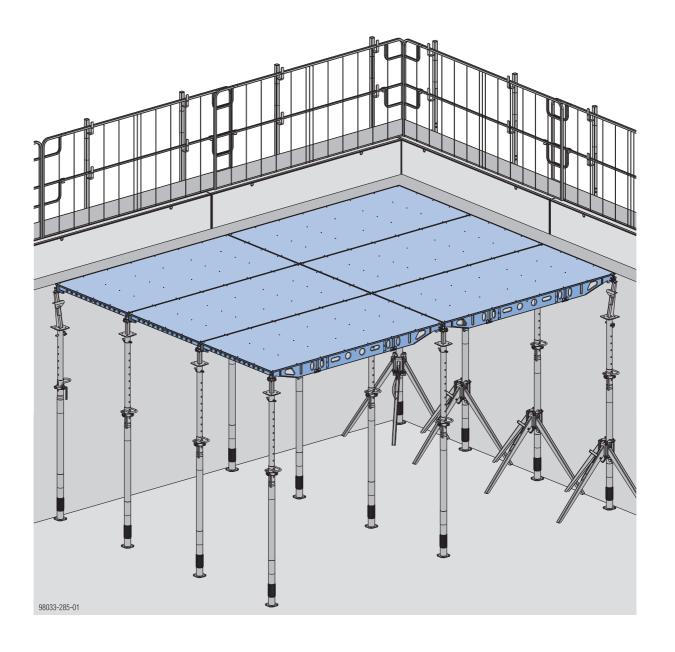


The Formwork Experts.

Panel floor formwork Dokadek 30

User Information

Instructions for assembly and use (Method statement)



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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 booklet can also be used as a generic method statement or incorporated with a site-specific method statement.
- Many of the illustrations in this booklet show the situation during formwork assembly and are therefore not always complete from the safety point of view.
- Any safety accessories not shown in these illustrations must still be used by the customer, in accordance with the applicable rules and regulations.
- Further safety instructions, especially warnings, will be found in the individual sections of this booklet!

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 sideguard 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. Heating appliances are only allowed if properly and expertly used, and set up a safe distance away from the formwork.
- The customer must consider all types of weather conditions on equipment and in connection with the use or storage of the equipment (e.g. slippery surfaces, risk of slippage, effects of wind, etc.) and must take steps in good time to safeguard the equipment and the surrounding areas and to protect the 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 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 suitable condition. Steps must be taken to rule out the use of any components that are damaged, deformed, or weakened due to wear, corrosion or rot.
- Combining our formwork systems with those of other manufacturers could be dangerous, risking damage to both health and property. If you intend to combine different systems, please contact Doka for advice first
- The equipment/system must be assembled and erected in accordance with the applicable laws, Standards and rules by suitably skilled personnel of the customer's, having regard to any and all required safety inspections.
- It is not permitted to modify Doka products; any 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 out 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 regulations applying to the handling of formwork and scaffolding. In addition, the Doka slinging means must be used - this is a mandatory requirement.
- Remove any loose parts or fix them in place so that they cannot be dislodged or fall free!
- All components must be stored safely, following all the special Doka instructions given in the relevant sections of this booklet!

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 booklet:



DANGER

Indicates a hazardous situation which, if not avoided, will result in death or serious injury.



WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



NOTICE

Is used to address practices not related to physical injury.



Instruction

Indicates that actions need to be taken 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

Refers to other documents and materials.

999803302 - 11/2017 **doka**

Eurocodes at Doka

In Europe, a uniform series of Standards known as **Eurocodes** (EC) was developed for the construction field by the end of 2007. These are intended to provide a uniform basis, valid throughout Europe, for product specifications, tenders and mathematical verification. The EC are the world's most highly developed Standards in the construction field.

In the Doka Group, the EC are to be used as standard from the end of 2008. They will thus supersede the DIN norms as the "Doka standard" for product design.

The widely used "Permissible stress design" (comparing the actual stresses with the permissible stresses) has been superseded by a new safety concept in the EC.

The EC contrast the actions (loads) with the resistance (capacity). The previous safety factor in the permissible stresses is now divided into several partial factors. The safety level remains the same!



 E_d Design value of effect of actions

(E ... effect; d ... design) Internal forces from action F_d (V_{Ed} , N_{Ed} , M_{Ed})

F_d Design value of an action

 $F_d = \gamma_F \cdot F_k$ (F ... force)

F_k Characteristic value of an action

"actual load", service load (k ... characteristic) e.g. dead weight, live load, concrete pressure, wind

VF Partial factor for actions

(in terms of load; F ... force) e.g. for dead weight, live load, concrete pressure, wind Values from EN 12812 R_d Design value of the resistance

(R ... resistance; d ... design) Design capacity of cross-section (V_{Rd} , N_{Rd} , M_{Rd})

Steel: $R_d = \frac{R_k}{\gamma_M}$ Timber: $R_d = k_{mod} \cdot \frac{R_k}{\gamma_M}$

R_k Characteristic value of the resistance

e.g. moment resistance to yield stress

γ_M Partial factor for a material property

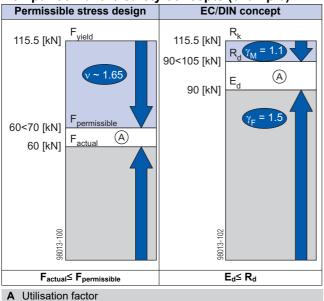
(in terms of material; M...material) e.g. for steel or timber Values from EN 12812

k_{mod} **Modification factor** (only for timber – to take account of the moisture and the duration of load action)

e.g. for Doka beam H20

Values as given in EN 1995-1-1 and EN 13377

Comparison of the safety concepts (example)



 \triangle

The "permissible values" communicated in Doka documents (e.g.: $Q_{permissible} = 70 \text{ kN}$) do not correspond to the design values (e.g.: $V_{Rd} = 105 \text{ kN}$)!

- ➤ Avoid any confusion between the two!
- Our documents will continue to state the permissible values.

Allowance has been made for the following partial factors:

 $y_F = 1.5$

 $\gamma_{M, timber} = 1.3$

 $\gamma_{M, \text{ steel}} = 1.1$

 $k_{\text{mod}} = 0.9$

In this way, all the design values needed in an EC design calculation can be ascertained from the permissible values.

Doka services

Support in every stage of the project

Doka offers a broad spectrum of services, all with a single aim: to help you succeed on the site.

Every project is unique. Nevertheless, there is one thing that all construction projects have in common and that is a basic structure with five stages. We at Doka know our clients' varying requirements. With our consulting, planning and other services, we help you achieve effective implementation of your formwork assignment using our formwork products - in every one of these stages.







Project Development Stage

Taking well-founded decisions thanks to professional advice and consulting

Find precisely the right formwork solutions, with the aid of

- help with the bid invitation
- in-depth analysis of the initial sit-
- objective evaluation of the planning, execution, and time-risks

Bidding Stage



Optimising the preliminary work with Doka as an experienced partner

Draw up potentially winning bids, by

- basing them on realistically calculated guideline prices
- making the right formwork choices
- having an optimum time-calculation basis

Operations Scheduling Stage



Controlled, regular forming operations, for greater efficiency resulting from realistically calculated formwork concepts

Plan cost-effectively right from the outset, thanks to

- detailed offers
- determination of the commissioning quantities
- co-ordination of lead-times and handover deadlines

doka 999803302 - 11/2017



Concrete Construction Stage



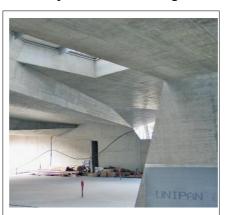
Optimum resource utilisation with assistance from the Doka Formwork Experts

Workflow optimisation, thanks to

- thorough utilisation planning
- internationally experienced project technicians
- appropriate transport logistics
- on-site support



Project Close-out Stage



Seeing things through to a positive conclusion
with professional support

Doka Services are a byword for transparency and efficiency here, offering

- jointly handled return of rented formwork
- professional dismantling
- efficient cleaning and reconditioning using special equipment

The advantages for you thanks to professional advice and consulting

- Cost savings and time gains When we advise and support you right from the word 'go', we can make sure that the right formwork systems are chosen and then used as planned. This lets you achieve optimum utilisation of the formwork equipment, and effective forming operations because your workflows will be correct.
- Maximised workplace safety
 The advice and support we can give you in how to use the equipment correctly, and as planned, leads to greater safety on the job.
- Transparency

Because our services and costs are completely transparent, there is no need for improvisation during the project – and no unpleasant surprises at the end of it.

Reduced close-out costs
 Our professional advice on the selection, quality and correct use of the equipment helps you avoid damage, and minimise wear-and-tear.

Panel floor formwork Dokadek 30

Extraordinarily fast forming

by integrating both the typical and infill zone

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

Extra-safe working

as the system is set up working from ground level

- Panels are erected from below, with no ladders or cranes needed
- Can be safely handled by only two people thanks to the ergonomically designed grip-holes in the edgeprofiles
- Integral anti-liftout guard built in to every panel

Handling-method is easy to understand

because the process is logical

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



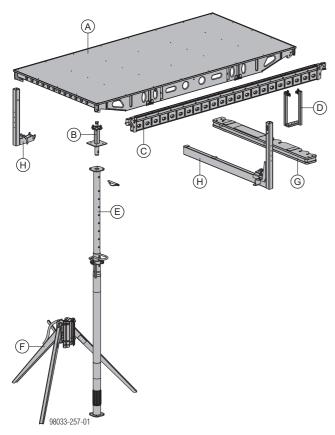
In addition to this document, also follow the directions in the following User Information booklets:

- 'Alternative methods of assembly'
- 'Structure edge'



System overview

Basic design concept

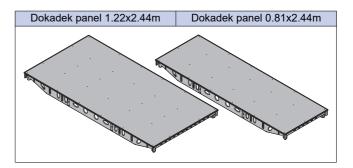


- A Dokadek panel
- **B** Dokadek head
- C Dokadek infill beam
- **D** Dokadek suspension clamp H20
- E Doka floor prop Eurex 30 top
- **F** Removable folding tripod
- G Dokadek wall clamp
- H Dokadek handrail-post shoes

The Dokadek 30 system components

Dokadek panels

- galvanised, yellow coated steel frames with riveted wood/plastic composite sheets
- delivered on Dokadek panel pallets



Dokadek heads

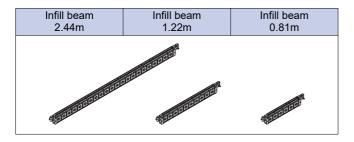
- for holding the Dokadek panels safely
- with a built-in anti-liftout guard for the Dokadek panels

Support head	Edge head 18mm / 21mm / 27mm	Cross head
1)	1)	1)
Corner head	Wall head	

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

Dokadek infill beams

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



Dokadek suspension clamp H20

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



Doka floor props Eurex 30 top

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



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

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



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



WARNING

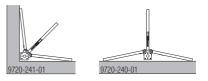
It is not permitted to use the Floor prop extension 0.50m.

Removable folding tripod 'top'

- for holding floor props upright
- swing-out legs allow flexible placement in constricted situations such as along edges and in corners

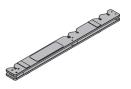


Setting up tripods in corners or up against walls



Dokadek wall clamp

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



Dokadek handrail-post shoes

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

Handrail-post shoe short	Handrail-post shoe long

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

Instructions for assembly and use (Method statement)

Ground rules

Dokadek panels

Permitted slab thickness [cm]1)

Panel size	Without additional pre- cautions	With additional pre- cautions ²⁾	Flatness deviation as per DIN 18202, Table 3
1.22x2.44m	30	_	Line 6
1.22x2.44m	> 30 - 32		Line 5
1.22x2.44m	_	> 30 - 50	Line 6
0.81x2.44m	45	_	Line 6
0.81x2.44m	> 45 - 50	_	Line 5
0.81x2.44m	_	> 45 - 50	Line 6

¹⁾ when using Doka floor prop Eurex 30 top

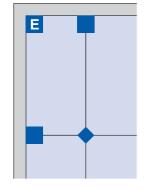
Dokadek heads

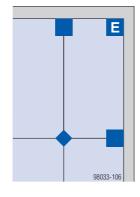


WARNING

➤ 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
•	E	

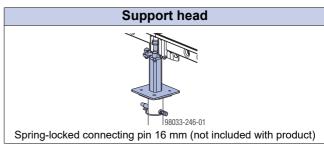
1) Spring locked connecting pin 16mm not included with product

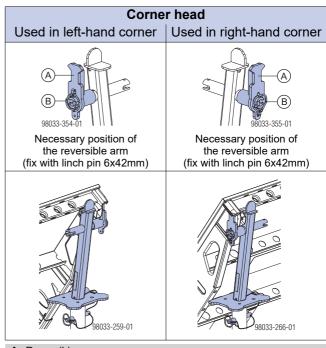


NOTICE

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

Installation examples





- A Reversible arm
- **B** Linch pin 6x42mm

Wall head			
Used on narrowside of formwork	Used on broadside of formwork		
98033-244-01	98033-245-01		

²⁾ See 'Additional precautions for slab thicknesses of up to 50 cm'.

Doka floor props Eurex 30 top

\triangle

WARNING

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

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

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

Example: A Eurex 30 top 300 prop with a support head can be extended to max. 284 cm (for a max. room height of 308.5 cm).



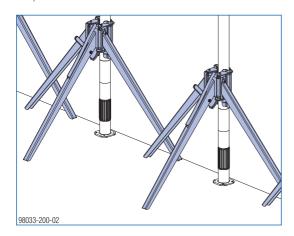
We recommend using props of the same type for the typical and infill zone, i.e. when combining Dokadek and Dokaflex.

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.

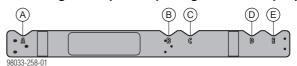


Once the 1st row of panels has been fixed (e.g. with wall clamps) so that it cannot tip over, the Removable folding tripods can be removed.

