beams into the support heads.



- Mount the fillers.



- A** Dokadek 20 infill beam
- B** Doka floor prop Eurex top + Removable folding tripod
- C** Supporting head H20 DF
- D** Doka beam H20 where infill width 'a' is ≥ 17 cm
(closures of less than 17 cm can be made up in-situ with a 4/20 cm plank or squared timber)
- 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!

Version 2: Infill width 'a' = 36 - 235 cm

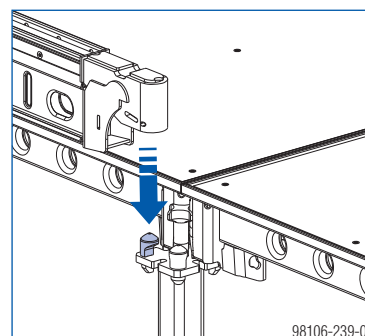
Primary beam	Infill width 'a'	Secondary beam
1.10 m	36 - 100 cm	Doka double aluminium beam tec-2 2.20m
1.80 m	90 - 180 cm	
2.45 m	145 - 235 cm	

Eurex 20:

- max. prop spacing 'b': 100 cm
- max. primary-beam spacing: 200 cm
- max. secondary-beam spacing: 18 cm
(Do not exceed the max. support centres of the formwork sheets!)
- for infill gaps 'a' ≥ 135 cm: intermediate prop (with Supporting head H20) is required

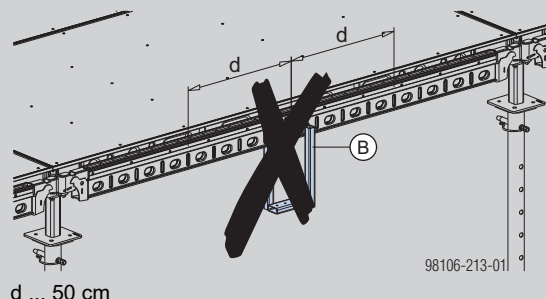
Installation:

- Hook the infill beams into the support heads.



WARNING

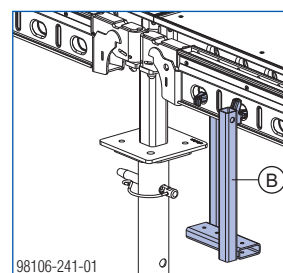
- Do not hook the suspension clamp into the mid-section of the infill beam 2.00m.



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

Number of suspension clamps needed:

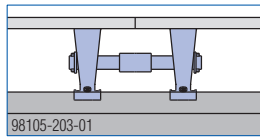
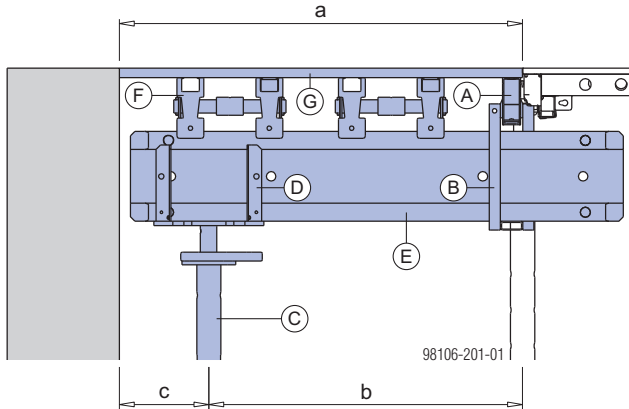
- next to every floor prop in the longitudinal direction
- next to every other floor prop in the transverse direction



► Mount the fillers.

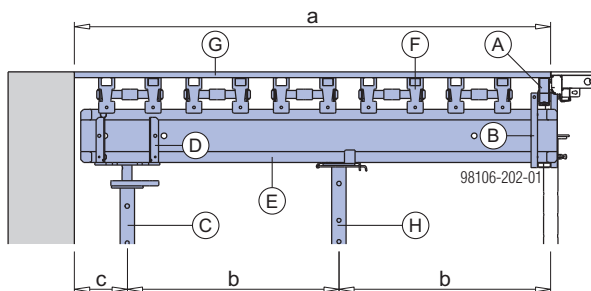


Place a beam (or double beam) wherever there is to be a joint between the panels.

**Practical example: Infill width 'a' ≤ 135 cm**

b ... max. 100 cm

c ... max. 35 cm

Practical example: Infill width 'a' > 135 cm (with intermediate prop)

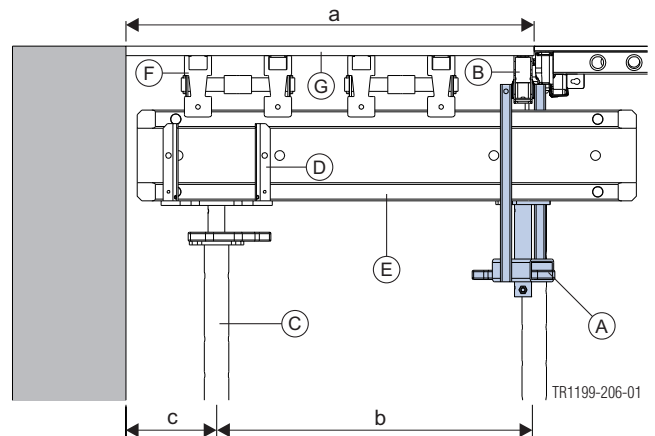
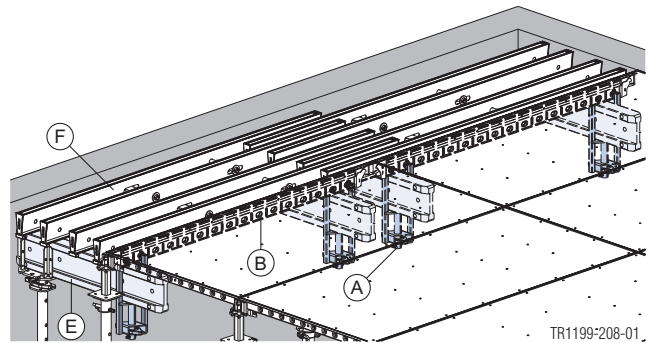
b ... max. 100 cm

c ... max. 35 cm

- A** Dokadek 20 infill beam
- B** Dokadek 20 suspension clamp tec-2
- C** Doka floor prop Eurex top + Removable folding tripod
- D** Lowering head H20
- E** Doka beam H20 as primary beam
- F** Doka double alu beam tec-2, used as secondary beam
- G** Formwork sheeting 21 mm
- H** Intermediate prop with Supporting head H20

**NOTICE**

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

Version 2: with lowering clamp tec-2

a ... Infill in wall area max. 135 cm

b ... max. 100 cm

c ... max. 35 cm

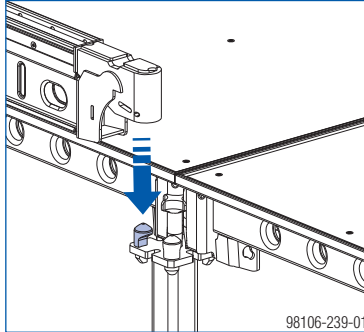
- A** Dokadek 20 lowering clamp tec-2
- B** Dokadek 20 infill beam
- C** Doka floor prop Eurex top + Removable folding tripod
- D** Lowering head H20
- E** Doka beam H20 as primary beam
- F** Doka double alu beam tec-2, used as secondary beam
- G** Formwork sheeting 21 mm

Infilling between 2 Dokadek forming-sections

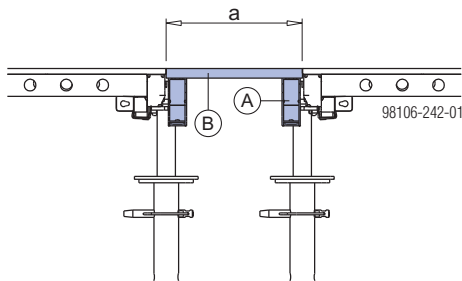
Version 1: Infill width 'a' = 17 - 36 cm

How to mount:

- Hooking the infill beams into the support heads.



- Mount the fillers.



Preconditions for multi-ply formwork sheets:
 Mean flexural modulus of elasticity where sheet moisture content is $10 \pm 2\%$: $\geq 5600 \text{ N/mm}^2$
 Characteristic flexural strength where sheet moisture content is $10 \pm 2\%$: $\geq 19 \text{ N/mm}^2$

A Dokadek 20 infill beam

B Formwork sheeting 21 mm

Version 2: Infill width 'a' = 36 - 215 cm

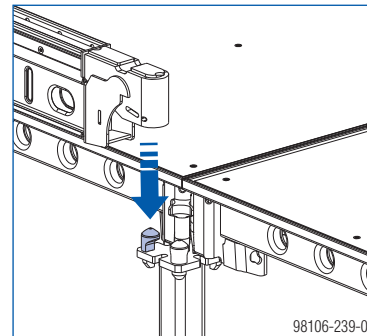
Primary beam	Infill width 'a'	Secondary beam
1.10 m	36 - 100 cm	Doka double aluminium beam tec-2 2.20m
1.80 m	90 - 170 cm	
2.45 m	145 - 215 cm	

Eurex 20:

- max. prop spacing 'b': 107.5 cm
- max. primary-beam spacing: 200 cm
- max. secondary-beam spacing: 18 cm
(Do not exceed the max. support centres of the formwork sheets!)
- for infill gaps 'a' $\geq 100 \text{ cm}$: intermediate prop (with Supporting head H20) is required

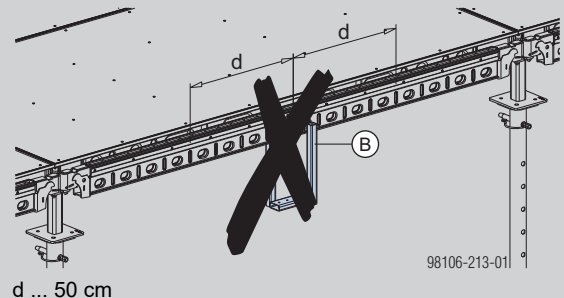
Installation:

- Hook the infill beams into the support heads.



WARNING

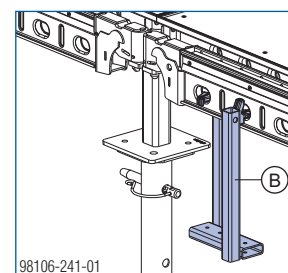
- Do not hook the suspension clamp into the mid-section of the infill beam 2.00m.



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

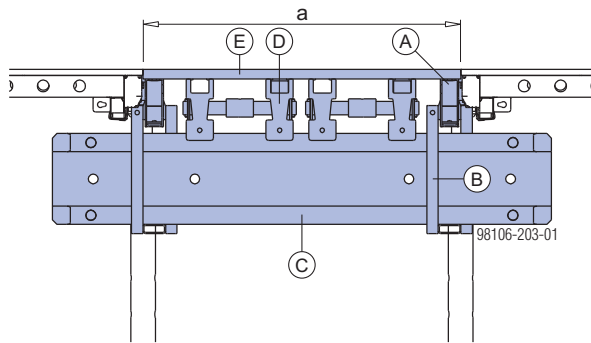
Number of suspension clamps needed:

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

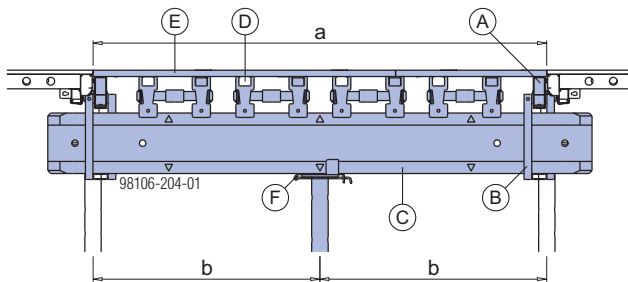


► Mount the fillers.

Practical example: Infill width 'a' ≤ 100 cm



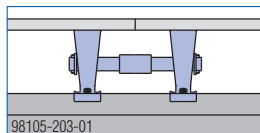
Practical example: Infill width 'a' > 100 cm (with intermediate prop)



- A** Dokadek 20 infill beam
- B** Dokadek 20 suspension clamp tec-2
- C** Doka beam H20 as primary beam
- D** Doka double alu beam tec-2, used as secondary beam
- E** Formwork sheeting 21 mm
- F** Intermediate prop with Supporting head H20



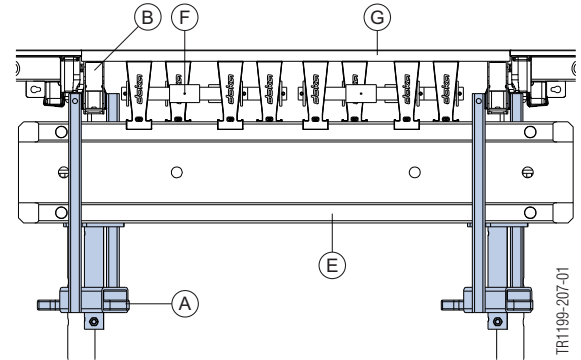
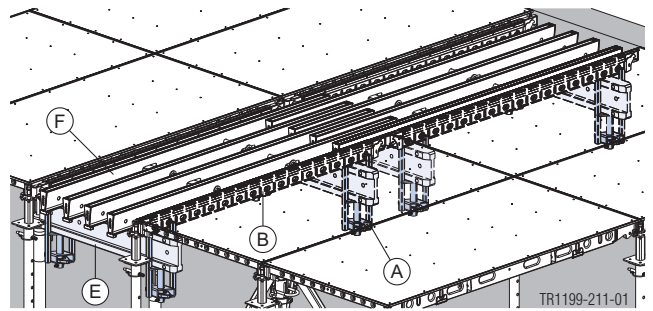
Place a beam (or double beam) wherever there is to be a joint between the panels.



NOTICE

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

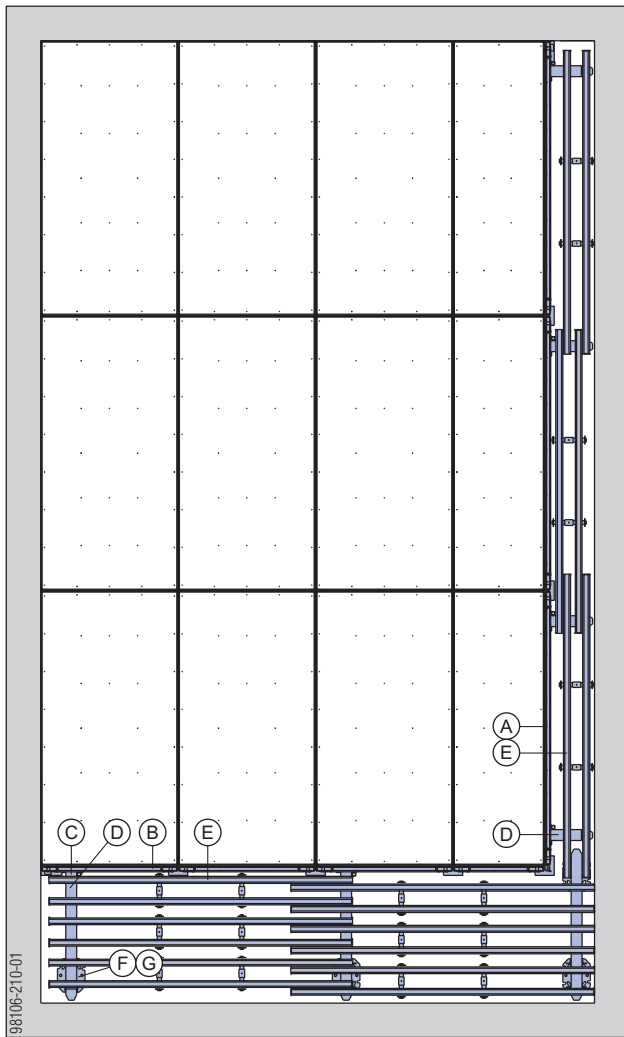
Version 2: with lowering clamp tec-2



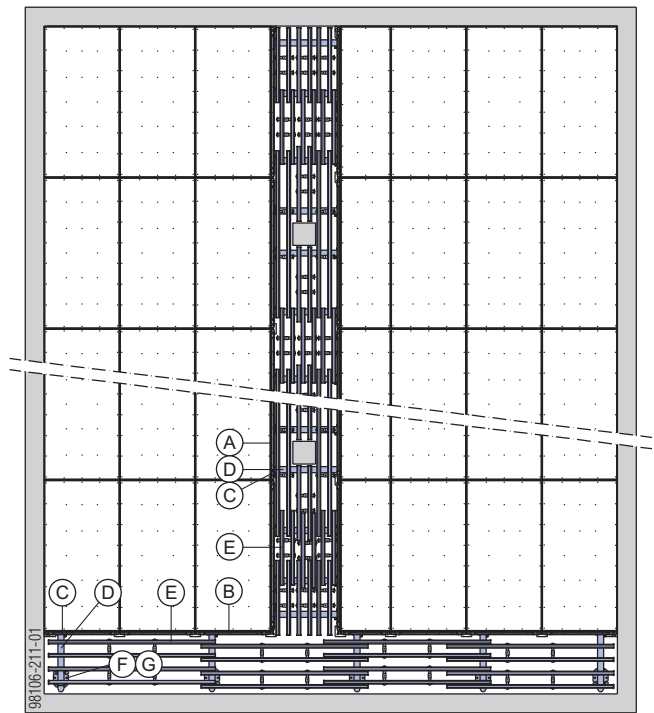
- A** Dokadek 20 lowering clamp tec-2
- B** Dokadek 20 infill beam
- E** Doka beam H20 as primary beam
- F** Doka double alu beam tec-2, used as secondary beam
- G** Formwork sheeting 21 mm

Practical examples

L-shaped infill zone



T-shaped infill zone

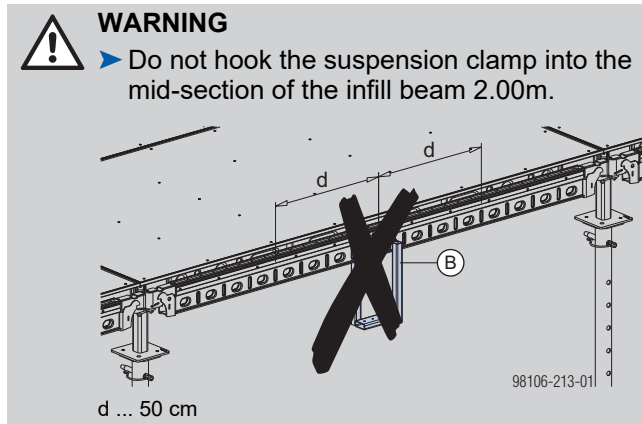


- A** Dokadek 20 infill beam 2.00m
- B** Dokadek infill beam 1.00m or 0.66m
- C** Dokadek 20 suspension clamp tec-2
- D** Doka beam H20 as primary beam
- E** Doka double alu beam tec-2, used as secondary beam
- F** Doka floor prop Eurex 20 top + Removable folding tripod
- G** Lowering head H20

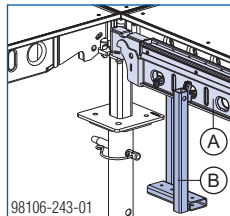
Infill zones around columns

with Dokadek 20 infill beams, Doka beams H20 and Doka double alu beams tec-2 0.98m

- Hook two infill beams 1.00m into the support heads in the transverse direction.



