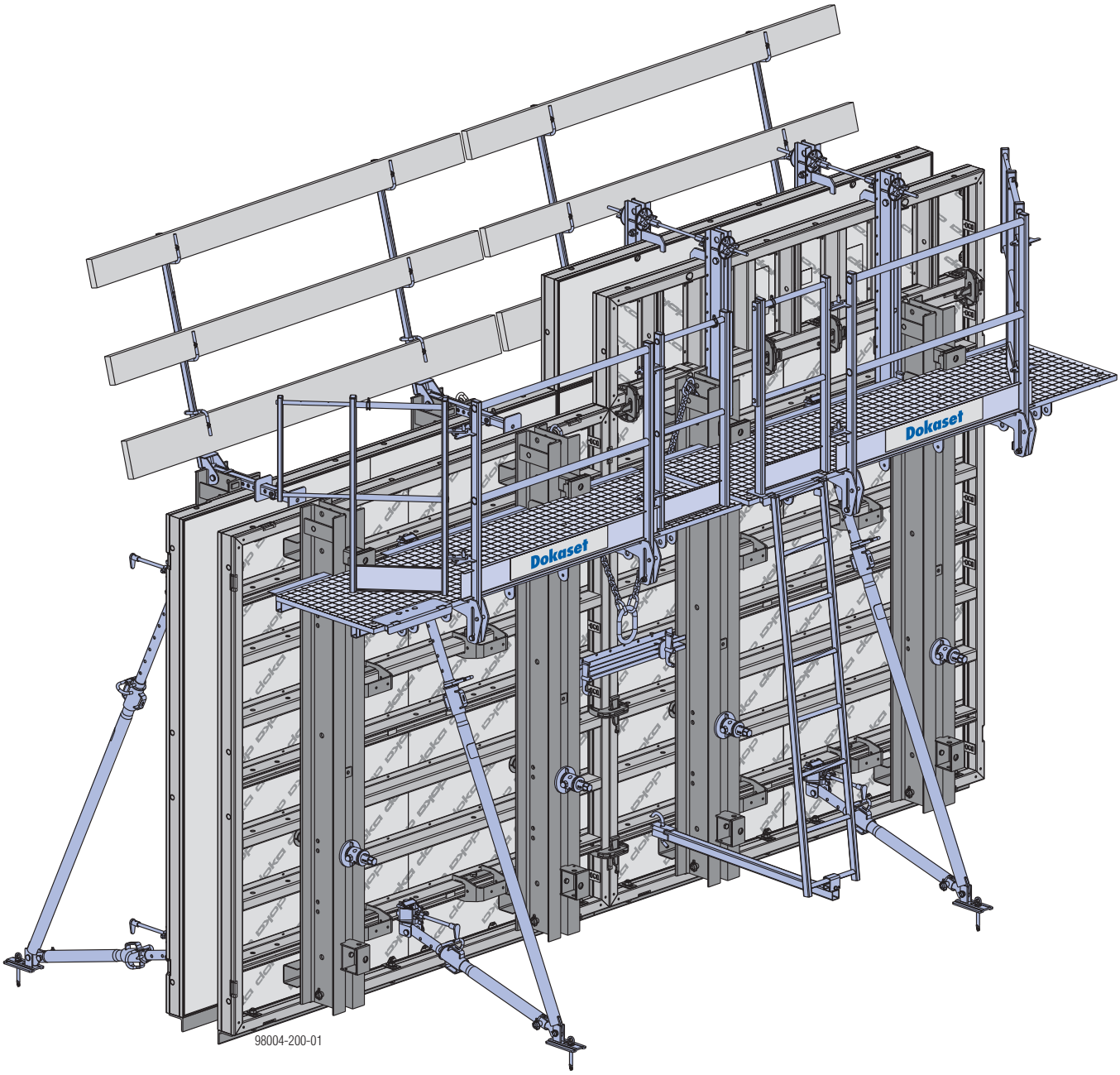
999800402 - 01/2021
en-GB

The Formwork Experts.

Dokaset

User Information

Instructions for assembly and use (Method statement)




Dokaset
Dokaset

Contents

Introduction

Elementary safety warnings

User target groups

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

Hazard assessment

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

Remarks on this booklet

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

Planning

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

Regulations; industrial safety

- All laws, Standards, industrial safety regulations and other safety rules applying to the utilisation of our products in the country and/or region in which you are operating must be observed at all times.
- If a person or object falls against, or into, the 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. Heaters are permissible only when used correctly and situated a correspondingly safe distance from the formwork.
- Customer must give due consideration to any and all effects of the weather on the equipment and regards both its use and storage (e.g. slippery surfaces, risk of slipping, effects of the wind, etc.) and implement appropriate precautionary measures to secure the equipment and surrounding areas and to protect workers.
- All connections must be checked at regular intervals to ensure that they are secure and in full working order.
  In particular threaded connections and wedged connections have to be checked and retightened as necessary in accordance with activity on the jobsite and especially after out-of-the-ordinary occurrences (e.g. after a storm).
- It is strictly forbidden to weld Doka products – in particular anchoring/tying components, suspension components, connector components and castings etc. – or otherwise subject them to heating.
  Welding causes serious change in the microstructure of the materials from which these components are made. This leads to a dramatic drop in the failure load, representing a very great risk to safety.
  It is permissible to cut individual tie rods to length with metal cutting discs (introduction of heat at the end of the rod only), but it is important to ensure that flying sparks do not heat and thus damage other tie rods.
  The only articles which are allowed to be welded are those for which the Doka literature expressly points out that welding is permitted.

Assembly

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

Closing the formwork

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

Pouring

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

Stripping the formwork

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

Transporting, stacking and storing

- Observe all country-specific regulations applying to the handling of formwork and scaffolding. For system formwork the Doka slinging means stated in this booklet must be used – this is a mandatory requirement.
  If the type of sling is not specified in this document, the customer must use slinging means that are suitable for the application envisaged and that comply with the regulations.
- When lifting, always make sure that the unit to be lifted and its individual parts can absorb the forces that occur.
- Remove loose parts or secure them so that they cannot slip out of position and drop.
- When lifting formwork or formwork accessories with a crane, no persons must be carried along, e.g. on working platforms or in multi-trip packaging.
- All components must be stored safely, following all the special Doka instructions given in the relevant sections of this document!

Maintenance

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

Miscellaneous

The weights as stated are averages for new material; actual weights can differ, depending on material tolerances. Dirt accretions, moisture saturation, etc. can also affect weight.
We reserve the right to make alterations in the interests of technical progress.

Eurocodes at Doka

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

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

Allowance has been made for the following partial factors:

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

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

Symbols used

The following symbols are used in this document:

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

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

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

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

Instruction
Indicates that actions have to be performed by the user.

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

Tip
Points out useful practical tips.

Reference
Cross-references other documents.

Services

Support in every stage of the project

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

Project assistance from start to finish

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

Efficient planning for a safe project sequence

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

Optimise construction workflows with Doka

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

Custom formwork and on-site assembly

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

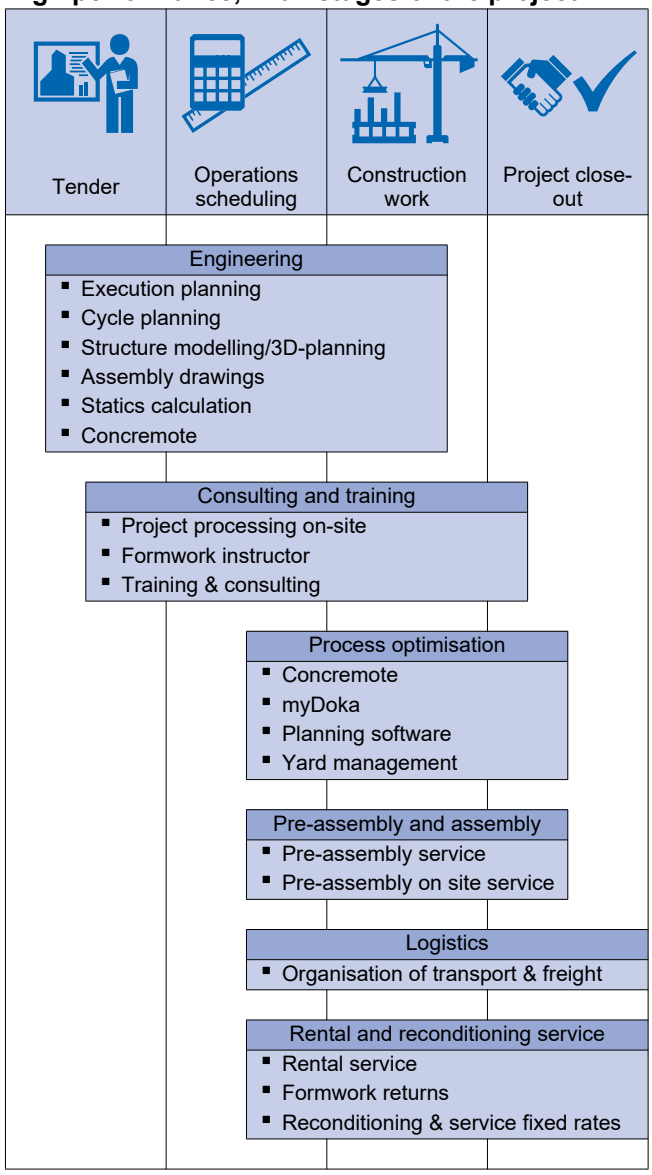
Just-in-time availability

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

Rental and reconditioning service

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

High performance, in all stages of the project



upbeat construction
digital services for higher productivity

From planning through to completion - with upbeat construction we'll be moving construction forward and upping the beat for more productive building with all our digital services. Our digital portfolio covers the entire construction process and is being extended all the time. To find out more about our specially developed solutions go to doka.com/upbeatconstruction.

Product description

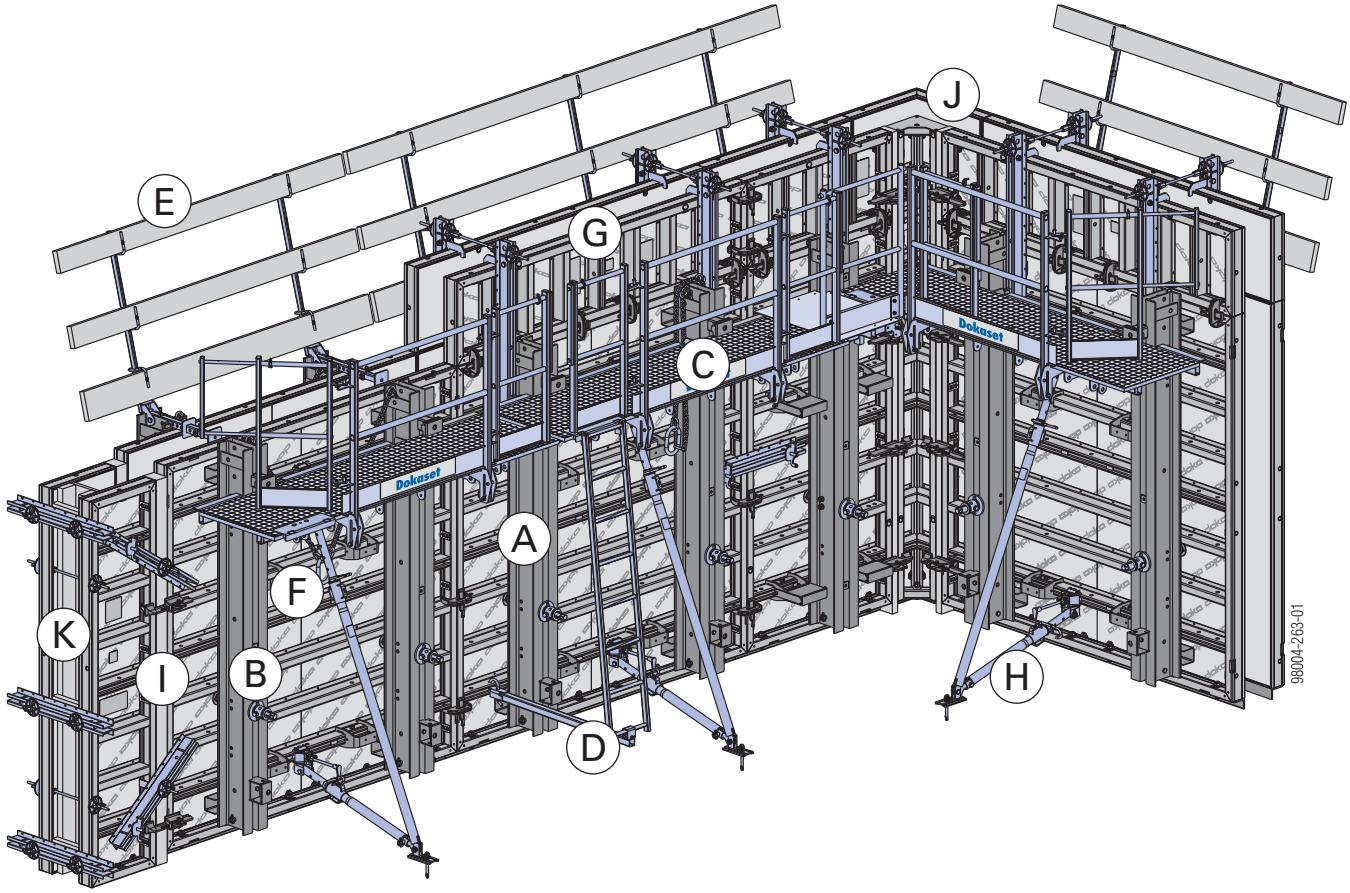
Dokaset is the ideal formwork for the requirements of the building construction sector.

The **very high load-bearing capacity** and **long lifespan** of Dokaset make it an **economical** solution for all wall-forming tasks.

Permitted fresh-concrete pressure: 80 kN/m²

Among the many advantages of Dokaset:

- small numbers of form ties, as only 2 ties are needed per 2.70 m width, saving both materials and man-hours
- up to a formwork height of 3.37 m, only 1 form tie in the concrete
- formwork can be tied working from one side only – easy and time-saving
- much higher number of form-ply re-use cycles than with conventional plywood sheets, thanks to the use of the long-lived Xlife sheet
- All the main jobs on the formwork can be carried out from the ground, for example:
  - attaching the connecting devices
  - tying
  - attaching/detaching the formwork to/from the crane
- **High standard of safety**



A	The Dokaset panel in detail (Page 14)
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Wall formwork

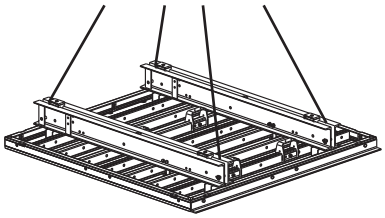
Instructions for assembly and use (Method statement)

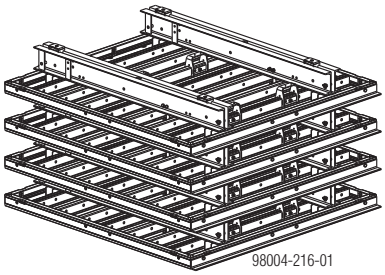
Brace the formwork in a windproof manner when erecting it and when it is temporarily placed in the standing position.

Observe all applicable safety regulations.

Transporting / handling the panels

➤ To separate the panels, use the Doka 4-part chain 3.20m (see the section headed 'Transporting, stacking and storing').





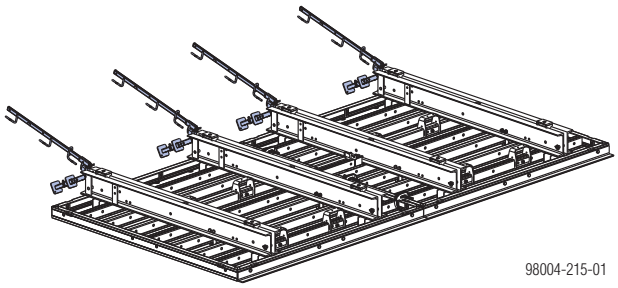
98004-216-01

➤ Set the panel down on a prepared flat area.

Preparing the gang-forms

➤ Combine the panels into gang-forms (see the section headed 'Gang-forms').

➤ Mount the opposing guard-rail posts and Dokaset head anchors.



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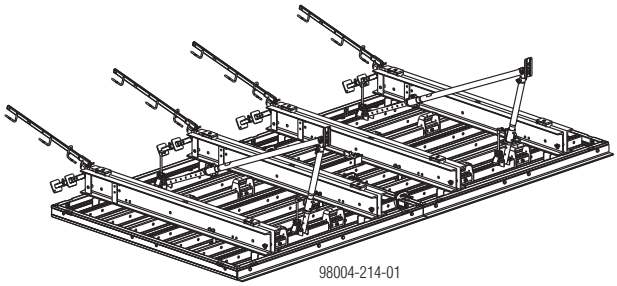
See also the section headed 'Opposing guard-rails'.

Panel struts, 2-part chain

➤ With the gang-form still flat, mount panel struts to it (see "Plumbing accessories").



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➤ Mount a Dokaset 2-part chain 1.50m (see "Gang-forms").

Closing the formwork

- ➤ Attach the lifting chain to the Dokaset-2-part chain 1.50m.
- ➤ Pick up the element by crane.
- ➤ Spray the formwork sheet with release agent (see the section headed 'Cleaning and care of your equipment').
- ➤ Fly the element to its new location.