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

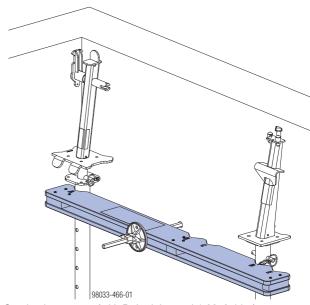
Dokadek wall clamp

Determining the required spacing of the floor props

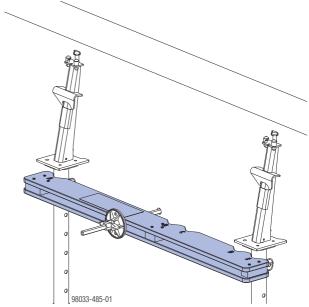


Head on 1st prop is in Position A.	Width of panel to be shored	Position of 2nd prop
Corner head	0.81 m	В
Wall head	0.81 m	С
Corner head	1.22 m	D
Wall head	1.22 m	E

Practical examples



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

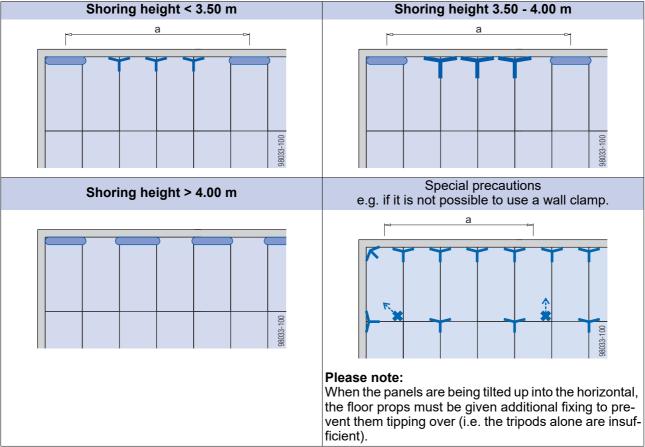


Starting from a wall (with Dokadek panel 1.22x2.44m)

Stability of formwork

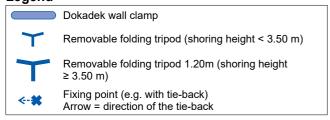
Stabilising the starting section during assembly

Starting from a wall



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

Legend



Starting from middle of room



NOTICE

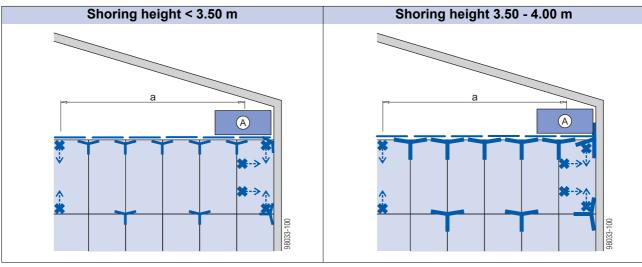
When starting from the middle of a room where it is possible to attach fixing-points to the structure, you MUST proceed in the following order:

- 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.

$\dot{\mathbb{N}}$

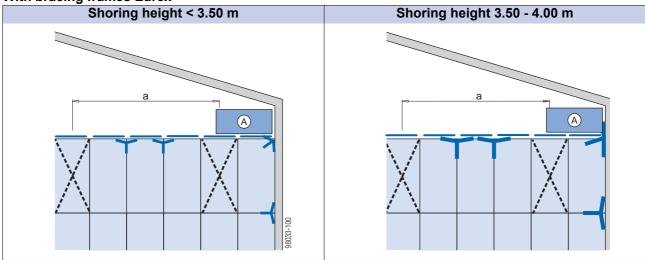
CAUTION

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.



- a ... fixing-point on 1st panel, every max. 7.50 m and on last panel
- A Mobile scaffold tower, e.g. Wheel-around scaffold DF

With bracing frames Eurex



- a ... 7,5 m and on last panel
- A Mobile scaffold tower, e.g. Wheel-around scaffold DF

Legend



Removable folding tripod (shoring height < 3.50 m)



Removable folding tripod 1.20m (shoring height



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



Dokadek infill beam



Bracing frames Eurex with diagonal crosses



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

Additional stabilisation during erection work



WARNING

- ➤ Before anybody steps onto the surface of the formwork, its stability must be ensured by e.g. wall clamps or lashing straps.
- Transfer of horizontal loads as defined by EN 12812 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 'Floor formwork around edges'.

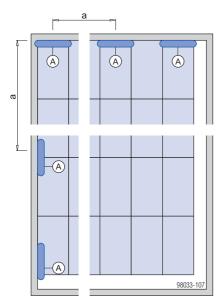
> Formwork next to walls must be secured against tipover as shown in the illustrations.



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

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

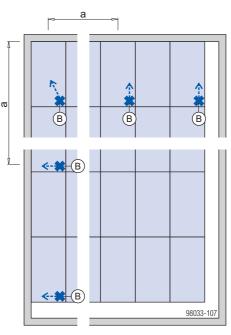
Fixing point with wall clamps



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

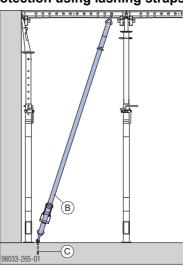
A Fixing point with wall clamps

Fixing point with lashing straps



- a ... fixing-point on 1st panel, every max. 7.50 m and on last panel
- **B** Fixing point using lashing straps Arrow = direction of the tie-back

Practical example Tip-over protection using lashing straps

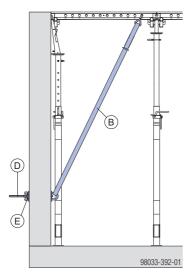


- B Lashing strap 5.00m
- C Doka express anchor 16x125mm

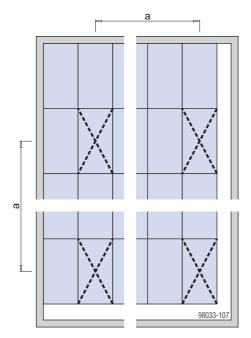
18 doka 999803302 - 11/2017



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



Fixing with Bracing frames Eurex



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

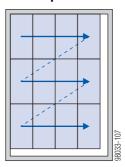
Legend



Bracing frames Eurex with diagonal crosses

Forming up and stripping out

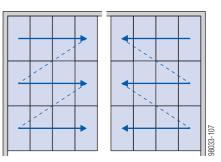
Direction of panel set-up



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



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



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

Ladder systems and working scaffolds

Platform stairway 0.97m

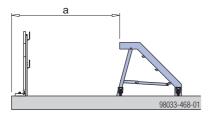


- wheel-around, fold-down platform stairway made of light alloy
- working heights of up to 3.00 m (max. standing height 0.97 m)
- Stair width: 1.20 m



NOTICE

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



Max. load-bearing capacity: 150 kg



Follow all country-specific regulations!

Wheel-around scaffold DF



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



NOTICE

- The Wheel-around scaffold DF is not allowed to be used for mounting and dismounting the panels.
- When work is being carried out near dropoff edges (i.e. at a distance of < 2 m), the 'Wheel-around scaffold DF accessory set' (consisting of a toeboard and intermediate guardrail) is needed.



Follow the directions in the User Information booklet!

Working scaffold Modul



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

Ballast weight needed1)

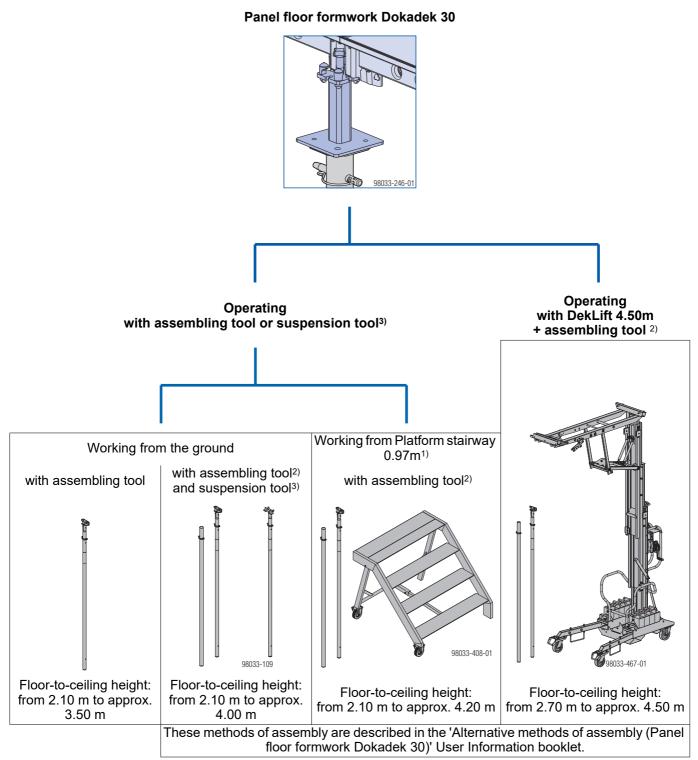
•	
Standing height	Ballast weight
1.41 m	40 kg
1.91 m	100 kg

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



Follow the directions in the User Information booklet!

Method statement overview



1) 2 platform stairways are needed for hanging the panels into place.

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

³⁾ Head part painted yellow

Operating with Dokadek assembling tool



NOTICE

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

Closing the formwork

Preparations

➤ Set the **Dokadek assembling tools** to the required length (= approx. room height). Min. 3 Dokadek assembling tools needed per site-erection team. From room heights of 3.80 m upward, the Dokadek assembling tool extension 2.00m is also needed.



WARNING

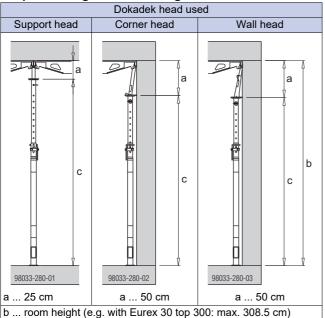
➤ Floor props must not be used extended to their full lengths!

See also the section headed "Ground rules".

Roughly adjust the height of the floor props, using the fastening clamp.



Required length = room height minus 'a'



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

(see the section headed 'Ground rules') c ... extension-length of floor prop

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

Putting up the 1st row of floor props

> Put up each removable folding tripod.



CAUTION

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

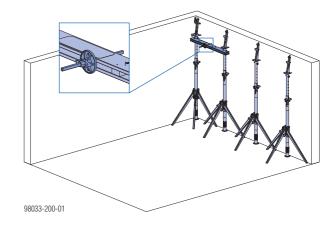
- ➤ Make sure that the Removable folding tripod is facing in the right direction.
- ➤ The leg with the clamping lever must be pointing in the longitudinal direction of the panels.
- Put up floor props (complete with corner and wall heads) directly against the wall and secure them with Removable folding 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!

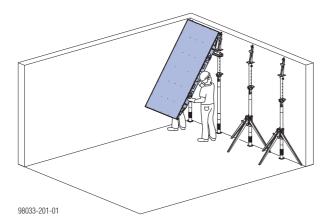
- ➤ Make sure that the tie rod does not stick out too far from the wall clamp, as this would get in the way when the panel is lifted onto the heads.
- ➤ Adjust the 1st and 2nd floor props to the right height and fix them with a wall clamp to prevent them from tipping over. To do this, mount the wall 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.



Mounting the 1st row of panels

Mount the 1st panel

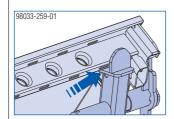
Persons 1 and 2: Hook the panel onto the corner head and the wall head.



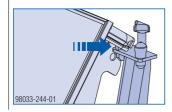


Make sure that the panel is correctly engaged in both heads.

Corner head



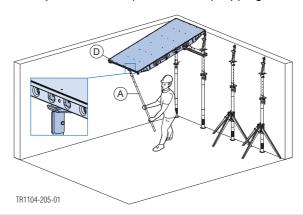
Wall head



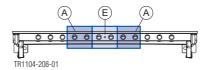


For greater room-heights, use an extra assembling tool (set to a shorter length) or a suspension tool for tilting up the panel.

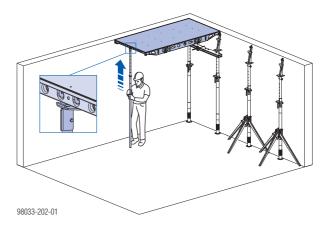
➤ Person 1: Position the assembling tool that is set to a shorter length off-centre in the outside cross profile of the panel and lift up the end for propping.



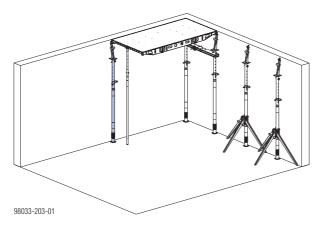
- A Assembling tool set to shorter length, or Dokadek suspension tool
- **D** Dokadek panel



- **A** Position of assembling tool set to shorter length, or Dokadek suspension tool
- E Position of Dokadek assembling tool B
- ➤ Person 2: Hook the assembling tool into the middle of the outside cross profile of the panel, raise the panel and secure the assembling tool so that it cannot tip over.

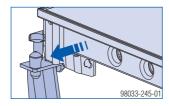


➤ Person 1: Place a floor prop (plus wall head) beneath the panel. The panel must still also be supported by the assembling tool. (Max. inclination of the assembling tool with respect to the perpendicular: 5°)

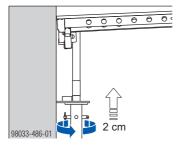




Make sure that the panel is correctly fitted onto the pin of the head.



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

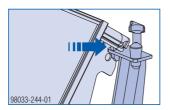


Mount further panels

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



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

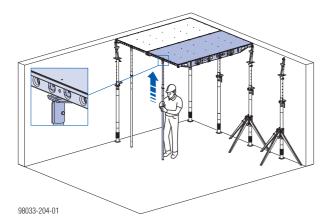


> Person 1: Tilt the panel part-way up.



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

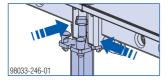
➤ Person 2: Hook the assembling tool into the middle of the outside cross profile of the panel, raise the panel and secure the assembling tool so that it cannot tip over.



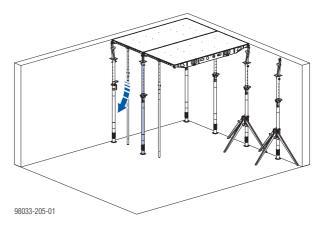
Person 1: Place a floor prop (plus Support head) beneath both panels.



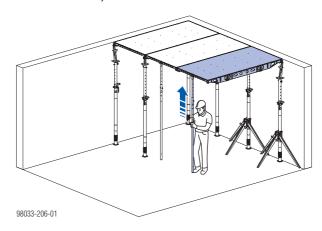
Make sure that the panels are correctly fitted onto the pins of the head.

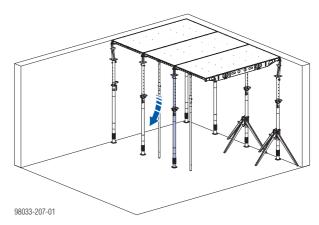


➤ Person 2: Remove the assembling tool from the 1st panel. The 2nd panel must still also be supported by the assembling tool. (Max. inclination of the assembling tool with respect to the perpendicular: 5°)



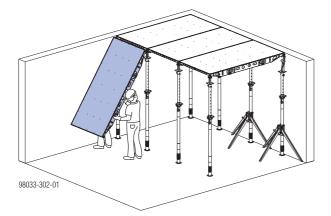
➤ Set up further panels in the same way, until only the planned infill zone is left unformed. Ensure stability during the set-up operations (see the section headed 'Ground rules')!





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')!





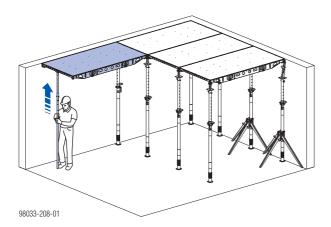
Make sure that the panel is correctly engaged in both heads.