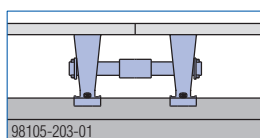
- Hook 4 suspension clamps into the infill beams **as close to the floor props as possible**.



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



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

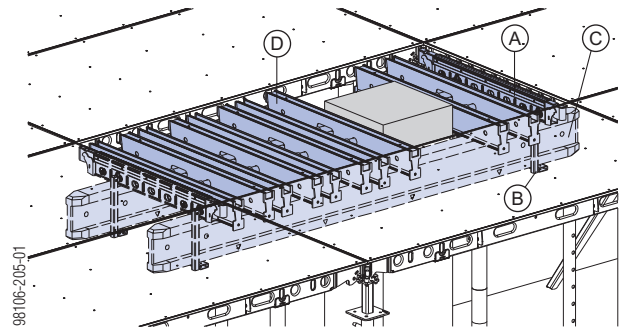


NOTICE

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

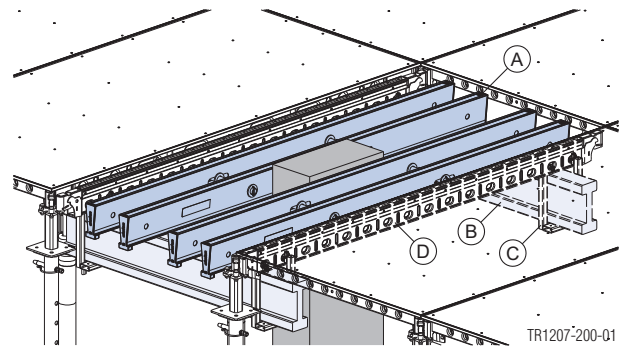
Practical examples Column located inside panel-field

With Doka double aluminium beam tec-2 0.98m



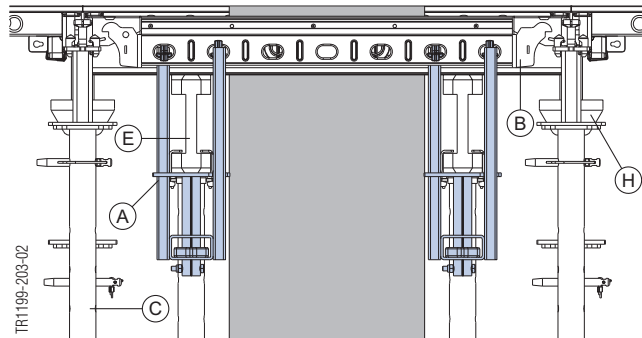
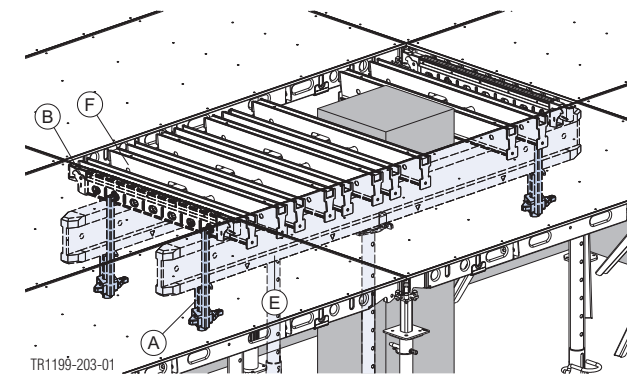
- A Dokadek 20 infill beam 1.00m
- B Dokadek 20 suspension clamp tec-2
- C Doka beam H20 2.45m used as primary beam
- D Doka double alu beam tec-2 0.98m, used as secondary beam

With Doka double aluminium beam tec-2 1.95m



- A Doka double aluminium beam tec-2 1.95, used as secondary beam
- B Doka beam H20 as primary beam
- C Dokadek 20 suspension clamp tec-2
- D Dokadek 20 infill beam

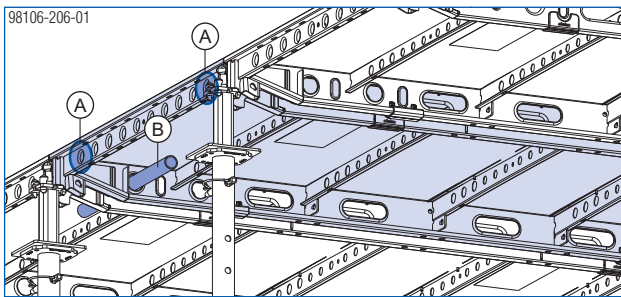
With lowering clamp tec-2



- A** Dokadek 20 lowering clamp tec-2
- B** Dokadek 20 infill beam
- C** Doka floor prop Eurex top + Removable folding tripod
- E** Doka beam H20 as primary beam
- F** Doka double alu beam tec-20, used as secondary beam
- H** Dokadek support head

Floor formwork around edges

with Lashing strap 5.00m and Doka express anchor 16x125mm



- A** Anchorage points for longitudinal and transverse tie-backs
B Scaffold tube d33.7mm (site-provided) in panel joint for longitudinal tie-back

Permissible tie-back load in the anchorage points of the frame profile **(A)** : 5 kN

Permissible tie-back load on the Scaffold tube d33.7mm **(B)** : 4.6 kN



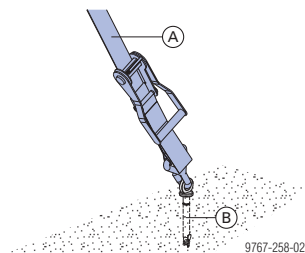
WARNING

- 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 - the only tool needed for screwing it in is a hammer.

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



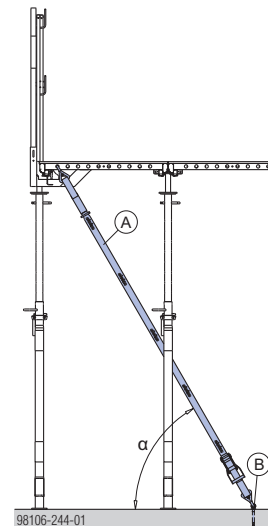
Follow the 'Doka express anchor 16x125mm' Fitting Instructions or the 'Lashing strap 5.00m' User Information booklet!

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

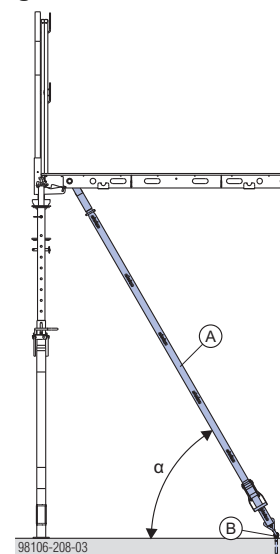
Follow the manufacturers' applicable fitting instructions.

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

Fall protection

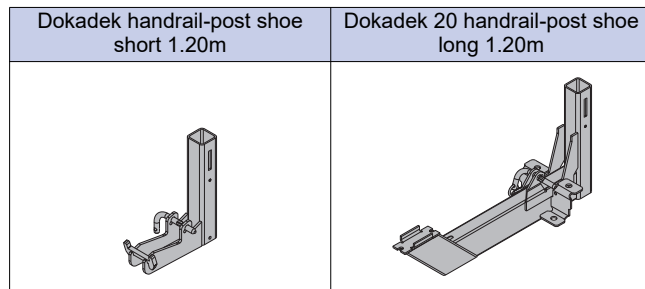


NOTICE

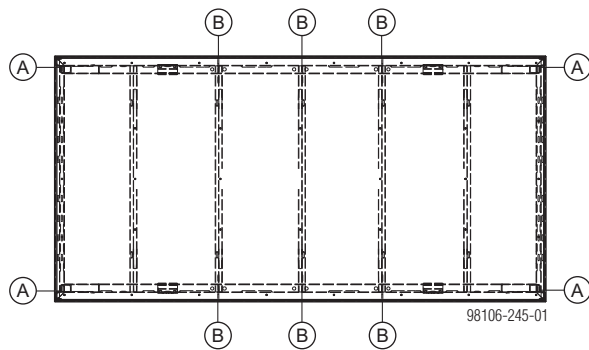
- Install guardrail systems from below (e.g. using a Wheel-around scaffold DF).

Guardrail systems on the formwork

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 or 1.80m.



Possible fixing points for the handrail-post shoes



A Dokadek handrail-post shoe short 1.20m

B Dokadek 20 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.
- Use of Handrail post shoe long 1.20m with Handrail post XP 1.80m not permitted.

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	Guardrail board 20 cm	Scaffold tube 48.3mm	Protective grating XP 2.50x1.20m	Scaffold tube d33.7mm ¹⁾
0.2	200	200	200	200	200
0.6	200	100	200	200	200
1.1	100	—	200	100	200
1.3	—	—	200	100	200

¹⁾ Min. section thickness 2.0 mm for steel grade S355

Min. section thickness 3.0 mm for steel grade S235

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

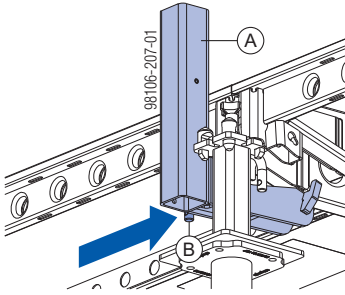
Dynamic pressure q [kN/m ²]	Safety barrier				
	Guardrail board 15 cm	Guardrail board 20 cm	Scaffold tube 33.7mm	Scaffold tube 48.3mm	Protective gratings XP 2.50x1.20m + 2.50x0.60m
0.2	200	200	200	200	200
0.6	200	100	200	200	200
1.1	100	—	200	200	100
1.3	—	—	200	200	100



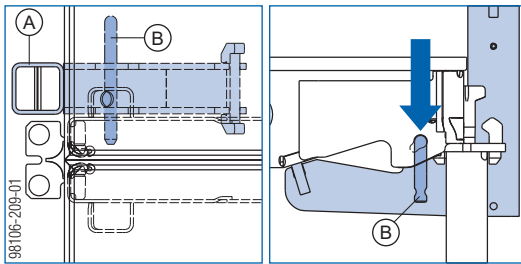
- The span of the handrail posts is roughly equal to the influence width if
 - they are evenly spaced
 - the guardrail boards are either continuous or are jointed at the handrail posts, and
 - there are no cantilevering projections.
- The wind conditions likely to be encountered in Europe, in accordance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

Attaching a 'Handrail-post shoe - short'

- ▶ 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).

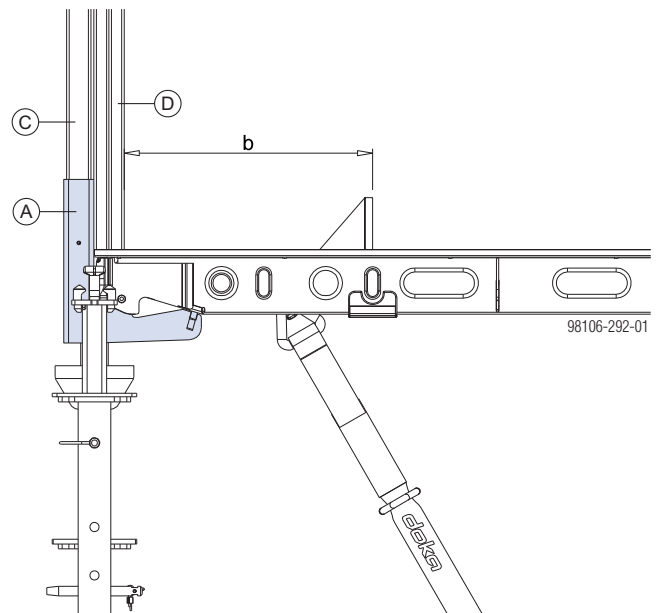
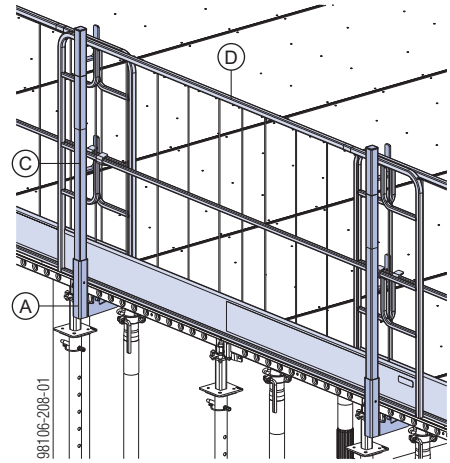


Make sure that the handrail-post shoe short **(A)** and the bolt (vertical!) **(B)** are in the correct position!



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

- ▶ Mount the sideguards.

Practical example with Protective grating XP

b ... min. 60 cm walkway width recommended (comply with country-specific regulations)

A Dokadek handrail-post shoe short 1.20m

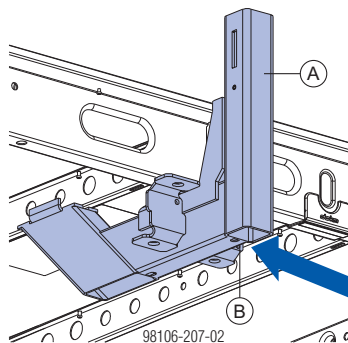
B Pin

C Handrail post XP 1.20m

D Protective grating XP

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).

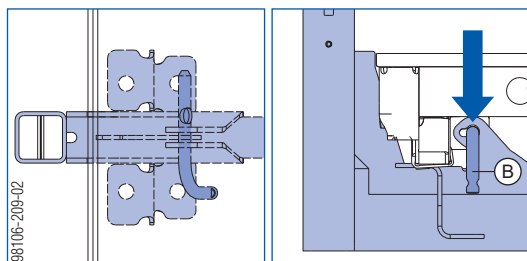


A Dokadek 20 handrail-post shoe long 1.20m

B Pin

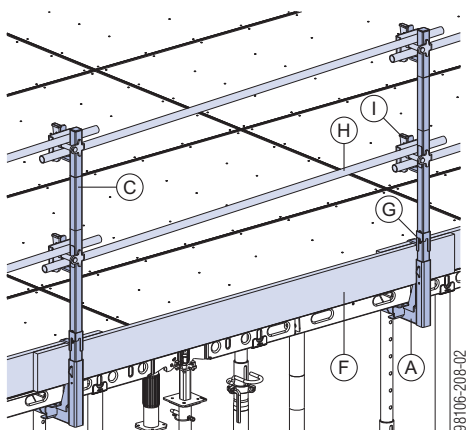


Make sure that the bolt (**B**) is in the vertical position!



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

Practical example with scaffold tubes d33.7mm



A Dokadek 20 handrail-post shoe long 1.20m

C Handrail post XP 1.20m

F Toeboard

G Toeboard holder XP 1.20m

H Scaffold tube d33.7mm

I Scaffold tube holder d34/48mm

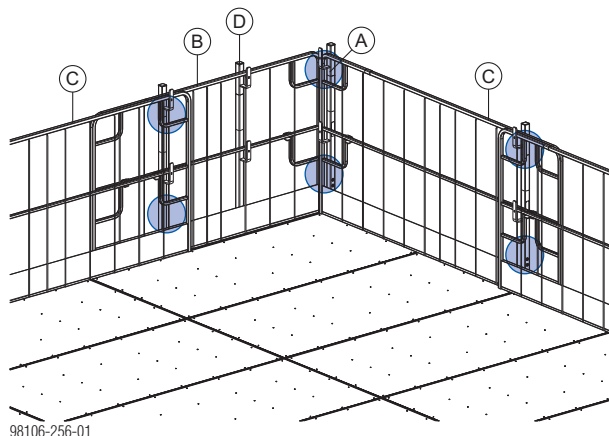
Guardrail systems at corners



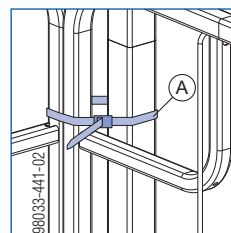
NOTICE

- 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 2.50m can be used.

Practical example



Close-up showing how fastened:



A Attached with cable tie or binding wire

B Protective grating XP 2.00x1.20m

C Protective grating XP 2.50x1.20m

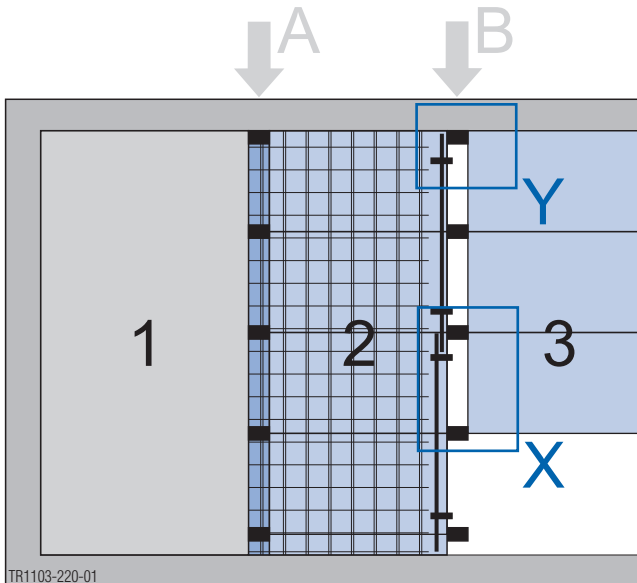
D Handrail post XP 1.20m

Fall protection at construction joints

The Dokadek joint head is used together with the Dokadek handrail-post shoe short 1.20m to make up secure edge protection for the formed casting section at construction joints (without provision for infill zones).

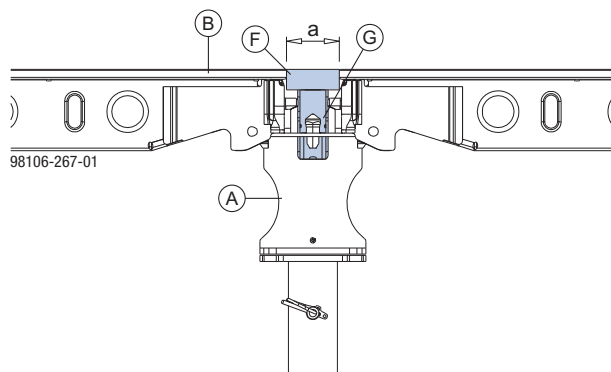
- Permits the work of setting up the panels in the system to proceed smoothly at the construction joint.
- No need for bottom fixings of the floor props.
- Joint is easily closed after removal of the edge protection.
- Construction joints can only be made along the transverse side of the panels.