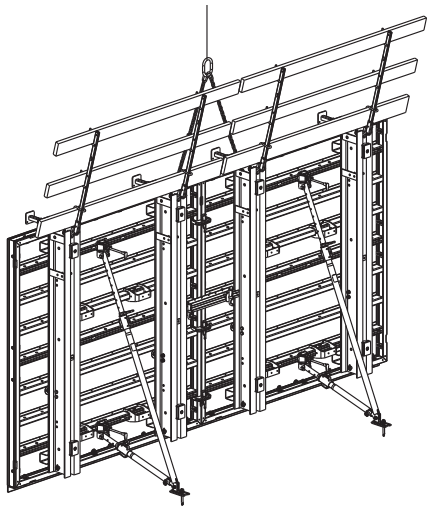
CAUTION

Never use a sledge-hammer to plumb and align the elements!

This would damage the profiles of the gangs.

- ➤ Use only proper plumbing tools (e.g. a special pry-bar) that cannot cause any damage.
- ➤ Apply plumbing tools to the bottom angle only.

- ➤ Fix the panel struts firmly to the ground (see the section headed 'Plumbing accessories').



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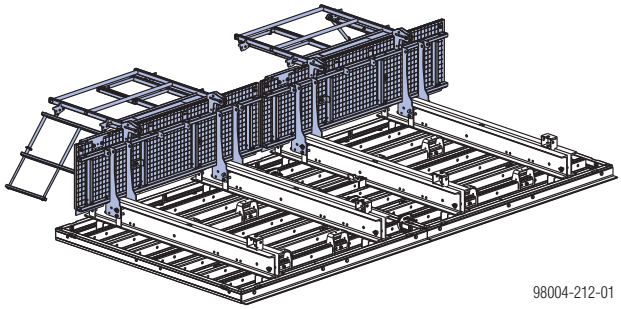
The element is now stable and can be plumbed and aligned exactly, with no need for the crane.

- ➤ Detach the element from the crane.
- ➤ Continue lining up further gang-forms in this way, and link them together (see the section headed 'Gang-forms').

Set up the side of the formwork with the platform

Once the reinforcement has been placed, the formwork can be closed.

- ➤ Unfold the rear railings, side railings and platform.



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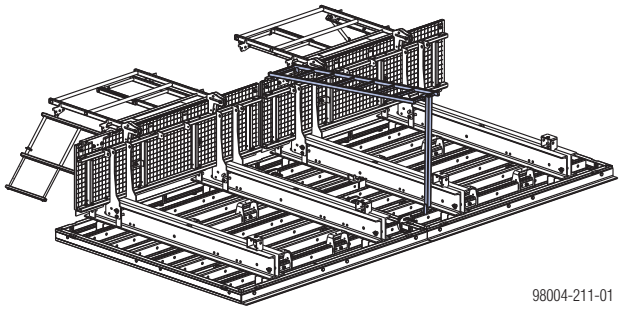
See also the section headed 'Platform system'.

Ladder system

- ➤ Attach the ladder in the desired position.



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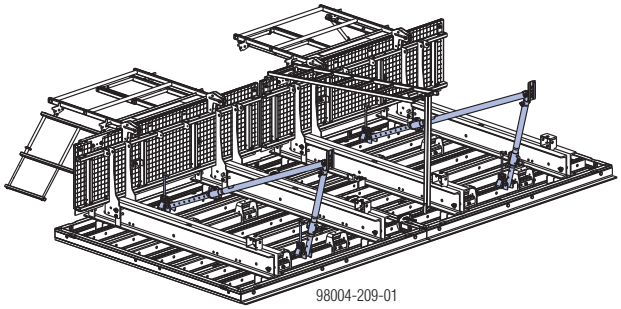
See also the section headed 'Ladder system'.

Panel struts, 2-part chain

➤ With the gang-form still flat, mount panel struts to it (see the setion headed 'Plumbing accessories').



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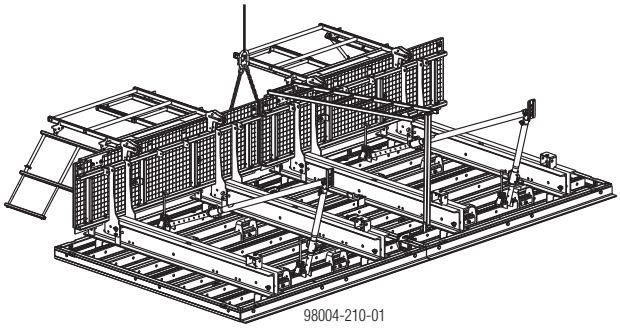
➤ Mount a Dokaset 2-part chain 1.50m (see the section headed 'Gang-forms').



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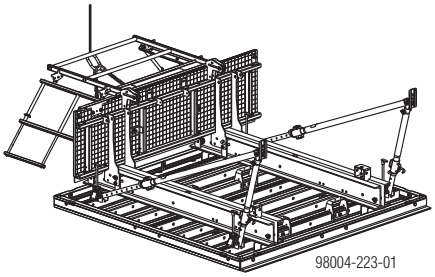
➤ When raising a 2.70x2.70m panel, it is OK to pass the 2-part chain across the sturdy rear railings.



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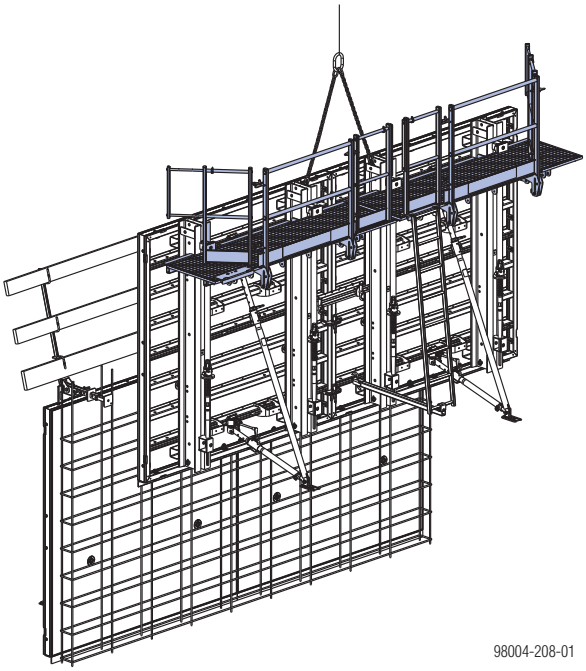
➤ In all other respects, the procedure is the same as described in the previous section 'Closing the formwork'.



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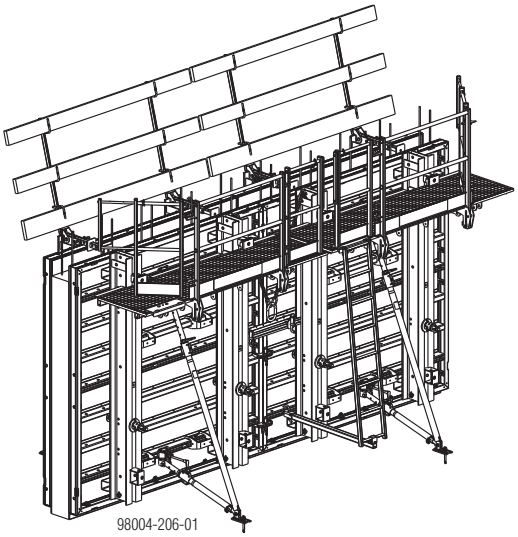
➤ Take the form ties out of the stand-by position, apply concrete release agent as needed, and fit the form ties (see the section headed 'Dokaset tie rod system').

Pouring

NOTICE

- Permitted fresh-concrete pressure: 80 kN/m²
- See also the section headed 'Concrete pressure on perpendicular formwork to DIN 18218' in the Doka Calculation Guide.
- Comply with 'Compacting of concrete by vibrating', DIN 4235 Part 2.

- Pour the concrete.
- Make only moderate use of vibrators, carefully co-ordinating the times and locations of vibrator use.



Stripping the formwork

NOTICE

- Comply with the stipulated stripping times.

- Take out and "park" the form ties.
- Undo the connectors to the adjacent elements.
- Remove any loose items from the formwork and platforms, secure them or put them into the stand-by position.
- Attach the panel to the crane.
- Undo the ground anchors of the panel struts.

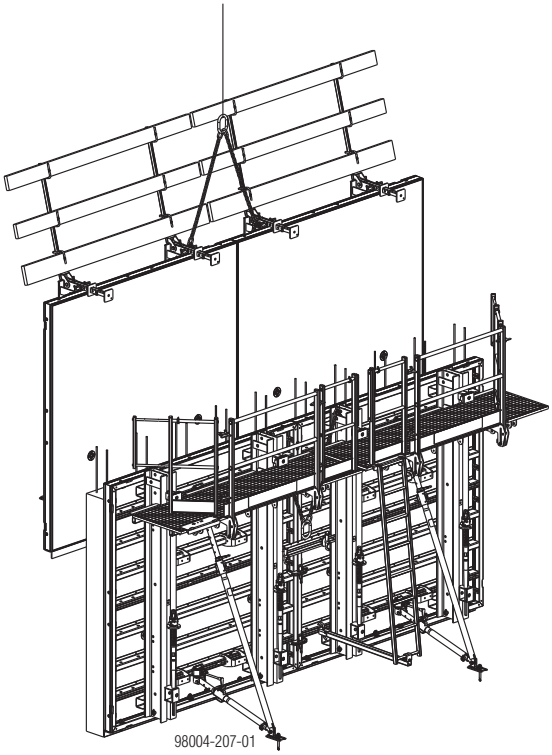
WARNING

The formwork tends to adhere to the concrete. When stripping the formwork, do not try to break concrete cohesion using the crane!

Risk of crane overload.

- Use suitable tools such as timber wedges or a special pry-bar to detach the formwork from the concrete.

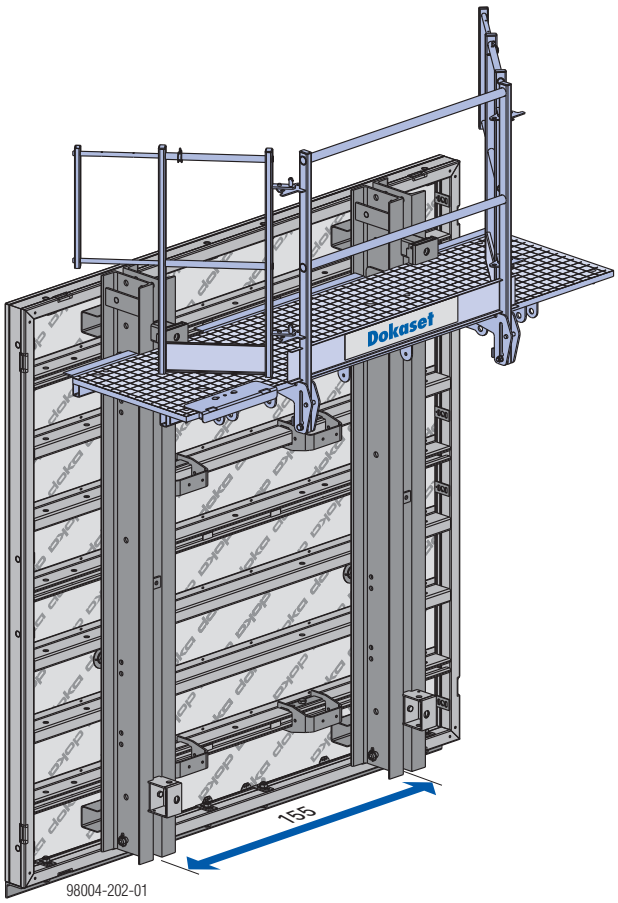
- Lift the gang-form away and to its next location.



If the gang-form is 'parked' prior to its next use, it must have sufficient stability (see the section headed 'Plumbing accessories').

- Clean residual concrete off the formwork sheet (see the section headed 'Cleaning and care of your equipment').

The Dokaset panel in detail



Types of panel:

- Dokaset panel 2.70x2.70m with platform
- Dokaset panel 2.70x2.70m
- Dokaset panel 1.35x2.70m with platform
- Dokaset panel 1.35x2.70m

High load-bearing capacity

Permitted fresh-concrete pressure: 80 kN/m²

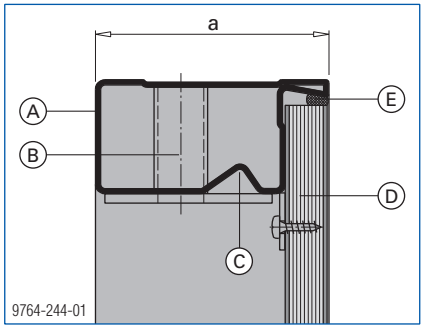
- Full hydrostatic fresh-concrete pressure up to a height of 2.77 m, with no limitation on the pouring rate
- Low deflection

Clean concrete surfaces with the innovative Xlife sheet

The Xlife sheet consists of a **combination of a traditional plywood core and a novel and innovative plastic coating**.
This combination of materials ensures high numbers of repeat uses, with superb concrete results every time, and reduces the proneness to damage.

- High quality concrete finish
- Less touching-up needed
- Less cleaning work - the Xlife sheet can also be cleaned using a high-pressure spray cleaner
- Because the Xlife sheet is screwed on from the rear, this leaves no screw imprints on the concrete

Dimensionally stable, galvanised steel frame



a ... 123 mm

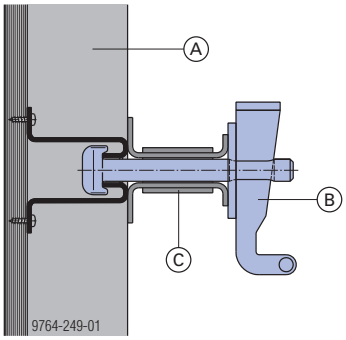
A	Frame profile
B	Cross borehole
C	Continuous hardware slot for inter-panel connectors
D	Xlife sheet
E	Silicone sealing strip

- Dimensionally stable frame profiles
- Strong cross-profiles
- Edges are easy to clean - so panels always abut tightly
- All-round hardware slot for fastening the inter-panel connectors at any point required
- Hot-dip galvanised for long life
- Edges of formwork sheet are protected by frame profile
- Cross boreholes for corner configurations and stop-ends

WARNING

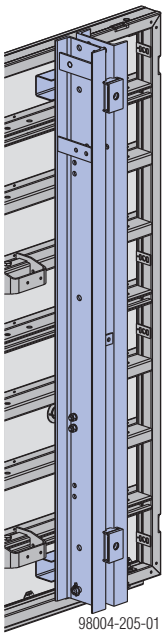
➤ It is forbidden to climb on the cross-profiles. The cross-profiles are NOT a substitute for a ladder.

Accessories are easy to fasten, in the integrated waling system



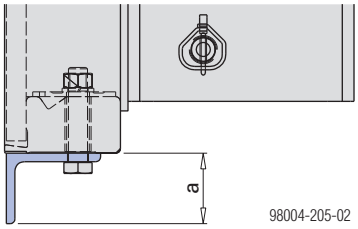
A	Dokaset panel
B	Framax wedge clamp
C	Framax universal waling

Strong walings



- sustain the full hydrostatic concrete pressure
- minimise deflection
- have integral slinging points for resetting the panels by crane
- have integral stacking shoes

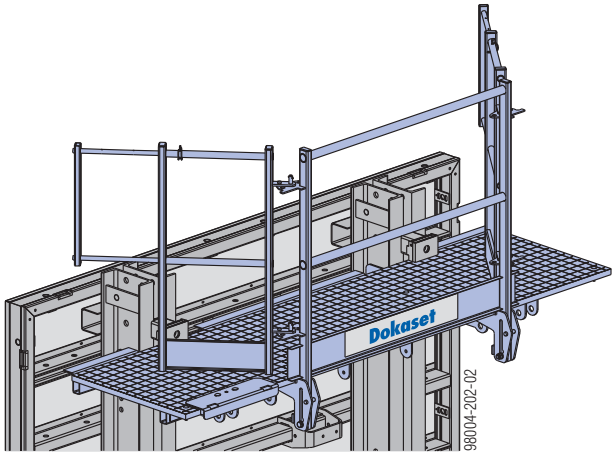
Bottom angle



a ... 7.5 cm

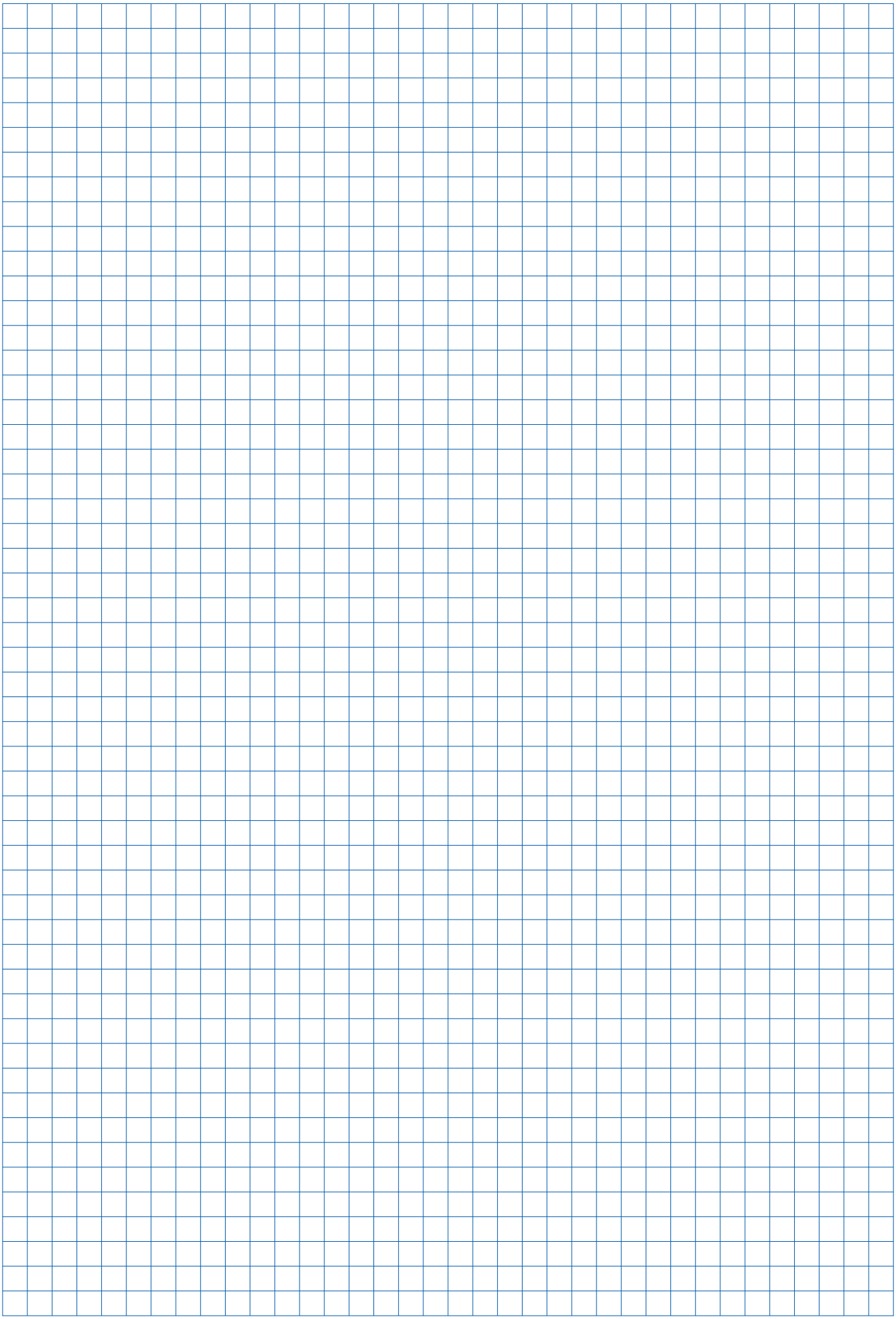
- provides clearance for e.g. up to 5 cm high installation lines
- facilitates formwork removal