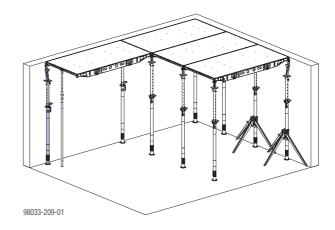
Support head

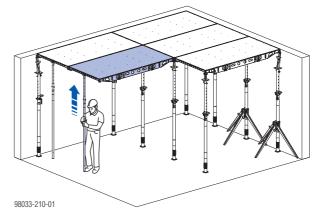


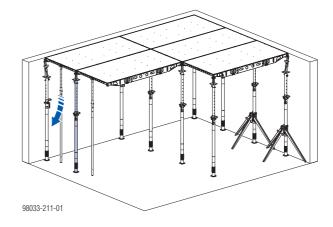
Wall head











Mounting the bracing frames

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

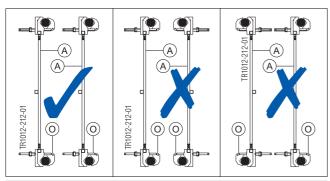
Features:

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



NOTICE

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

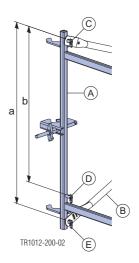


A Bracing frame Eurex

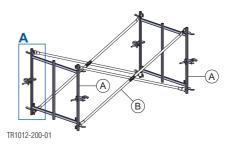
- O Prop holder with quick-fixing mechanism
- Always set up the bracing frames such that the end with the two safety catches (D) and (E) is at the bottom (see Close-up A).
- It is not possible to use bracing frames directly alongside a wall.
- Use with Deklift only conditionally possible (because the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

Area	Diagonal cross	Safety catch needed
Typical zone, Dokadek 30	18.200	Pos. C+E
Structure edge, Dokadek 30 without drop head	9.175	Pos. C+E

Close-up A

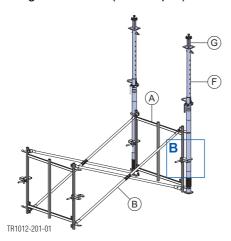


- a ... 101.9 cm
- b ... 87.6 cm
- A Bracing frame Eurex
- **B** Diagonal cross
- C Safety catch 1
- **D** Safety catch 2
- E Safety catch 3
- Join both Bracing frames Eurex with diagonal crosses at top and bottom, and secure these with safety catches (Close-up A).



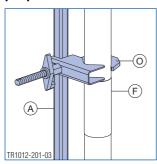
- A Bracing frame Eurex
- **B** Diagonal cross

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



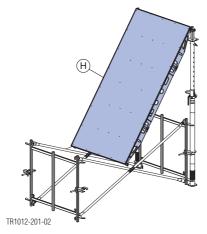
- A Bracing frame Eurex
- **B** Diagonal cross
- F Doka floor prop Eurex
- G Dokadek support head

Close-up B - prop-holder



Quick-fixing mechanism closed

- A Bracing frame Eurex
- F Doka floor prop Eurex
- ➤ Engage the Dokadek panel in the support heads.



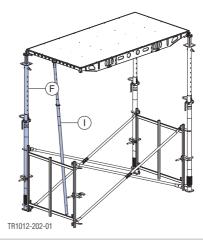
H Dokadek panel



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

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

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



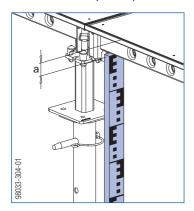
- F Doka floor prop Eurex
- I Assembling tool
- ➤ For details on all other worksteps, see the section headed 'Operating with assembling tool'.
- ➤ For positions and numbers of frames see the 'Structure edge (Panel floor formwork Dokadek 30)' User Information booklet.

Dismantling

> is carried out in the opposite order from assembly.

Levelling the formwork

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



a ... 6.5 cm

Additional precautions for slab thicknesses of up to 50 cm

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

Mounting guardrail systems

> See "Guardrail systems".

Mounting fillers

➤ See the section headed "Forming infill zones".

Pouring

Permitted slab thickness [cm]1)

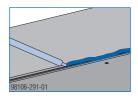
Panel size	Without additonal pre- cautions	With additonal pre-	Flatness deviation as per DIN 18202, Table 3
1.22x2.44m	30	_	Line 6
1.22x2.44m	> 30 - 32	_	Line 5
1.22x2.44m	_	> 30 - 50	Line 6
0.81x2.44m	45	_	Line 6
0.81x2.44m	> 45 - 50	_	Line 5
0.81x2.44m	_	> 45 - 50	Line 6

¹⁾ when using Doka floor prop Eurex 30 top

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 out the formwork

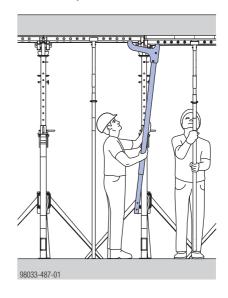


NOTICE

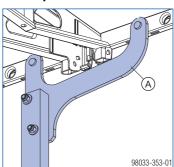
- Observe all stipulated stripping times!
- Always strip out the formwork in reverse order.
- As well as the instructions given here, you MUST follow the instructions in 'Reshoring props, concrete technology and stripping out'.



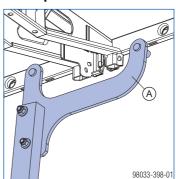
The Dokadek stripping tool **(A)** is an easy, safe way of detaching panels from the concrete where necessary.



Used on Dokadek panels 1.22x2.44m



Used on Dokadek panels 0.81x2.44m



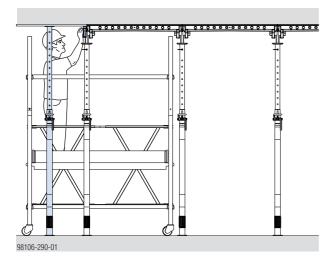
 $^{^{\}rm 2)}$ See the section headed 'Additional precautions for slab thicknesses of up to 50 cm'.

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 or wall clamps.
- Set the assembling tools to the required length (= approx. room height). Min. 3 assembling tools needed per site-erection team.
 - From room heights of 3.80 m upward, the assembling tool extension 2.00m is also needed.
- 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 beam H20.
- Remove the infill beams, for example using a working scaffold for access.



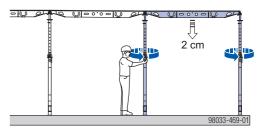
> Remove the panels.

Dismantling the floor props and panels



NOTICE

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

- Use a hammer to back off the adjusting nut.
- Take a firm grip on the slider tube with one hand.
- Open the peg to release the slider tube. Guide the slider tube into the fixed tube with your hand.



- ➤ 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 an assembling tool support 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.
- See "Reshoring props, concrete technology and stripping out".

Forming infill zones



NOTICE

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

Areas where infilling may be needed:

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



WARNING

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

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

Recommended nail lengths:

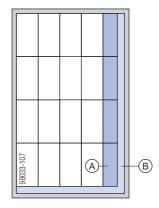
- Sheet thickness 18 mm: approx. 60 mm
- Sheet thickness 21 mm: approx. 65 mm
- Sheet thickness 27 mm: approx. 70 mm

Dokadek system components for infill zones

Dokadek panel 0.81x2.44m

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

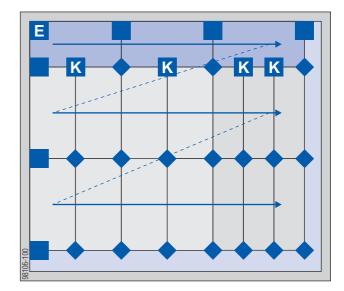
The Dokadek panels 0.81x2.44m are mounted in the same way as the Dokadek panels 1.22x2.44m.



- A Dokadek panel 0.81x2.44m
- B Infill zone (max. width 41 cm)

Dokadek cross head to reduce the infill zone

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



Legend

Support head	Corner head	Wall head	Dokadek cross head
•	E		K
1)			

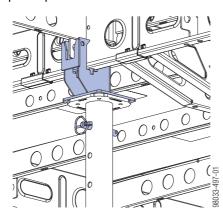
1) Spring locked connecting pin 16mm not included with product

Installation of Dokadek cross head



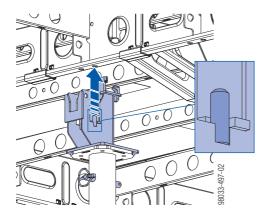
NOTICE

- ➤ 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 every floor prop where only 1 panel is resting on this prop's head.
- ➤ Shore the panels with floor props and cross heads at the required position.

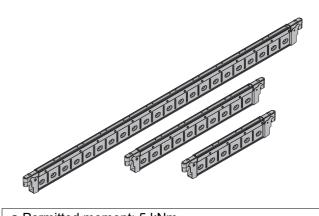




The pins of the cross head must be fitted into the two holes in the panel.



Dokadek infill beams

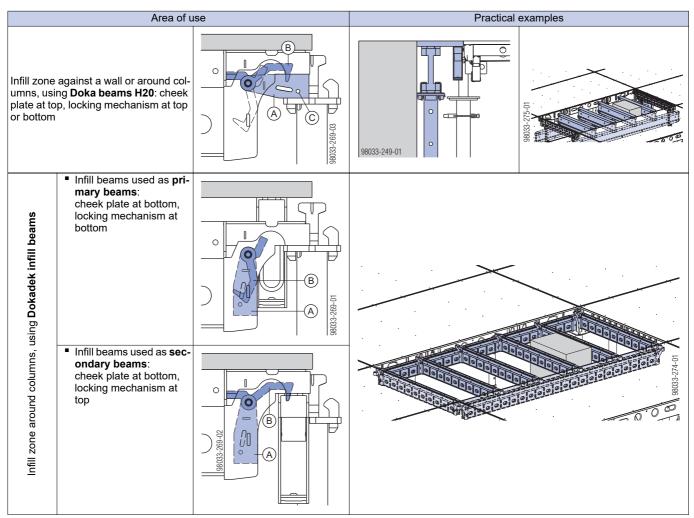


- Permitted moment: 5 kNm
- Permitted shear force: 11 kN
- Flexural stiffness EI: 320 kNm²
- Permissible imposed load where supported by floor prop in mid-span: 22 kN

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

matching sheet thickness				
Sheet thickness				
18 mm	21 mm	27 mm		
98033-303-01 9 D	98033-303-02	98033-303-03		

Adjusting the Dokadek infill beams



- A Cheek plate (silver)
- B Locking mechanism (red)
- **C** Position for optional extra anti-liftout guard with spring cotter (included with product)

Dokadek suspension clamp H20



Permitted shear force: 11 kN

Note:

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

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Infilling along wall connections

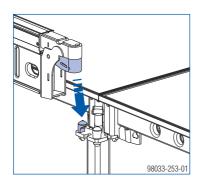
Variant 1: Infill width 'a' = 17 - 35 cm

• Max. spacing of infill props (Eurex 30): 244 cm

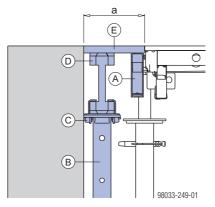
■ Max. slab thickness: 50 cm

How to mount:

➤ Hook the infill beams into the support heads (cheek plate at top).



> Mount the fillers.



- A Dokadek infill beam
- B Doka floor prop Eurex 30 top + Removable folding tripod
- C Supporting head H20 DF
- D Doka beam H20 where infill width 'a' is ≥ 17 cm (infill gaps of less than 17 cm can be filled in-situ with a plank or squared timber).
- E Formwork sheeting

Variant 2: Infill width 'a' = 32 - 61 cm

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

	Type of sheet	
Sheet thickness	Doka formwork sheet 3-SO 1)	Multi-ply formwork sheet ²⁾
18 mm	_	55 cm
21 mm	41 cm	61 cm
27 mm	61 cm	_
Max. spacing of infill props (Eurex 30): 244 cm		

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

	Type of sheet	
Sheet thickness	Doka formwork sheet 3-SO 1)	Multi-ply formwork sheet ²⁾
18 mm	_	52 cm
21 mm	35 cm	58 cm
27 mm	52 cm	_
 Max. spacing of infill props (Eurex 30): 244 cm 		

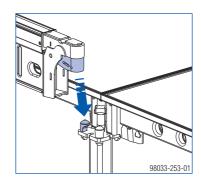
- ¹⁾ The computed values apply to the secondary (i.e. weaker) load-bearing direction, with the longitudinal direction of the sheet parallel to the edge of the floor-slab.
- ²⁾ Mean flexural modulus of elasticity where sheet moisture content is 10±2%: ≥ 5600 N/mm²

Characteristic flexural strength where sheet moisture content is 10±2%:

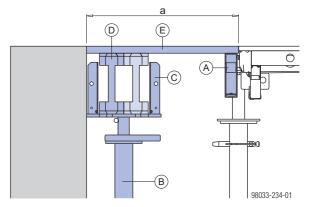
≥ 19 N/mm²

How to mount:

Hook the infill beams into the support heads (cheek plate at top).



Mount the fillers.



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

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

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

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

Eurex 30:

- max. prop spacing 'b': 75 cm
- max. primary-beam spacing: 244 cm
- max. secondary-beam spacing: 50cm (Do not exceed the max. support centres of the formwork sheets!)
- for infill gaps 'a' ≥ 100 cm: intermediate prop (with Supporting head H20) is required

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

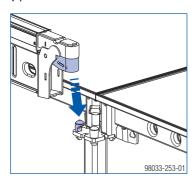
Primary beam	Infill width 'a'	Recommended secondary beam
1.10 m	55 - 100 cm	
1.80 m	90 - 170 cm	2.90 m
2.90 m	145 - 270 cm	

Eurex 30:

- max. prop spacing 'b': 50 cm
- max. primary-beam spacing: 244 cm
- max. secondary-beam spacing: 42 cm (Do not exceed the max. support centres of the formwork sheets!)
- for infill gaps 'a' ≥ 75 cm: intermediate prop (with Supporting head H20) is required

How to mount:

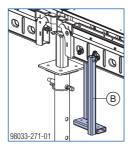
Hook the infill beams into the support heads (cheek plate at top).



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

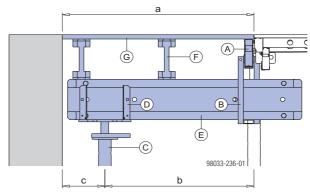
Number of suspension clamps needed:

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



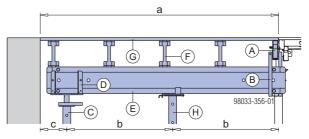
Mount the fillers.