Schematic of typical sequence



- 1 ... Pouring
2 ... Placing the reinforcement
3 ... Setting up the formwork:
A ... Close-up view of construction joint with strip of formwork sheeting
B ... Close-up view of construction joint with handrail post
X ... Typical zone
Y ... Wall area

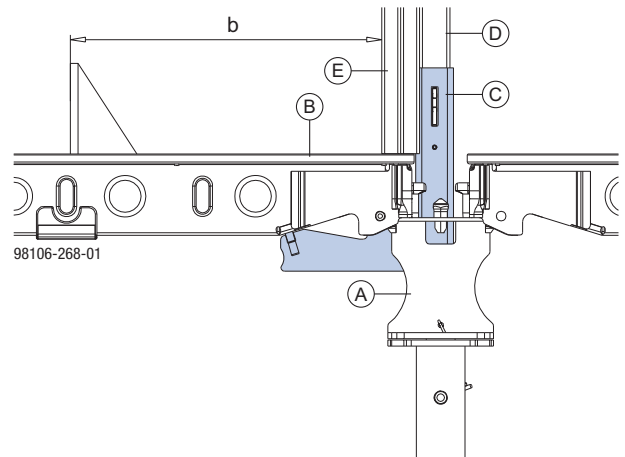
Close-up view of construction joint with strip of formwork sheeting



a ... 7.5 cm

- A** Dokadek joint head
- B** Dokadek 20 panel
- F** Strip of formwork sheeting 7.5 cm
- G** Dokadek 20 infill beam

Close-up view of construction joint with handrail post



b ... min. 60 cm walkway width recommended (comply with country-specific regulations)

- A** Dokadek joint head
- B** Dokadek 20 panel
- C** Dokadek handrail-post shoe short 1.20m
- D** Handrail post XP ¹⁾
- E** Protective grating XP

¹⁾ For details of the possible combinations of handrail-post shoes and handrail posts, see the section headed 'Guardrail systems on the formwork'.

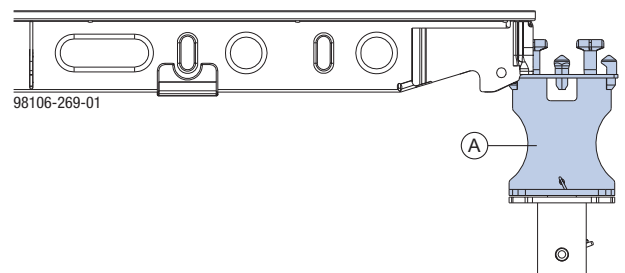


WARNING

▶ The Dokadek heads must always be fixed to the floor prop with the correct pin.

Work sequence in typical zone

- ▶ Position the panels as far as the construction joint and then set up the Dokadek joint head.

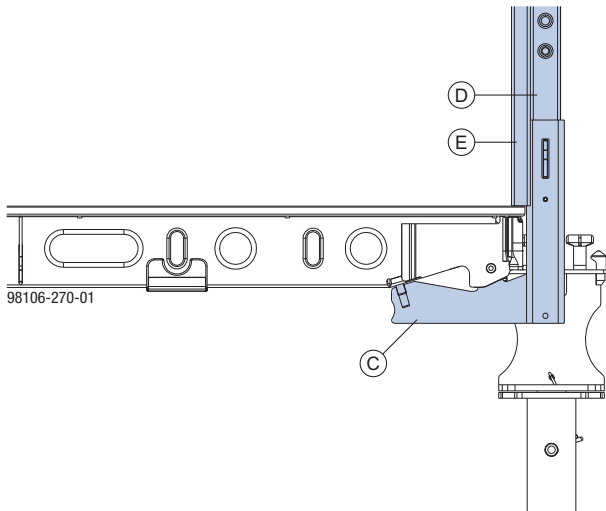


- A** Dokadek joint head



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

- Install the Handrail post shoes short 1.20m with Handrail posts XP and edge protection.

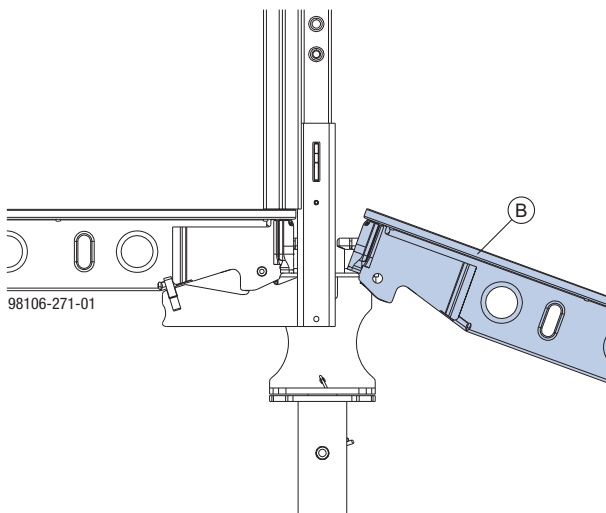


C Dokadek handrail-post shoe short 1.20m

D Handrail post XP

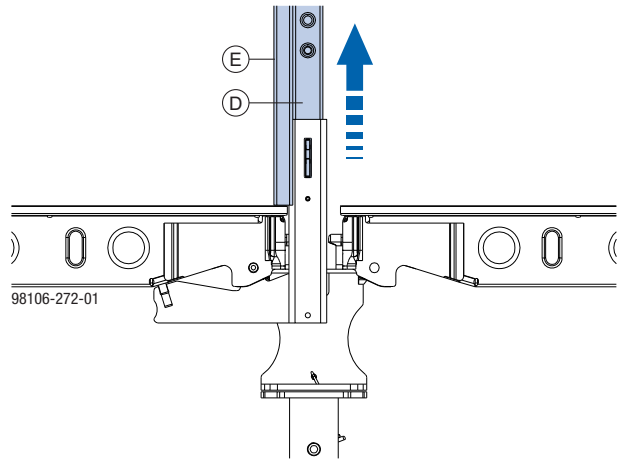
E Protective grating XP

- For the next casting section, engage further panels and swing them up to the horizontal.



B Dokadek 20 panel

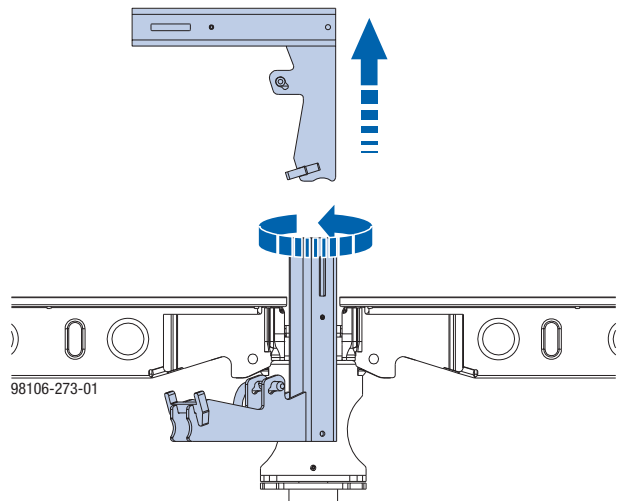
- When edge protection is in place for the next casting section, remove Handrail posts XP and edge protection.



D Handrail post XP

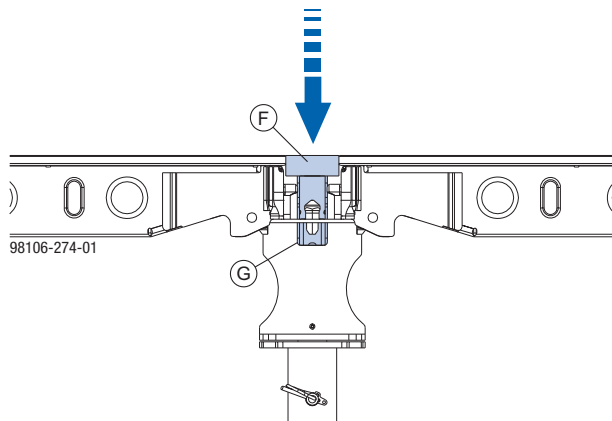
E Protective grating XP

- Remove the bolt of the handrail-post shoe short working from above the formwork. Remove the handrail-post shoe short upwards by turning and tilting it 90°, respectively.



C Dokadek handrail-post shoe short 1.20m

- Close the construction joint from above with infill beams and strips of formwork sheeting 7.5 cm wide (note thickness of formwork sheeting).

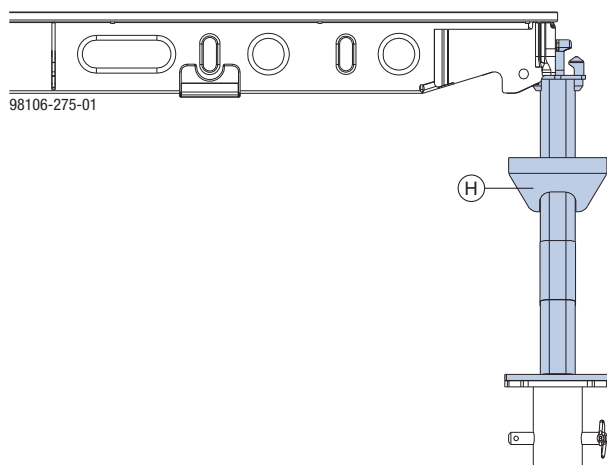


F Strip of formwork sheeting 7.5 cm

G Dokadek 20 infill beam

Work sequence in wall area

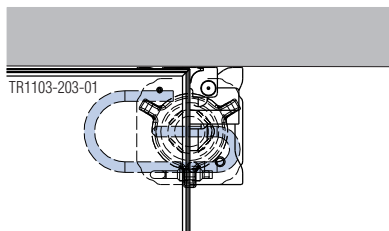
- Position the panels as far as the construction joint and then set up the Dokadek wall head.



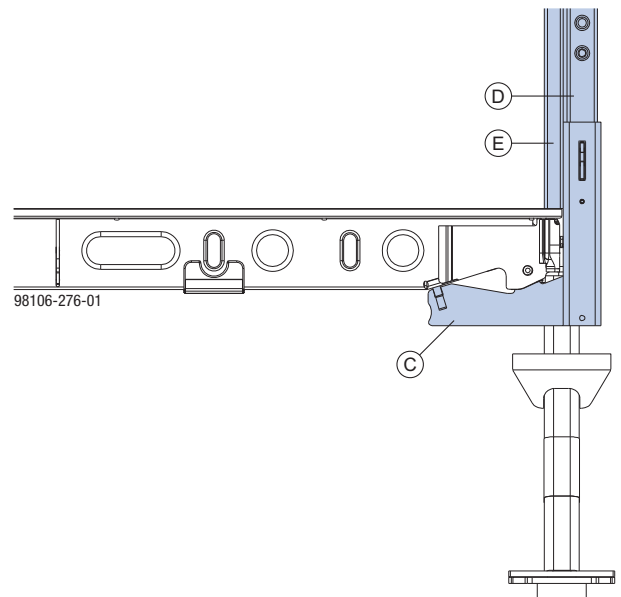
A Dokadek wall head



Make sure that the fastening clamp is correctly positioned.



- Install the Handrail post shoes short 1.20m with Handrail posts XP 1.20m and edge protection.

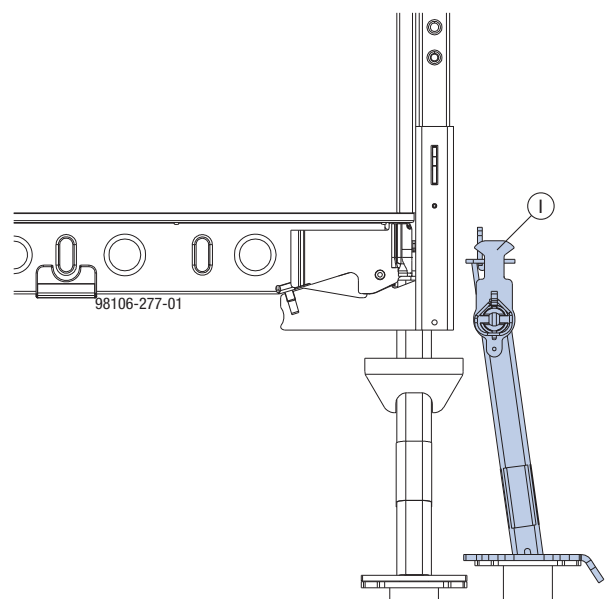


C Dokadek handrail-post shoe short 1.20m

D Handrail post XP

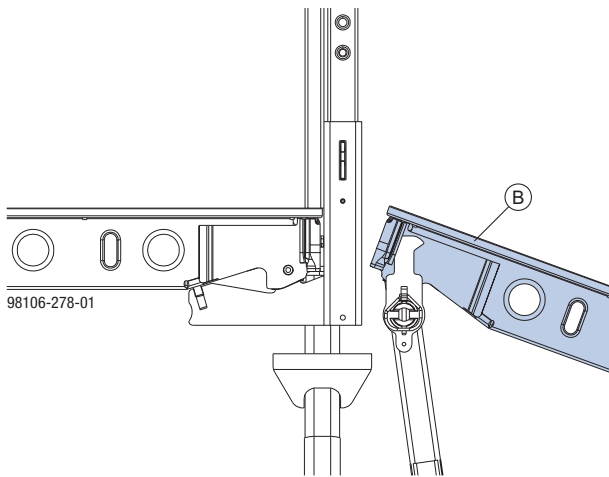
E Protective grating XP

- Position the corner head at the construction joint.



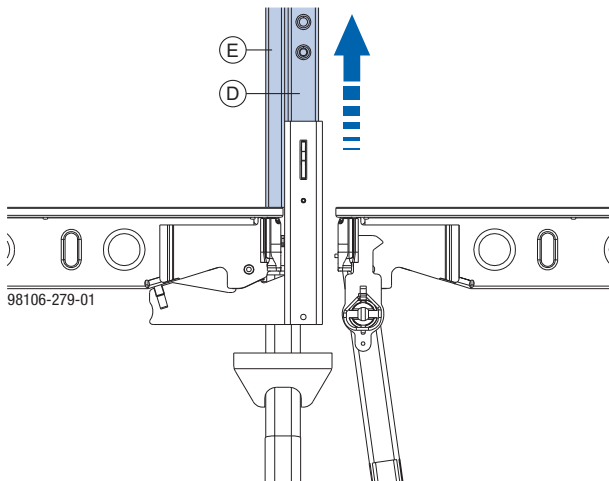
I Dokadek corner head

- Engage one panel and swing it up to the horizontal.



I Dokadek 20 panel

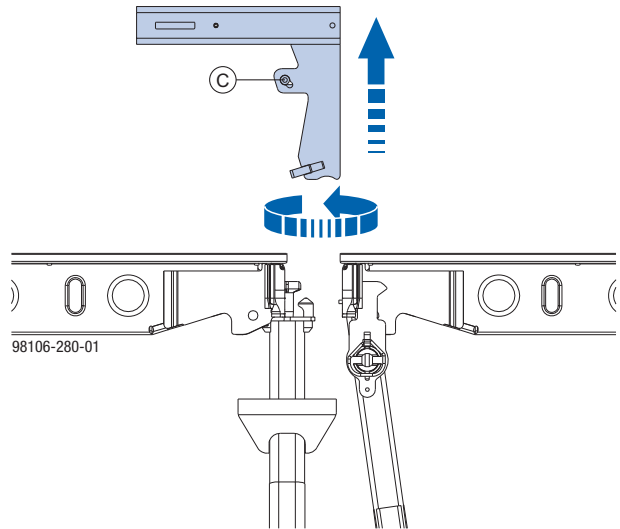
- When edge protection is in place for the next casting section, remove Handrail posts XP 1.20m and edge protection.



D Handrail post XP

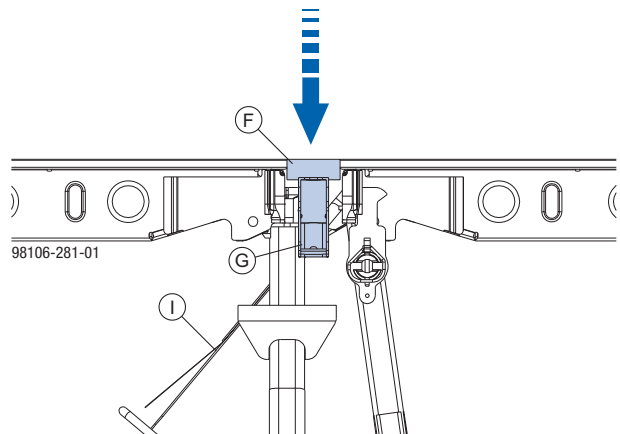
E Protective grating XP

- Remove the bolt of the handrail-post shoe short working from above the formwork. Remove the handrail-post shoe short upwards by turning and tilting it 90°, respectively.



C Dokadek handrail-post shoe short 1.20m

- Close the construction joint from above with infill beams and strips of formwork sheeting 7.5 cm wide (note thickness of formwork sheeting).



F Strip of formwork sheeting 7.5 cm

G Dokadek 20 infill beam

I Lashing strap 5.00m

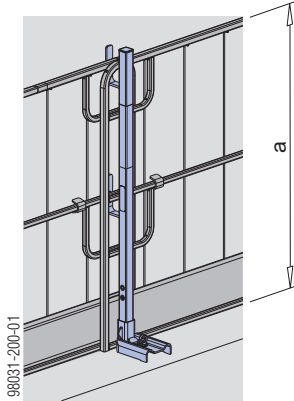


Tie back the panel to improve the tightness of the formwork at the corner head.