Platform



Permitted live load: 1.5 kN/m² (150 kg/m²)
Load Class 2 to EN 12811-1:2003

- fold-away, ready-to-use platforms for convenient, safe working
- integral guard rails
- floor decking with grate



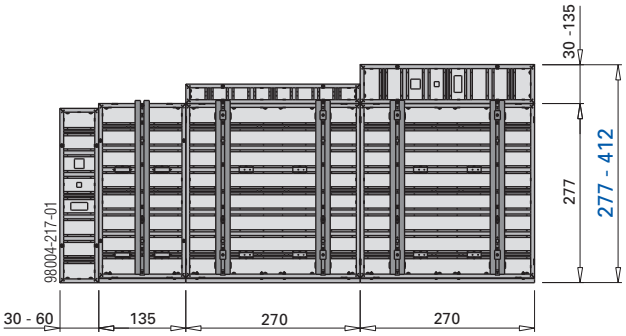
System grid

Combined with Framax Xlife panels, Dokaset permits a **panel size-grid in 15 cm** increments. This advantageous increment-grid makes Dokaset both flexible and economical.

- Easy planning and forming
- Height and width can be adjusted in 15 cm increments
- Very few closures needed
- Clear joint pattern

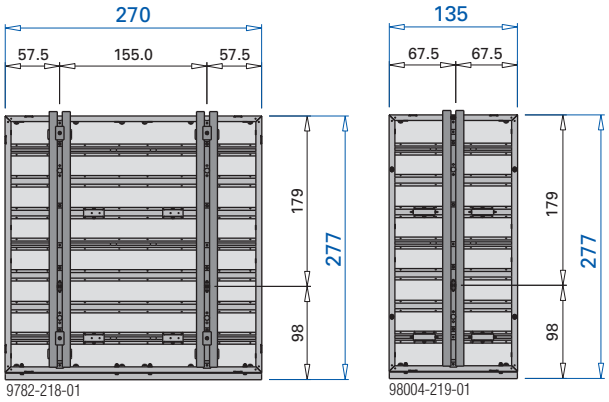
Only 1 form-tie in the concrete. Up to a formwork height of 3.37 m, only one form-tie is needed in the concrete.

Only 2 form-ties per 2.70 m of width.



Schematic representation
Dimensions in cm

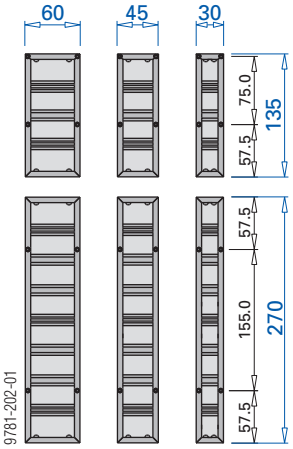
Dokaset panels



Dimensions in cm

Framax Xlife panels

The following Framax Xlife panels are suitable for use in length adjustment:



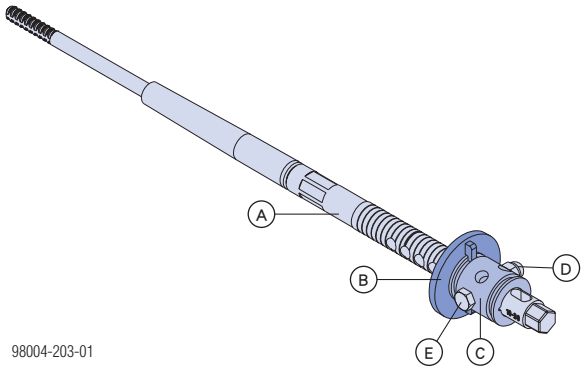
Dimensions in cm

Vertical stacking with horizontal Framax Xlife panels can be carried out using any width from 30 to 135 cm.

Dokaset form-tie system

Dokaset tension tie 10-30cm

- for wall thicknessess from 10 to 30 cm
- can be operated from one side
- no expendable jacket tubes



A	Form-tie
B	Pressing plate
C	Adjusting sleeve
D	Hexagonal screw
E	Cap nut

Wall-thickness grid:

- 10 to 30 cm, in 1 cm increments
- 10.5 to 30.5 cm, in 1 cm increments (for adjustments)

Dokaset tension tie 10-30cm:

Permitted capacity, allowing a 1.6 : 1 factor of safety against failure: 220 kN

Permitted capacity to DIN 18216: 150 kN

Adjusting the Dokaset tension tie

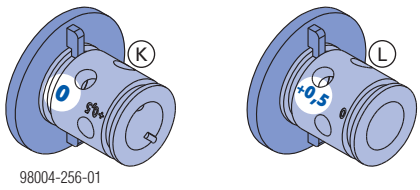
Setting the wall-thickness grid

➤ Unscrew the hexagon screw and pull it out.

➤ Pull the adjusting sleeve and the pressing plate off the rod.

➤ Separate the adjusting sleeve from the pressing plate by moving it to one side.

➤ Select the desired wall-thickness grid for the adjusting sleeve, then push it and the pressing plate back onto the rod.

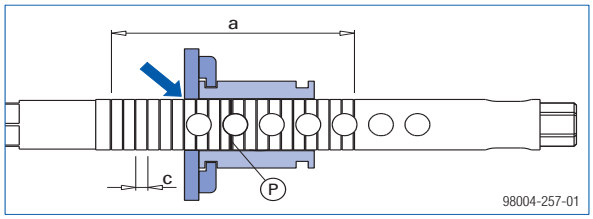


K	Mounting position for a wall-thickness grid of 10 to 30 cm
L	Mounting position for a wall-thickness grid of 10.5 to 30.5 cm

Adapting to the wall thickness

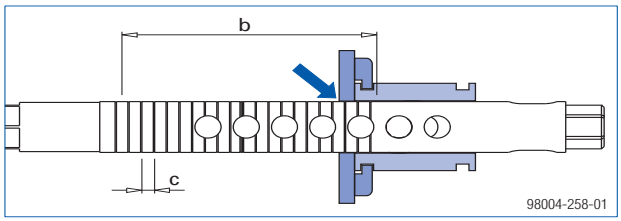
➤ Position the pressing plate and the adjusting sleeve on the form-tie:
- for 10 to 30 cm grid: on the groove
- for 10.5 to 30.5 cm grid: between two grooves

Example with a wall thickness of 16 cm:



a ... wall-thickness grid 10 to 30 cm
c ... space between grooves: 1 cm

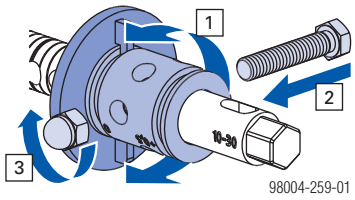
Example with a wall thickness of 27.5 cm:



b ... wall-thickness grid 10.5 to 30.5 cm
c ... space between grooves: 1 cm

The double groove **(P)** marks a wall thickness of 20 cm.

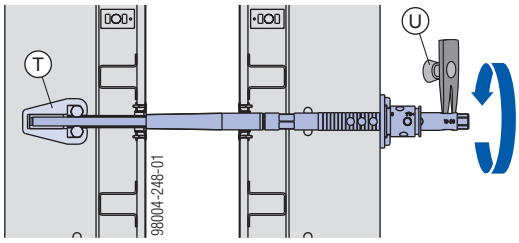
➤ Turn the adjusting sleeve, fit the hexagon screw into the relevant hole and fix it with the cap nut.



Operating the form-tie from one side

Fixing the form-tie:

➤ Screw the Dokaset tension tie all the way into the integrated tying component **(T)** of the opposing formwork, until it fully engages, and tighten it (screw-in depth = 9 cm).



Tools: Formwork hammer **(U)**

Removing the form-tie:

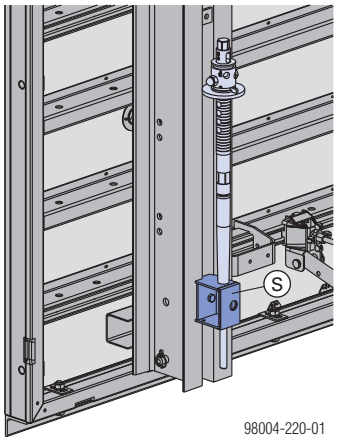
➤ Unscrew the Dokaset tension tie from the tying component **(T)** (9 cm).
Tools: Dokaset ratchet 3/4", width-across 36

Spraying the conical part of the Dokaset tension tie with concrete release agent will make it easier to detach it from the concrete.

➤ Take out and "park" the form-ties.

Parking the Dokaset tension tie

To facilitate transport and handling, the Dokaset tension tie can be "parked" in the bottom stacking shoe. The form-tie is then available for immediate reuse at the next usage location.



S Bottom stacking shoe

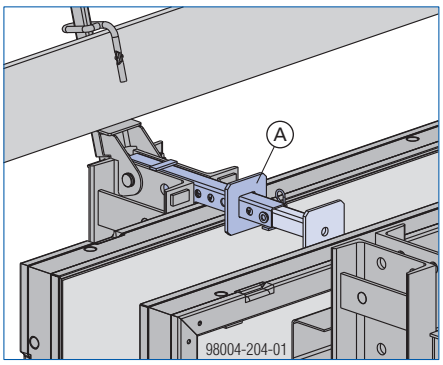
Tying across the top of the Dokaset panel

On a **formwork height of 277 cm**, the **Dokaset head anchor 12-36cm** is used as a pressure anchor. It is placed across the top of the panel.

- for wall thicknessess from 12 to 36 cm
- firmly holds the two sides of the formwork the required distance apart

Possible mounting positions:

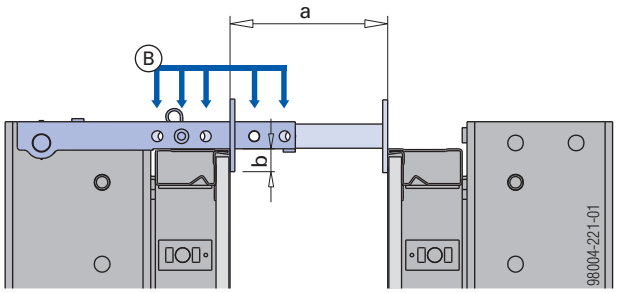
- On the opposing formwork – bolted in place on every U240 waling together with the Dokaset railing holder.
- On the platform side - bolted in place in every U240 waling.



How to use the Dokaset head anchor 12-36cm:

➤ Bolt the Dokaset head anchor into the Dokaset waling.

➤ Telescope the Dokaset head anchor to the desired length "a" (= wall thickness) and fix it in the relevant hole with a bolt and spring cotter.

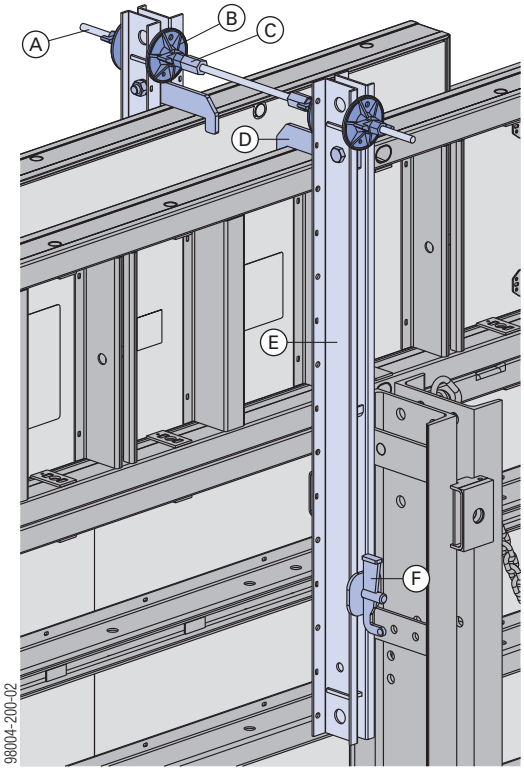


a ... 12 cm to 36 cm (in 1 cm increments)
b ... 3.5 cm

A	Dokaset head anchor 12-36cm
B	Possible fixing positions

Tension/pressure tie across top of formwork

For **formwork heights of 307, 322 and 337 cm**, the form-tie at the top of the formwork must be a **tension and pressure tie**.

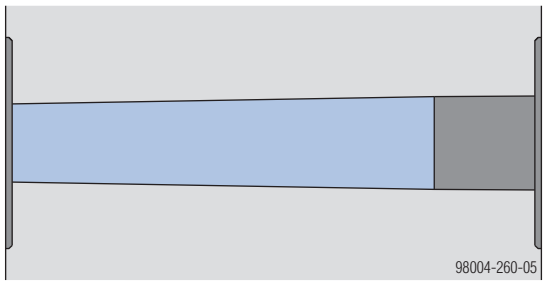


A	Tie-rod 15.0mm
B	Super-plate 15.0
C	Hexagon nut 15.0
D	Dokaset universal waling holder
E	Framax universal waling 1.50m
F	Framax wedge clamp

Closing off the form-tie point

Dokaset closure cone 20cm

- fire-resistant
- sound-insulating



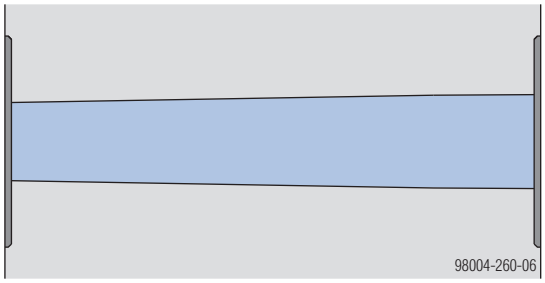
➤ As soon as the formwork has been removed, press a Dokaset closure cone into the opening.
The residual moisture in the concrete makes the cone sit firmly in place, so it is not necessary to glue it in.

➤ On walls that are less than 20 cm thick, simply knock off the projecting part of the cone with a hammer.

➤ On walls that are more than 20 cm thick, fill in the rest of the form-tie point with mortar mixture.

Dokaset fibre-concrete cone 30cm

- fire-resistant
- sound-insulating



We recommend the following materials for gluing in the plugs:

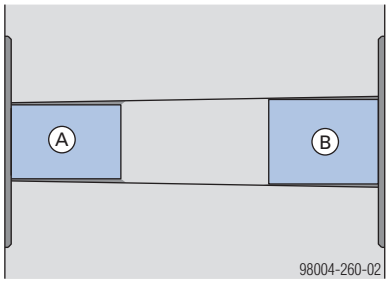
- Commercially available **cement mortar**, e.g. repair and renovation mortar, watertight exterior grouting compound etc.
  Pay attention to the colour of the concrete here!
- Tile bonding cement (is mostly dark) in cases where the colour of the concrete is unimportant

➤ Cut the Dokaset fibre-concrete cone 30cm to the length needed for the thickness of the wall.

➤ Evenly distribute the mortar mixture in the conical opening and then slowly press the fibre-concrete cone into the opening while gently turning it. (Using a piece of wood makes it easier to fit the plug on the right plane).

Fibre concrete plugs

- fire-resistant
- sound-insulating



A Fibre concrete plug 35mm
B Fibre concrete plug 40mm

➤ Evenly distribute the mortar mixture in the conical opening and then slowly press the fibre-concrete plug into the opening while gently turning it. (Using a piece of wood makes it easier to fit the plug on the right plane).