Practical example: Infill width 'a' ≤ 100 cm



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

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



- c \dots 40 cm (up to slab thickness of 32 cm), 25 cm (slab thickness > 32 cm and up to 50 cm)
- A Dokadek infill beam
- B Dokadek suspension clamp H20
- C Doka floor prop Eurex 30 top + Removable folding tripod
- D Lowering head H20
- E Doka beam H20 used as primary beam
- F Doka beam H20 used as secondary beam
- **G** Form-ply
- H Intermediate prop with Supporting head H20



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



Infilling between 2 Dokadek formingsections

Variant 1: Infill width 'a' = 17 - 61 cm

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

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

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

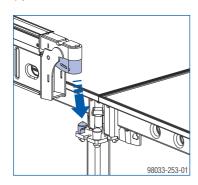
	Type of sheet	
Sheet thickness	Doka formwork sheet 3-SO 1)	Multi-ply formwork sheet ²⁾
18 mm	_	52 cm
21 mm	35 cm	58 cm
27 mm	52 cm	_

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

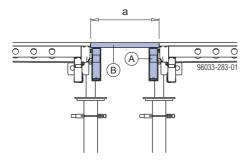
Characteristic flexural strength where sheet moisture content is 10±2%: ≥ 19 N/mm²

How to mount:

➤ Hook the infill beams into the support heads (cheek plate at top).



➤ Mount the fillers.



- A Dokadek infill beam
- **B** Formwork sheeting

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

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

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

Eurex 30:

- max. prop spacing 'b': 72 cm
- max. primary-beam spacing: 244 cm
- max. secondary-beam spacing: 45 cm (Do not exceed the max. support centres of the formwork sheets!)
- for infill gaps 'a' ≥ 81 cm: intermediate prop (with Supporting head H20) is required

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

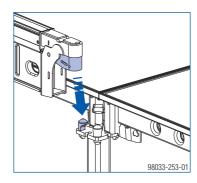
Primary beam	Infill width 'a'	Recommended secondary beam
1.10 m	55 - 100 cm	
1.80 m	90 - 170 cm	2.90 m
2.90 m	145 - 270 cm	
		•

Eurex 30:

- max. prop spacing 'b': 47 cm
- max. primary-beam spacing: 244 cm
- max. secondary-beam spacing: 36 cm (Do not exceed the max. support centres of the formwork sheets!)
- for infill gaps 'a' ≥ 72 cm: intermediate prop (with Supporting head H20) is required

How to mount:

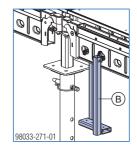
Hook the infill beams into the support heads (cheek plate at top).



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

Number of suspension clamps needed:

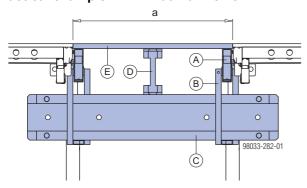
- next to every floor prop in the longitudinal direction
- next to every other floor prop in the transverse direction Floor prop



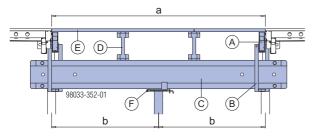
²⁾ Mean flexural modulus of elasticity where sheet moisture content is 10±2%; ≥ 5600 N/mm²

Mount the fillers.

Practical example: Infill width 'a' ≤ 81 cm



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



- A Dokadek infill beam
- **B** Dokadek suspension clamp H20
- C Doka beam H20 used as primary beam
- **D** Doka beam H20 used as secondary beam
- E Form-ply
- F Intermediate prop with Supporting head H20

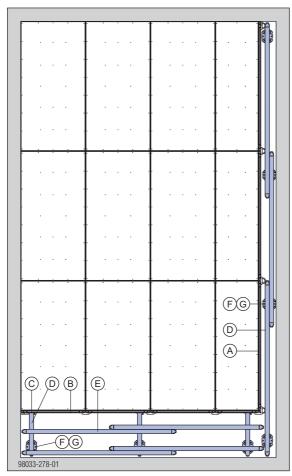


Place a beam (or double beam) wherever there is to be a joint between the panels.



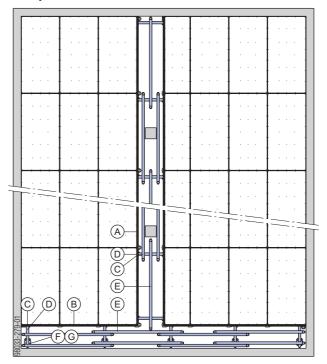
Practical examples

L-shaped infill zone

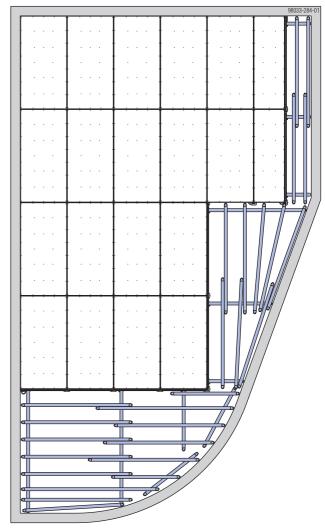


- A Dokadek infill beam 2.44m
- B Dokadek infill beam 1.22m or 0.81m
- C Dokadek suspension clamp H20
- D Doka beam H20 used as primary beam
- E Doka beam H20 used as secondary beam
- **F** Doka floor prop Eurex 30 top + Removable folding tripod
- **G** Lowering head H20

T-shaped infill zone



Adapting to difficult layout shapes

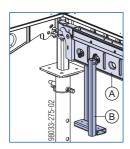


Symbolic representation

Infills zones around columns

using Dokadek infill beams and Doka beams H20

- ➤ Hook two infill beams 1.22m or 0.81m into the support heads in the transverse direction (cheek plate at top).
- ➤ Hook 4 suspension clamps into the infill beams as close to the floor props as possible.



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



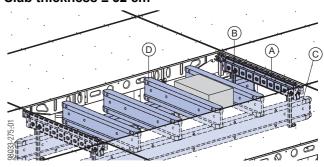
Be sure to place a beam (or double beam) wherever there is to be a joint between the panels.



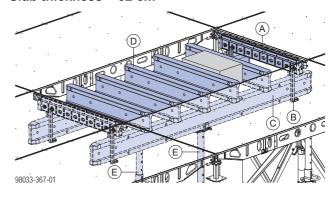


Practical examples - Column located inside panelfield (variant 1)

Slab thickness ≤ 32 cm



Slab thickness > 32 cm



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

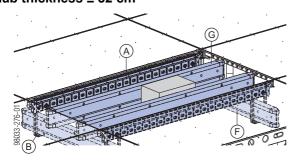
- $^{\mbox{\scriptsize 1)}}$ Do not exceed the max. support centres of the formwork sheets!
- A Dokadek infill beam 1.22m or 0.81m
- B Dokadek suspension clamp H20
- C Doka beam H20 2.90m used as primary beam
- D Doka beam H20 used as secondary beam (e.g. Dokadek system beam H20 eco P 1.10m for a panel width of 1.22 m)
- E Extra shore in mid-span):
 - Doka floor prop Eurex 30 top
 - Supporting head H20 DF

Practical examples - Column located inside panelfield (variant 2)

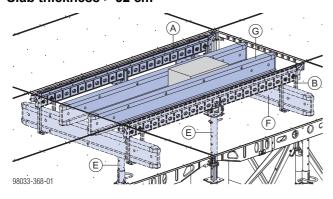


If necessary, the infill beams and Doka beams H20 can also be arranged the other way round, i.e. the Infill beams 2.44m on which the suspension clamps are mounted are fixed in the longitudinal direction.

Slab thickness ≤ 32 cm



Slab thickness > 32 cm



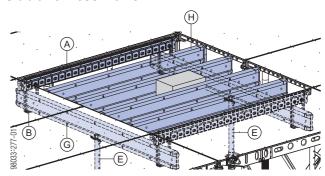
Slab thickness	Max. spacing of sec- ondary-beams	N° of extra shores per infill beam
≤ 32 cm	50 cm 1)	_
> 32 cm	42 cm ¹⁾	1 (in mid-span)

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

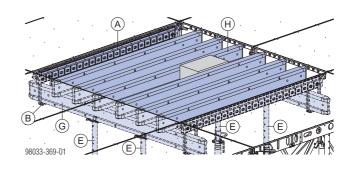
- A Dokadek infill beam 2.44m
- B Dokadek suspension clamp H20
- E Extra shore in mid-span)
 - :- Doka floor prop Eurex 30 top
 - Dokadek edge head + Spring locked connecting pin 16mm
- **F** Doka beam H20 used as primary beam (e.g. Doka beam H20 1.80m for a panel width of 1.22 m)
- **G** Doka beam H20 2.45m used as secondary beam

Practical examples - Column is exactly beneath the panel joint

Slab thickness ≤ 32 cm



Slab thickness > 32 cm



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

- ¹⁾ Do not exceed the max. support centres of the formwork sheets!
- A Dokadek infill beam 2.44m
- **B** Dokadek suspension clamp H20
- E Extra shore:
 - Doka floor prop Eurex 30 top
 - Supporting head H20 DF
- **G** Doka beam H20 used as primary beam (e.g. Doka beam H20 2.90m for a panel width of 1.22 m)
- H Doka beam H20 2.45m used as secondary beam

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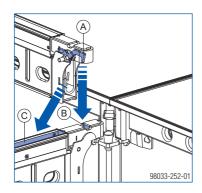
using Dokadek infill beams

- ➤ Hook two Infill beams 2.44m into the support heads in the longitudinal direction (cheek plate and locking mechanism at bottom).
- ➤ Place Infill beams 1.22m (or 0.81m, if appropriate) on the underlying Infill beams 2.44m in the transverse direction (cheek plate at bottom, locking mechanism at top).



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

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



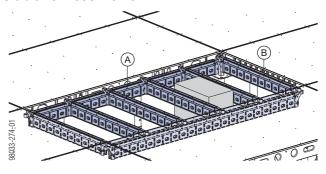


Make sure that there are 2 infill beams under every point where 2 sheets abut.

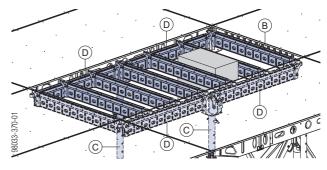


Practical examples - Column located inside panelfield (variant 1)

Slab thickness ≤ 32 cm



Slab thickness > 32 cm



Slab thickness	Max. spacing of sec- ondary-beams	N° of extra shores
≤ 32 cm	50 cm ¹⁾	_
> 32 cm	42 cm ¹⁾	1

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

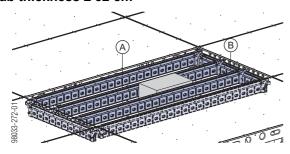
- A Dokadek infill beam 2.44m
- B Dokadek infill beam 1.22m or 0.81m
- C Extra shore:
 - Doka floor prop Eurex 30 top
 - Dokadek cross head + Spring locked connecting pin 16mm
- D Dokadek infill beams 1.22m (4 in all)

Practical examples - Column located inside panelfield (variant 2)

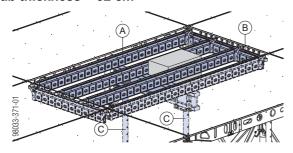


If necessary, the infill beams can also be arranged the other way round, i.e. the Infill beams 2.44m are laid onto the underlying Infill beams 1.22m or 0.81m.

Slab thickness ≤ 32 cm



Slab thickness > 32 cm



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

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

- A Dokadek infill beam 2.44m
- B Dokadek infill beam 1.22m or 0.81m
- C Extra shore for Dokadek infill beam 2.44m (Pos. A):
 - Doka floor prop Eurex 30 top
 - Removable folding tripod top
 - Lowering head / 4-way head H20
 - Doka beam H20 1.25m when using Dokadek panels
 - 1.22x2.44m

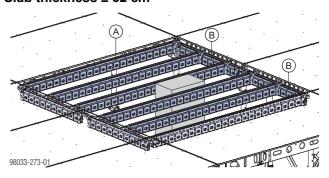


NOTICE

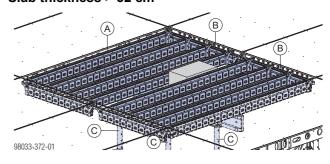
The extra prop must only be used for Dokadek infill beams 2.44m, and not for Dokadek panels.

Practical examples - Column is exactly beneath the panel joint

Slab thickness ≤ 32 cm



Slab thickness > 32 cm



Slab thickness	Max. spacing of sec- ondary-beams	N° of extra shores on infill beams
≤ 32 cm	50 cm ¹⁾	_
> 32 cm	42 cm ¹⁾	1

- 1) Do not exceed the max. support centres of the formwork sheets!
- A Dokadek infill beam 2.44m
- B Dokadek infill beam 1.22m or 0.81m
- C Extra shore for Dokadek infill beam 2.44m (Pos. A):
 - Doka floor prop Eurex 30 top
 - Removable folding tripod top
 - Lowering head / 4-way head H20
 - Intermediate prop with Supporting head H20 DF
 - Doka beam H20 2.45m when using Dokadek panels
 - 1.22x2.44m

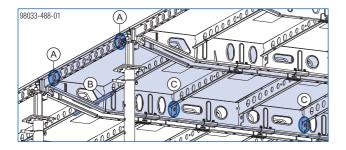


NOTICE

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

Floor formwork around edges

with Lashing strap 5.00m and Doka express anchor 16x125mm



Permitted bracing force [kN]

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



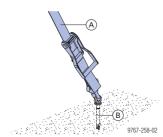
WARNING

- ➤ Do NOT exceed the permitted bracing angle and bracing 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!
- Make an anchorage point in the floor with a Doka express anchor.
- > Attach and tighten the lashing strap.



- 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}≥14 N/mm²:

 $F_{perm.} = 5.0 \text{ kN } (R_d = 7.5 \text{ kN})$



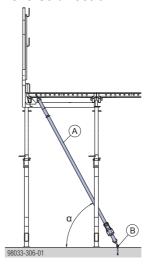
Follow the Fitting Instructions!

When preparing anchoring points using dowels made by other manufacturers, carry out a statical verification.