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



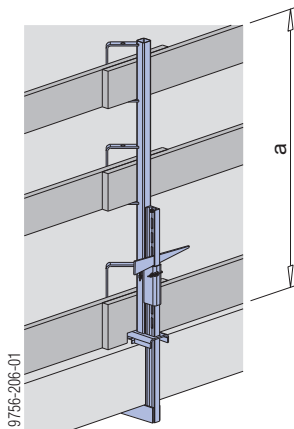
a ... > 1.00 m



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



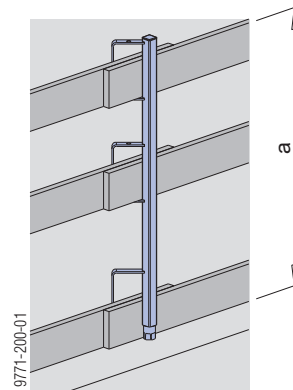
a ... > 1.00 m



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



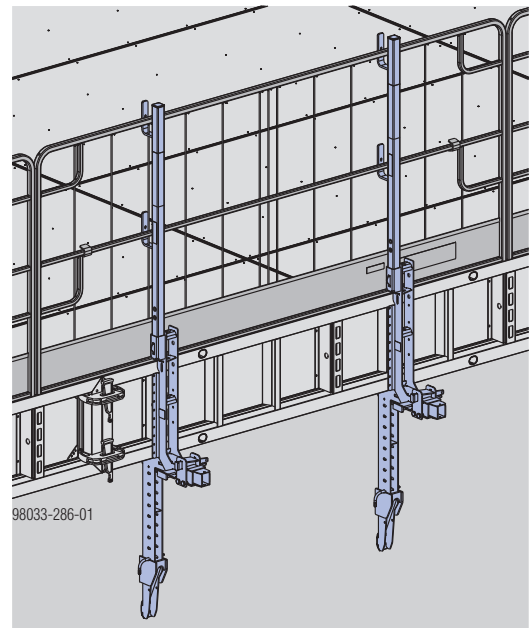
a ... > 1.00 m



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



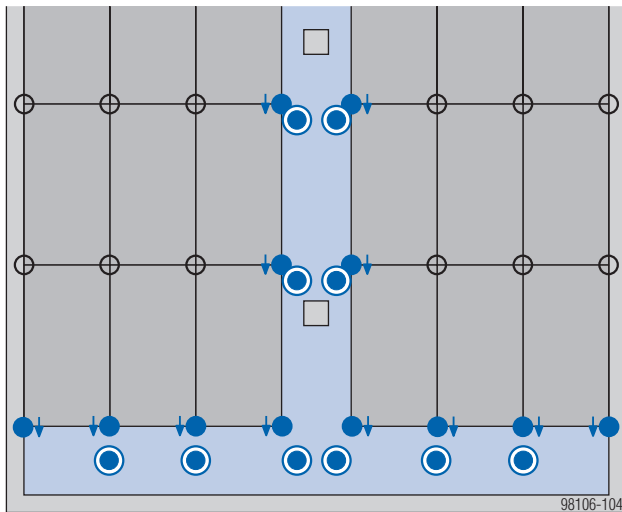
Follow the directions in the "Doka floor end-shutter clamp" User Information booklet!

Early stripping without drop head without activation of the slab

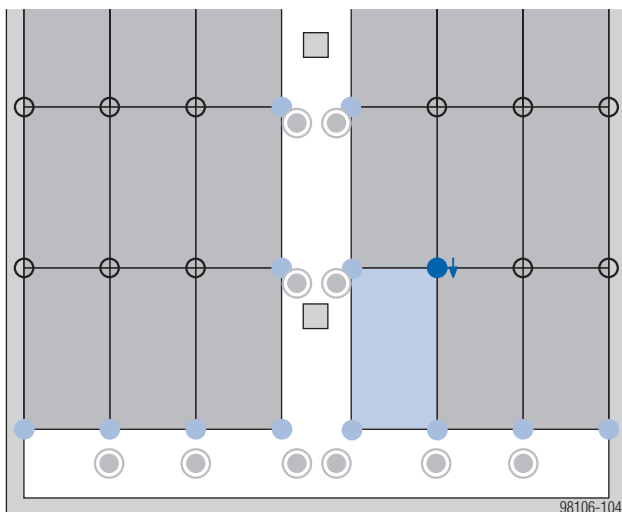
The precondition for this is the presence of an upper reinforcement layer (minimum reinforcement is sufficient) to sustain the stresses occurring above the props.

Explanation of symbols:

- System prop under load
 - ↓● Floor prop for lowering
 - Temporary reshore for installation - floor props of same type as system props
 - Temporary reshore already under load
 - Lowered floor props
- Lower all floor props of the panels in the edge area of the infill.
 - Position floor props to shore up the formwork panels of the infill zone.

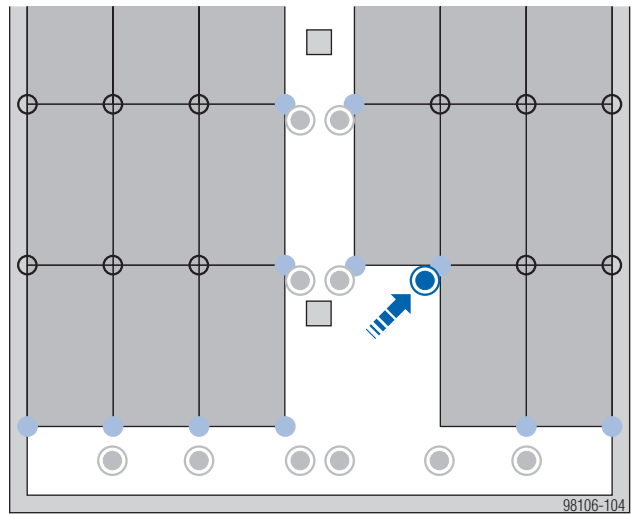


- Remove the supporting structure in the infill zone, leaving the reshored formwork sheeting in place.
- Lower the floor prop of the first panel.

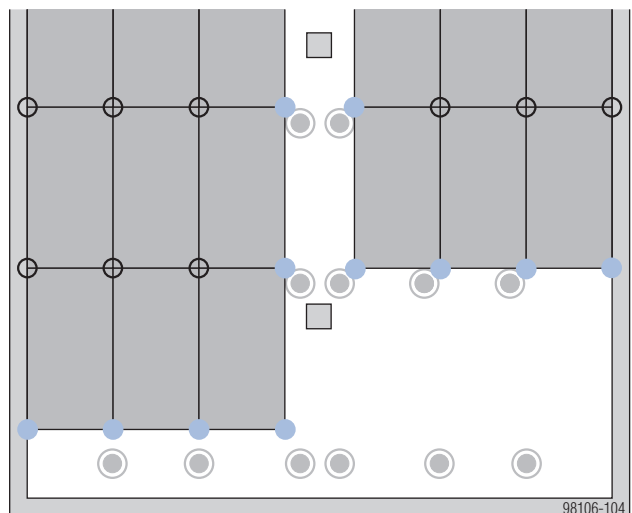


- Strike the panel.

- Use the floor prop as a temporary reshore.



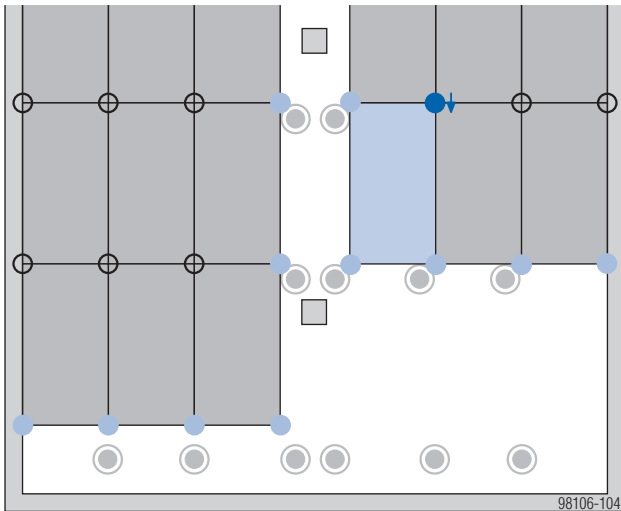
- In the same way, lower the floor props of the next panel in the row, strike the panel and use the floor prop for temporary reshoring, and proceed to the next panel.



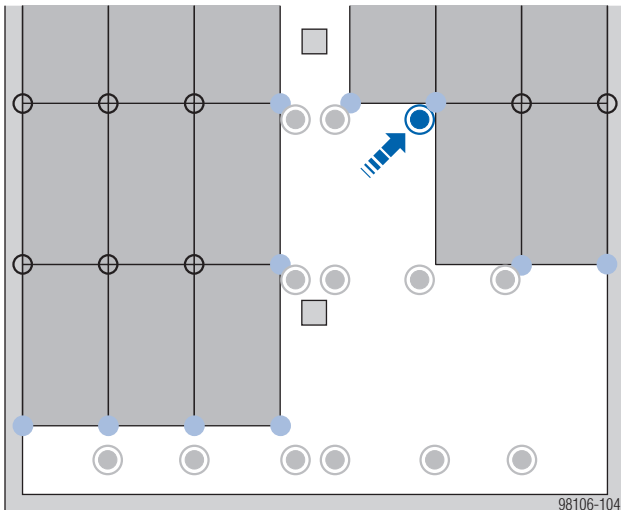
Note:

An extra floor prop for temporary reshoring is not necessary at the wall area.

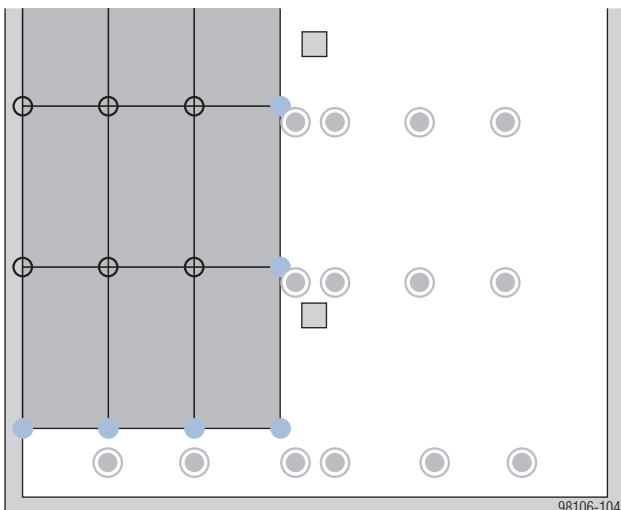
- Proceed in the same way with each row of panels in turn.
- Lower the floor props.



- Strike the panel.
- Use the floor prop for temporary reshoring.



- Working on the same principle, strike the remaining panels and use the floor props for temporary reshoring.



- Strike the formwork in the remainder of the room in the same way. This leaves only the temporary reshoring in place.

**NOTICE**

All systems in which the floor props are re-installed directly after section-by-section stripping out, with the result that the floor slab is not activated.

In early stripping without drop head without activation of the slab, the formwork is removed section by section, with the props being re-installed immediately to reshore each section as it is stripped.

One possibility with Dokaflex 1-2-4 is to insert strips of formwork sheeting that can be propped to carry the slab, permitting the actual formwork to be stripped out.

Strips of formwork sheeting can also be positioned between tables, and propped.

Important parts of the procedure:

- As each floor prop is placed it has to be pre-stressed by a blow with a hammer against the adjusting nut.
- The entire slab is not stripped out at once, because it does not yet have the strength necessary to support its own weight; instead, stripping out proceeds by small degrees, section by section.
- At the time of striking, the slab must have sufficient strength to carry itself between the floor props.

A minimum concrete strength of C8/10 and the presence of top reinforcement suffice for a span of max. 2.6 m between props.

Top reinforcement of 1.88 cm²/m is required. If slab thickness is less than 16 cm the top reinforcement has to be at least 2.1 cm²/m.

- Consequently, the floor slab is not activated.
- 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.
- It is important to allow for adequate curing.

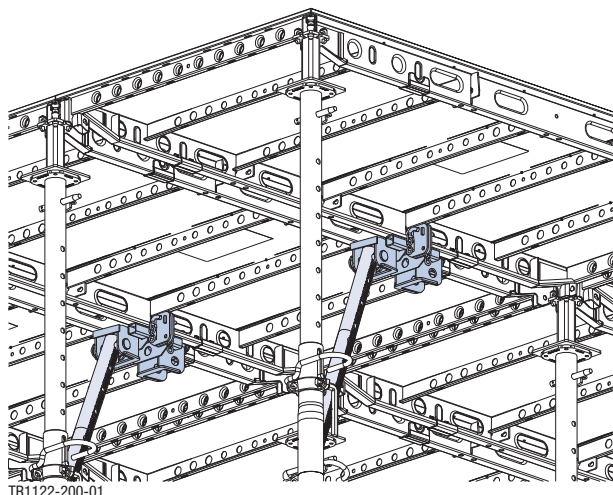
Note:

For more information about correct positioning of the reshoring props, see the section headed 'Reshoring props, concrete technology and stripping out'.

Additional areas of use

Sloping slabs

The Dokadek 20 plumbing-strut connector is used for transferring horizontal loads via plumbing struts in situations where Panel floor formwork Dokadek 20 is being used to form e.g. sloping slabs, or sections of slab along exposed (= no side wall) structure-edges.



TR1122-200-01

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).



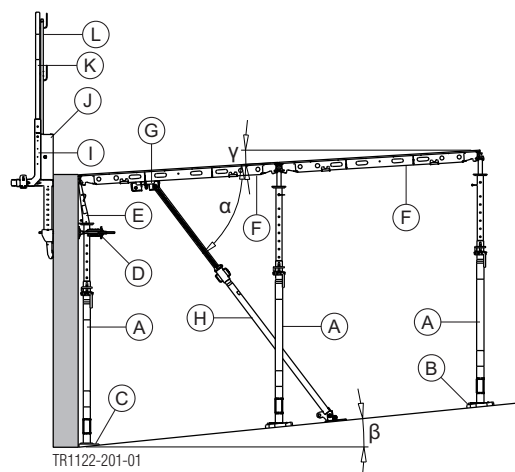
Compensating plates can be used to compensate for floor-slab angles of inclination up to 16% in all directions.



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



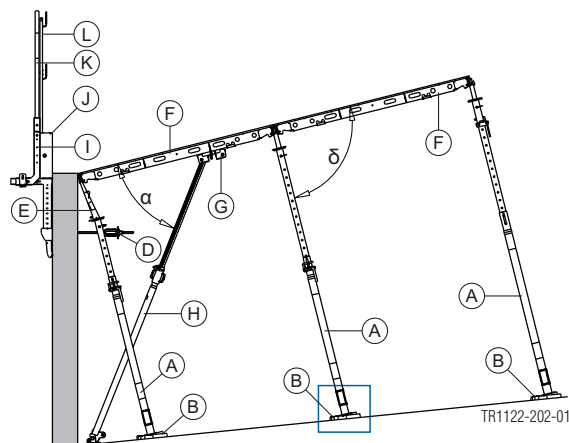
TR1122-201-01

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)

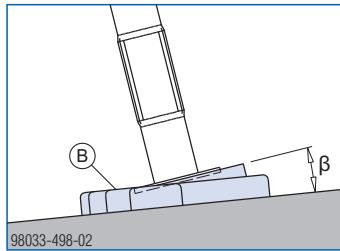
Usage situation B: Doka floor props are at 90° to the formwork plane



TR1122-202-01

α ... approx. 60°

δ ... 90°

Close-up of compensating plate

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 20 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**

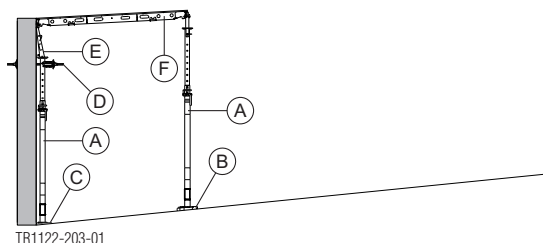
Because the floor props are out-of-vertical, additional horizontal forces occur!

Closing the formwork**NOTICE**

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

e.g. Usage situation A:

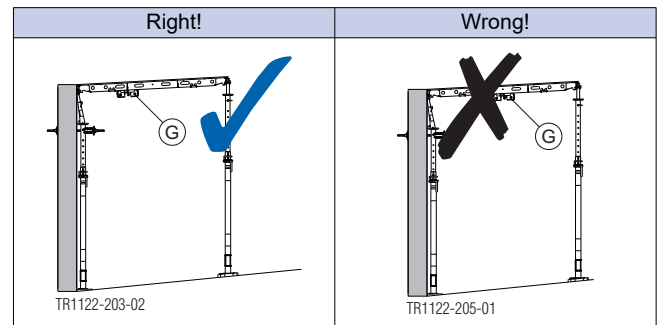
- Set up the Doka floor props and use compensating plates to plumb the props. Use wooden wedges close to the edge of the slab where space is restricted.
- Use Dokadek wall clamps to secure the floor props against tip-over.
- Fit a Dokadek wall head.
- Engage the panel, raise the free end and fix it.



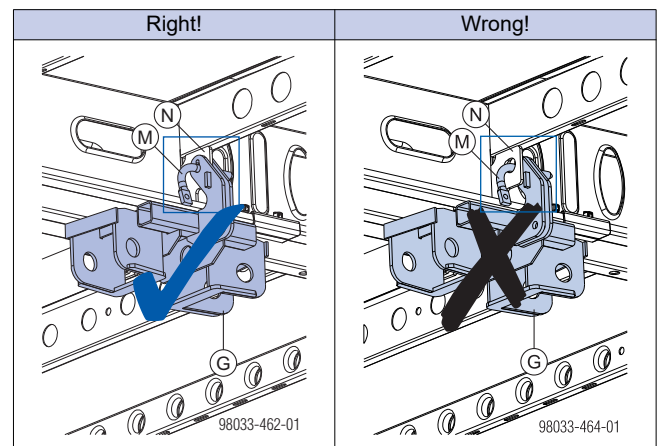
- A Doka floor prop Eurex
- B Compensating plate
- C Wooden wedge
- D Dokadek wall clamp
- E Dokadek wall head
- F Dokadek panel

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 20 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.