➤ Fit a fibre concrete plug into the opposite side of the wall.

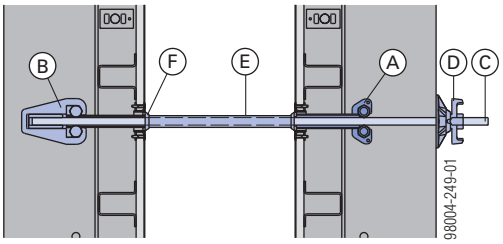
Tie rod system 20.0

- for wall thicknesses of over 30 cm
- can be operated on one or both sides

Tie rod 20.0mm:
Permitted capacity, allowing a 1.6 : 1 factor of safety against failure: 220 kN
Permitted capacity to DIN 18216: 150 kN

WARNING
Sensitive rod steel!
➤ Never weld or heat tie rods.
➤ Tie rods that are damaged or have been weakened by corrosion or wear must be withdrawn from use.

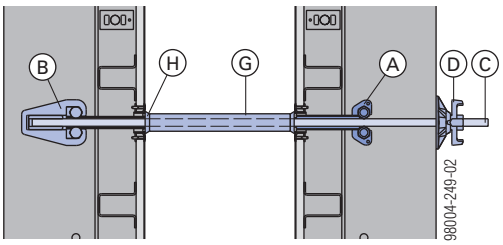
The **Dokaset tie-hole reducer 20.0** makes it possible to use the Tie rod system 20.0.



A	Dokaset tie-hole reducer 20.0
B	Tying-component of the opposing formwork
C	Tie rod 20.0mm
D	Super plate 20.0 B
E	Plastic tube 26mm
F	Universal cone 26mm

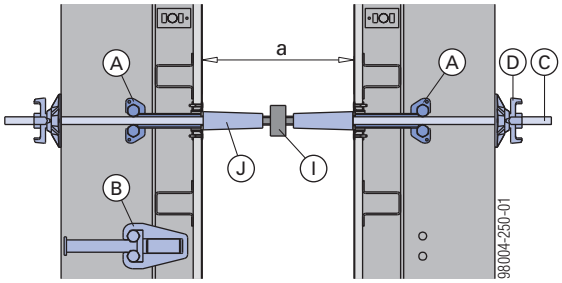
NOTICE
The Plastic tubes 26mm are left in the concrete and are sealed off with **Plugs 26mm**.

Watertight form-tie points using a fibre-concrete tube



A	Dokaset tie-hole reducer 20.0
B	Tying-component of the opposing formwork
C	Tie-rod 20.0mm
D	Super-plate 20.0 B
G	Fibre-concrete tube d27 ("Frank" product name)
H	Cone d27 ("Frank" product name)

Watertight form-tie points using a water-stop

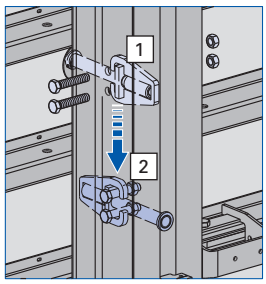


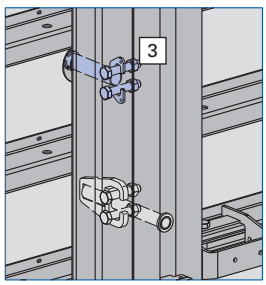
a ... Wall thickness min. 40 cm

A	Dokaset tie-hole reducer 20.0
B	Tying-component of opposing formwork in stand-by position
C	Tie-rod 20.0mm
D	Super-plate 20.0 B
I	Water stop 20.0
J	Anchoring cone 20.0 + Sealing sleeve 20.0

To make it possible to operate the form-tie from both sides, the integral tying component must be replaced with the Dokaset tie-hole reducer 20.0.

1) Undo the screws on the integral tying component.
2) Fasten the integral tying component in the bottom holes on the Dokaset waling (stand-by position).
3) Bolt the Dokaset tie-hole reducer 20.0 to the Dokaset waling.

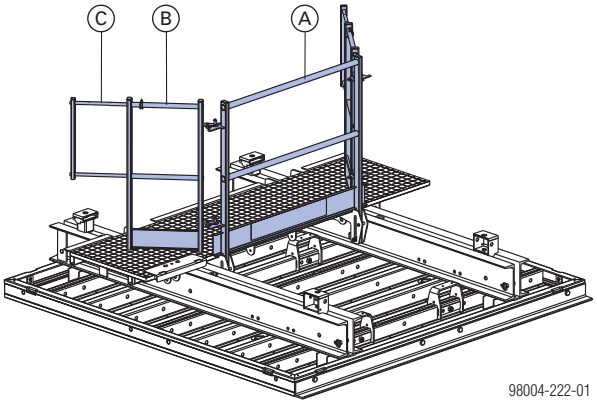




Platform system

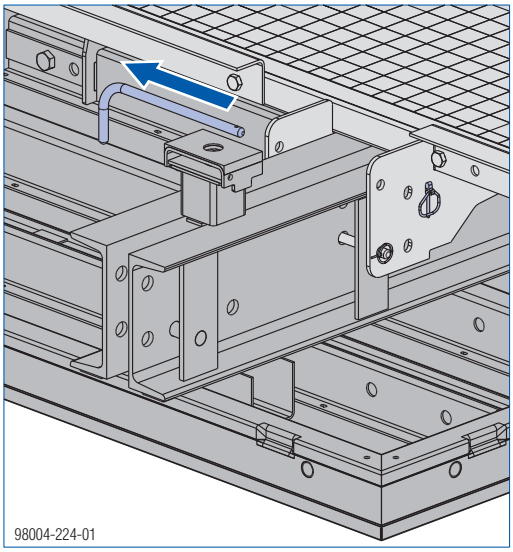
Unfolding the platform

➤ Tilt up the **rear railings** by 90°.
They lock into place automatically.
➤ Pivot both **side railings** into the desired position, as required by the usage situation.
Locking is in 45° steps.

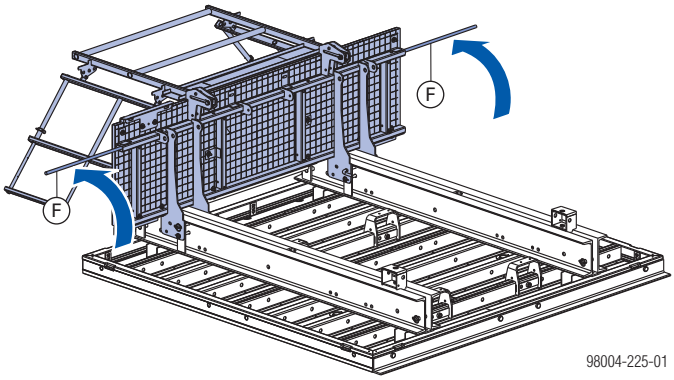


A Rear railing
B Side railing
C Handrail extension

➤ Take out the **two top platform bolts**.



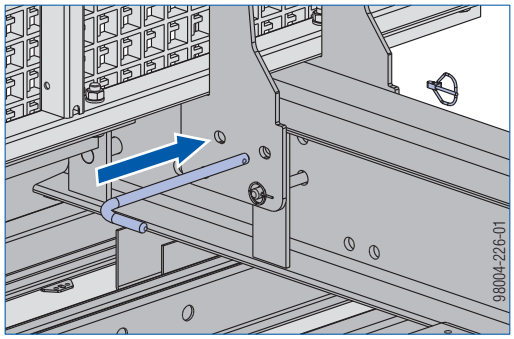
➤ **Tilt up** the **platform** by 90°.



F Round steel bar

To make it easier to tilt up the platform:
Insert a round steel bar into the shaped tube of the platform. In this way, 2 men can easily tilt up the entire platform without any great physical effort.

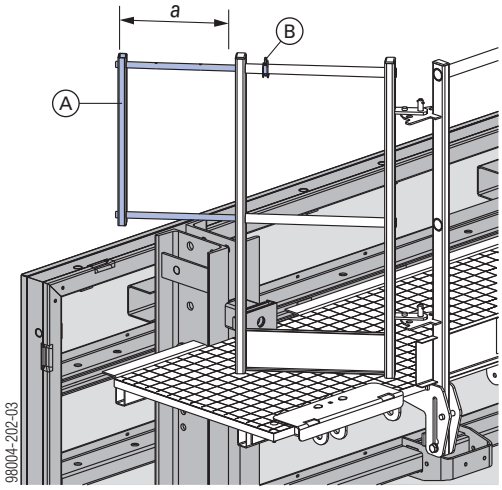
➤ Fix the platform again with **both platform bolts**, and secure these with linch pins.



➤ When raising a 2.70x2.70m panel, it is OK to pass the 2-part chain across the sturdy rear railings.

Extending the end-of-platform sideguards

The end-of-platform sideguards can be extended with the built-in **handrail lengthening piece**.

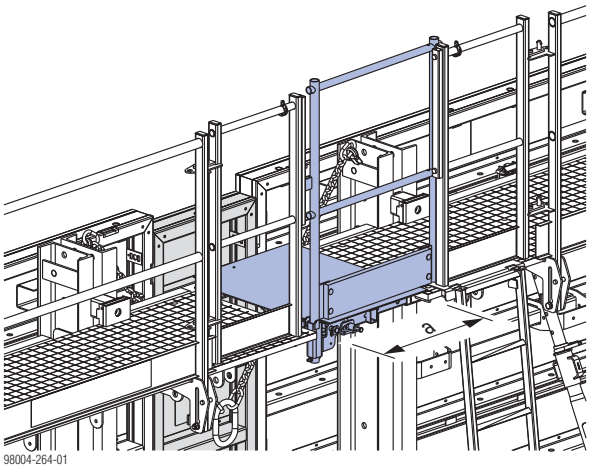


a ... can be telescoped to 14 or 32 cm

A Integral handrail lengthening piece
B Linch pin

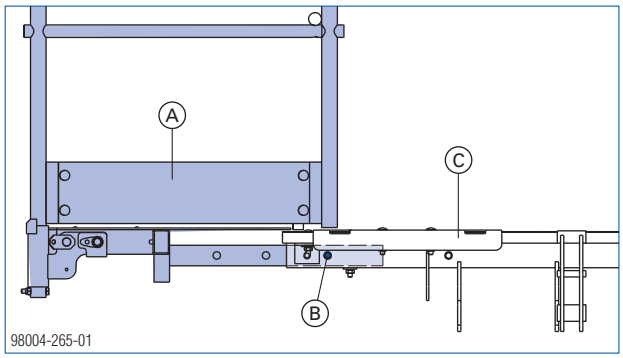
Extending the platform to either side

The platform can be lengthened by up to 0.55 m on either side using the **Xsafe platform extension 0.55m**.



a ... can be telescoped to 40 or 55 cm

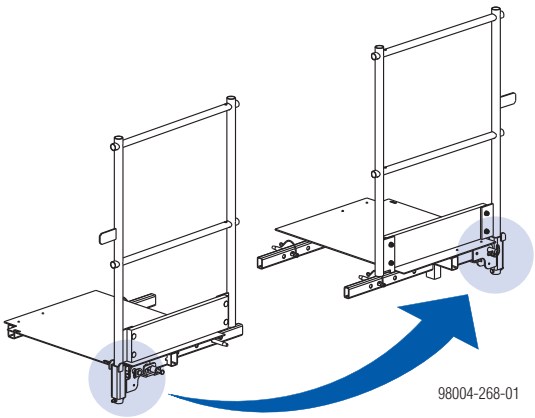
How to attach the platform extension:



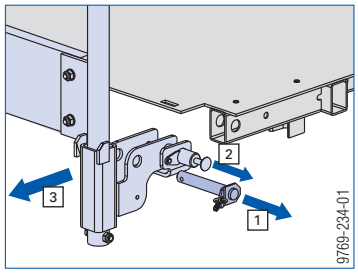
A	Xsafe platform extension 0.55m
B	Spring-locked connecting pin
C	Platform

Adapting the platform extension for use on left or right

The swivel unit has to be modified depending on whether the platform extension is to be mounted to the right-hand or left-hand side of the platform.



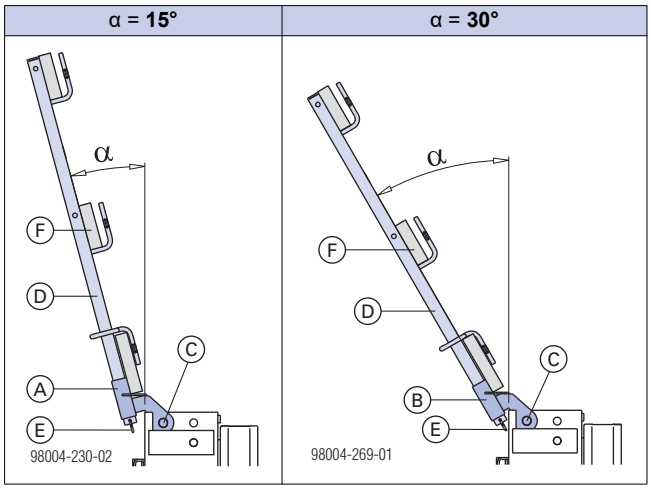
1) Take out the fastening bolt.
2) Pull out the locking mechanism.
3) Pull out the whole swivel unit (incl. railing).



The swivel unit can now be mounted on the other side, in reverse order.

Opposing guard-rail

Dokaset railing holders and **Handrail posts 1.00m** are used for setting up safe opposing guard-rails.



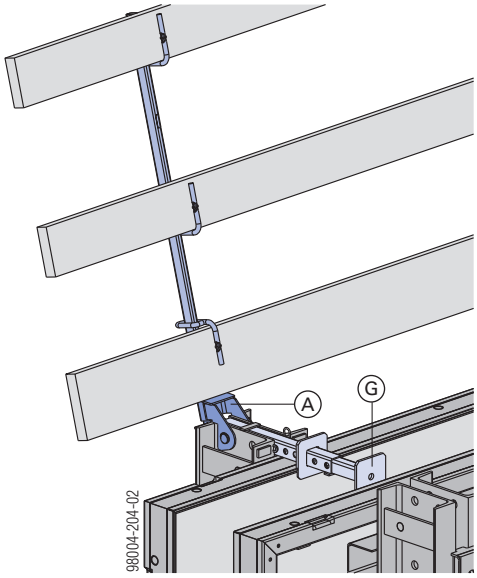
A Dokaset railing holder 15 degrees
B Dokaset railing holder 30 degrees
C Bolt d25/110
D Handrail post 1.00m
E Spring cotter 5mm
F Guard-rail board (must be fixed)

Note:
When choosing which Dokaset railing holder to use, you must comply with national safety regulations regarding the maximum angle allowed for the railings.

There are two possible mounting situations for the Dokaset railing holder, depending on the mounting position of the Dokaset head anchor.

Variant 1 - Head anchor on the opposing formwork

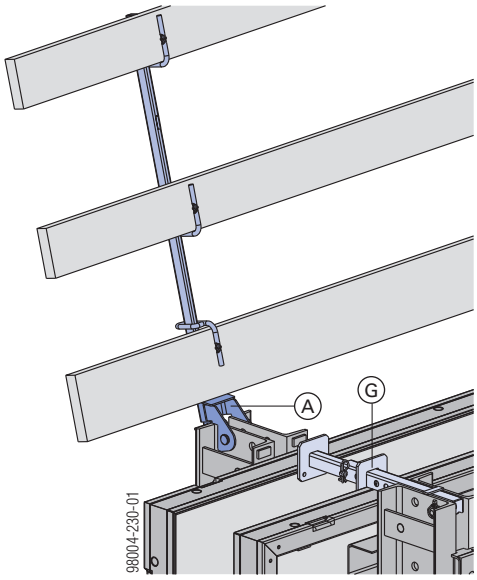
➤ Jointly bolt the Dokaset railing holder and head anchor into the hole in the waling, and secure the bolts.



A Dokaset railing holder
G Dokaset head anchor 12-36cm

Variant 2 - Head anchor on the platform side

➤ Bolt the Dokaset railing holder directly into the hole in the waling, and secure the bolts.

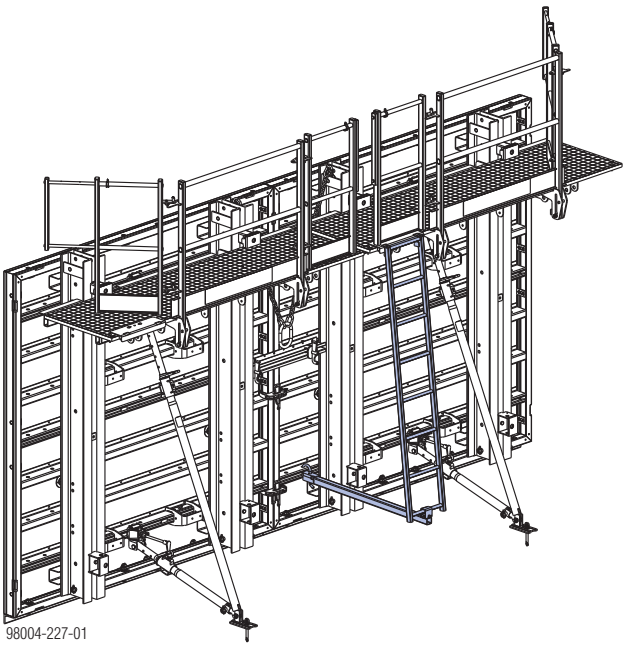


A Dokaset railing holder
G Dokaset head anchor 12-36cm

Ladder system

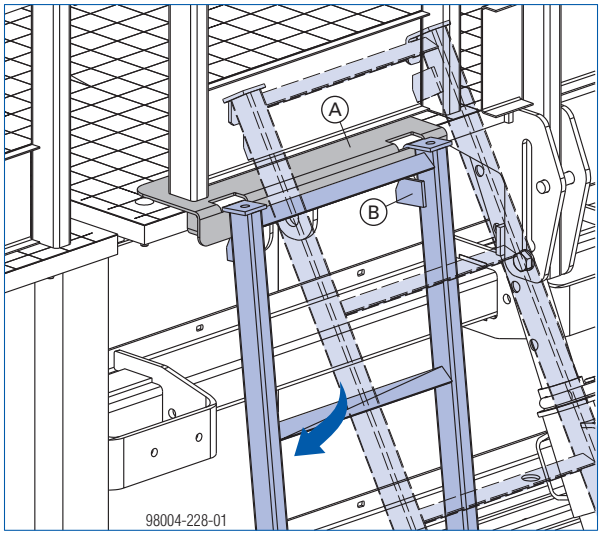
Ladders can be attached to all Dokaset panels with platforms.