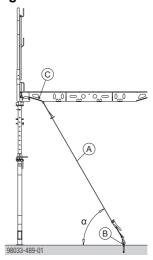
Follow the manufacturer's applicable fitting instructions

Practical examples

Tie-back in transverse direction



Tie-back in longitudinal direction



- α ... Bracing angle approx. 60°
- A Lashing strap 5.00m
- B Doka express anchor 16x125mm
- **C** Tie rod 20.0

Type of railing

Guardrail systems on the formwork



NOTICE

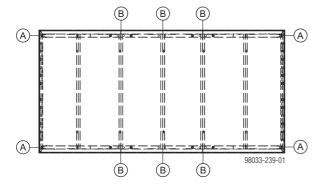
- Ideally, guardrail systems etc. should be mounted from below (e.g. using a Wheelaround scaffold DF).
- When mounting/dismounting edge protection from above, the crew must use a personal fall-arrest system (e.g. the Doka personal fall-arrest set).
- Suitable anchorage points must be defined by a skilled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

Guardrail system with transfer of concreting loads

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

Dokadek handrail-post shoe short	Dokadek handrail-post shoe long

Possible fixing points for the handrail-post shoes



- A Dokadek handrail-post shoe short
- B Dokadek handrail-post shoe long



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



CAUTION

The Edge protection system XP may only be used in combination with the Handrail post XP 1.20m. Permitted influence width [cm] of the handrail-post shoes for slab thicknesses of up to 32 cm (without additional precautions)

	Guardrail board 15 cm¹)	Guardrail board 20 cm ¹⁾	Scaffold tube 48.3mm	Protective grating XP 2.70x1.20m			
Dynamic pressure q [kN/m²]	With concrete load						
0.2	137	137	137	137			
	Without concrete load						
0.2	259	259	259	259			
0.6	259	137	259	259			
1.1	137	_	259	259			
1.3	_	_	259	244			

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

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

Type of railing				
Guardrail board 15 cm ^{1) 2)}	Guardrail board 20 cm ^{1) 2)}	Protective grating XP 2.70x1.20m		
With concrete load				
137 ²⁾	137	137		
Witho	ut concrete	load		
259 ²⁾	259	259		
259 ²⁾	137	259		
137 ²⁾	_	259		
_	_	244		
	With 259 2)	With concrete 137 2)		

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

 $^{^{\}rm 2)}$ Guardrail boards 15 cm are only permitted up to a slab thickness of 45 cm

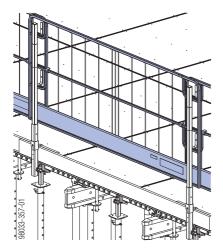


- The span of the handrail posts is roughly equal to the influence width if
 - they are evenly spaced
 - the guardrail boards are either continuous or are jointed at the handrail posts, and
 - there are no cantilevering projections
- The wind conditions likely to be encountered in Europe, in accordance with EN 13374, are largely recognised by the dynamic pressure q=0.6 kN/m² (highlighted grey in the tables).



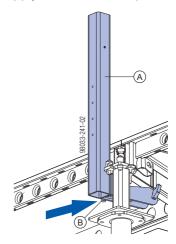
NOTICE

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



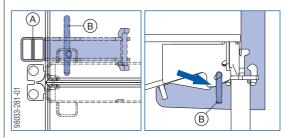
Attaching a 'Handrail-post shoe - short'

➤ 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').



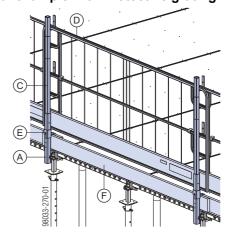


Make sure that the 'Handrail-post shoe - short' **(A)** and the bolt (vertical!) **(B)** are in the correct position!



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

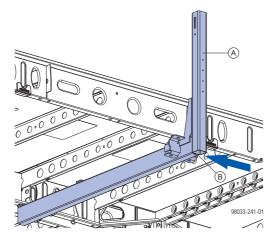
Practical example with Protective grating XP



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

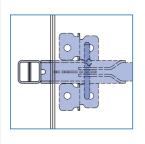
Attaching a 'Handrail-post shoe - long'

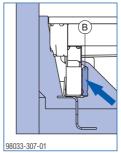
➤ Working from below, push the 'Handrail-post shoe long' onto the longitudinal profile of the Dokadek panel, in the transverse direction, and fix it to the cross profile with bolts (these are included in the scope of supply of the 'Handrail-post shoe - long').





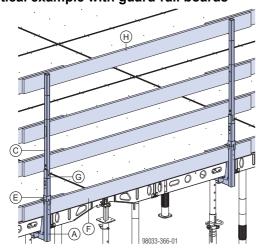
Make sure that the bolt **(B)** is in the vertical position!





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

Practical example with guard-rail boards



- A Dokadek handrail-post shoe long
- **B** Bolt
- C Handrail post XP 1.20m
- E Toeboard holder XP 0.60m
- F Toeboard
- G Toeboard holder XP 1.20m
- H Guard-rail boards

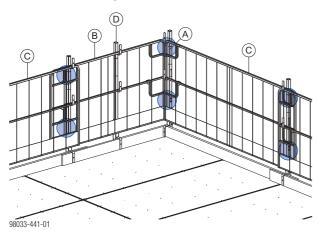
Guardrail systems at corners



NOTICE

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

Practical example for slab thickness ≤ 32 cm

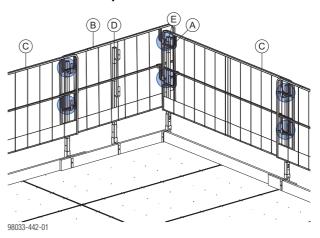


Close-up: attachment method

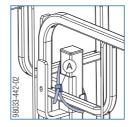


- A Attached with cable tie or binding wire
- **B** Protective grating XP 2.00x1.20m
- C Protective grating XP 2.70x1.20m
- **D** Handrail post XP 1.20m
- E Toeboard holder XP 1.20m

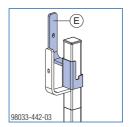
Practical example for slab thickness > 32 cm



Close-up: attachment method



Close-up: extra Toeboard holder XP 1.20m

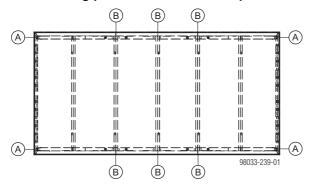


Guardrail system without transfer of concreting loads

The Dokadek handrail-post shoes 1,20m are fixed to defined positions on the previously-mounted Dokadek panel. They are used for holding Handrail posts XP 1.20m.

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

Possible fixing points for the handrail-post shoes



- A Dokadek handrail-post shoe short 1.20m
- B Dokadek handrail-post shoe long 1.20m



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



CAUTION

- Allowance for a DIN 4420 walkway of at least 60 cm in width has to be made when using the Handrail-post shoe short and Handrailpost shoe long 1.20m.
 - Consequently, use of the Handrail-post shoe short 1.20m is not permitted if there are projecting elements at the edge of the structure.
- ➤ It is not permitted to use the Edge protection system XP in conjunction with the Handrail post XP 0.60m.

Note:

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

Permitted influence widths [cm] of the handrailpost shoes

	Type of railing						
	Guardrail board 15 cm ¹⁾	Guardrail board 20 cm ¹⁾	Scaffold tube 48.3mm	Protective grating XP 2.70x1.20m			
Dynamic pressure q [kN/m²]	Without concrete load						
0.2	259	259	259	259			
0.6	259	137	259	259			
1.1	137	_	259	259			

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

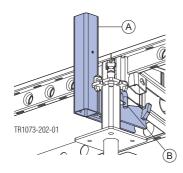


1.3

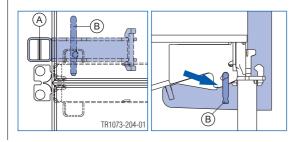
- The span of the handrail posts is roughly equal to the influence width if
 - they are evenly spaced
 - the guardrail boards are either continuous or are jointed at the handrail posts, and
 - there are no cantilevering projections
- The wind conditions likely to be encountered in Europe, in accordance with EN 13374, are largely recognised by the dynamic pressure q=0.6 kN/m² (highlighted grey in the tables).

Secure the Dokadek handrail-post shoe short 1.20m

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

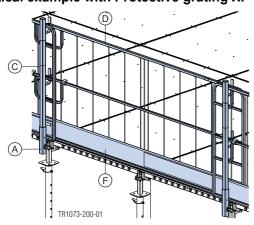


Make sure that the Handrail-post shoe - narrowside **(A)** and the bolt (vertical!) **(B)** are in the correct position!



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

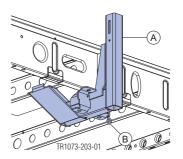
Practical example with Protective grating XP



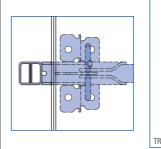
- A Dokadek handrail-post shoe short 1.20m
- **B** Pin
- C Handrail post XP 1.20m
- D Protective grating XP 2.70x1.20m
- F Toeboard

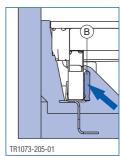
Secure the Dokadek handrail-post shoe long 1.20m

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



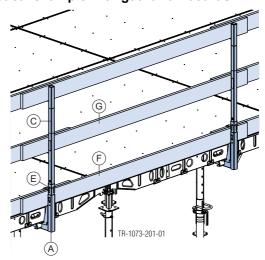
Make sure that the bolt **(B)** is in the vertical position!





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

Practical example with guard-rail boards



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

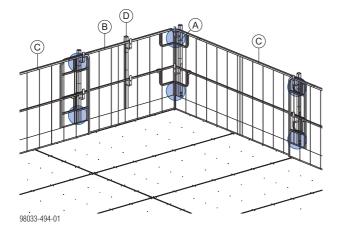
Guardrail systems at corners

User Information Panel floor formwork Dokadek 30

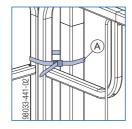


NOTICE

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



Close-up showing how fastened:

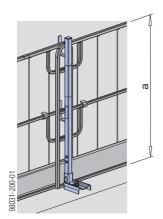


- A Attached with cable tie or binding wire
- **B** Protective grating XP 2.00x1.20m
- C Protective grating XP 2.70x1.20m
- D Handrail post XP 1.20m

Fall-arrest systems on the structure

Handrail post XP 1.20m

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



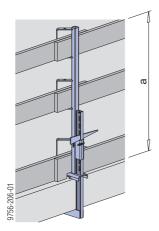
a ... > 1.00 m



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



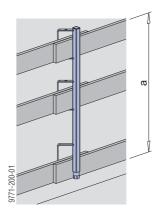
a ... > 1.00 m



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



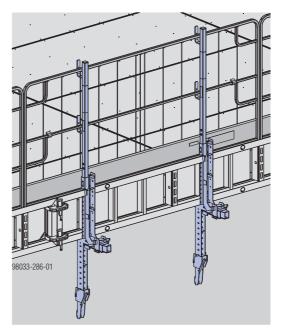
a ... > 1.00 m



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



 $\bigcap_{\mathbf{i}}$

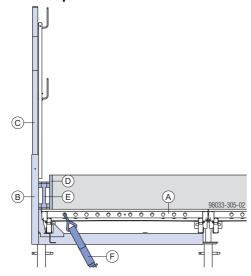
Follow the directions in the "Doka floor endshutter clamp" User Information booklet!

Slab stop-ends

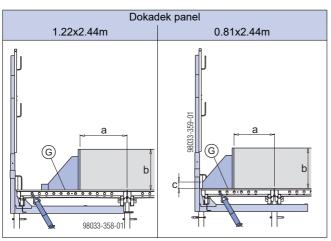
Permissible influence width of the Dokadek handrailpost shoes with slab stop-ends: 137 cm

in the longitudinal direction

Practical example for slab thickness ≤ 32 cm



Practical example for slab thickness > 32 cm

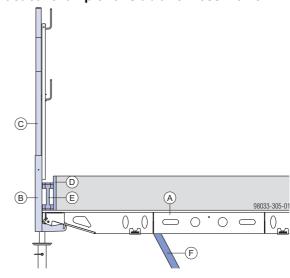


b ... max. 50 cm c ... max. 5 cm

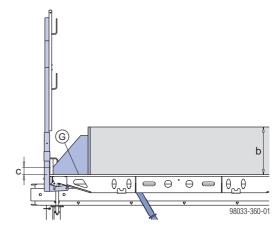
Dokadek panel	Max. projecting concrete cover on Dokadek panel a [cm]	Max. slab thickness b [cm]
1.22x2.44m	52	50
0.81x2.44m	All remainder of panel	45

in the transverse direction

Practical example for slab thickness ≤ 32 cm



Practical example for slab thickness > 32 cm

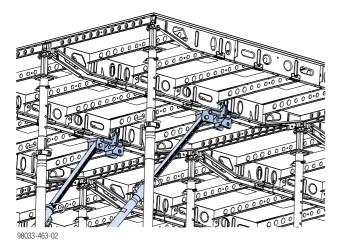


- b ... max. 50 cm c ... max. 5 cm
- A Dokadek panel
- **B** Dokadek 'handrail-post shoe long' or 'handrail-post shoe short'
- C Handrail post XP 1.20m
- **D** Formwork sheeting
- E Doka beam H20
- F Lashing strap 5.00m
- **G** Spax screws for attaching the stop-end to the Dokadek panel

Additional areas of use

Sloping slabs

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



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 structuraldesign 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).



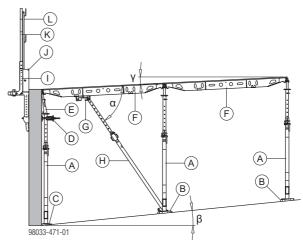
Compensating plates can be used to compensate for floor-slab angles of inclination up to 16 % in all directions.



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

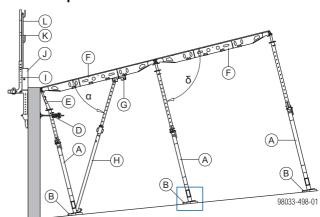


α ... approx. 60°

β ... max. 16%

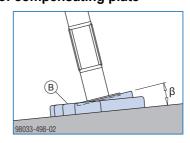
y... max. 5% without drop head and max. 3% with drop-head (in both the longitudinal and transverse directions)

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



α ... approx. 60°

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 plumbing-strut connector
- H Plumbing strut 340 IB or Plumbing strut 540 IB
- I Doka floor end-shutter clamp
- J Framax Xlife panel
- K Handrail post XP 1.20m
- L Protective grating XP 2.70x1.20m



NOTICE

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

Closing the formwork

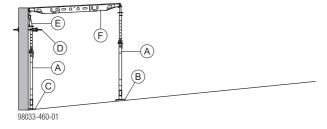


NOTICE

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

e.g. Usage situation A:

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



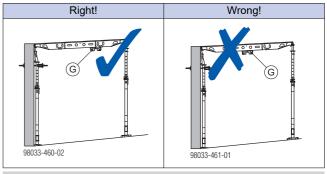
- A Doka floor prop Eurex
- B Compensating plate
- C Wooden wedge
- D Dokadek wall clamp
- E Dokadek wall head
- F Dokadek panel

How to mount the Dokadek plumbing-strut connector

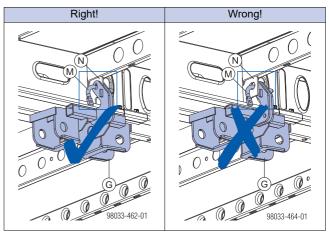


NOTICE

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



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



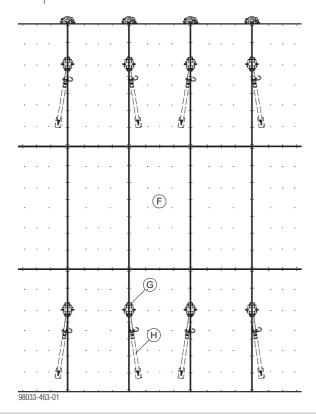
- F Dokadek panel
- G Dokadek plumbing-strut connector
- H Plumbing strut 340 IB or Plumbing strut 540 IB

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



NOTICE

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

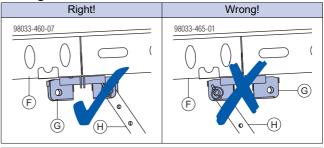


- F Dokadek panel
- G Dokadek plumbing-strut connector
- H Plumbing strut 340 IB or Plumbing strut 540 IB

Attaching the plumbing strut

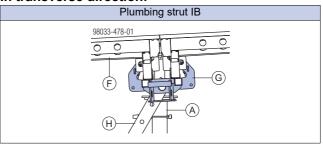
- ➤ Take the fastening bolt out of the plumbing strut.
- ➤ Attach the plumbing strut in either the longitudinal or transverse direction, depending on the inclination of the slab.