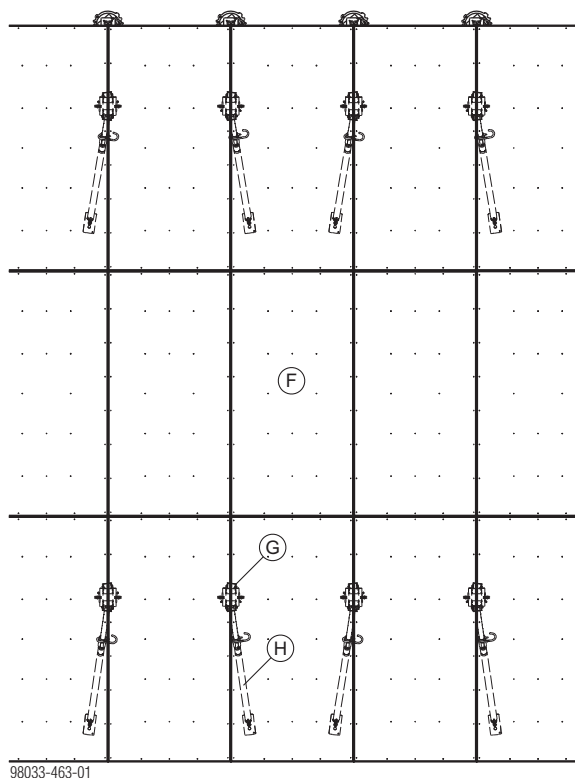
**G** Dokadek 20 plumbing strut connector**M** Fastening bolt (vertical)**N** Transverse stiffening plate

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

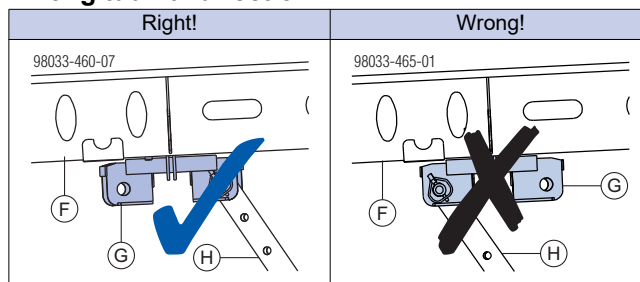
G Dokadek 20 plumbing strut connector

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:

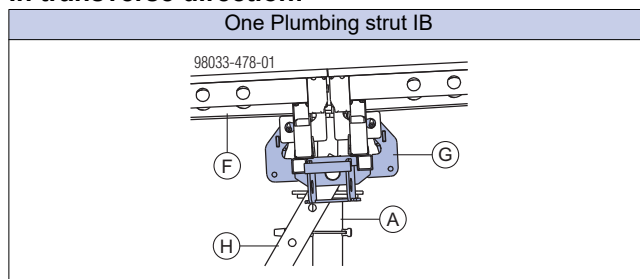


F Dokadek panel

G Dokadek 20 plumbing strut connector

H Plumbing strut 340 IB or Plumbing strut 540 IB

In transverse direction:



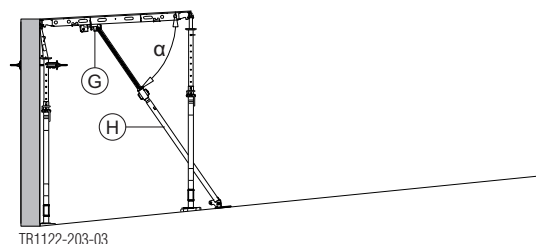
A Doka floor prop Eurex

F Dokadek panel

G Dokadek 20 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.
- 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 20 plumbing strut connector

H Plumbing strut 340 IB or Plumbing strut 540 IB



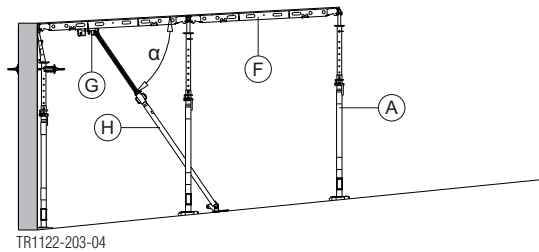
NOTICE

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.



TR1122-203-04

α ... approx. 60°

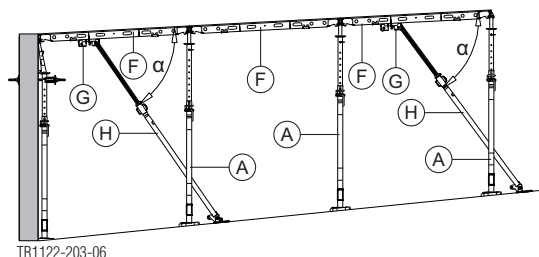
A Doka floor prop Eurex

F Dokadek panel

G Dokadek 20 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.



TR1122-203-06

α ... approx. 60°

A Doka floor prop Eurex

F Dokadek panel

G Dokadek 20 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.

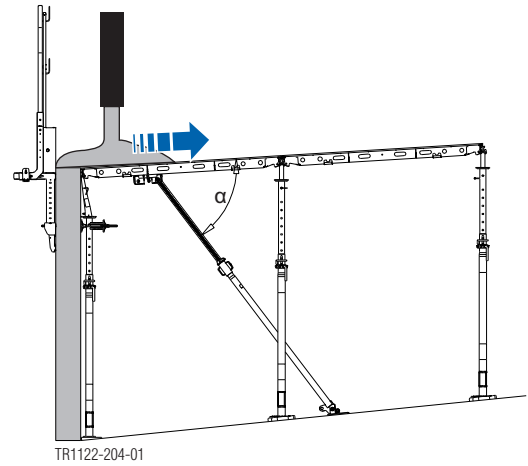


98017-202-01



WARNING

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



TR1122-204-01

α ... approx. 60°

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.

Additional precautions for slab thicknesses of up to 50 cm

The Panel floor formwork Dokadek 20 makes it possible to form greater slab thicknesses using one of the following solutions.

Permitted slab thickness [cm]

Panel size	Flatness deviation	with no extra precautions	Beams H20 in the longitudinal direction of the panels	Beams in the transverse direction + extra floor prop with supporting head in the middle of the beam
2.00x1.00m	l / 500	20	40	35
2.00x1.00m	l / 400	>20-25	50	35
2.00x0.66m	l / 500	30	50	50
2.00x0.66m	l / 400	>30-37	50	50



NOTICE

- The additional propping is mounted AFTER the formwork has been secured against tip-over.
- Secure – with tripods – the standard-system floor props that have only 1 panel resting on the heads.
- Only extend the floor props until they encounter resistance from above. The panel must not be raised.

The Dokadek panels must be supported by H20 primary beams, floor props, and 4-way heads or Supporting heads H20 in the longitudinal and transverse direction, as shown above.

Stripping the formwork

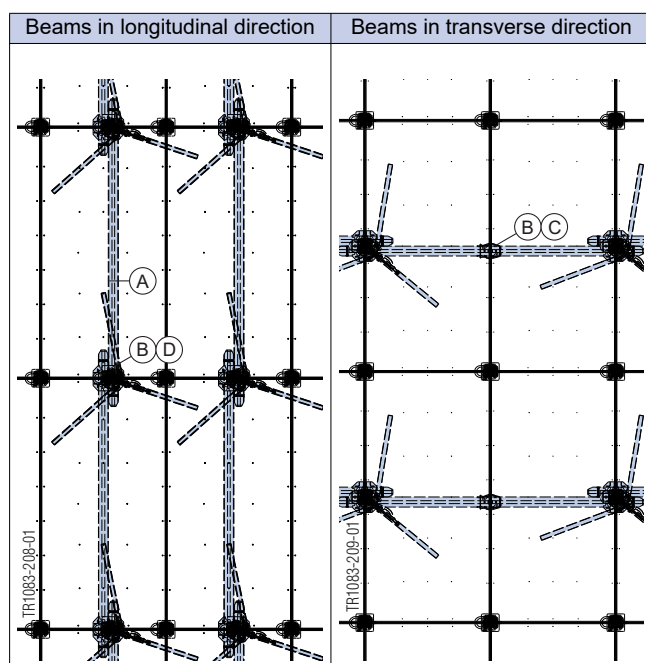


NOTICE

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

Early removal of all the extra shores from the typical zone is permitted if the service and live loads are $\leq 1.5 \text{ kN/m}^2$.

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



A Doka beam H20 2.45m used as primary beam

B Doka floor prop Eurex top

C Supporting head H20 DF

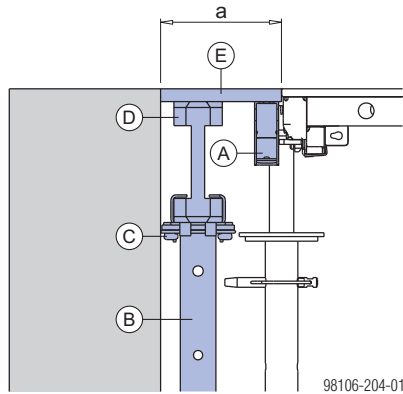
D 4-way head H20

Applications in infill zones

Infilling along wall connections

Version 1: Infill width 'a' = 17 - 36 cm

- max. spacing of infill props (Eurex 20): 200 cm



- A** Dokadek 20 infill beam
- B** Doka floor prop Eurex top + Removable folding tripod
- C** Supporting head H20 DF
- D** Doka beam H20 where infill width 'a' is ≥ 17 cm
(infill of less than 17 cm can be made up in-situ with a 4/20 cm plank or squared timber)
- E** Form-ply

Version 2: Infill width 'a' = 36 - 235 cm

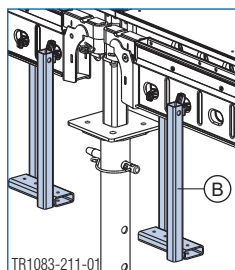
Primary beam	Infill width 'a'	Secondary beam
1.10 m	36 - 100 cm	Doka double alu beam tec-2 2.20m
1.80 m	90 - 170 cm	
2.45 m	145 - 235 cm	

Eurex 20:

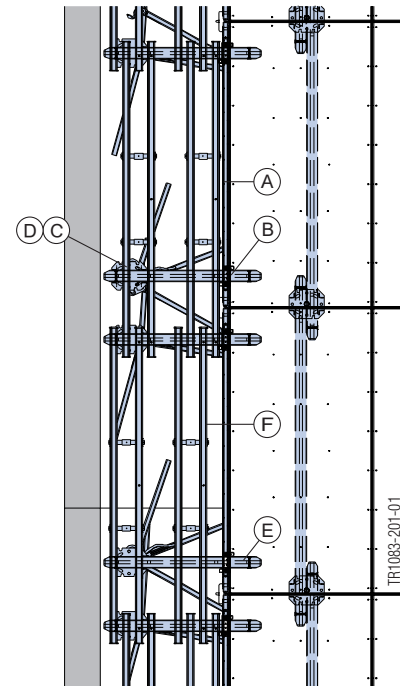
- max. prop spacing 'b': 90 cm
- max. primary-beam spacing: 156 cm
- max. secondary-beam spacing: 18 cm
(Do not exceed the max. support centres of the formwork sheets!)
- for infill gaps 'a' ≥ 135 cm: intermediate prop (with Supporting head H20) is required

Note:

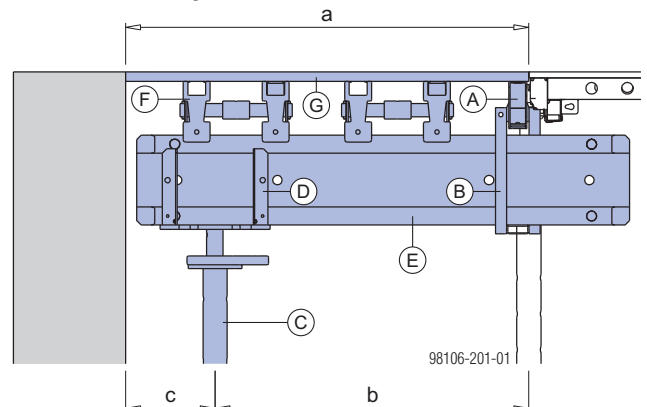
The Suspension clamp tec-2 must be hooked into the **first openings** of the infill beam.



Practical example



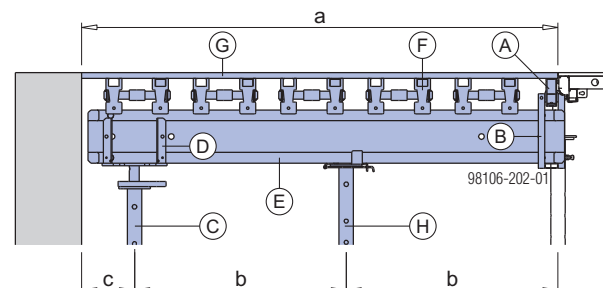
Practical example: Infill width 'a' ≤ 125 cm



b ... max. 90 cm

c ... max. 35 cm

Practical example: Infill width 'a' ≥ 125 cm (with intermediate prop)

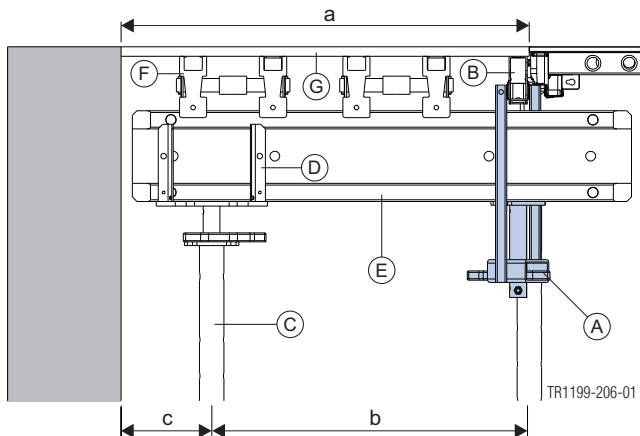
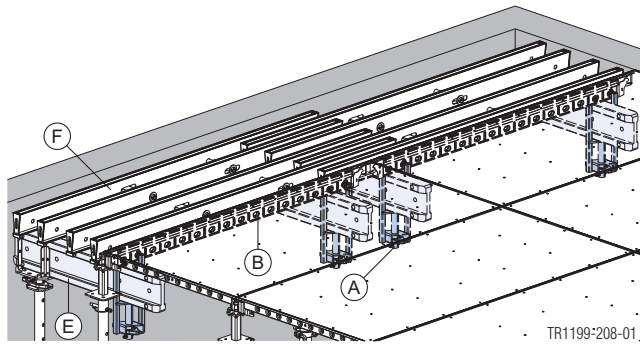


b ... max. 90 cm

c ... max. 35 cm

- A** Dokadek 20 infill beam
- B** Dokadek 20 suspension clamp tec-2
- C** Doka floor prop Eurex top + Removable folding tripod
- D** Lowering head H20
- E** Doka beam H20 used as primary beam
- F** Doka double alu beam tec-2, used as secondary beam
- G** Formwork sheeting 21 mm
- H** Intermediate prop with Supporting head H20

Version 2: with lowering clamp tec-2



a ... Infill in wall area max. 135 cm

b ... max. 100 cm

c ... max. 35 cm

A Dokadek 20 lowering clamp tec-2

B Dokadek 20 infill beam

C Doka floor prop Eurex top + Removable folding tripod

D Lowering head H20

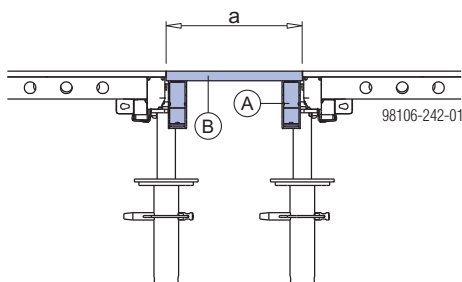
E Doka beam H20 as primary beam

F Doka double alu beam tec-2, used as secondary beam

G Formwork sheeting 21 mm

Infilling between 2 Dokadek forming-sections

Version 1: Infill width 'a' = 17 - 36 cm



Preconditions for multi-ply formwork sheets:

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%: $\geq 19 \text{ N/mm}^2$

A Dokadek 20 infill beam

B Formwork sheeting 21 mm

Version 2: Infill width 'a' = 36 - 235 cm

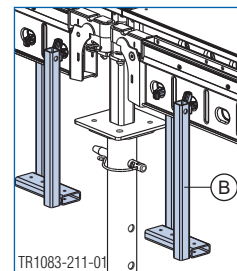
Primary beam	Infill width 'a'	Secondary beam
1.10 m	36 - 100 cm	Doka double aluminium beam tec-2 2.20m
1.80 m	90 - 170 cm	
2.45 m	145 - 235 cm	

Eurex 20:

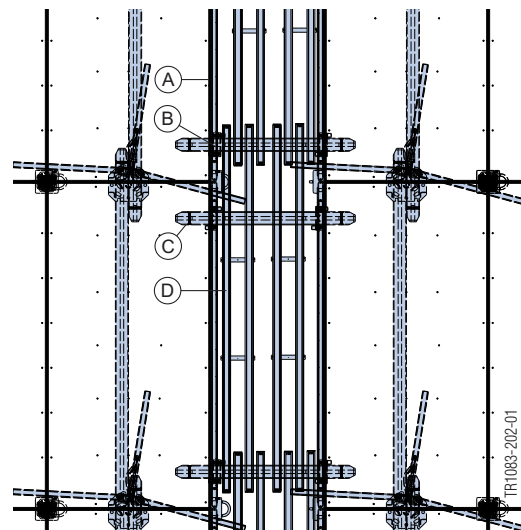
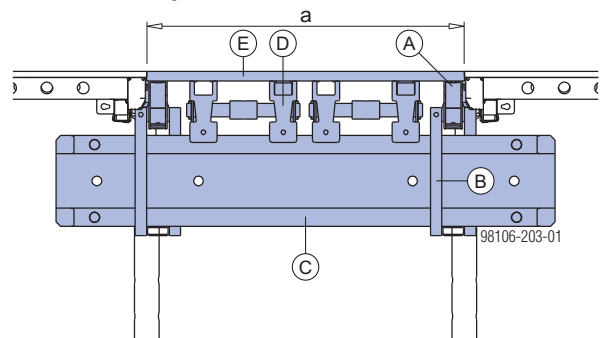
- max. prop spacing 'b': 85 cm
- max. primary-beam spacing: 156 cm
- max. secondary-beam spacing: 18 cm
(Do not exceed the max. support centres of the formwork sheets!)
- for infill gaps 'a' $\geq 100 \text{ cm}$: intermediate prop (with Supporting head H20) is required

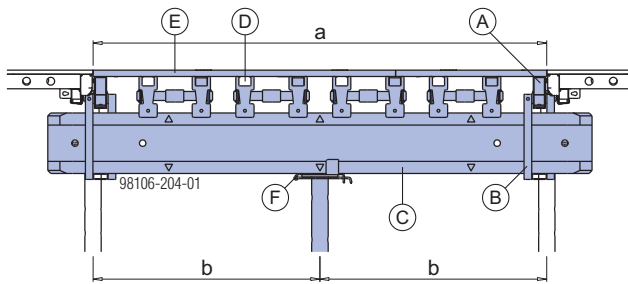
Note:

The Suspension clamp tec-2 must be hooked into the **first openings** of the infill beam.