As a rule, every gang-form is provided with one ladder.



Mounting the ladders

➤ Hook a Dokaset ladder 2.70m into the ladder holder on the platform.



A Ladder holder

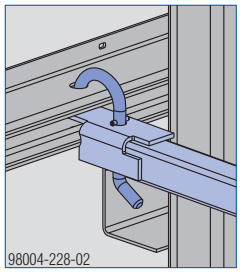
B Locking plate

The locking plate prevents the ladder being accidentally unhooked.

The ladder can be fixed on either the left-hand or right-hand side of the platform.

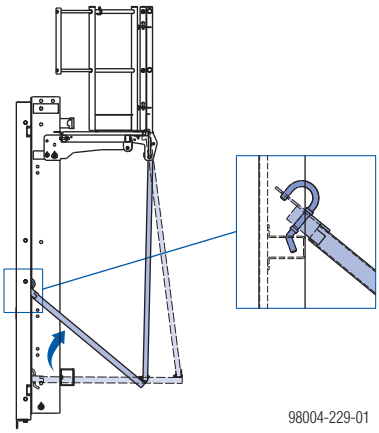
➤ Remount the ladder holder to the side that you want to fix the ladder to.

➤ Fasten the ladder-fixing brace to the panel with a fastening clamp.



To protect the ladder when the gang-form is lifted:

➤ Fasten the ladder-fixing brace to a higher position on the panel – this pulls the ladder inwards.



Gang-forms

For lifting and resetting, it is usual to assemble larger units (gangs) from Dokaset panels.
Max. width of the gang-forms: 5.40 m

Equipment needed for one 5.40 m wide gang-form with a platform:

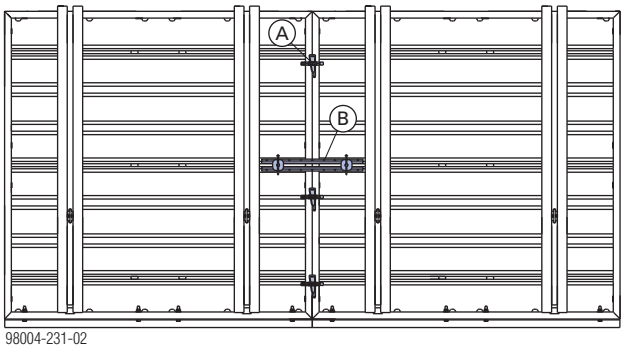
Designation	N° of items
Dokaset panel 2.70x2.70m with platform	2
Dokaset ladder 2.70m	1
Panel strut 340	2
Framax quick-acting clamp RU	3
Framax universal waling 0.90m	1
Framax wedge clamp	2
Dokaset 2-part chain 1.50m	1
Total weight: 2240 kg	

Equipment needed for one 5.40 m wide gang-form with no platform:

Designation	N° of items
Dokaset panel 2.70x2.70m	2
Panel strut 340	2
Framax quick-acting clamp RU	3
Framax universal waling 0.90m	1
Framax wedge clamp	2
Dokaset 2-part chain 1.50m	1
Dokaset railing holder	4
Handrail post 1.00m	4
Dokaset head anchor 12-36cm	4
Guard-rail boards (site-provided)	3
Total weight: 1800 kg	

Joining the panels to make gang-forms

The connector components are mounted to the panels when these are still face-down on the assembly bench.



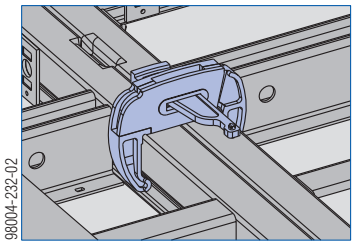
98004-231-02

A Framax quick-acting clamp RU
B Framax universal waling 0.90m with Framax wedge clamps

NOTICE
Do not oil or grease wedge-clamped joints.

Framax quick-acting clamp RU

The Framax quick acting clamp RU provides a self-aligning, tension-proof link.


98004-232-02

Framax quick acting clamp RU:
Permitted tensile force: 15.0 kN
Permitted shear force: 6.0 kN
Permitted moment: 0.5 kNm

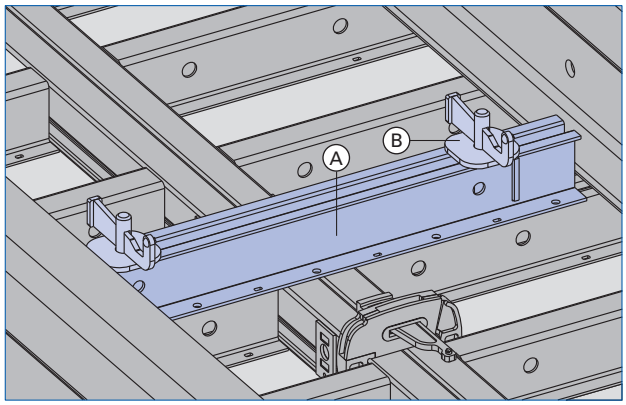
Assembly:

➤ Place the Quick acting clamp RU over the panel joint apply and fix tightly by hitting the wedge with a hammer (formwork hammer max. 800 g).
The panel joint is now tight.

See the section headed 'Vertical stacking' for instructions on where to position the Framax quick acting clamps RU.

Framax universal waling

To provide additional stiffening of large gangs, a **Framax universal waling 0.90m** should be attached roughly half-way up the gang.



98004-232-01

A Framax universal waling 0.90m
B Framax wedge clamp

Joining the gang-form to adjoining gangs

Use 3 Quick-acting clamps RU per 2.77m of panel height to join the gangs.

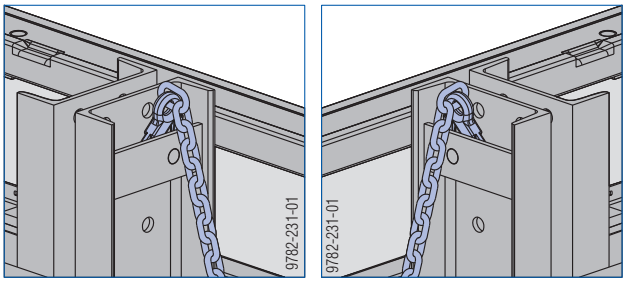
Lifting chain

Every gang-form is equipped with a Dokaset 2-part chain 1.50m. This stays attached to the gang throughout the forming assignment.

The advantage of this is much greater safety:

- The operators can attach the gangs to the crane while working from ground level.

Close-up showing how/where the chain is attached to the waling:



Note:

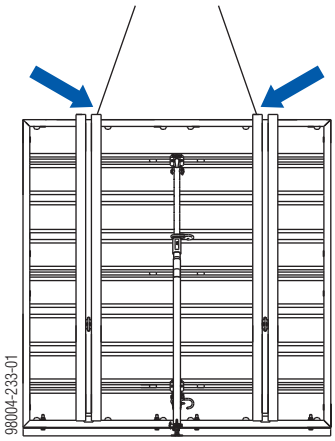
The chain can be attached to either side of the U 240 waling.

Max. load:

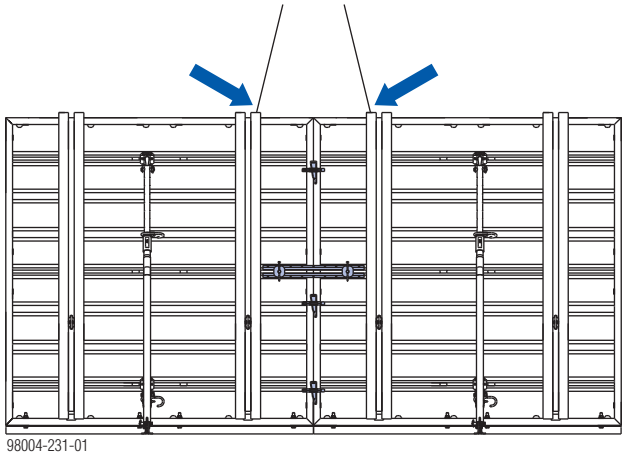
2000 kg on each bolt of the Dokaset waling

➤ Use the right slinging points! (Always attach the 2-part chain to the inside bolts of the unit to be lifted)

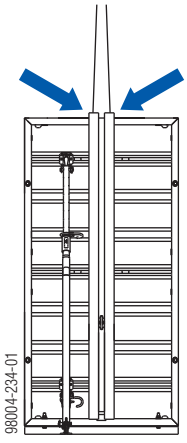
Single 2.70 m panel:



5.40 m gang (2 x 2.70 m):



1.35 m panel:



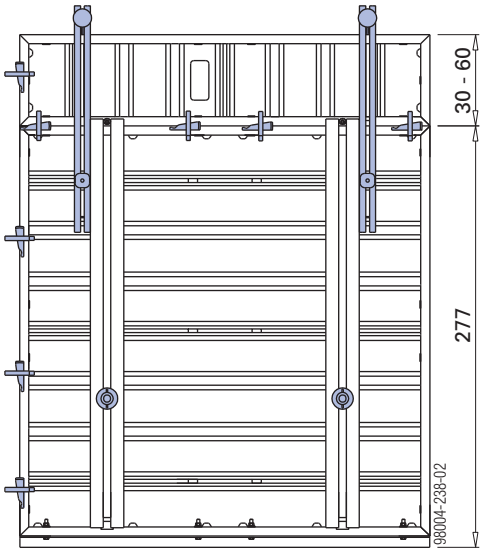
Vertical stacking of panels

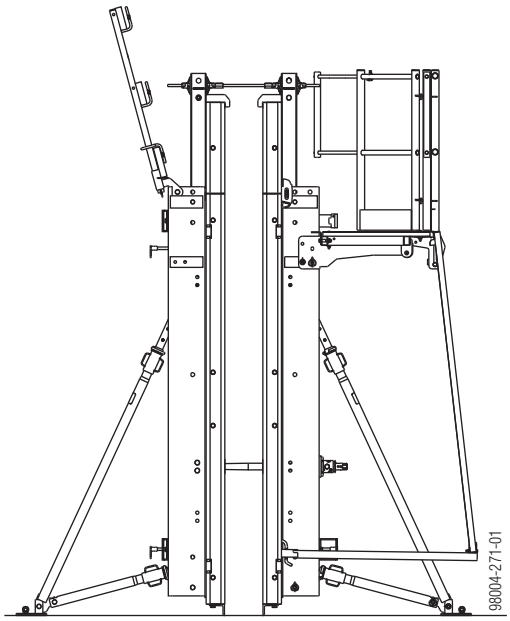
The following information is given for each of the gang-forms mentioned below:

- position of the panel connectors
- position of the form-ties

Panel width 2.70 m

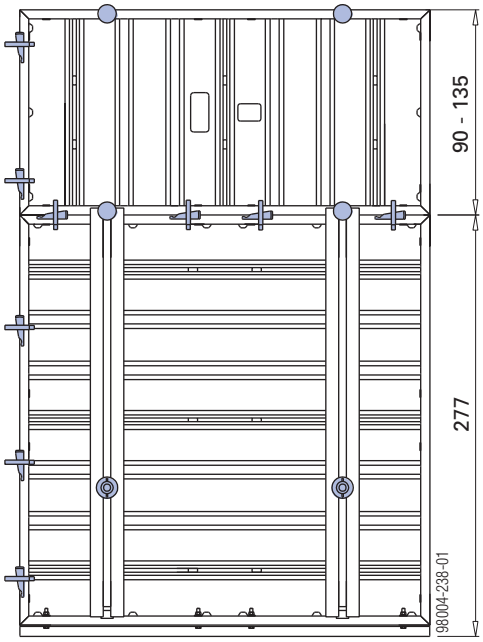
Formwork height: **307 cm, 322 cm, 337 cm**

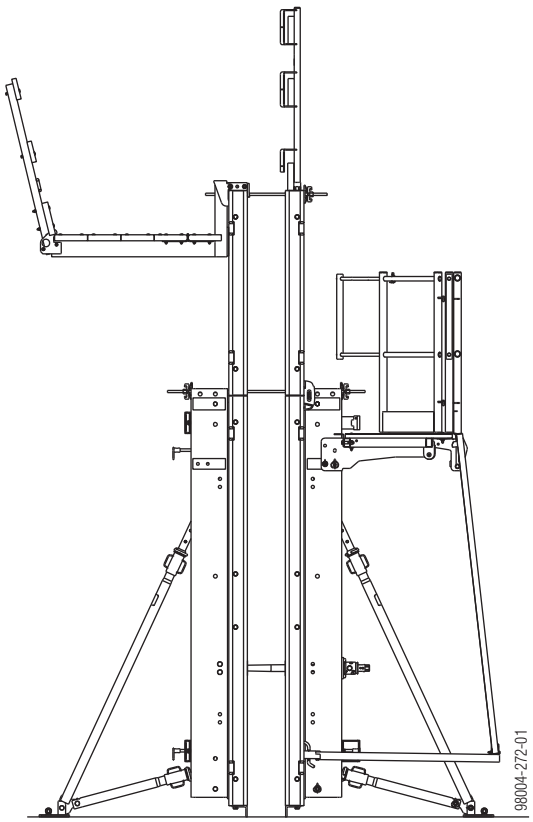




The form-ties across the top of the formwork are tension/pressure ties.

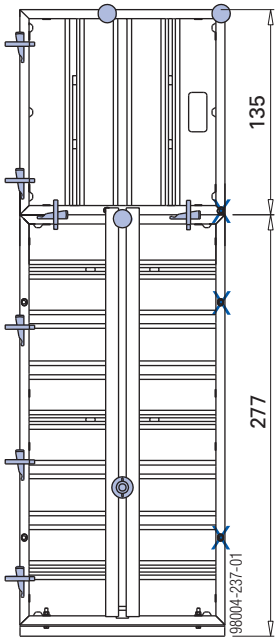
Formwork height: **367 to 412 cm**





Panel width 1.35 m

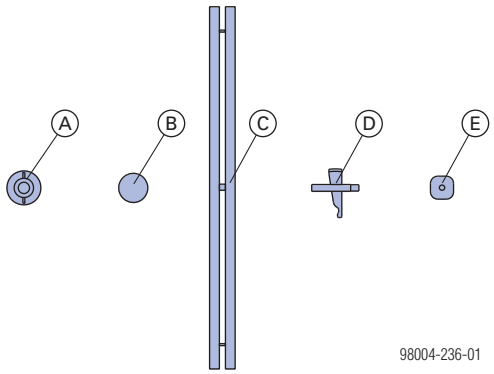
Example with a formwork height of: **412 cm**



X ... When this configuration is used at the end of a gang-form (e.g. for stop-ends, wall junctions, etc.) extra form ties must be fitted in the frame profile here.

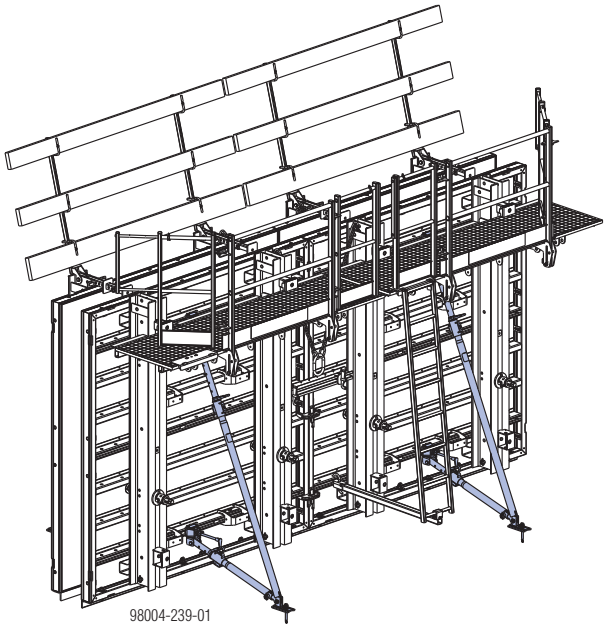
NOTICE

As a rule, do not locate 1.35 m wide panels next to one another, as this would necessitate an extra form tie.



A	Dokaset tension tie 10-30cm
B	Tie-rod 15.0mm + Super-plate 15.0
C	Framax universal waling 1.50m
D	Framax quick-acting clamp RU
E	Framax wedge clamp

Plumbing accessories



Panel struts brace the formwork against wind loads and make it easier to plumb and align.

NOTICE

Formwork panels must be held stable **in every phase** of construction work!

Observe all applicable safety regulations!

For more information (wind loads etc.) see the section headed 'Vertical and horizontal loads' in the Calculation Guide 'Doka formwork engineering'.