In longitudinal direction:

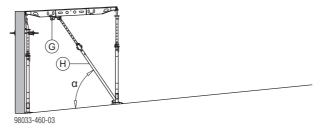


- F Dokadek panel
- G Dokadek plumbing-strut connector
- H Plumbing strut 340 IB or Plumbing strut 540 IB

In transverse direction:



- A Doka floor prop Eurex
- F Dokadek panel
- G Dokadek plumbing-strut connector
- H Plumbing strut 340 IB or Plumbing strut 540 IB
- Pin the plumbing strut onto the plumbing-strut connector with the fastening bolt.
- Extend the plumbing strut to the desired length.
- ➤ Fix the plumbing strut to the floor with a Doka express anchor.



- α ... approx. 60°
- G Dokadek plumbing-strut connector
- H Plumbing strut 340 IB or Plumbing strut 540 IB



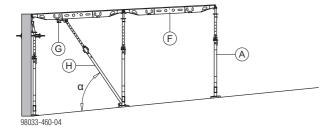
NOTICE

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

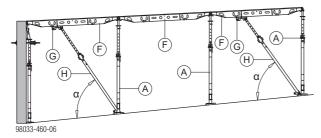


Follow the directions in the 'Doka express anchor 16x125mm' Fitting Instructions!

> Put up further panels.



- α ... approx. 60°
- A Doka floor prop Eurex
- F Dokadek panel
- G Dokadek plumbing-strut connector
- H Plumbing strut 340 IB or Plumbing strut 540 IB
- ➤ Then fit plumbing-strut connectors as needed.
- ➤ Pin a plumbing strut to each connector and fix each strut to the floor with a Doka express anchor.



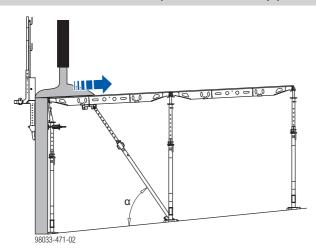
- α ... approx. 60°
- A Doka floor prop Eurex
- F Dokadek panel
- G Dokadek plumbing-strut connector
- H Plumbing strut 340 IB or Plumbing strut 540 IB

Pouring



WARNING

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



Stripping out the formwork

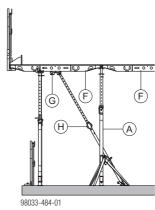


NOTICE

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

Forming at slab-edges

Usage situation C:



- A Doka floor prop Eurex
- F Dokadek panel
- **G** Dokadek plumbing-strut connector
- H Plumbing strut 340 IB or Plumbing strut 540 IB

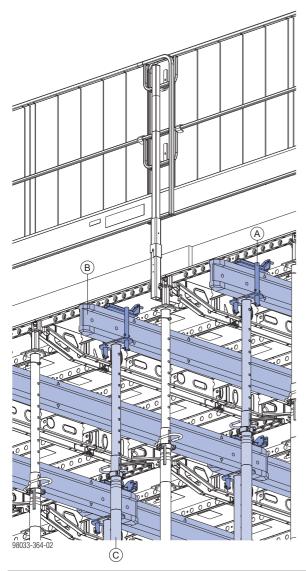
Note:

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



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

Additional precautions for slab thicknesses of up to 50 cm



- A Timber-beam seat H20
- B Doka beam H20 (recommended length: 2.90m)
- C Doka floor prop Eurex 30 top

Permitted slab thickness [cm] with additional precautions

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



NOTICE

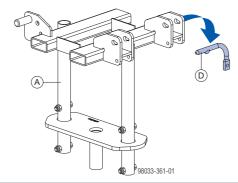
The additional propping is mounted AFTER the formwork has been secured against tipover.

Mounting additional shores (in the typical zone)

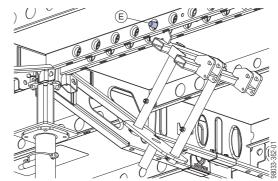
Mounting the Timber beam seat H20 (in the typical zone)

at a panel joint

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

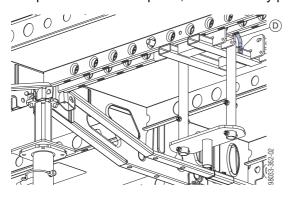


- A Timber-beam seat H20
- D Safety pin
- ➤ Mount the Timber-beam seat H20 to the middle of the cross profile of the panel. To do this, insert a d16mm bolt into the 2nd hole of the cross profile (from the middle) of one of the two panels.

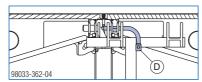


E Bolt, d16mm

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



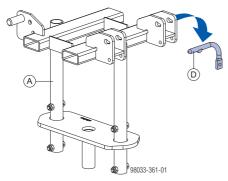
Close-up of safety pin



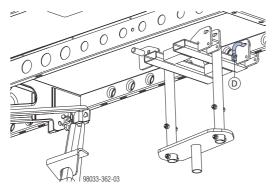
D Safety pin

on an edge panel

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



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



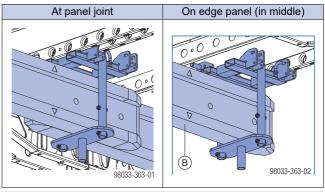
D Safety pin

Inserting Doka beams H20



NOTICE

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



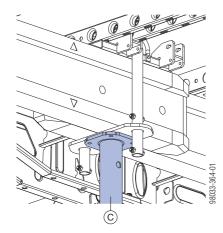
B Doka beam H20 (recommended length: 2.90m)

Fitting the floor props



NOTICE

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



- C Doka floor prop Eurex 30 top
- ➤ After fitting all the floor props, raise the Doka beams H20 by turning the adjusting nut on each prop.



Do not fit and extend the floor props until the reinforcement has been placed. This lessens the risk of panels being lifted out of the Dokadek heads.

Mounting additional shores (at the structure edge)



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

Stripping out 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'.

On slabs with thicknesses of between 30 cm and 50 cm, early removal of all the extra shores from the typical zone is permitted even in cases where service loads and live loads are present. The resulting prop loads are of max. 40 kN per prop, which is permissible for temporary reshores.

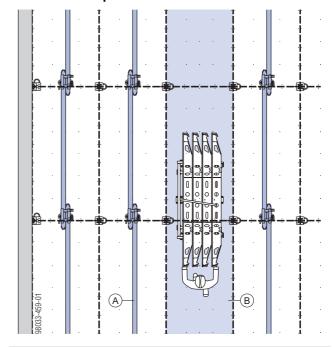
Minimum concrete strength required before the extra shores are removed: C8/10

Creating an access alley

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

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

Practical example



- A Extra shore
- **B** Access alley

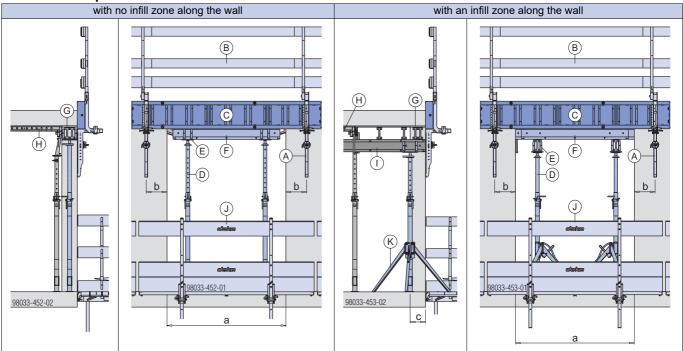
Forming past room-high openings in walls

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



Follow the directions in the "Doka floor endshutter clamp" User Information booklet!

Practical examples



- a ... see the 'Doka floor end-shutter clamp' User Information booklet
- b ... min. 15 cm
- c ... 25 cm
- A Doka floor end-shutter clamp
- B Fall-arrest barrier
- C End-shuttering
- D Doka floor prop Eurex 30 top
- E Lowering head H20
- F Doka beam H20 top
- **G** Formwork sheet (nailed-on)
- H Dokadek panel
- I Infill zone
- J Folding platform K or guard scaffolding
- **K** Removable folding tripod



- The Doka floor end-shutter clamp can be fixed to the wall by the Bridge edge beam anchor 30kN 15.0.
- Larger box-outs can be formed as described under the heading 'Floor-slab formwork at the structure edge'.

Using Doka floor props Eurex 20



WARNING

➤ In the typical and infill zones, and/or when mixing Dokadek and Dokaflex, the props used must all be of the same type.

Note:

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

Permitted slab thicknesses [cm]

t	Eurex 20										
igh	250 300 Panel Panel			300		50	400		55	550	
m]			Panel		Pa	Panel		Panel			
Room height [m]	1.22m	0.81m	1.22m	0.81m	1.22m	0.81m	1.22m	0.81m	1.22m	0.81m	
4.58											
4.48											
4.38											
4.28											
4.18											
4.08							23.4	38.0	32.0	50.0	
3.98							25.3	40.6			
3.88							27.3	43.4			
3.78							29.7	46.6			
3.68							31.7 49.6				
3.58					20.5	34.1					
3.48					22.4	36.7					
3.38					24.5	39.5					
3.28					26.5	42.3					
3.18					28.8	45.5	32.0	50.0			
3.08			18.6	31.5	31.0	48.5					
2.98			21.1	34.9							
2.88			23.0	37.5							
2.78			25.7	41.2	32.0	50.0					
2.68			27.6	43.8							
2.58	19.5	32.6	28.7	45.3							
2.48			29.8	46.8							
2.38	19.7	33.0	30.9	48.3							
2.28			32.0	50.0							
2.18	20.3	33.7									
2.08											
1.98											
1.88											
1.78											

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



WARNING

It is forbidden to use the Doka floor prop Eco 20!



WARNING

➤ Additional measures, such as those described in the section headed 'Additional precautions for slab thicknesses of up to 50 cm', are forbidden!

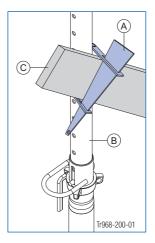
Bracing clamp B

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



NOTICE

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



- A Bracing clamp B
- B Doka floor prop Eurex 20
- C Plank

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

Bracing clamp B												
		Plank										
Eurex 20	2.4 x 15 3 x 15		4 x 15		5 x 10		5 x 12		5 x 15			
	IT	ОТ	IT	ОТ	IT	ОТ	IT	ОТ	IT	ОТ	IT	ОТ
150	_	✓	_	✓	✓	\	✓	✓	✓	✓	✓	✓
250	_	✓	_	✓	✓	✓	√	✓	✓	✓	✓	✓
300	_	√	_	√	√	✓	√	√	√	✓	✓	√
350	_	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
400	✓	✓	✓	✓	✓	✓	√	✓	✓	✓	✓	√
450	✓	✓	√	✓	✓	✓	√	✓	✓	✓	✓	✓
550	√	✓	✓	✓	√	✓	✓		✓	_	✓	_

Legend:

IT Inner tube

OT Outer tube

√ Possible to combine

Not possible to combine

General remarks

Combining with other Doka systems

Dokaflex 30 tec and Dokaflex

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

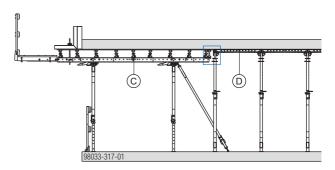




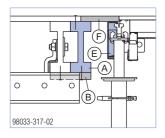
For more information, please refer to the 'Dokaflex 30 tec' and 'Dokaflex' User Information booklets.

Dokamatic and Dokaflex tables

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



Close-up of extra beam:



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



NOTICE

The beam (A) must be pre-mounted!



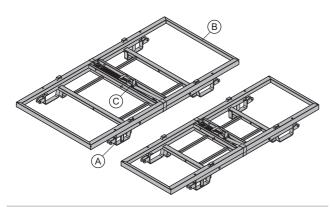
For more information, see the "Dokamatic table" and "Dokaflex table" User Information booklets.

Transporting, stacking and storing

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

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

Dokadek panel pallets



- A Pallet
- B Cover (captive)
- C Lashing strap

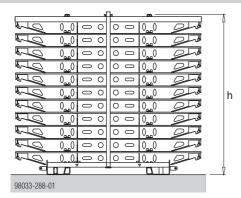
Storage and transport device for Dokadek panels:

- Dokadek panel pallet 1.22x2.44m for Dokadek panels 1.22x2.44m
- Dokadek panel pallet 0.81x2.44m for Dokadek panels 0.81x2.44m
- durable
- stackable



CAUTION

- Max. number of Dokadek panels: 11 Corresponds to a stack height 'h' (incl. panel pallet) of approx. 215 cm.
- It is forbidden to stack panels of different widths on the same pallet.



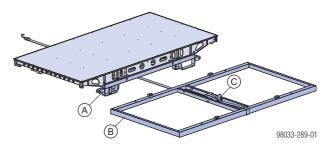


NOTICE

- Rating plate must be in place and clearly legible
- Load the items centrically.

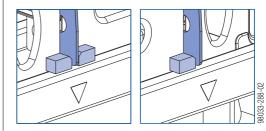
Stacking the panels

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

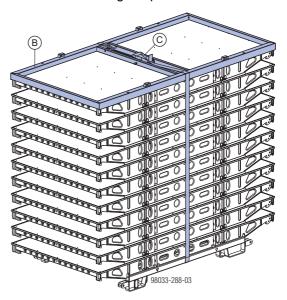




Make sure it is in the correct position!



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

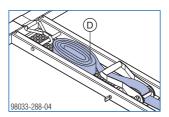




For easier use of the lashing strap we recommend using a standard step ladder with platform.



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



Dokadek panel pallet as a storage unit

Max. n° of units on top of one another

	Outdoors (on the site)	Indoors
N° of Dokadek pan- els in the pallet	Floor gradient up to 3%	Floor gradient up to 1%
≤ 6	1	3
> 6	1	2

Dokadek panel pallet as a transport device

Suitable transport appliances:

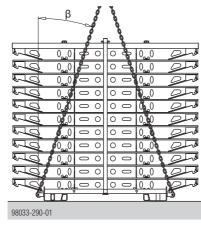
- crane
- forklift truck
- pallet stacking truck
- Attachable wheelset

Lifting by crane

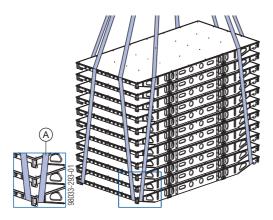


NOTICE

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



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



Shifting with forklift or pallet stacking truck

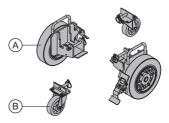


NOTICE

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

Shifting with Attachable wheelset

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



Correct loading of trucks (lorries)

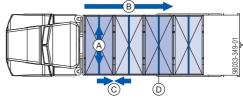


NOTICE

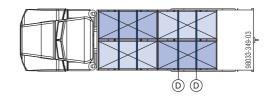
Ideally, arrange the Dokadek panel pallets at right-angles to the cargo floor. (A) If the stacks are not of the same height, then the panels must always be arranged at right angles to the cargo floor.