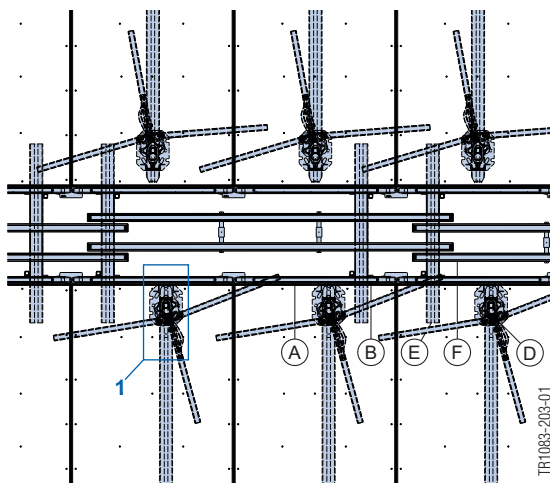
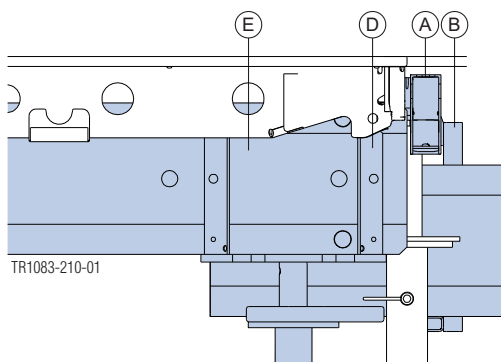
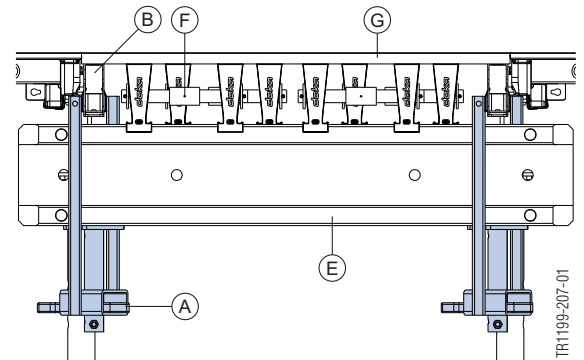
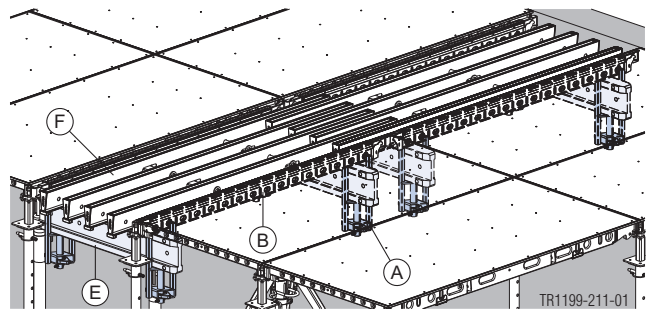
Widthwise infill

Practical example: Infill width 'a' $\leq 100 \text{ cm}$ 

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

b ... max. 85 cm

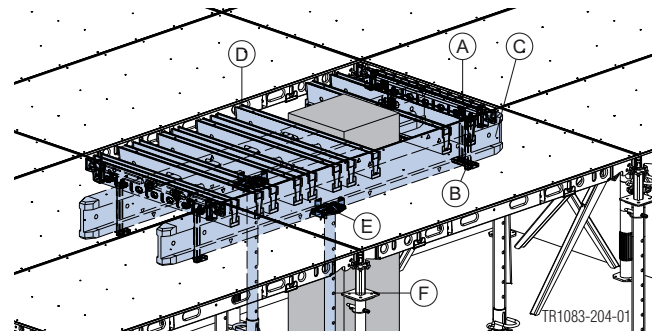
- A** Dokadek 20 infill beam
- B** Dokadek 20 suspension clamp tec-2
- C** Doka beam H20 as primary beam
- D** Doka double alu beam tec-2, used as secondary beam
- E** Formwork sheeting 21 mm
- F** Intermediate prop with Supporting head H20

Closures**Close-up 1****Version 2: with lowering clamp tec-2**

- A** Dokadek 20 lowering clamp tec-2
- B** Dokadek 20 infill beam
- E** Doka beam H20 as primary beam
- F** Doka double alu beam tec-2, used as secondary beam
- G** Formwork sheeting 21 mm

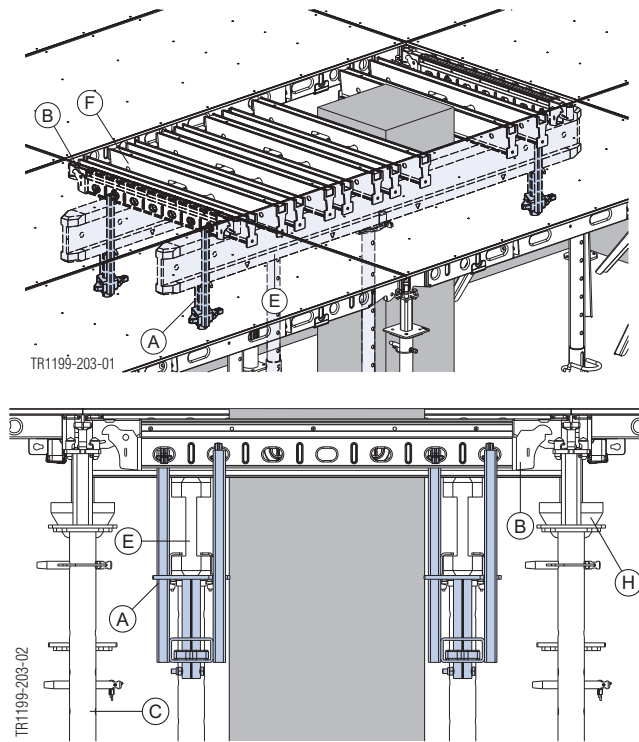
Infill zones around columns

- Support the primary beam with a floor prop and supporting head in the middle.



- A** Dokadek 20 infill beam
- B** Dokadek 20 suspension clamp tec-2
- C** Doka beam H20 as primary beam
- D** Doka double alu beam tec-2, used as secondary beam
- E** Supporting head H20 DF
- F** Doka floor prop Eurex 20

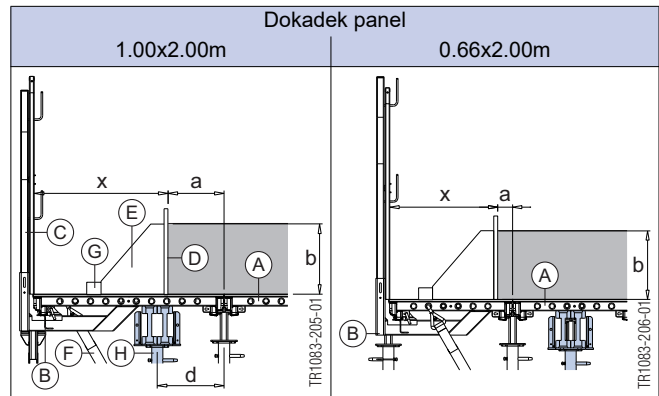
With lowering clamp tec-2



- A** Dokadek 20 lowering clamp tec-2
- B** Dokadek 20 infill beam
- C** Doka floor prop Eurex top + Removable folding tripod
- E** Doka beam H20 as primary beam
- F** Doka double alu beam tec-20, used as secondary beam
- H** Dokadek support head

Slab stop-ends

Slab stop-end in longitudinal direction with Handrail post shoe long 1.20m



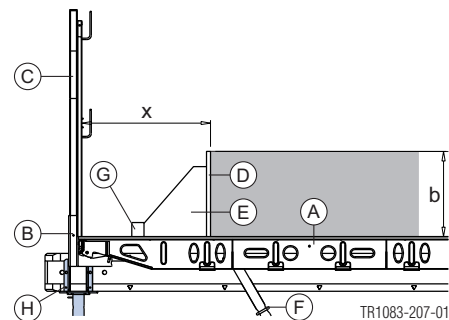
b ... max. 50 cm

d ... 36.5 cm (position the 4-way head H20 as close as possible to the Handrail post shoe long 1.20m!)

x ... Follow the directions in EN 12811!

Dokadek panel	Max. projecting concrete cover on Dokadek panel a [cm]	Max. slab thickness [cm] b [cm]
1.00x2.00m	85	50
0.66x2.00m	10	50
0.66x2.00m	acting on whole area	37

Slab stop-end in transverse direction with Handrail post shoe short 1.20m



b ... max. 50 cm

x ... Follow the directions in EN 12811!

- A** Dokadek panel
- B** Dokadek handrail-post shoe long or handrail-post shoe short 1.20m
- C** Handrail post XP 1.20m
- D** Sheeting
- E** Stop-end
- F** Lashing strap 5.00m
- G** Spax screws for attaching the stop-end to the Dokadek panel
- H** 4-way head H20

Note:

EN 12811 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.

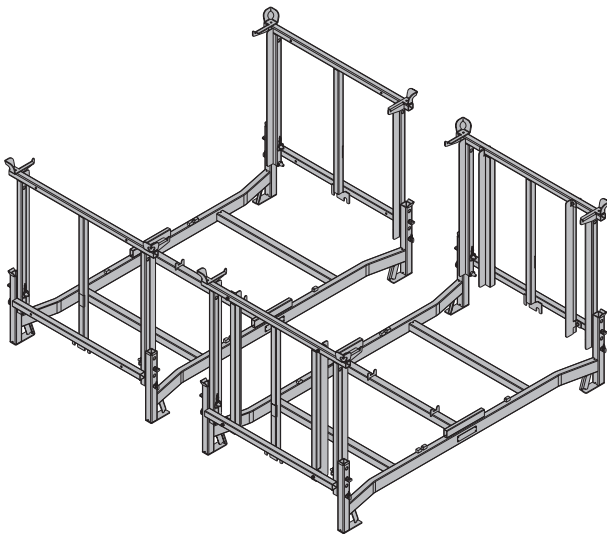
General

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 20 panel pallets



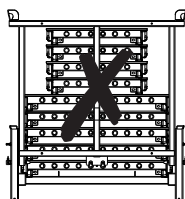
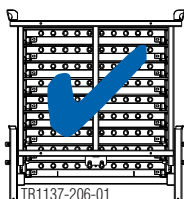
Storage and transport device for Dokadek 20 panels:

- Dokadek 20 panel pallet 1.00x2.00m for Dokadek 20 panels 1.00x2.00m
- Dokadek 20 panel pallet 0.66x2.00m for Dokadek 20 panels 0.66x2.00m
- durable
- stackable



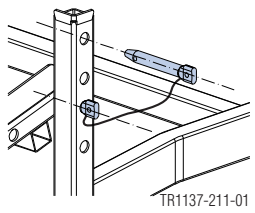
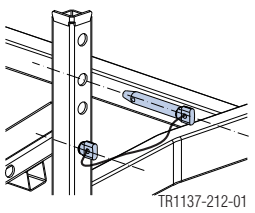
CAUTION

- The Dokadek 20 panel pallets can transport only Dokadek 20 panels.
- Stacking Dokadek 20 panels 0.66x2.00m on the Dokadek panel pallet 1.00x2.00m is prohibited.
- It is forbidden to stack panels of different widths on the same pallet.



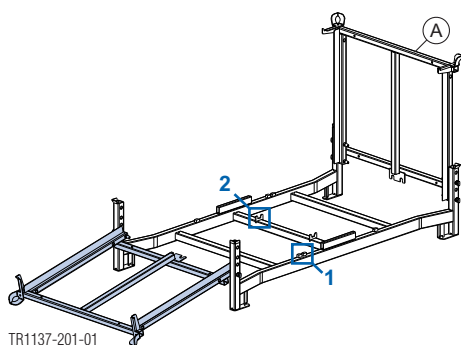
NOTICE

- The type plate must be in place and clearly legible.

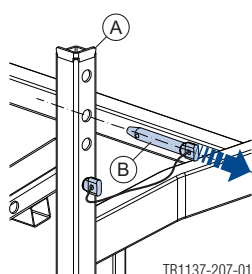
Max. n° of panels	10	9
Position of the fastening bolts		
Load height with pallets stacked two-high	259,0 cm (for truck without roof)	245.0 cm (for truck with roof)
Min. number of panels:	3	2

Stacking the panels

- At one end of the pallet, remove the top Fastening bolts D22 and swing the frame down.



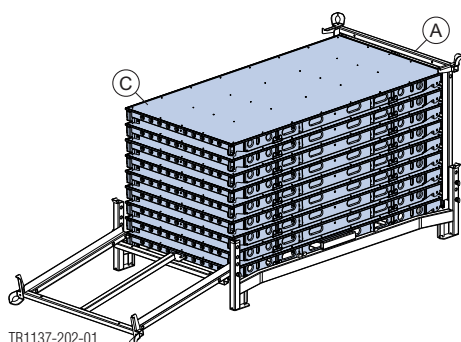
TR1137-201-01



TR1137-207-01

- A** Dokadek 20 panel pallet
B Fastening bolt D22

- Load the pallet with Dokadek 20 panels. The bottom-most panel has to be secured (see Close-ups 1 and 2).



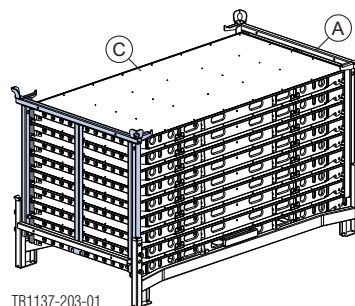
TR1137-202-01

- A** Dokadek 20 panel pallet
C Dokadek 20 panel

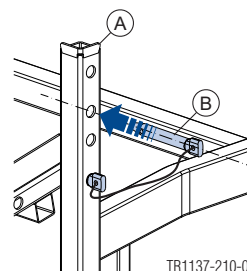
Securing the bottommost panel

Close-up 1 Dokadek 20 panel 1.00x2.00m	Close-up 2 Dokadek 20 panel 0.66x2.00m
<p>TR1137-208-01</p> <p>View from above</p>	<p>TR1137-209-01</p> <p>View from below</p>

- Swing the frame up and secure it with fastening bolts D22. Secure each Fastening bolt D22 with linch pin and cotter pin.



TR1137-203-01



TR1137-210-01

- A** Dokadek 20 panel pallet
B Fastening bolt D22
C Dokadek 20 panel

Dokadek panel pallet as a storage unit



NOTICE

When filling panel pallets with panels, make sure that the pallets are standing on firm ground and that the panels are stacked correctly in the pallets.

Max. n° of units on top of one another

Outdoors (on the site) floor gradients of up to 3%	Stacked in the warehouse floor gradients of up to 1%
1	4

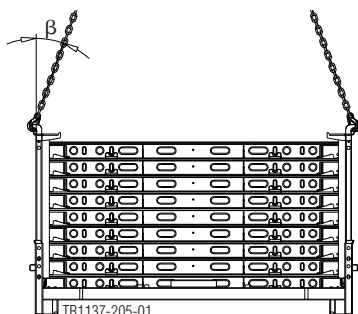
Dokadek panel pallet as a transport device

Suitable transport appliances:

- crane
- forklift truck
- pallet stacking truck

Lifting by crane**NOTICE**

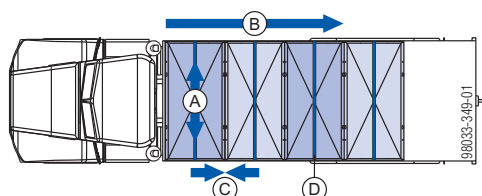
- Multi-trip packaging items must be lifted individually.
- Use a suitable crane suspension tackle (do not exceed permitted load capacity).
- Spread angle β max. 30°!

**Shifting with forklift or pallet stacking truck**

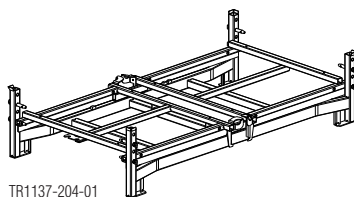
The forks can be inserted under either the sides or the ends of the pallets.

Correct loading of trucks (lorries)**NOTICE**

- Arrange the Dokadek 20 panel pallets at right-angles to the cargo floor. **(A)**
- Load the truck from front to back with Dokadek 20 panel pallets. **(B)**
- Arrange the Dokadek 20 panel pallets so that they are positively locked. **(C)**
- Secure each Dokadek 20 panel pallet stack with a lashing strap **(D)**

**Transporting and storing empty panel pallets**

The frames of the empty panels have to be folded in and set in the parking position for transport and storage.

**Max. n° of empty units on top of one another**

Outdoors (on the site) floor gradients of up to 3%	Stacked in the warehouse floor gradients of up to 1%
4	10

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:

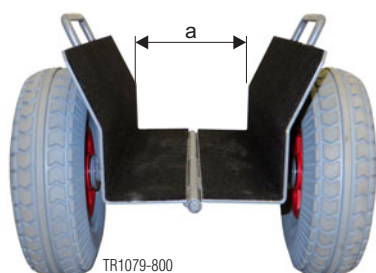
- Clamping jaws
- Clamping sides, felt-padded on inside
- The weight of the material being transported securely closes the clamping mechanism

Designation: M-Timber trolley 170mm-CT

Weight: 7.0 kg

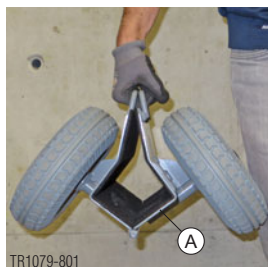
Dimensions:

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



Max. load: 300 kg

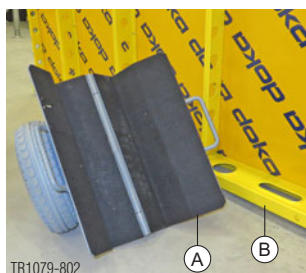
State during transport



A M-Timber trolley 170 mm-CT

How to load

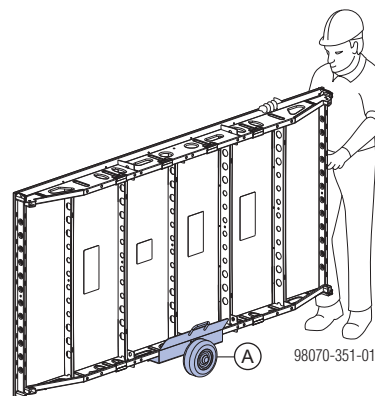
- Position the Timber trolley beside the Dokadek panel, midway along the panel.



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.

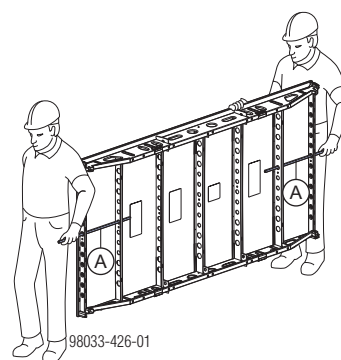


A M-Timber trolley 170 mm-CT

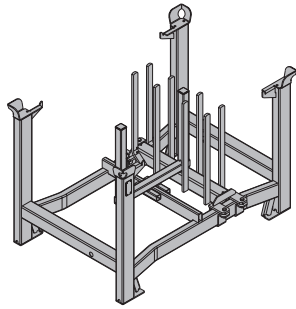
Manual transport



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



Dokadek 20 infill beam pallet



Storage and transport device for Dokadek 20 infill beams 2.00:

- durable
- stackable
- Infill beams 2.00m are supplied ex-works in the Dokadek infill beam pallet, while Infill beams 1.00m and 0.66m are supplied in the Doka multi-trip transport box 1.20x0.80m.