Number of struts per 5.40 m width of gang-form:

Formwork height [m]	Panel strut 340
up to 4.12	2
Max. anchoring load: F_k = **13.5 kN** (R_d = **20.3 kN**)	

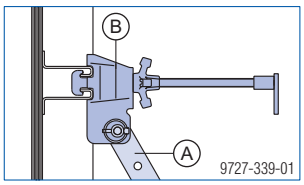
The values apply where the wind pressure w_e = 0.65 kN/m². This results in an impact pressure q_p = 0.5 kN/m² (102 km/h) where $c_{p,\,net}$ = 1.3. The greater wind loads encountered at exposed formwork-ends must be restrained by additional plumbing accessories (e.g. struts or pipe-braces). In cases where higher wind pressure is encountered, the number of struts must be determined by statical calculation!

For more information, see the Calculation Guide 'Wind loads to the Eurocodes', or consult your Doka technician!

Note:

Every gang-form must be supported by **at least 2 plumbing accessories**.

Connection in the waling profile



A Panel strut 340 IB

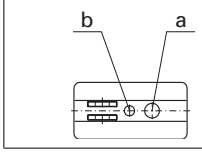
B Prop head EB

Animation: https://player.vimeo.com/video/268536814

Fixing to the ground

➤ Anchor the plumbing accessories in such a way as to resist tensile and compressive forces!

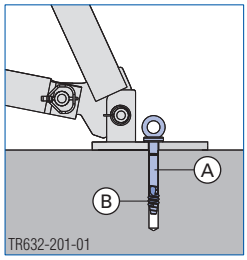
Drilled holes in footplate

Panel strut 340


a ... diam. 26 mm
b ... diam. 18 mm

Anchoring the footplate

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



A Doka express anchor 16x125mm

B Doka coil 16mm

Characteristic cube compressive strength of the concrete ($f_{ck,cube}$):
min. 15 N/mm² (C12/15 grade concrete)

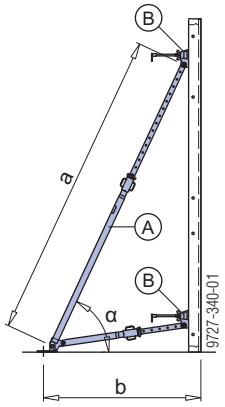
Follow the Fitting Instructions!

Required safe working load of alternative anchors for foot-plates:
$R_d \geq 20.3$ kN ($F_{permissible} \geq 13.5$ kN)
Follow the manufacturers' applicable fitting instructions.

Panel strut 340

Product features:

- can be extended in 8 cm increments
- Fine adjustment by screw-thread
- All parts are captive, including the telescopic tube which has a safety stop to prevent dropout



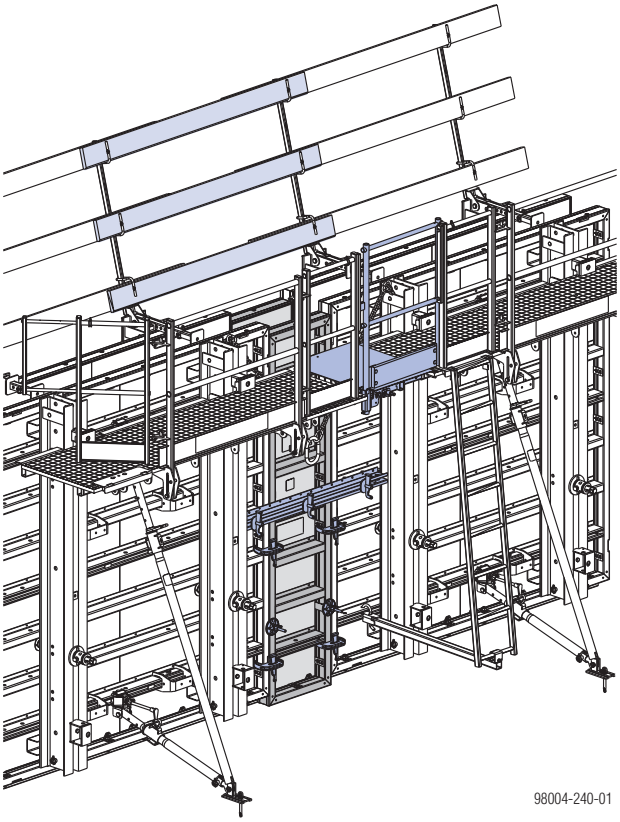
a ... 190.8 - 341.8 cm
b ... 115.8 - 165.5 cm
α ... approx. 60°

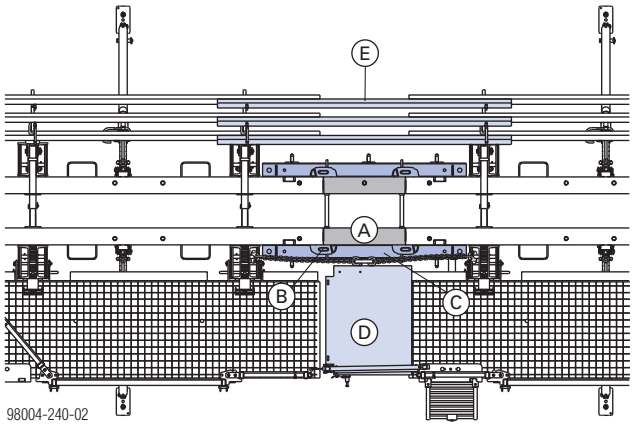
A Panel strut 340 IB
B Prop head EB

Length adjustment using closures

with Framax Xlife panel

Example: Symmetrical gang-form, 6.00 m wide
Distribution of panels: 2.70 - 0.60 - 2.70 m



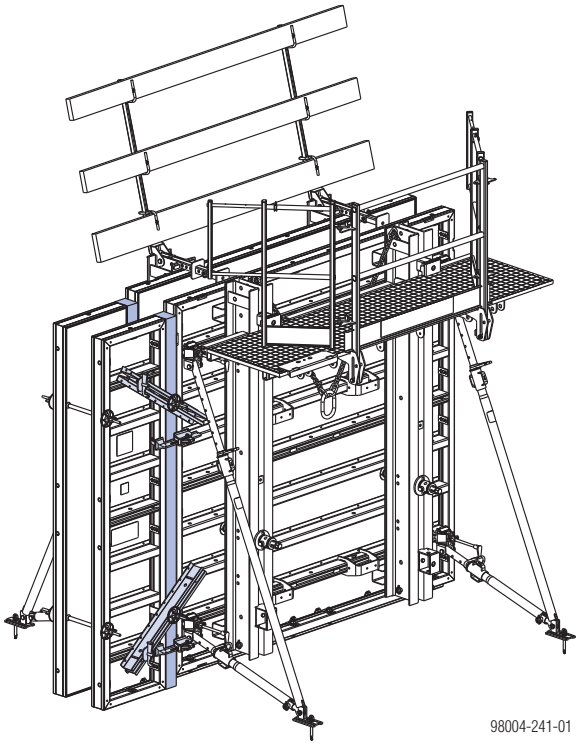


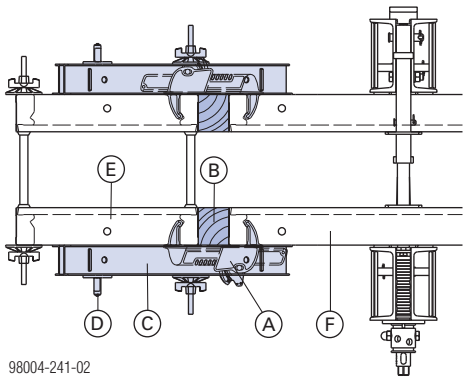
A	Framax Xlife panel 0.60m
B	Framax quick-acting clamp RU
C	Framax universal waling 1.50m + Framax wedge clamps
D	Xsafe platform extension 0.55m
E	Guard-rail boards

with fitting timber and Framax multi function clamp

Combining Dokaset with Framax Xlife makes various different closure options possible.

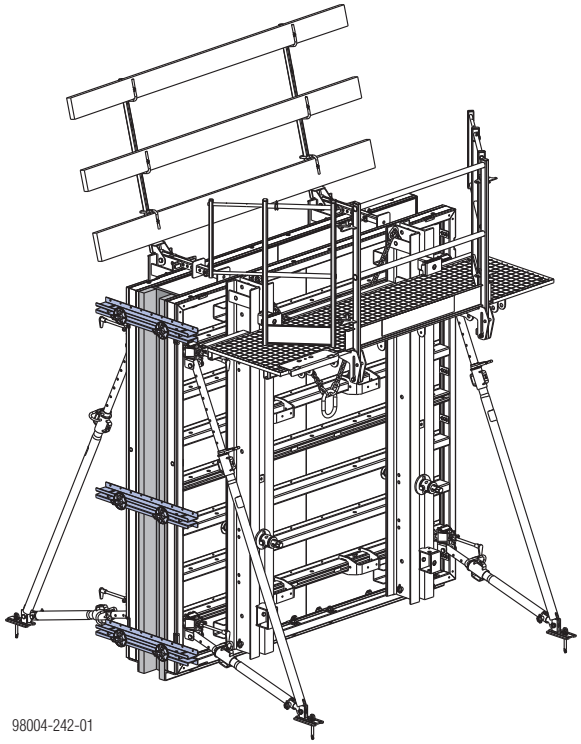
Example:
Closure with fitting-timber and Framax universal waling – up to 15 cm





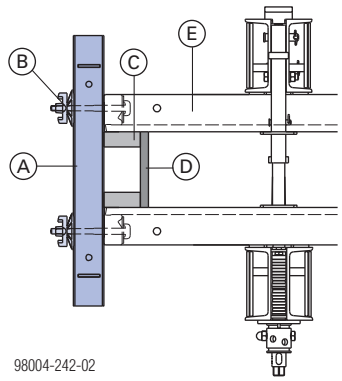
A	Framax multi-function clamp
B	Framax fitting-timber
C	Framax universal waling
D	Framax wedge clamp
E	Framax Xlife panel (max. width 60 cm)
F	Dokaset panel

Stop-end formwork



98004-242-01

The universal walings are mounted using universal fixing bolts and Super plates 15.0 fixed through the cross boreholes in the panels.



98004-242-02

A	Framax universal waling
B	Framax universal fixing bolt + Super plate 15.0
C	Squared timber
D	Formwork sheet
E	Dokaset panel

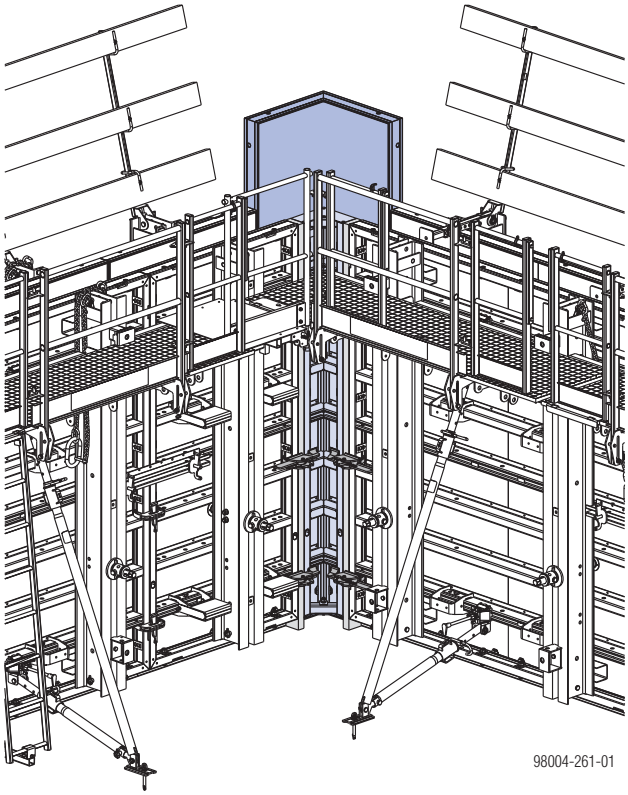
Framax universal waling:
Permitted moment: 5.2 kNm

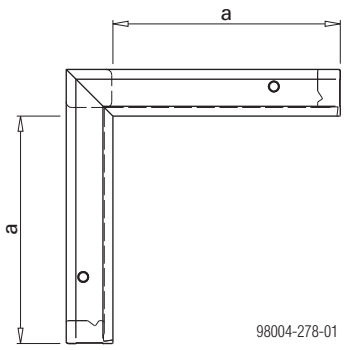
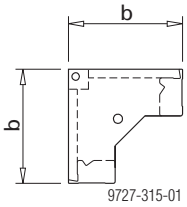
Framax universal fixing bolt:
Permitted tensile force in the cross borehole of the Dokaset panel: 25.0 kN

90 degree corners

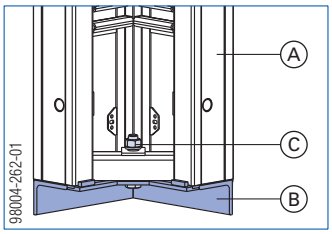
with Dokaset outside corner 3.30m

Up to a wall thickness of 30 cm, no form-ties are needed in corners where the Dokaset outside corner 3.30m is used.



Dokaset outside corner 3.30m	Framax Xlife inside corner
 a ... 60 cm	 b ... 30 cm

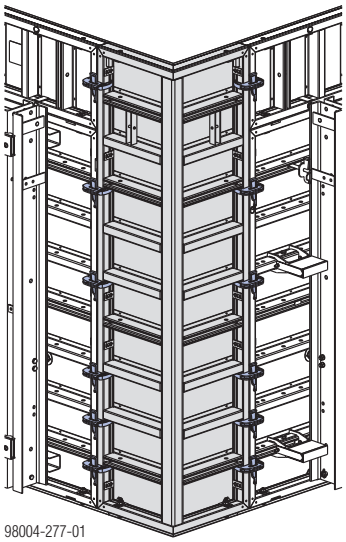
Close-up of "Dokaset bottom angle for inside corner":



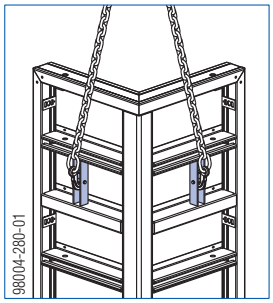
A	Framax Xlife inside corner
B	Dokaset bottom angle for inside corner
C	Hexagon screw M20 (width-across: 30 mm)

N° of clamps needed on Dokaset outside corner:

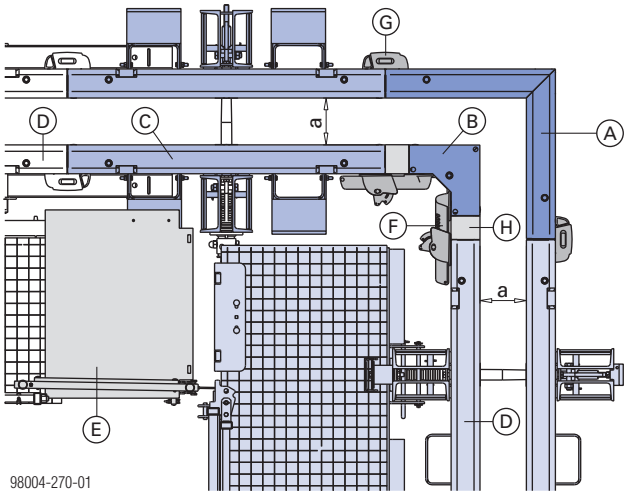
Pour-height	N° of Framax quick-acting clamps RU or Framax multi-function clamps
2.70 m	10
3.30 m	12



➤ When lifting and resetting the **Dokaset outside corner** (with the Dokaset 2-part chain 1.50m), use the **integrated slinging points**.