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



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



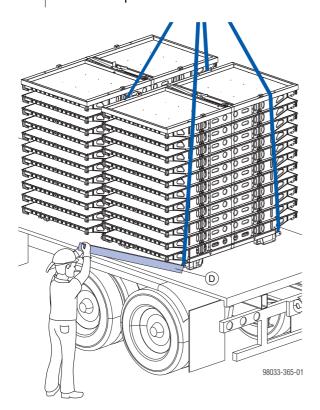


With closely stacked bundles of panels:

➤ lever-up the bundle of panels (e.g. with a squared timber (D)), to make a space for threading in the slings.

Caution!

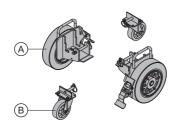
When doing this, always make sure that the bundle of panels remains stable!



999803302 - 11/2017 **doka**

Attachable wheelset

Product description



- A 2 heavy-duty wheels
- B 2 swivel casters

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

Suitable for drive-through access openings > 150 cm.



NOTICE

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

Wheeling



NOTICE

- Max. gradient of floor: 3%
- Max. speed 4 km/h (walking pace)
- Either bridge any openings in the floor with sufficiently strong planking/boards secured so that they cannot slip away to either side, or close off openings with sufficiently strong side railings!
- Keep the travel route clean and free of any obstacles.
- It is forbidden to use any mechanical assistance during the wheeling operation!
- It is forbidden to wheel panel pallets that have been stacked on top of one another!
- Where necessary, secure loosely stacked panels so that they cannot slip.

Lifting by crane

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



NOTICE

- Secure the stack of panels with the cover and the lashing strap.
- > Before attaching the lifting chain, check that:

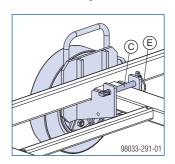


- the fixing brake is applied
- linch pins have been fitted to the fastening bolts of the heavy-duty wheels and the swivel casters.

Assembly

Heavy-duty wheel

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

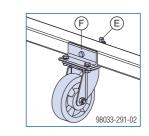


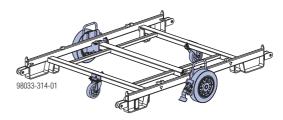


Where needed, you can adjust the braking force with the setting screw (width-across 24).

Swivel caster

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

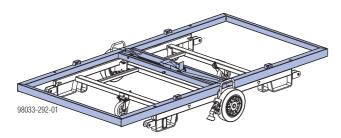




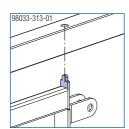
- A Heavy-duty wheel
- **B** Swivel caster
- C Fastening bolt
- E Linch pin
- F Wheel-pin

Variant 1: Panels stacked loosely

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

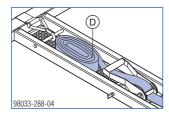


Make sure it is in the correct position!



-0

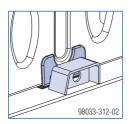
Coil up the end of the lashing strap and put it in the storage tray (\mathbf{D}) .



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



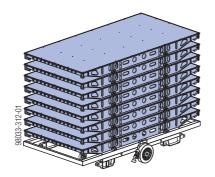
Make sure it is in the correct position!





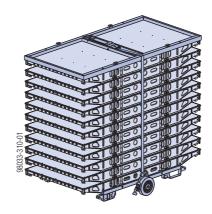
Max. number of loose Dokadek panels: 8

> Set down further panels, exactly over one another.

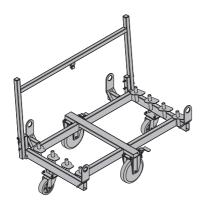


Variant 2: Panels secured and stacked with the cover and the lashing strap

> See the section headed "Dokadek panel pallets"

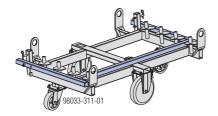


DekDrive



Transport device for Dokadek panels

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



Max. number of Dokadek panels: 4

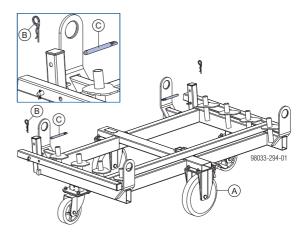


NOTICE

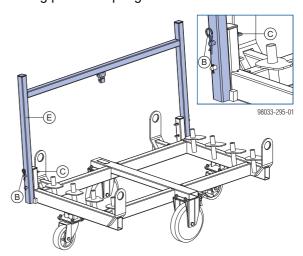
- Rating plate must be in place and clearly legible
- Load the items centrically.
- It is allowed to stack panels of different widths.
- Not suitable for use as a storage unit.
- When the DekDrive is parked or is being crane-lifted, always apply the fixing brake.
- Always secure the panels with webbing.

Loading the DekDrive

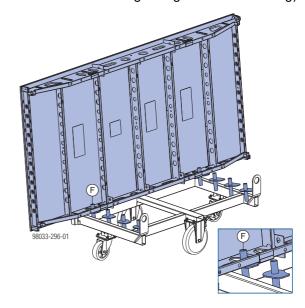
- ➤ Apply the fixing brake on the heavy-duty wheel.
- ➤ Remove the top spring cotters and self-locking pins, at both ends of the DekDrive.



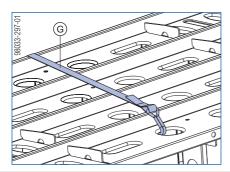
➤ Tilt up the railing and secure it at both ends with selflocking pins and spring cotters.



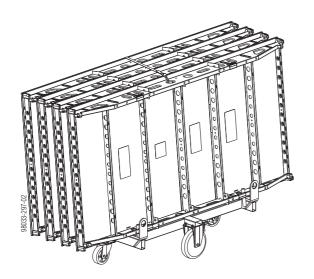
➤ Starting from the side nearest the railing, push the Dokadek panels centrally onto the holding pins (with the formwork sheeting facing towards the railing).



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



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



Wheeling



NOTICE

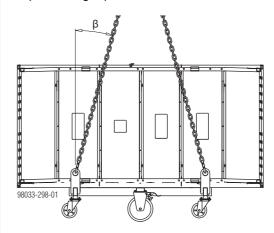
- Max. gradient of floor: 3%
- Max. speed 4 km/h (walking pace)
- Either bridge any openings in the floor with sufficiently strong planking/boards secured so that they cannot slip away to either side, or close off openings with sufficiently strong side railings!
- Keep the travel route clean and free of any obstacles.
- It is forbidden to use any mechanical assistance during the wheeling operation!

Lifting by crane



NOTICE

- Use a suitable lifting chain for repositioning. (Do not exceed the permitted load capacity). e.g: Doka 4-part chain 3.20m.
- DekDrives may only be lifted one at a time.
- Spread-angle β max. 30°!



> Before attaching the lifting chain, check that:



the fixing brake is applied

Alternative transport options

With timber trolley

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

Features:

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

Designation: M-Timber trolley 170mm-CT

Weight: 7.0 kg Dimensions:

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



Max. load: 300 kg

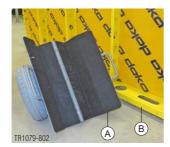
State during transport



A M-Timber trolley 170 mm-CT

How to load

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



- A M-Timber trolley 170 mm-CT
- **B** Dokadek panel

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

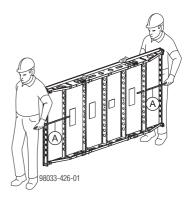


A M-Timber trolley 170 mm-CT

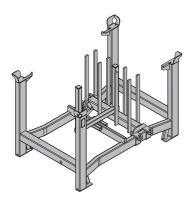
Manual transport



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



Dokadek infill-beam pallet



Storage and transport device for Dokadek infill beams:

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

Max. number of Dokadek infill beams: 44

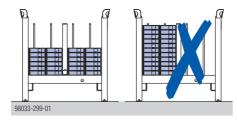
Max. load: 800 kg

Permitted imposed load: 5900 kg

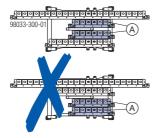


NOTICE

- Load Infill beams 2.44m and 1.22m onto the pallet centrically, so that they are braced against the uprights of the pallet.
- Multi-trip packaging items that each contain very different loads must be stacked with the heaviest ones at the bottom and the lightest ones at the top!
- Always stack in complete layers.



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



- Before the infill beams are transported by lorry, they must be firmly connected to the pallet, e.g. by bundling with steel strapping.
- The rating 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)	Indoors
Floor gradients of up to 3%	Floor gradients of up to 1%
2	6
It is not allowed to stack empty pallets on top of one another!	

Note:

How to use with bolt-on castor set:

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 caster 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



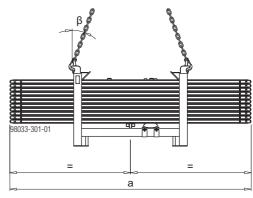
Follow the directions in the "Bolt-on castor set B" Operating Instructions!

Lifting by crane



NOTICE

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



a ... 244 cm or 122 cm

Repositioning by forklift truck or pallet stacking truck



NOTICE

• Load the items centrically.

Transporting Bracing frames Eurex



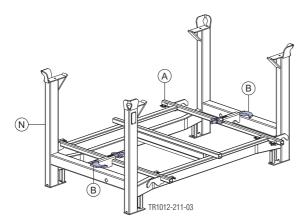
NOTICE

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

Loading the pallet

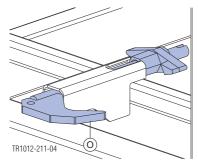
e.g. Bracing frame Eurex 1.22m

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



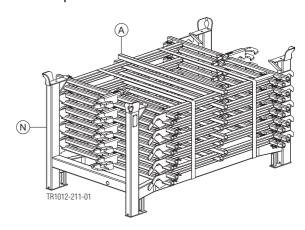
- A Bracing frame Eurex
- N Doka stacking pallet 1.55x0.85m
- O Prop-holder (= quick-fixing mechanism)

Close-up C



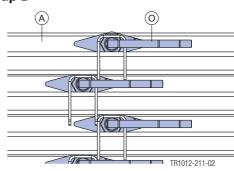
- O Prop-holder (= quick-fixing mechanism)
- Stack the other bracing frames alternate ways round (as shown in Close-up D).

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



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

Close-up D



O Prop-holder (= quick-fixing mechanism)

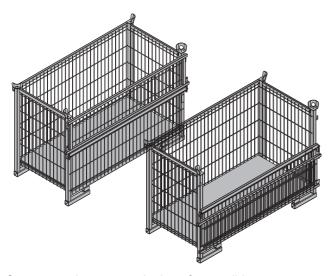
Load quantities

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



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

Doka skeleton transport box 1.70x0.80m



Storage and transport devices for small items:

- durable
- stackable

Suitable transport appliances:

- crane
- pallet stacking truck
- forklift truck

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

Max. load: 700 kg (1540 lbs)

Permitted imposed load: 3150 kg (6950 lbs)



NOTICE

- Multi-trip packaging items that each contain very different loads must be stacked with the heaviest ones at the bottom and the lightest ones at the top!
- Rating plate must be in place and clearly legible

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

Max. n° of boxes on top of one another

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

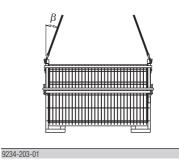
Using Doka skeleton transport boxes 1.70x0.80m as transport devices

Lifting by crane



NOTICE

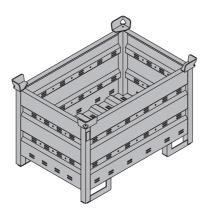
- Multi-trip packaging items may only be lifted one at a time.
- Only lift the boxes when their sidewalls are closed!
- Use a suitable lifting chain (e.g. Doka 4-part chain 3.20m).
 Do not exceed the permitted load-bearing capacity.
- Spread-angle β max. 30°!



Repositioning by forklift truck or pallet stacking truck

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

Doka multi-trip transport box 1.20x0.80m galv.



Storage and transport devices for small items:

- durable
- stackable

Suitable transport appliances:

- crane
- pallet stacking truck
- forklift truck

Max. load: 1500 kg (3300 lbs)

Permitted imposed load: 7850 kg (17305 lbs)

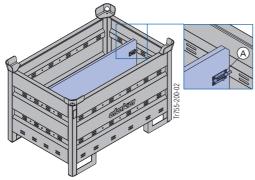


NOTICE

- Multi-trip packaging items that each contain very different loads must be stacked with the heaviest ones at the bottom and the lightest ones at the top!
- Rating plate must be in place and clearly legible

Multi-trip transport box partition

Different items in the 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	Lengthways	Crossways
1.20m	max. 3 partitions	-
0.80m	-	max. 3 partitions
	Tr755-200-04	Tr755-200-05

Using Doka multi-trip transport boxes as storage units

Max. n° of boxes on top of one another

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

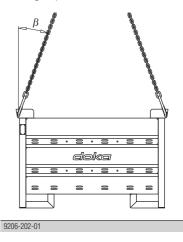
Using Doka multi-trip transport boxes as transport devices

Lifting by crane



NOTICE

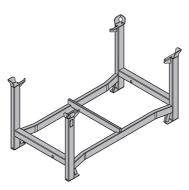
- Multi-trip packaging items may only be lifted one at a time.
- Use a suitable crane suspension tackle (e.g. Doka 4-part chain 3.20m).
 Do not exceed the permitted load-bearing capacity.
- Spread angle β max. 30°!



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:

- durable
- stackable

Suitable transport appliances:

- crane
- pallet stacking truck
- forklift truck

Max. load: 1100 kg (2420 lbs)

Permitted imposed load: 5900 kg (12980 lbs)



NOTICE

- Multi-trip packaging items that each contain very different loads must be stacked with the heaviest ones at the bottom and the lightest ones at the top!
- Rating plate must be in place and clearly legible

Using Doka stacking pallets as storage units

Max. n° of units on top of one another

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

Note:

How to use with bolt-on castor set:

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 caster set mounted to it.

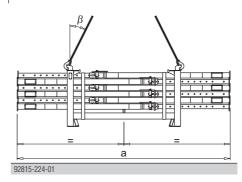
Using Doka stacking pallets as transport devices

Lifting by crane



NOTICE

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



	а	
Doka stacking pallet 1.55x0.85m	max. 4.0 m	
Doka stacking pallet 1.20x0.80m	max. 3.0 m	

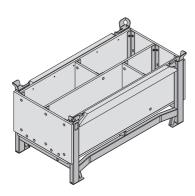
Repositioning by forklift truck or pallet stacking truck



NOTICE

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

Doka accessory box



Storage and transport devices for small items:

- durable
- stackable

Suitable transport appliances:

- crane
- pallet stacking truck
- forklift truck

The Doka accessory box is the tidy, easy-to-find way of storing and stacking all interconnection and form-tie components.