Max. number of Dokadek 20 infill beams: 66

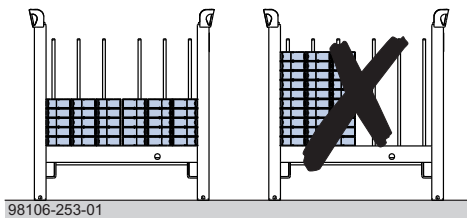
Max. load-bearing capacity: 800 kg

Permitted imposed load: 5900 kg



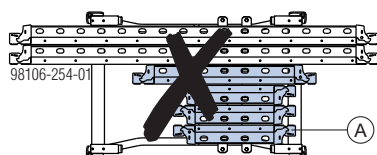
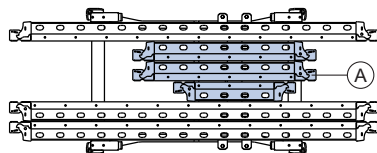
NOTICE

- Load Infill beams 2.00m 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.



98106-253-01

- It is permitted to stack infill beams of different lengths on the same pallet.
 - When the pallet is transported by lorry, Infill beams 1.00m and 0.66m (**A**) must be stacked on the inside.



98106-254-01

- 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 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.

Using the Dokadek infill-beam pallet as a transport device

Suitable transport appliances:

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



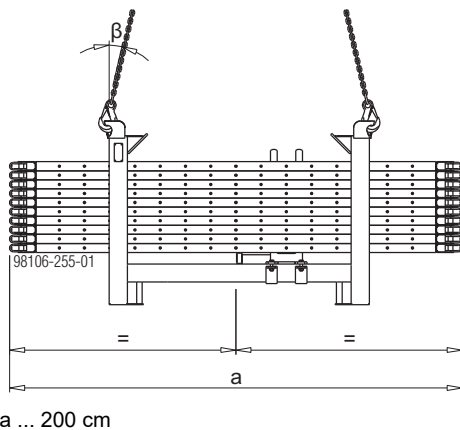
Follow the directions in the "Bolt-on castor set B" Operating Instructions!

Lifting by crane



NOTICE

- Multi-trip packaging items 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.
- 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°!



Repositioning by forklift truck or pallet stacking truck



NOTICE

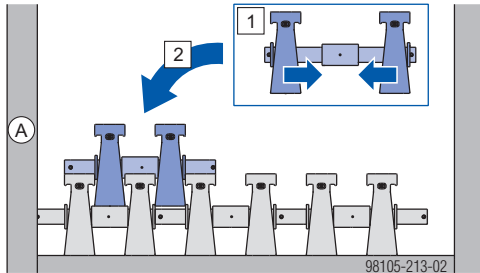
- Load the items centrally.

Stacking the Doka double alu beams tec-2



CAUTION

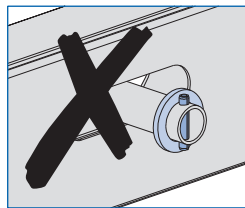
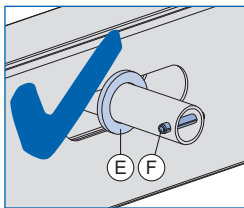
- Max. number of Doka double alu beams tec-2 per multi-trip packaging unit: 15
- Push the single profiles of the tec-2 beams together completely (Pos. 1).
- Stack the tec-2 beams into the multi-trip packaging unit, with the nailing strip facing downwards (Pos. 2).



A Doka multi-trip transport box 1.20x0.80m
(for Doka double aluminium beam tec-2 0.98m) or
Doka stacking pallet 1.55x0.85m
(for Doka double aluminium beam tec-2 2.20m)



Make sure that the washers (**E**) and locking pins (**F**) are correctly positioned so as to prevent damage to the profiles.

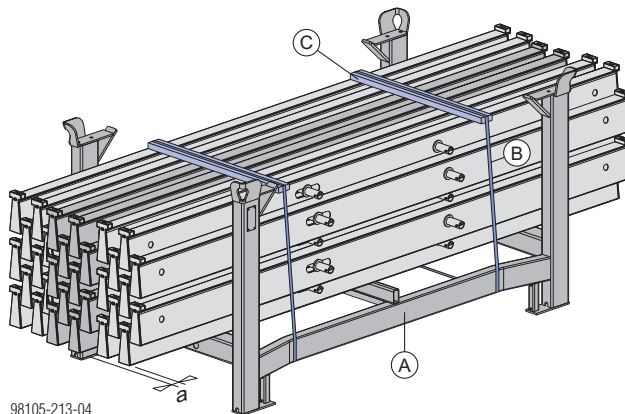


Bundling the Doka double alu beams tec-2 2.20m:



NOTICE

- Use plastic strapping tape!
- Bundle the whole stack together, including stacking pallet and sleepers.



a ... min. 30 mm (offset in longitudinal direction)

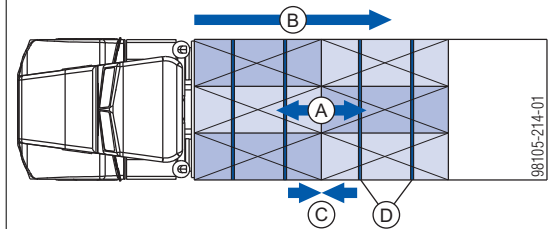
A Doka stacking pallet 1.55x0.85m
B Plastic strapping tape
C Sleeper 2.2 x 10 cm

Correct loading of trucks (lorries)



NOTICE

- Arrange the multi-trip packaging units **lengthways to the cargo floor. (A)**
- Load the truck from front to back. **(B)**
- Arrange the multi-trip packaging units so that they are positively locked. **(C)**
- Tie three multi-trip packaging units together with 2 lashing straps respectively, at right angles to the cargo floor. **(D)**
 - Use edge protectors to prevent damage to the profiles.



Transporting Bracing frames Eurex



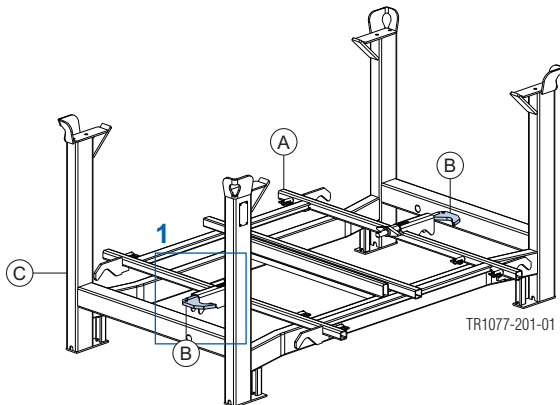
NOTICE

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

Max. number of Bracing frames Eurex 1.00m per stacking pallet: 10

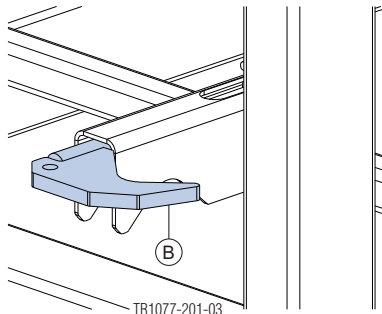
Loading the pallet

- Turn the prop-holders (= quick-fixing mechanisms) by 90°, fix them and place the frame into the Doka stacking pallet (see Close-up 1).



- A Bracing frame Eurex 1.00m
- B Prop-holder (= quick-fixing mechanism)
- C Doka stacking pallet 1.55x0.85m

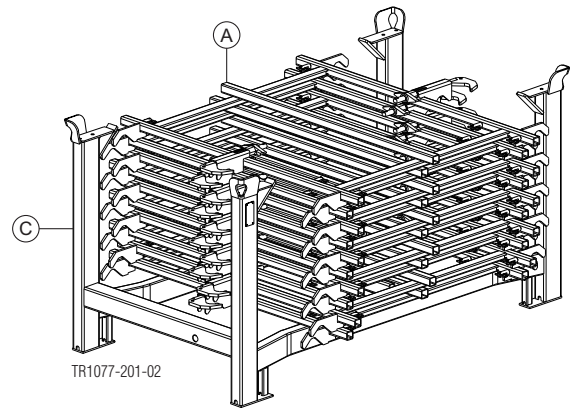
Close-up 1



- B Prop-holder (= quick-fixing mechanism)

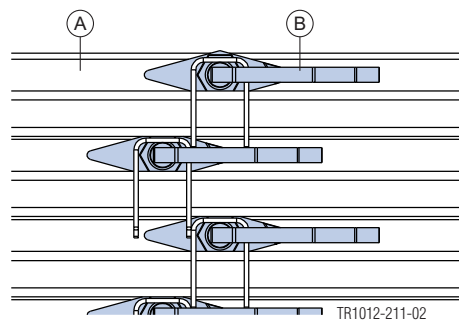
- Stack the other bracing frames alternate ways round (as shown in Close-up 2).

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



- A Bracing frame Eurex 1.00m
- C Doka stacking pallet 1.55x0.85m

Close-up 2

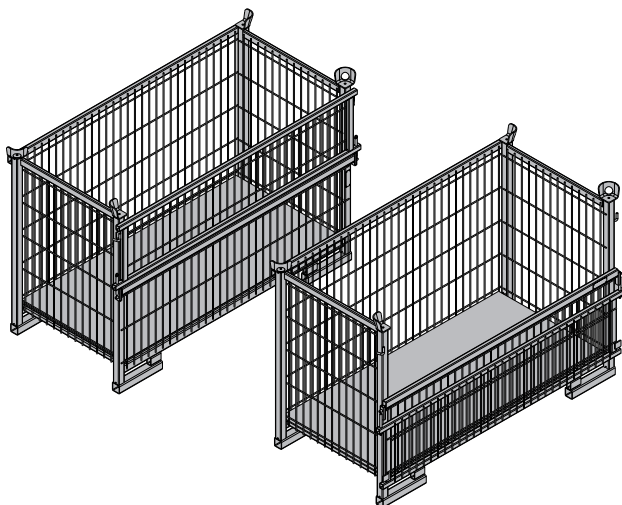


- A Bracing frame Eurex 1.00m
- B Prop-holder (= quick-fixing mechanism)

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.

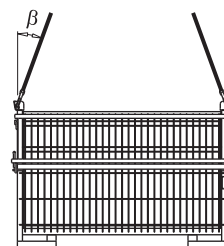
Using Doka skeleton transport boxes 1.70x0.80m as transport devices

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

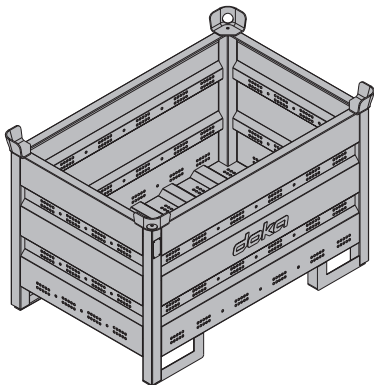
Repositioning by forklift truck or pallet stacking truck

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

Doka multi-trip transport box

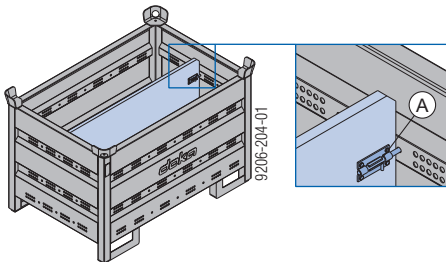
Storage and transport device for small items

Doka multi-trip transport box 1.20x0.80m



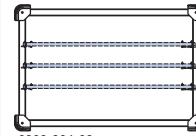
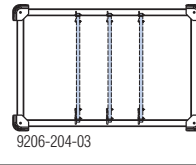
Max. carrying capacity: 1500 kg (3300 lbs)
Permitted imposed load: 7850 kg (17300 lbs)

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
		
9206-204-02		9206-204-03

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	1.20x0.80m	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.

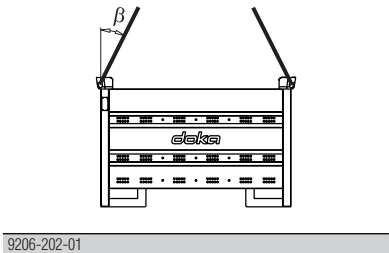
Using Doka multi-trip transport boxes as transport devices

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°!

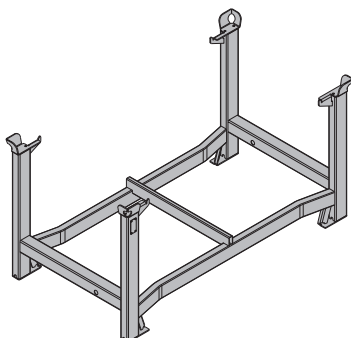


Repositioning by forklift truck or pallet stacking truck

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.

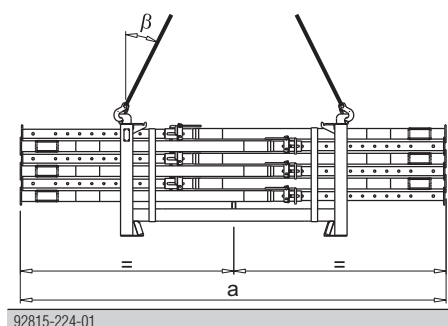
Using Doka stacking pallets as transport devices

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°!



	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

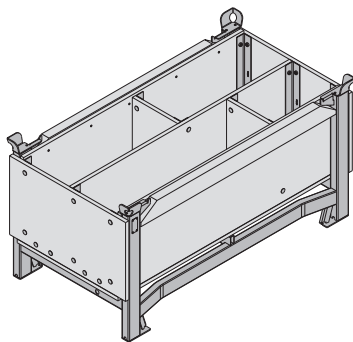


NOTICE

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

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.

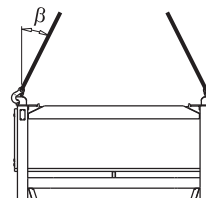
Doka accessory box as transport devices

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°!



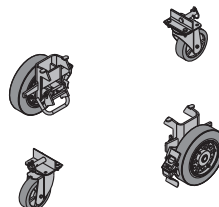
92816-206-01

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

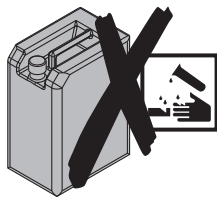
► Risk of slippage when surface is wet!

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

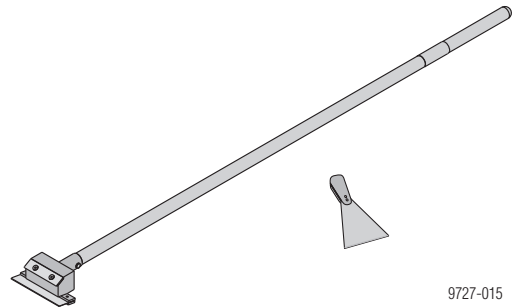


NOTICE

- 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.

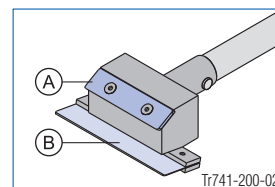
Concrete scraper

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

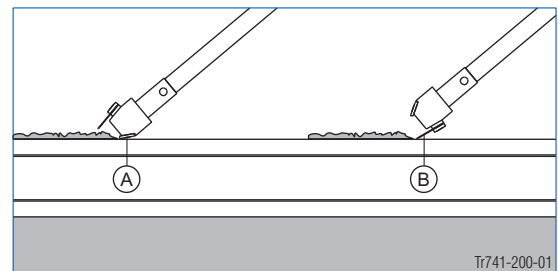


9727-015

Functional description:



Tr741-200-02



Tr741-200-01

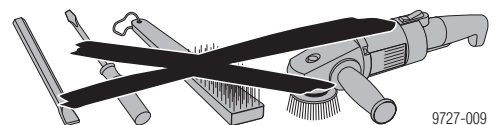
A Blade for dealing with heavy soiling

B Blade for dealing with slight soiling



NOTICE

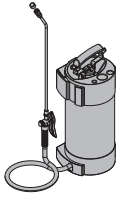
Do not use pointed or sharp objects, wire brushes, abrasive disks or cup brushes.



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

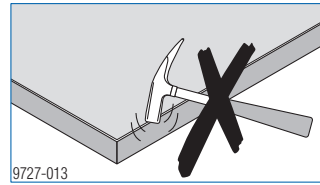
- Before every pour:
 - Apply release agent to the formwork sheet and the end faces **extremely thinly, evenly** and **in a continuous layer**.
- Make sure there are no drips of release-agent running down the formwork sheet.
- Applying too much release agent will spoil the concrete finish.



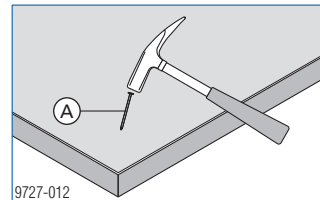
To determine the right dosage and to make sure that you are using the agent correctly, test it on less important parts of the structure first.

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 best time to strip out the formwork?

The concrete strength needed before the formwork can be stripped out 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/m^2 results in a load factor α of 0.54.

This means that formwork removal / stress-release can take place once 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 reshoring props after stripping out the formwork?

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, regardless of the information given above.

Observe all local standards and regulations!

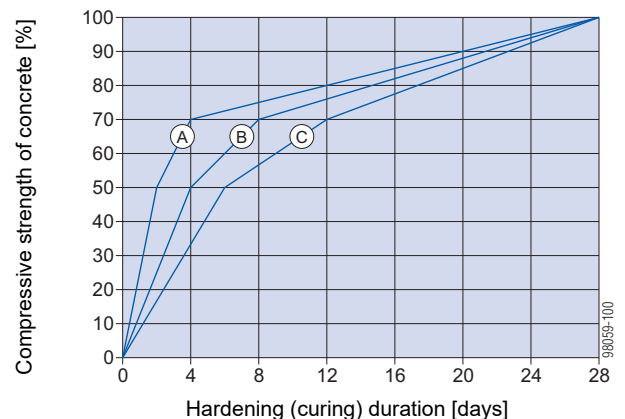
Strength development in the new concrete

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.



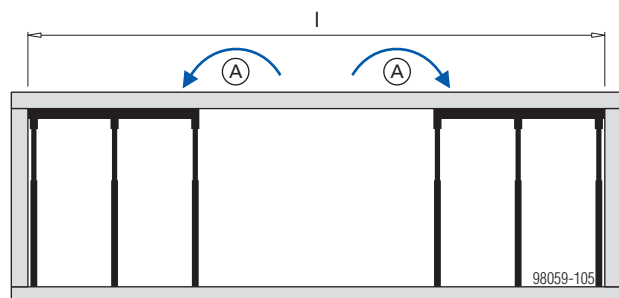
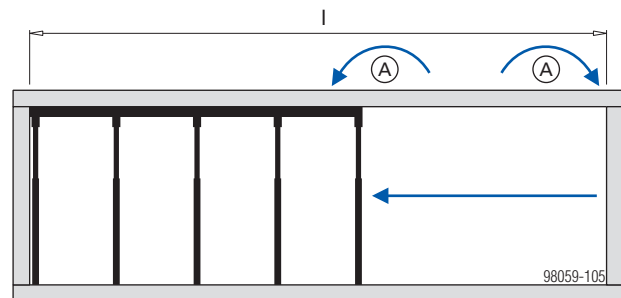
NOTICE

The basic rule is:

- 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**.