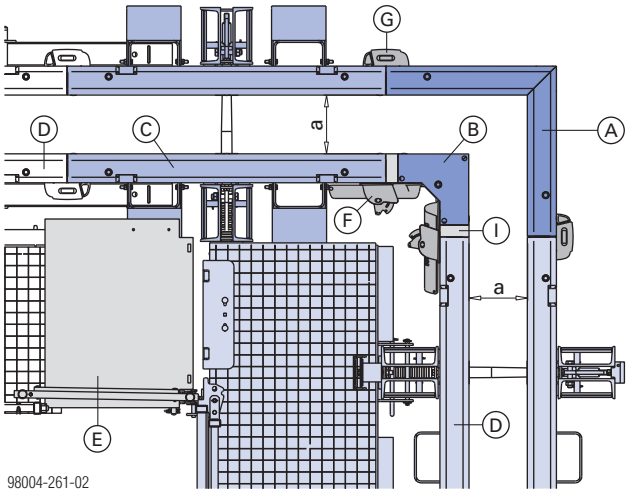


Example with a wall thickness of 20 cm



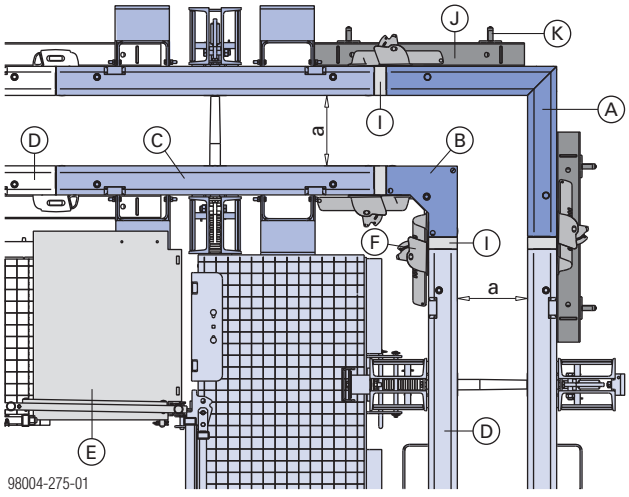
a ... 20 cm

Example with a wall thickness of 25 cm



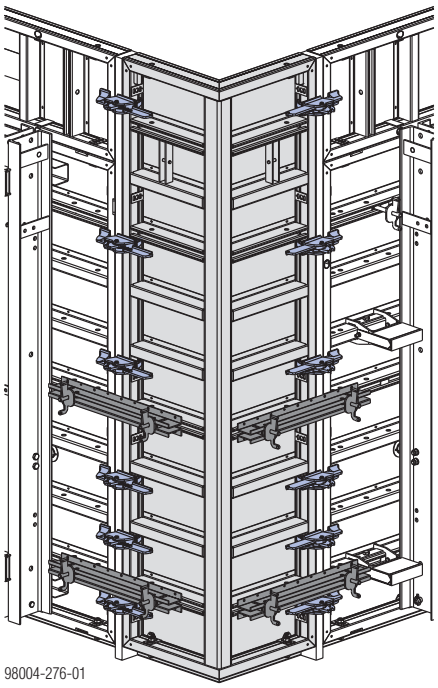
a ... 25 cm

Example with a wall thickness of 30 cm



a ... 30 cm

Dokaset outside corner: Number and position of universal walings or clamps

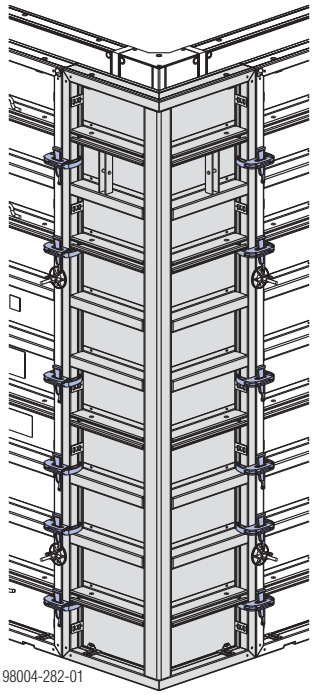


A	Dokaset outside corner 3.30m
B	Framax Xlife inside corner
C	Dokaset panel 1.35x2.70m
D	Dokaset panel 2.70x2.70m with platform
E	Xsafe platform extension 0.55m
F	Framax multi-function clamp
G	Framax quick-acting clamp RU
H	Framax fitting-timber 10cm
I	Framax fitting-timber 5cm
J	Framax universal waling 0.90m
K	Framax wedge clamp

Dokaset outside corner in conjunction with Framax Xlife

The Dokaset outside corner 3.30m can also be used on **Doka framed formwork Framax Xlife**.

Follow the directions in the "Framed formwork Framax Xlife" User Information booklet!



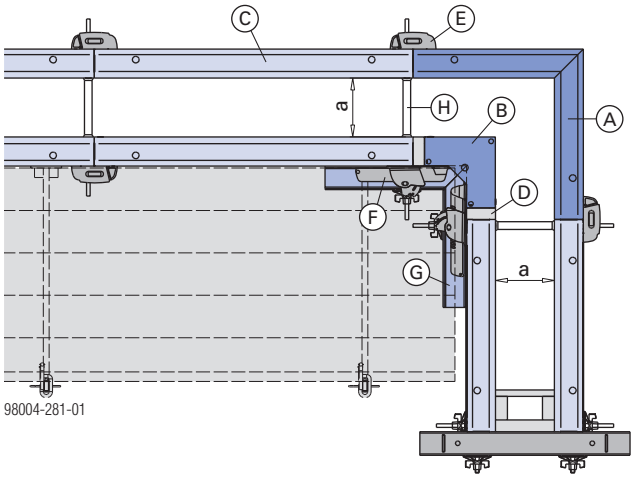
Preparations for combining the Dokaset outside corner with Framax Xlife:

➤ Remove the bottom angle from the Dokaset outside corner.
Spanner size (width-across): 30 mm

Temporarily fix the bottom angle to another position on the outside corner.

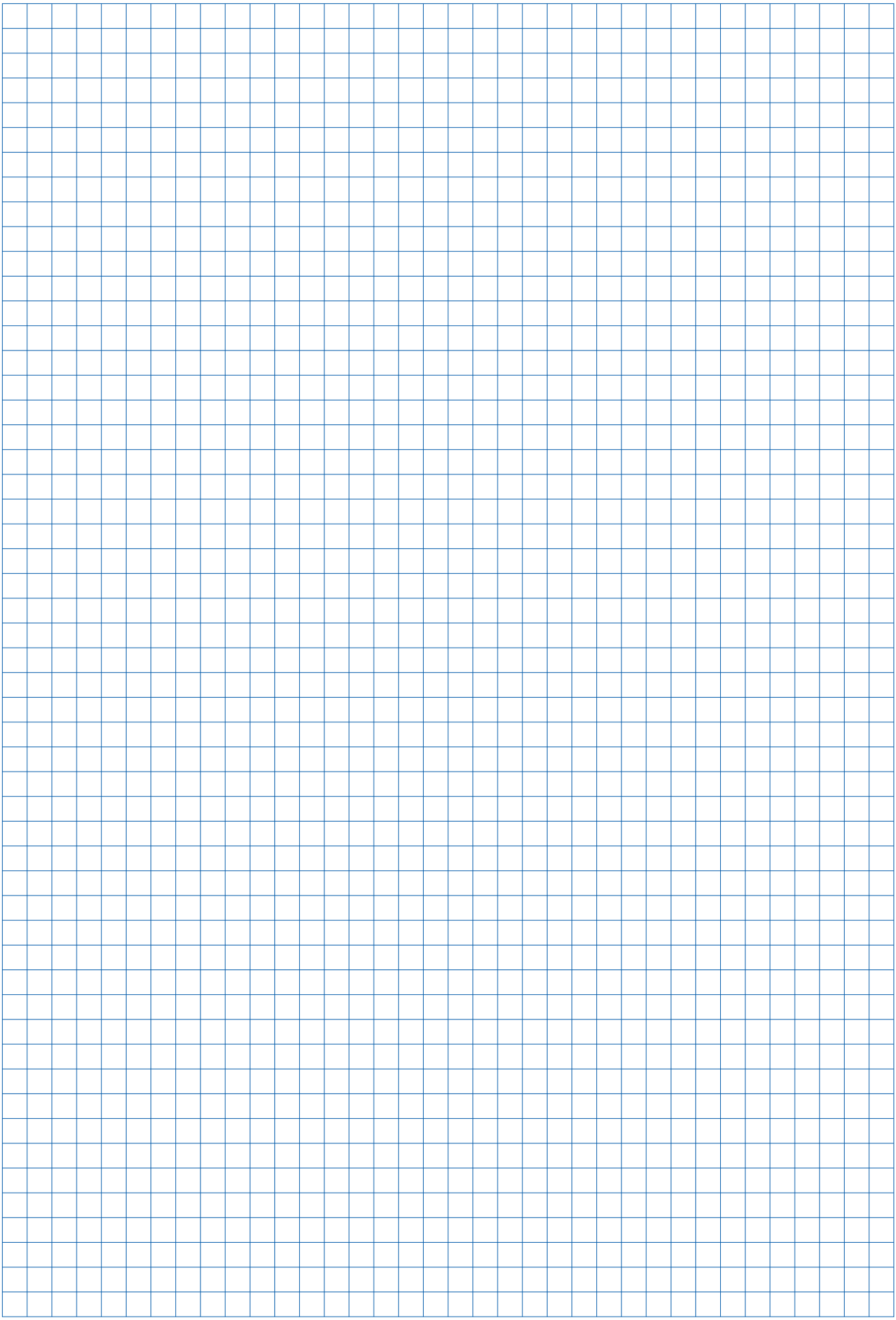
➤ The bottom angle can be fastened onto the top frame profile.

Example with a wall thickness of 25 cm



a ... 25 cm

A	Dokaset outside corner 3.30m
B	Framax Xlife inside corner
C	Framax Xlife panel
D	Framax fitting-timber 5cm
E	Framax quick-acting clamp RU
F	Framax multi-function clamp
G	Framax universal corner waling
H	Doka form-tie system



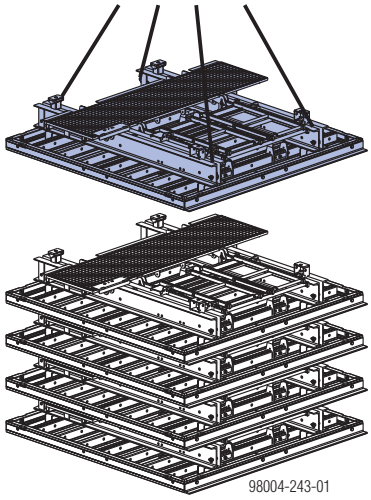
General

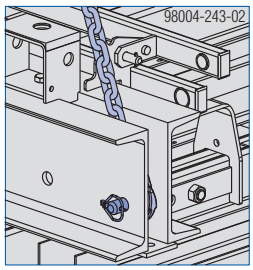
Transporting, stacking and storing

Transporting the panels

Doka 4-part chain 3.20m

The Doka 4-part chain 3.20m is used for separating the Dokaset panels.
Its centre-of-gravity position can be adjusted by shortening the individual lengths of chain.





➤ Attach the Doka 4-part chain 3.20m to the bolts in the Dokaset walings.

The bolts must be secured by linch pins.

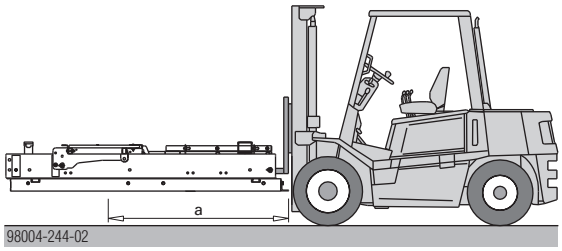
Max. load P_{max}:

	Spread-angle β			
	0°	0°-30°	30°-45°	45°-60°
Using 1 chain	1400 kg	-	-	-
Using 2 chains	-	2400 kg	2000 kg	1400 kg
Using all 4 chains	-	3600 kg	3000 kg	2120 kg

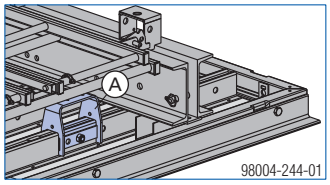
Follow the directions in the Operating Instructions!

Forklift truck

The integrated stacker brackets on the Dokaset panels allow them to be handled by forklift truck.



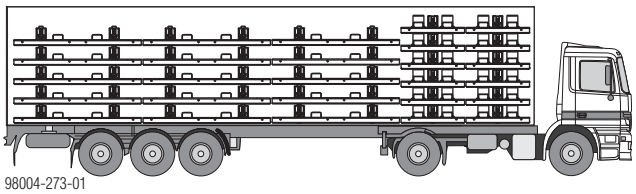
a ... required fork length: 180 cm



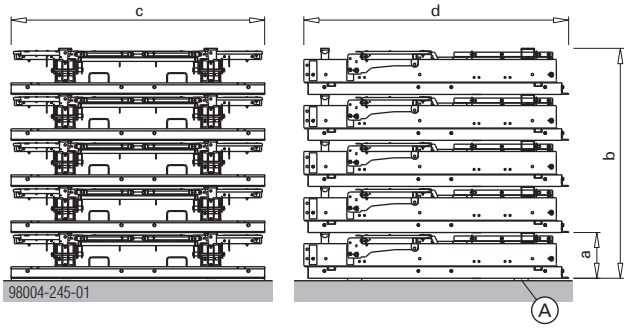
A Stacker bracket

➤ The stacker brackets are designed to handle max. 2 panels at a time.

Note:
Load the truck in such a way that it can be unloaded using a forklift truck (stacker brackets).



Stacking the panels

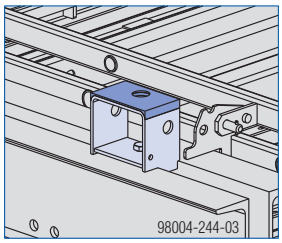


A Sleeper, e.g. 3x15cm

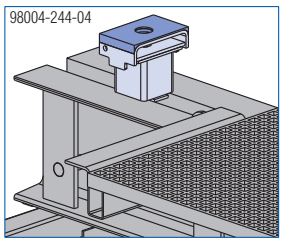
	a [cm]	b [cm]	c [cm]	d [cm]	Number of panels
2.70x2.70m panel with platform	49	245	270	282	5
2.70x2.70m panel	41	247	270	282	6
1.35x2.70m panel with platform	49	245	135	282	5
1.35x2.70m panel	38	228	135	282	6

Stacking shoes are captively integrated in the Dokaset panels. These stacking shoes have protective covers so that the Xlife sheet does not get damaged when the panels are stacked.

Bottom stacking shoe:



Top stacking shoe:



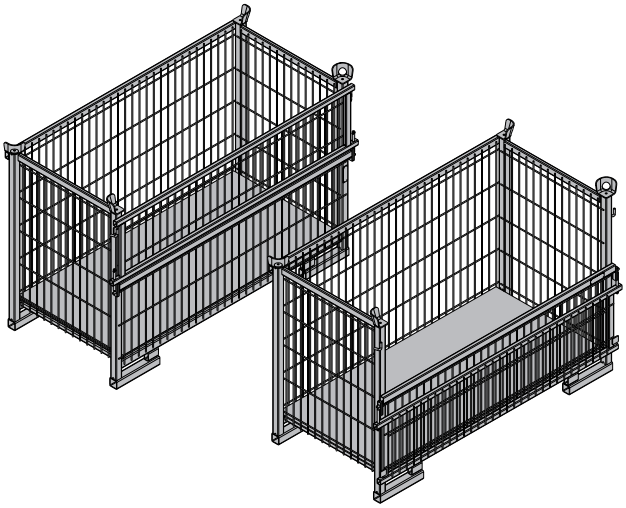
NOTICE

- Clean the protective covers before stacking the panels.
- The stacking shoes of the Dokaset panels must be arranged exactly above one another when the panels are stacked.

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.

Doka skeleton transport box 1.70x0.80m

Storage and transport device for small items



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

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

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

Max. n° of units on top of one another

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

NOTICE

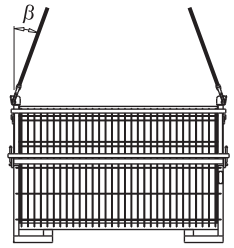
Stacked multi-trip boxes or pallets must have the heaviest boxes at the bottom and the lightest at the top.

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

Lifting by crane

NOTICE

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



9234-203-01

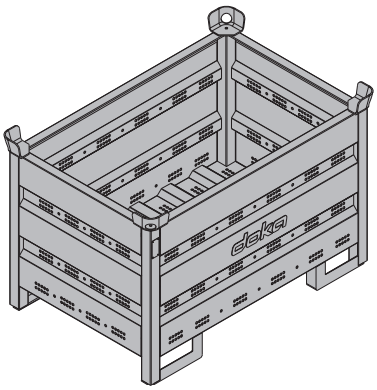
Repositioning by forklift truck or pallet stacking truck

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

Doka multi-trip transport box

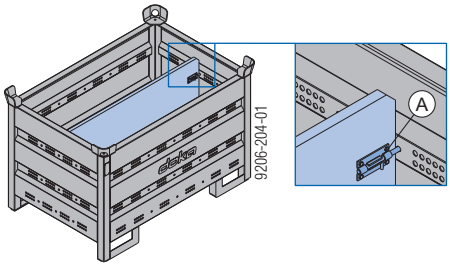
Storage and transport device for small items

Doka multi-trip transport box 1.20x0.80m



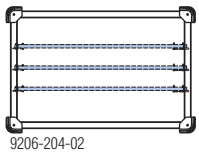
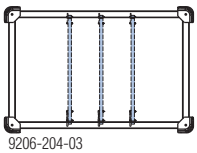
Max. carrying capacity: 1500 kg (3300 lbs)
Permitted imposed load: 7850 kg (17300 lbs)

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

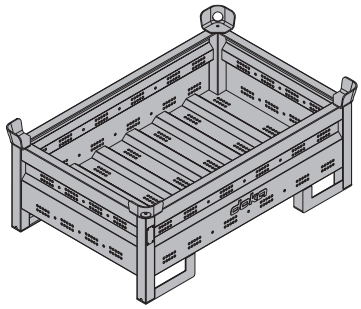


A Slide-bolt for fixing the partition

Possible ways of dividing the box

Multi-trip transport box partition	in the longitudinal direction	in the transverse direction
1.20m	max. 3 partitions	-
0.80m	-	max. 3 partitions
	 9206-204-02	 9206-204-03

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



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

Using Doka multi-trip transport boxes as storage units

Max. n° of units on top of one another

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

NOTICE

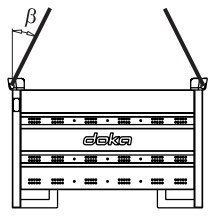
Stacked multi-trip boxes or pallets must have the heaviest boxes at the bottom and the lightest at the top.

Using Doka multi-trip transport boxes as transport devices

Lifting by crane

NOTICE

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



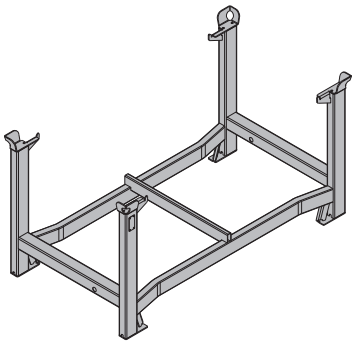
9206-202-01

Repositioning by forklift truck or pallet stacking truck

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

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

Storage and transport devices for long items.