Max. load: 1000 kg (2200 lbs)

Permitted imposed load: 5530 kg (12191 lbs)



NOTICE

- Multi-trip packaging items that each contain very different loads must be stacked with the heaviest ones at the bottom and the lightest ones at the top!
- Rating plate must be in place and clearly legible

Doka accessory boxes as storage units

Max. n° of boxes on top of one another

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

Note:

How to use with bolt-on castor set:

Always apply the fixing brake when the container is "parked".

When Doka accessory boxes are stacked, the bottom box must NOT be one with a bolt-on castor set mounted to it.

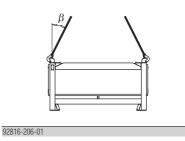
Doka accessory box as transport devices

Lifting by crane



NOTICE

- Multi-trip packaging items may only be lifted one at a time.
- Use a suitable lifting chain (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.

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 out 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



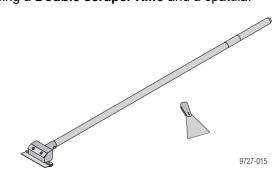


NOTICE

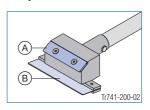
- Appliance pressure rating: 200 to max. 300 bar
- Keep the water-jet the correct distance from the formwork, and move it at the right speed:
 - The higher the pressure, the further away from the formwork you must keep the jet and the faster you must move it across the surface.
- Do not aim the jet at 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.

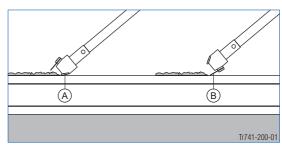
Concrete scraper

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



Functional description:



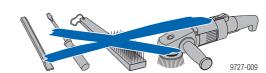


- A Blade for dealing with heavy soiling
- B Blade for dealing with slight soiling



NOTICE

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



Release agents

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





Follow the directions in the 'Doka releaseagent 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 releaseagent running down the formwork sheet.
- Applying too much release agent will spoil the concrete finish.



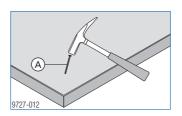
To determine the right dosage and to make sure that you are using the agent correctly, test it on less important parts of the structure first.

Care

No hammer-blows to the frame profiles



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



A max. I=60 mm

- Never push over panels or allow them to fall
- Do not use the panels as substitute ladders.



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 a

This is calculated by:

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

Slab thickness 'd' [m]	Dead load DL _{concrete} [kN/m²]	2.00 kN/m²	Load fa LL _{fina} 3.00 kN/m²	actor α al state 4.00 kN/m²	5.00 kN/m²
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 $_{finishing}$ = 2.00 kN/m 2 and a live load in the early-stripped state of LL $_{construction\ state}$ = 1.50 kN/m 2

 $DL_{concrete}$: calculated with $\gamma_{concrete}$ = 25 kN/m³

DL_{finishing}: load for floor finish, etc.

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

This means that 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 floorslab 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. This load distribution will depend on the relationship between the rigidities of these two floor-slabs.



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.

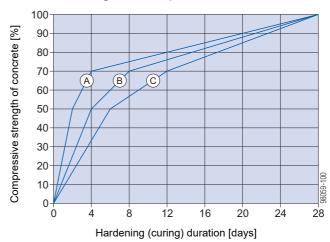
Observe all local standards and regulations!

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 ϑ≥15° **B** ϑ≥10°

C ϑ≥5°

Deflection of the new concrete

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

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

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

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

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

Cracks in new concrete

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

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

Curing of new concrete

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

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

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

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

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

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



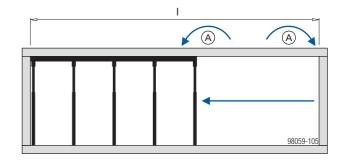
NOTICE

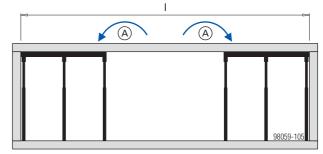
As a basic rule:

 Stress-release should always be carried out working from one side towards the other, or from the middle of the floor slab (midspan) 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!



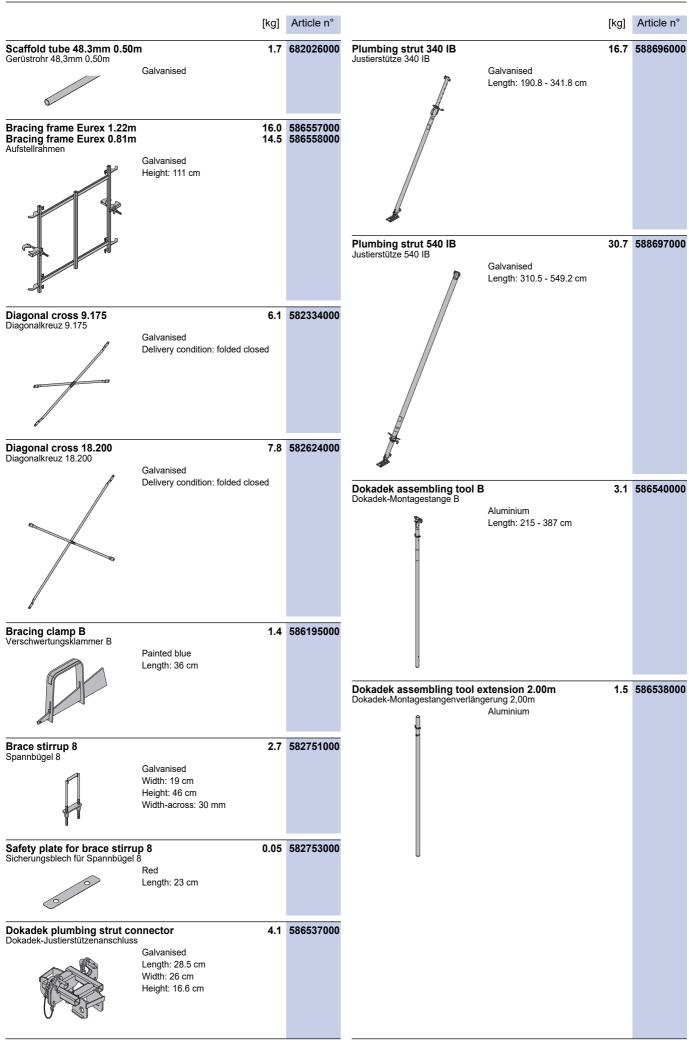


I ... Effective floor-slab spans of 7.50 m and over

A Load redistribution

	[kg]	Article n°	[kg]	Article n°
Dokadek panel 1.22x2.44m		586501000		586270000
Dokadek panel 0.81x2.44m Dokadek-Element	40.1	586502000	Length: 148 - 250 cm Doka floor prop Eurex 20 eco 300 14.0	586271000
Galvanised Painted yellow			Length: 173 - 300 cm Doka floor prop Eurex 20 eco 350 Length: 198 - 350 cm 16.9	586272000
			Doka floor prop Eurex 20 eco 400 20.5	586273000
The second second			Length: 223 - 400 cm Doka floor prop Eurex 20 eco 450 24.1	586275000
			Length: 248 - 450 cm Doka-Deckenstütze Eurex 20 eco	
Doka floor prop Eurex 30 top 250	12.8	586092400	Galvanised	
Length: 148 - 250 cm Doka floor prop Eurex 30 top 300	16.4	586093400		
Length: 173 - 300 cm Doka floor prop Eurex 30 top 350 Length: 198 - 350 cm	20.7	586094400		
Doka floor prop Eurex 30 top 400	24.6	586095400		
Length: 223 - 400 cm Doka floor prop Eurex 30 top 450	29.1	586119400		
Length: 248 - 450 cm Doka floor prop Eurex 30 top 550 Length: 303 - 550 cm	38.6	586129000		
Length: 303 - 550 cm Doka-Deckenstütze Eurex 30 top				
Galvanised			Power while falling this sales	500455500
			Stützbein top	586155500
			Galvanised Height: 80 cm	
			Delivery condition: folded closed	
U				
			Removable folding tripod 15.6	586155000
			Stützbein Galvanised	300133000
Doka floor prop Eurex 20 top 150	8.0	586096000	Height: 80 cm	
Length: 92 - 150 cm Doka floor prop Eurex 20 top 250		586086400	Delivery condition: folded closed	
Length: 148 - 250 cm	14.3	586087400		
Doka floor prop Eurex 20 top 300 Length: 173 - 300 cm Doka floor prop Eurex 20 top 350	17.4	586088400	Powerskie felding for a 44 00m	586145000
Length: 198 - 350 cm Doka floor prop Eurex 20 top 400	21.6	586089400	Removable folding tripod 1.20m Stützbein 1,20m Galvanised	300143000
Length: 223 - 400 cm Doka floor prop Eurex 20 top 550 Length: 298 - 550 cm	32.3	586090400	Height: 120 cm Delivery condition: folded closed	
Length: 298 - 550 cm Doka-Deckenstütze Eurex 20 top			Delivery condition: folded closed	
Galvanised				
			Dokadek wall clamp Dokadek-Wandhalter 4.5	183063000
U .			Dark brown Length: 138 cm	
y			Estigati. 100 om	
				586506000
			Dokadek-Auflagerkopf Galvanised	
			Height: 33 cm	
			•	

	[kg]	Article n°	[kg]	Article n°
A -	5.6 alvanised eight: 54 cm	586539000	Dokadek-Trägeraufnahme H20 Galvanised Height: 35 cm	586550000
A	4.3 alvanised eight: 56 cm	586536000	Dokadek handrail-post shoe short Dokadek-Stirngeländerschuh Galvanised Length: 23 cm Height: 56 cm	586519000
Dokadek edge head 18mm Dokadek edge head 21mm Dokadek edge head 27mm Dokadek-Randkopf	3.9	586544000 586545000 586546000	Dokadek handrail-post shoe short 1.20m Dokadek-Stirngeländerschuh 1,20m Galvanised Length: 23 cm Height: 27 cm	586598000
Ga	alvanised eight: 36 cm		Dokadek handrail-post shoe long Dokadek-Längsgeländerschuh Galvanised Length: 125 cm Height: 66 cm	586520000
A A	2.6 alvanised eight: 32 cm	586543000		
	alvanised ength: 15 cm	582528000 586509000	Dokadek handrail-post shoe long 1.20m Dokadek-Längsgeländerschuh 1,20m Galvanised Length: 47 cm Height: 37 cm	586560000
Dokadek infill beam 1.22m 18r Dokadek infill beam 0.81m 18r Dokadek infill beam 2.44m 21r Dokadek infill beam 1.22m 21r Dokadek infill beam 0.81m 21r Dokadek infill beam 2.44m 27r Dokadek infill beam 1.22m 27r Dokadek infill beam 0.81m 27r Dokadek-Ausgleichsträger	mm 8.7 mm 6.0 nm 16.6 mm 8.5 mm 6.0 nm 16.7 nm 16.7 nm 8.6	586510000 586511000 586512000 586513000 586514000 586516000 586516000 586517000	Lashing strap 5.00m 2.8 Zurrgurt 5,00m Yellow	586018000
The ball of the ba			Doka express anchor 16x125mm Doka-Expressanker 16x125mm Galvanised Length: 18 cm Follow the directions in the "Fitting instructions"!	588631000
W W	20 1.6 alvanised fidth: 15 cm eight: 35 cm	586518000	Doka coil 16mm Doka-Coil 16mm Galvanised Diameter: 1.6 cm	588633000



Article n° Article n° [kg] 3.1 586562000 Wheel-around scaffold DF 44.0 586157000 Dokadek suspension tool Mobilgerüst DF Dokadek-Einhängestange Aluminium Aluminium Length: 185 cm Head part yellow Length: 215 - 386 cm Width: 80 cm Height: 255 cm Delivery condition: folded closed Wheel-around scaffold DF accessory set 13.3 586164000 Zubehörset Mobilgerüst DF Aluminium Timber parts varnished yellow 5.0 586541000 Dokadek stripping tool Length: 189 cm Dokadek-Ausschalwerkzeug Powder-coated yellow Length: 212 cm Dokadek system beam H20 eco P 1.10m 5.7 189959000 Dokadek-Systemträger H20 eco P 1,10m Varnished yellow Dokadek stripping tool extension 1.50m 3.1 586559000 Dokadek-Ausschalwerkzeugverlängerung 1,50m Powder-coated yellow 5.7 189958000 Doka beam H20 eco P 1.10m Doka-Träger H20 eco P 1,10m Varnished yellow DekDrive 57.9 586526000 Galvanised Length: 145 cm Width: 88 cm Height: 108 cm Delivery condition: folded closed 3.6 583022000 Doka personal fall-arrest set Doka-Auffanggurt Follow the directions in the "Operating Instructions"! DekLift 4.50m 368.0 586553000 DekLift 4,50m Galvanised Follow the directions in the "Operating Instructions"! CE **Multi-trip packaging** CE 75.0 586523000 Dokadek panel pallet 1.22x2.44m Dokadek-Elementpalette 1,22x2,44m Galvanised Height: 26 cm Platform stairway 0.97m 23.5 586555000 Aluminium Width: 121 cm Pay attention to the national, technical safety regulations!

Article n° Article n° [kg] Dokadek panel pallet 0.81x2.44m Dokadek-Elementpalette 0,81x2,44m 66.0 586524000 Doka skeleton transport box 1.70x0.80m Doka-Gitterbox 1,70x0,80m 87.0 583012000 Galvanised Galvanised Height: 26 cm Height: 113 cm Attachable wheelset Aufsteck-Radsatz 27.3 586525000 Galvanised Doka stacking pallet 1.55x0.85m Doka-Stapelpalette 1,55x0,85m 41.0 586151000 Galvanised Height: 77 cm Dokadek infill beam pallet Dokadek-Ausgleichsträgerpalette 62.0 586528000 Galvanised Length: 119 cm Width: 79 cm Height: 81 cm Doka stacking pallet 1.20x0.80m Doka-Stapelpalette 1,20x0,80m 38.0 583016000 Galvanised Height: 77 cm Doka multi-trip transport box 1.20x0.80m 70.0 583011000 Doka-Mehrwegcontainer 1,20x0,80m Galvanised Height: 78 cm Bolt-on castor set B Anklemm-Radsatz B 33.6 586168000 Painted blue Multi-trip transport box partition 0.80m Multi-trip transport box partition 1.20m Mehrwegcontainer Unterteilung 3.7 583018000 5.5 583017000 Steel parts galvanised Timber parts varnished yellow 106.4 583010000 Doka accessory box Doka-Kleinteilebox Timber parts varnished yellow Steel parts galvanised Length: 154 cm Width: 83 cm Height: 77 cm



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