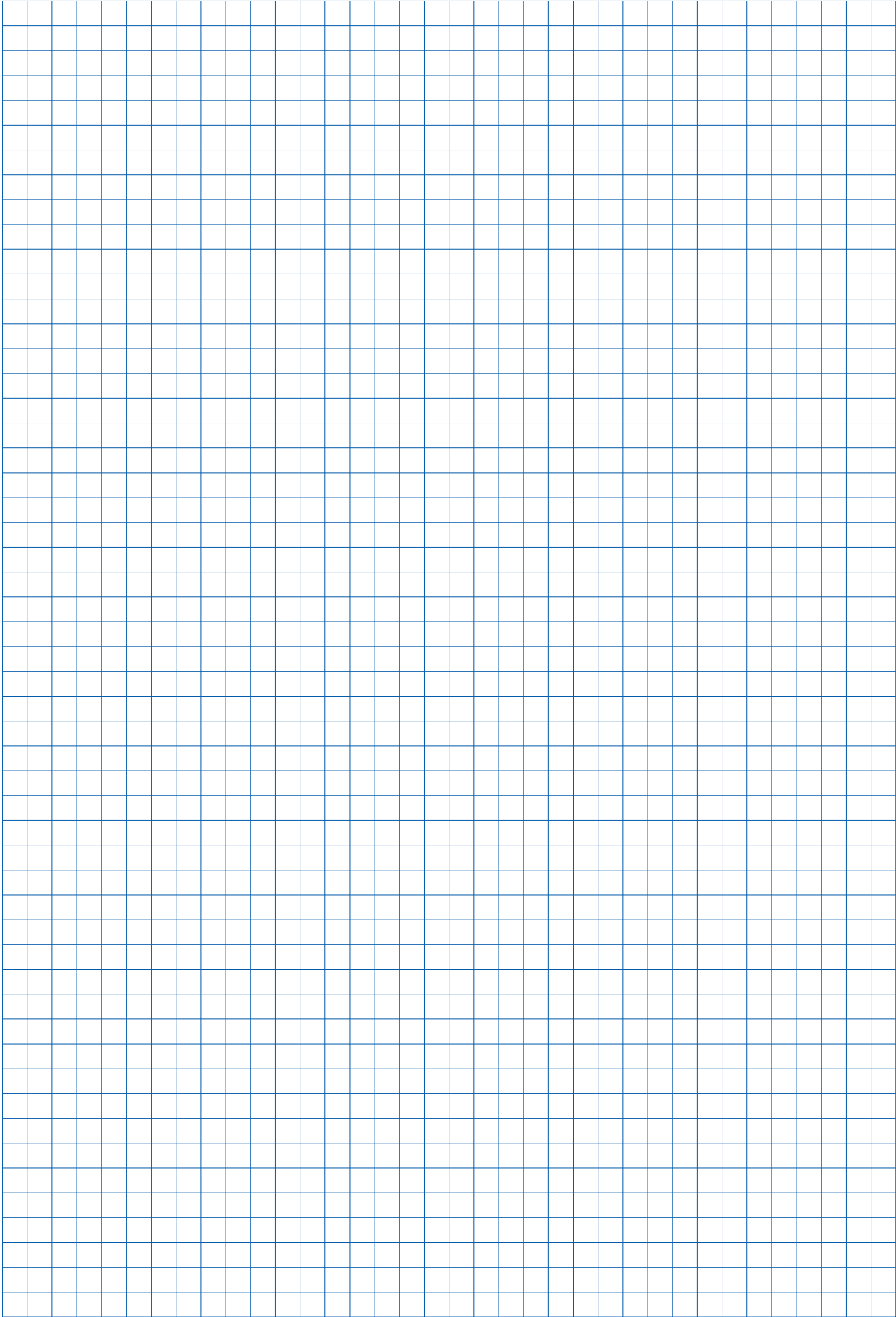
For wide spans, this procedure **MUST** be followed!

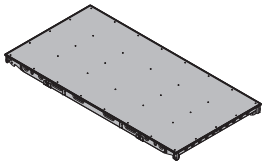
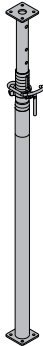
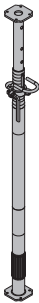
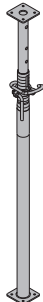
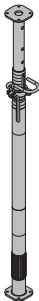


- Stress-release must **NEVER** be carried out **from both sides towards the middle!**

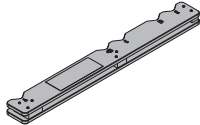
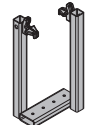
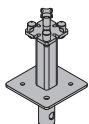
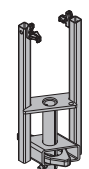
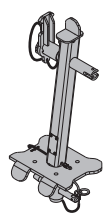
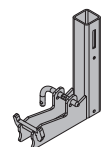
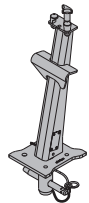
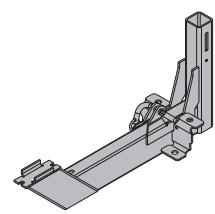
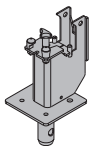


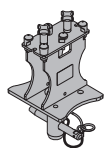

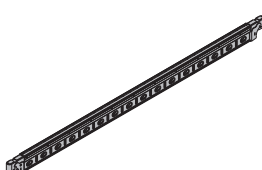


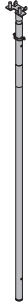
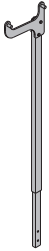
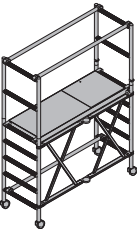
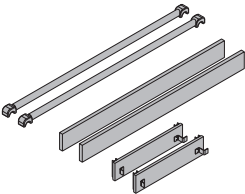
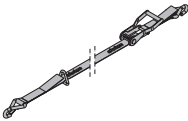
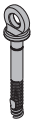

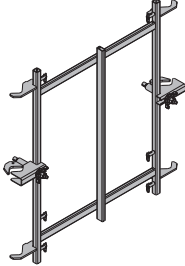

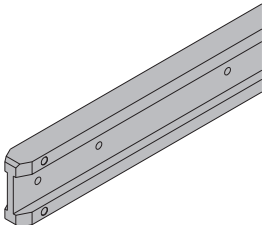
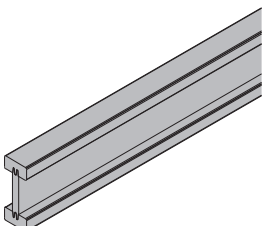

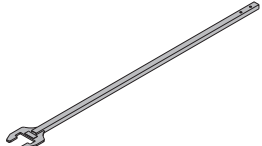
l ... Effective floor-slab spans of 7.50 m and over

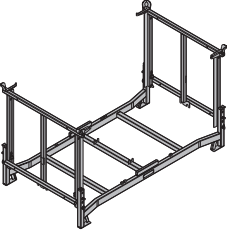
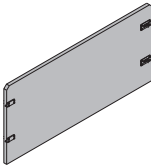
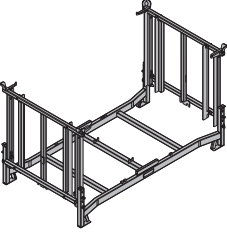
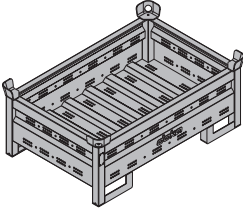
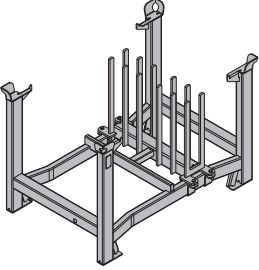
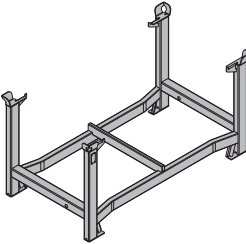
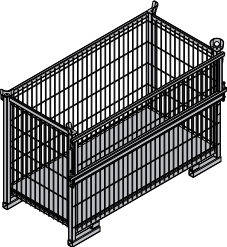
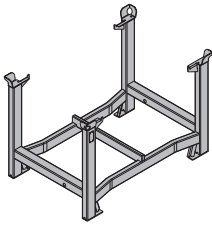
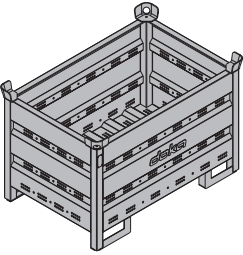
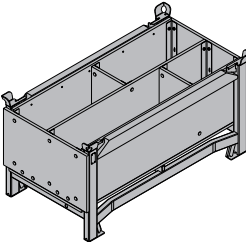
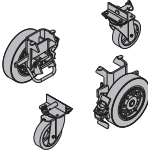
A Load redistribution



	[kg]	Article N°		[kg]	Article N°
Dokadek 20 panel 1.00x2.00m Dokadek 20 panel 0.66x2.00m Dokadek 20-Element  Galvanised Painted yellow	31.5 25.0	586580000 586581000	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  Galvanised	12.8 16.3 20.7 24.2 28.5	586000000 586001000 586002000 586003000 586004000
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-Deckenstütze Eurex 20 top  Galvanised	12.7 14.3 17.4 21.6 32.3	586086400 586087400 586088400 586089400 586090400	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  Galvanised	11.5 14.0 16.9 20.5 24.1 32.0	586270000 586271000 586272000 586273000 586275000 586276000
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  Galvanised	12.8 16.4 20.7 24.6 29.1 38.6	586092400 586093400 586094400 586095400 586119400 586129000	Removable folding tripod top Stützbein top  Galvanised Height: 80 cm Delivery condition: folded closed	12.0	586155500
			Removable folding tripod 1.20m Stützbein 1,20m  Galvanised Height: 120 cm Delivery condition: folded closed	20.7	586145000

	[kg]	Article N°		[kg]	Article N°
Dokadek 20 wall clamp Dokadek 20-Wandhalter  Dark brown Length: 116 cm	3.0	183073000	Dokadek 20 suspension clamp tec-2 Dokadek 20-Einhängebügel tec-2  Galvanised Painted blue Width: 15 cm Height: 29 cm	1.4	586586000
Dokadek support head Dokadek-Auflagerkopf  Galvanised Height: 33 cm	2.4	586506000	Dokadek 20 lowering clamp tec-2 Dokadek 20-Absenkbügel tec-2  Galvanised Painted blue Width: 15 cm Height: 48 cm	4.5	586607000
Dokadek corner head Dokadek-Eckkopf  Galvanised Height: 54 cm	5.6	586539000	Dokadek handrail-post shoe short 1.20m Dokadek-Stümgeländerschuh 1,20m  Galvanised Length: 23 cm Height: 27 cm	3.0	586598000
Dokadek wall head Dokadek-Wandkopf  Galvanised Height: 56 cm	4.3	586536000	Dokadek 20 handrail-post shoe long 1.20m Dokadek 20-Längsgeländerschuh 1,20m  Galvanised Painted blue Length: 62 cm Height: 31 cm	5.5	586587000
Dokadek 20 cross head Dokadek 20-Kreuzkopf  Galvanised Painted blue Height: 33 cm	3.0	586593000	Dokadek 20 assembling tool Dokadek 20-Montagestange  Aluminium Head part blue Length: 192 - 336 cm	2.2	586597000
Spring locked connecting pin 16mm Federbolzen 16mm  Galvanised Length: 15 cm	0.25	582528000			
Dokadek joint head Dokadek-Fugenkopf  Galvanised Height: 32 cm	4.2	586561000	Dokadek assembling tool B Dokadek-Montagestange B  Aluminium Length: 215 - 387 cm	3.1	586540000
Dokadek 20 infill beam 2.00m 21mm Dokadek 20 infill beam 1.00m 21mm Dokadek 20 infill beam 0.66m 21mm Dokadek 20-Ausgleichsträger  Galvanised	11.0 6.0 4.1	586582000 586583000 586584000			

	[kg]	Article N°		[kg]	Article N°
Dokadek suspension tool Dokadek-Einhängestange	3.1	586562000	 <p>Aluminium Head part yellow Length: 215 - 386 cm</p>	15.5	586596000
Dokadek stripping tool Dokadek-Ausschalwerkzeug	5.0	586541000	 <p>Powder-coated yellow Length: 212 cm</p>	6.6	582774000
Wheel-around scaffold DF Mobilgerüst DF	44.0	586157000	 <p>Aluminium Length: 185 cm Width: 80 cm Height: 255 cm Delivery condition: separate parts</p>	5.8	189959000
Wheel-around scaffold DF accessory set Zubehörset Mobilgerüst DF	13.3	586164000	 <p>Aluminium Timber parts varnished yellow Length: 189 cm</p>	5.8	189958000
Lashing strap 5.00m Zurrgurt 5,00m	2.8	586018000	 <p>Yellow</p>	12.0	586600000
Doka express anchor 16x125mm Doka-Expressanker 16x125mm	0.31	588631000	 <p>Galvanised Length: 18 cm Follow the directions in the "Fitting instructions"!</p>	10.0	586608000
Doka coil 16mm Doka-Coil 16mm	0.009	588633000	 <p>Galvanised Diameter: 1.6 cm</p>	5.5	586601000
Bracing frame Eurex 1.00m Aufstellrahmen Eurex 1,00m			 <p>Galvanised Height: 111 cm</p>		
Diagonal cross 9.200 Diagonalkreuz 9.200			 <p>Galvanised Delivery condition: folded closed</p>		
Dokadek system beam H20 eco P 1.10m Dokadek-Systemträger H20 eco P 1,10m			 <p>Varnished yellow</p>		
Doka beam H20 eco P 1.10m Doka-Träger H20 eco P 1,10m			 <p>Varnished yellow</p>		
Doka double aluminium beam tec-2 2.20m Doka double aluminium beam tec-2 1.95m Doka double aluminium beam tec-2 0.98m Doka-Doppelaluträger tec-2			 <p>Aluminium</p>		
Alu beam fork tec-2 Alu-Trärgabel tec-2			 <p>Powder-coated yellow Length: 201 cm</p>		

	[kg]	Article N°		[kg]	Article N°
Multi-trip packaging					
Dokadek 20 panel pallet 1.00x2.00m Dokadek 20-Elementpalette 1,00x2,00m  Galvanised Length: 214 cm Width: 119 cm Height: 126 cm	90.0	586588000	Multi-trip transport box partition 0.80m Multi-trip transport box partition 1.20m Mehrwegcontainer Unterteilung  Steel parts galvanised Timber parts varnished yellow	3.7 5.5	583018000 583017000
Dokadek 20 panel pallet 0.66x2.00m Dokadek 20-Elementpalette 0,66x2,00m  Galvanised Length: 214 cm Width: 119 cm Height: 126 cm	108.0	586589000	Doka multi-trip transport box 1.20x0.80x0.41m Doka-Mehrwegcontainer 1,20x0,80x0,41m  Galvanised	42.5	583009000
Dokadek 20 infill beam pallet Dokadek 20-Ausgleichsträgerpalette  Galvanised Length: 119 cm Width: 79 cm Height: 81 cm	63.0	586590000	Doka stacking pallet 1.55x0.85m Doka-Stapelpalette 1,55x0,85m  Galvanised Height: 77 cm	41.0	586151000
Doka skeleton transport box 1.70x0.80m Doka-Gitterbox 1,70x0,80m  Galvanised Height: 113 cm	87.0	583012000	Doka stacking pallet 1.20x0.80m Doka-Stapelpalette 1,20x0,80m  Galvanised Height: 77 cm	38.0	583016000
Doka multi-trip transport box 1.20x0.80m Doka-Mehrwegcontainer 1,20x0,80m  Galvanised Height: 78 cm	70.0	583011000	Doka accessory box Doka-Kleinteilebox  Timber parts varnished yellow Steel parts galvanised Length: 154 cm Width: 83 cm Height: 77 cm	106.4	583010000
			Bolt-on castor set B Anklemm-Radsatz B  Painted blue	33.6	586168000

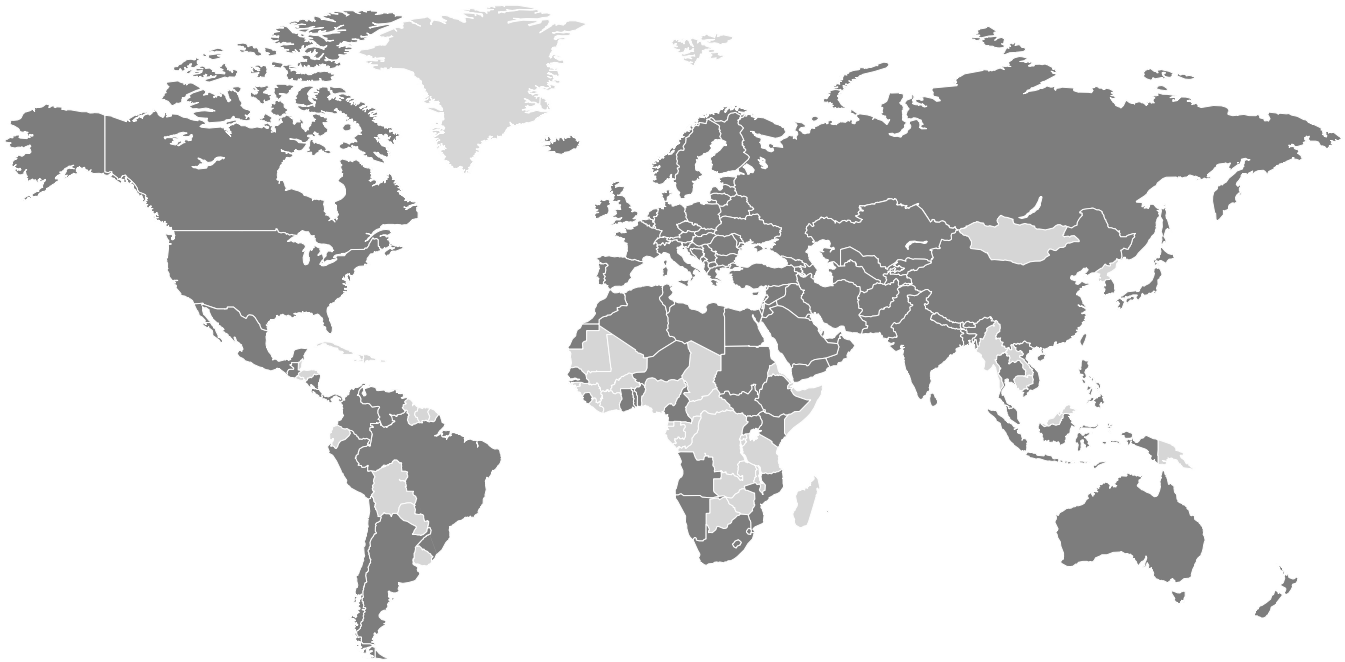
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