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

Using Doka stacking pallets as storage units

Max. n° of units on top of one another

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

NOTICE

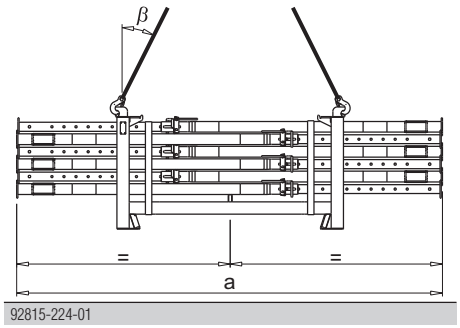
- Stacked multi-trip boxes or pallets must have the heaviest boxes at the bottom and the lightest at the top.
- **How to use with Bolt-on castor set B:**
  - Always apply the fixing brake when the container is 'parked'.
  - When Doka stacking pallets are stacked, the bottom pallet must NOT be one with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



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

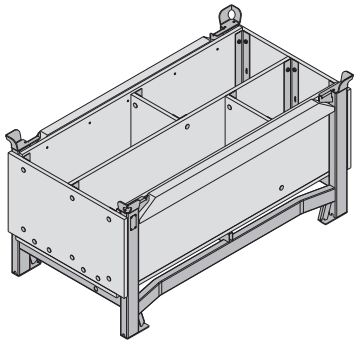
Repositioning by forklift truck or pallet stacking truck

NOTICE

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

Doka accessory box

Storage and transport device for small items



Max. carrying capacity: 1000 kg (2200 lbs)
Permitted imposed load: 5530 kg (12191 lbs)

Doka accessory boxes as storage units

Max. n° of units on top of one another

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

NOTICE

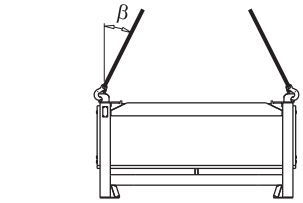
- Stacked multi-trip boxes or pallets must have the heaviest boxes at the bottom and the lightest at the top.
- **How to use with Bolt-on castor set B:**
  - Always apply the fixing brake when the container is 'parked'.
  - When Doka stacking pallets are stacked, the bottom pallet must NOT be one with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

Doka accessory box as transport devices

Lifting by crane

NOTICE

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



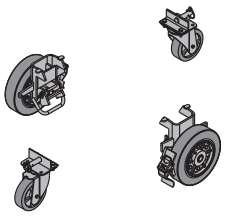
92816-206-01

Repositioning by forklift truck or pallet stacking truck

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

Bolt-on castor set B

The Bolt-on caster set B turns the stacking pallet into a fast and manoeuvrable transport device.
Suitable for drive-through access openings > 90 cm.



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

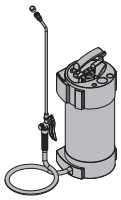
- Doka accessory box
- Doka stacking pallets

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

Cleaning and care of your equipment

Release agents

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



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

NOTICE

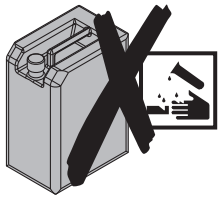
- Before every pour:
  - Apply release agent to the formwork sheet and the end faces **extremely thinly**, **evenly** and **in a continuous layer**.
- Make sure there are no drips of release-agent running down the formwork sheet.
- Applying too much release agent will spoil the concrete finish.

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

Cleaning

NOTICE

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

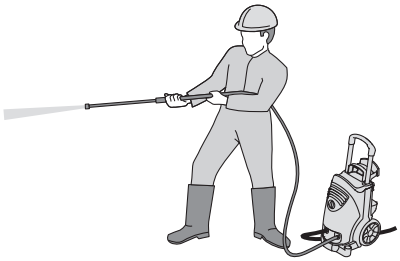


Cleaning high formwork:
Provide a service tower at a suitable cleaning location.

- Wheel-around scaffold DF
  (up to a formwork height of 3.90 m)
- Working scaffold Modul
  (up to a formwork height of 6.70 m)

Cleaning equipment

High-pressure spray cleaner

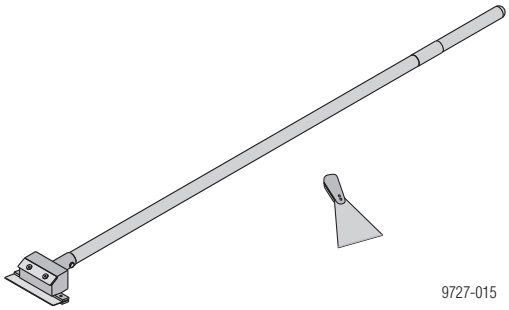


NOTICE

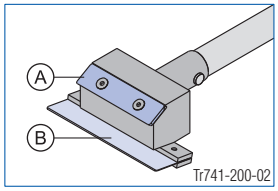
- Appliance pressure rating: 200 to max. 300 bar
- Keep the water-jet the correct distance from the formwork, and move it at the right speed:
  - The higher the pressure, the further away from the formwork you must keep the jet and the faster you must move it across the surface.
- Do not aim the jet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

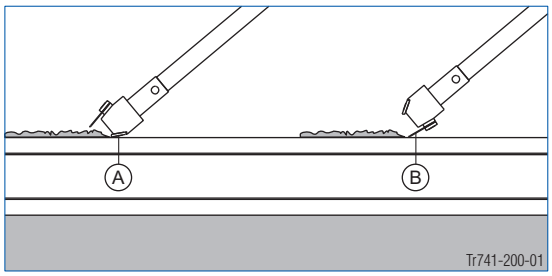
Concrete scraper

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



Functional description:

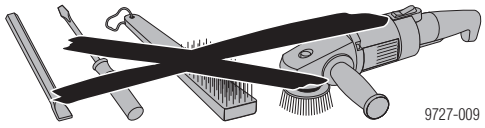




A Blade for dealing with heavy soiling
B Blade for dealing with slight soiling

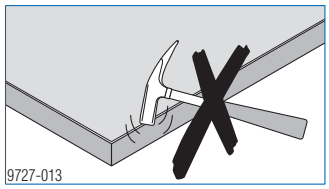
NOTICE

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

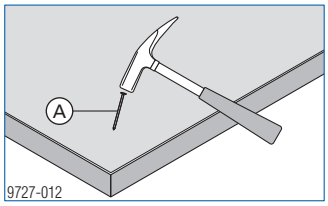


Care

- No hammer-blows to the frame profiles



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



A max. l=60 mm

	[kg]	Article N°
Dokaset panel 2.70x2.70m Dokaset-Element 2,70x2,70m Galvanised Height: 282 cm	**835.0**	**588900000**
Dokaset panel 2.70x2.70m with platform Dokaset-Element 2,70x2,70m mit Bühne Galvanised Height: 282 cm Delivery condition: folded closed	**986.0**	**588901000**
Dokaset panel 1.35x2.70m Dokaset-Element 1,35x2,70m Galvanised, powder-coated Height: 282 cm	**454.0**	**588902000**
Dokaset panel 1.35x2.70m with platform Dokaset-Element 1,35x2,70m mit Bühne Galvanised, powder-coated Height: 282 cm Delivery condition: folded closed	**538.0**	**588903000**
Xsafe platform extension 0.55m Xsafe-Bühnenverlängerung 0,55m Timber parts varnished yellow Steel parts galvanised	**41.0**	**587734000**

	[kg]	Article N°
Dokaset outside corner 3.30m Dokaset-Außenecke 3,30m	**283.0**	**588914000**
Dokaset bottom angle for inside corner Dokaset-Bodenwinkel für Innenecke Height: 7.5 cm	**7.9**	**588913000**
Dokaset ladder 2.70m Dokaset-Leiter 2,70m Galvanised Length: 212 cm Width: 37 cm	**19.7**	**588904000**
Dokaset railing holder 30 degrees **Dokaset railing holder 15 degrees** Dokaset-Geländerhalter Galvanised Height: 18 cm	**2.0** **2.0**	**588915000** **588916000**
Handrail post 1.00m Geländer 1,00m Galvanised Length: 124 cm	**3.8**	**584335000**
Dokaset head anchor 12-36cm Dokaset-Kopfanker 12-36cm Galvanised, powder-coated Length: 47 - 71 cm	**4.7**	**588905000**
Dokaset tension tie 10-30cm B Dokaset-Zuganker 10-30cm B Galvanised Length: 115 cm	**13.5**	**588910500**

	[kg]	Article N°
Dokaset tension tie 10-30cm Dokaset-Zuganker 10-30cm Galvanised Length: 115 cm	**13.0**	**588910000**
Dokaset ratchet 3/4" SW36 Dokaset-Knarre 3/4" SW36 Galvanised Length: 100 cm	**5.1**	**588909000**
Dokaset tie hole reducer 20.0 Dokaset-Ankerlochreduktion 20,0 Galvanised Length: 20 cm	**1.2**	**588911000**
Framax quick acting clamp RU Framax-Schnellspanner RU Galvanised Length: 20 cm	**3.3**	**588153400**
Framax multi function clamp Framax-Uni-Spanner Galvanised Length: 40 cm	**5.8**	**588169000**
Framax universal waling 0.60m **Framax universal waling 0.90m** **Framax universal waling 1.50m** Framax-Klemmschiene Painted blue	**6.6** **10.6** **16.8**	**588689000** **588150000** **588148000**
Framax wedge clamp Framax-Spannklemme Galvanised Length: 21 cm	**1.5**	**588152000**
Dokaset universal waling holder Dokaset-Klemmschienenhalter Galvanised Length: 24.5 cm	**1.5**	**588927000**
Framax universal fixing bolt 10-16cm Framax-Universalverbinder 10-16cm Galvanised Length: 26 cm	**0.60**	**588158000**

	[kg]	Article N°
Panel strut 340 IB Elementstütze 340 IB consisting of: (A) **Plumbing strut 340 IB** Galvanised Length: 190.8 - 341.8 cm (B) **Adjusting strut 120 IB** Galvanised Length: 81.5 - 130.6 cm Galvanised Delivery condition: folded closed	**24.3** **16.7** **7.6**	**580365000** **588696000** **588248500**
Prop head EB Stützenkopf EB Galvanised Length: 40.8 cm Width: 11.8 cm Height: 17.6 cm	**3.1**	**588244500**
Doka express anchor 16x125mm Doka-Expressanker 16x125mm Galvanised Length: 18 cm Follow the directions in the "Fitting instructions"!	**0.31**	**588631000**
Doka coil 16mm Doka-Coil 16mm Galvanised Diameter: 1.6 cm	**0.009**	**588633000**
Dokaset 2-part chain 1.50m Dokaset-Zweistrangkette 1,50m Follow the directions in the "Operating Instructions"!	**4.8**	**588917000**
Doka 4-part chain 3.20m Doka-Vierstrangkette 3,20m Follow the directions in the "Operating Instructions"!	**15.0**	**588620000**
Dokaset closure cone 20cm Dokaset-Verschlusskonus 20cm Length: 18 cm	**0.50**	**588925000**

	[kg]	Article N°
Dokaset fibre concrete cone 30cm Dokaset-Faserbetonkonus 30cm Length: 29.2 cm	**0.72**	**588926000**
Fibre concrete plug 27mm **Fibre concrete plug 35mm** **Fibre concrete plug 40mm** Faserbetonstopfen Grey	**0.03** **0.11** **0.14**	**581473000** **588923000** **588924000**
Double scraper Xlife 100/150mm 1.40m Doppelschaber Xlife 100/150mm 1,40m	**2.8**	**588674000**

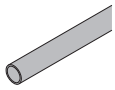
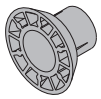
Tie rod system 15.0

Tie rod 15.0mm galvanised 0.50m	**0.72**	**581821000**
Tie rod 15.0mm galvanised 0.75m	**1.1**	**581822000**
Tie rod 15.0mm galvanised 1.00m	**1.4**	**581823000**
Tie rod 15.0mm galvanised 1.25m	**1.8**	**581826000**
Tie rod 15.0mm galvanised 1.50m	**2.2**	**581827000**
Tie rod 15.0mm galvanised 1.75m	**2.5**	**581828000**
Tie rod 15.0mm galvanised 2.00m	**2.9**	**581829000**
Tie rod 15.0mm galvanised 2.50m	**3.6**	**581852000**
Tie rod 15.0mm galvanised .....m	**1.4**	**581824000**
Tie rod 15.0mm non-treated 0.50m	**0.73**	**581870000**
Tie rod 15.0mm non-treated 0.75m	**1.1**	**581871000**
Tie rod 15.0mm non-treated 1.00m	**1.4**	**581874000**
Tie rod 15.0mm non-treated 1.25m	**1.8**	**581886000**
Tie rod 15.0mm non-treated 1.50m	**2.1**	**581876000**
Tie rod 15.0mm non-treated 1.75m	**2.5**	**581887000**
Tie rod 15.0mm non-treated 2.00m	**2.9**	**581875000**
Tie rod 15.0mm non-treated 2.50m	**3.6**	**581877000**
Tie rod 15.0mm non-treated 3.00m	**4.3**	**581878000**
Tie rod 15.0mm non-treated 3.50m	**5.0**	**581888000**
Tie rod 15.0mm non-treated 4.00m	**5.7**	**581879000**
Tie rod 15.0mm non-treated 5.00m	**7.2**	**581880000**
Tie rod 15.0mm non-treated 6.00m	**8.6**	**581881000**
Tie rod 15.0mm non-treated 7.50m	**10.7**	**581882000**
Tie rod 15.0mm non-treated .....m Ankerstab 15,0mm	**1.4**	**581873000**
Super plate 15.0 Superplatte 15,0 Galvanised Height: 6 cm Diameter: 12 cm Width-across: 27 mm	**1.1**	**581966000**
Hexagon nut 15.0 Sechskantmutter 15,0 Galvanised Length: 5 cm Width-across: 30 mm	**0.23**	**581964000**
Plastic tube 22mm 2.50m Kunststoffrohr 22mm 2,50m PVC Grey Diameter: 2.6 cm	**0.45**	**581951000**

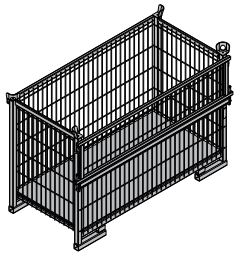
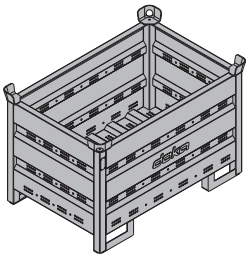
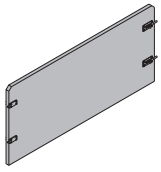
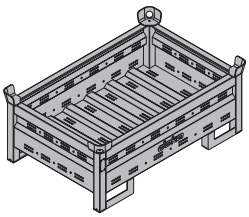
	[kg]	Article N°
Universal cone 22mm Universal-Konus 22mm Grey Diameter: 4 cm	**0.005**	**581995000**
Protective cap 15.0/20.0 Schutzkappe 15,0/20,0 Yellow Length: 6 cm Diameter: 6.7 cm	**0.03**	**581858000**
Tie-rod wrench 15.0/20.0 Ankerstabschlüssel 15,0/20,0 Galvanised	**1.9**	**580594000**
Friction type ratchet SW27 Freilaufknarre SW27 Manganese-phosphated Length: 30 cm	**0.49**	**581855000**
Box spanner 27 0.65m Steckschlüssel 27 0,65m Galvanised	**1.9**	**581854000**

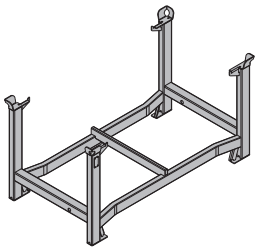
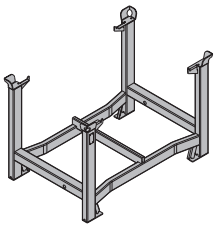
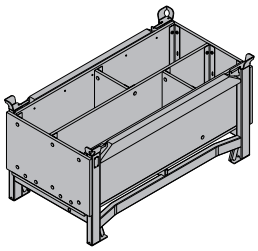
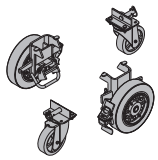
Tie rod system 20.0

Tie rod 20.0mm galvanised 0.50m	**1.3**	**581411000**
Tie rod 20.0mm galvanised 0.75m	**1.9**	**581417000**
Tie rod 20.0mm galvanised 1.00m	**2.5**	**581412000**
Tie rod 20.0mm galvanised 1.25m	**3.2**	**581418000**
Tie rod 20.0mm galvanised 1.50m	**3.8**	**581413000**
Tie rod 20.0mm galvanised 2.00m	**5.0**	**581414000**
Tie rod 20.0mm galvanised 2.50m	**6.3**	**581430000**
Tie rod 20.0mm galvanised .....m	**2.5**	**581410000**
Tie rod 20.0mm non-treated 0.50m	**1.3**	**581405000**
Tie rod 20.0mm non-treated 0.75m	**1.9**	**581416000**
Tie rod 20.0mm non-treated 1.00m	**2.5**	**581406000**
Tie rod 20.0mm non-treated 1.50m	**3.8**	**581407000**
Tie rod 20.0mm non-treated 2.00m	**5.0**	**581408000**
Tie rod 20.0mm non-treated .....m Ankerstab 20,0mm	**2.5**	**581403000**
Super plate 20.0 B Superplatte 20,0 B Galvanised Height: 7 cm Diameter: 14 cm Width-across: 34 mm	**2.0**	**581424000**

	[kg]	Article N°
Plastic tube 26mm 2.00m Kunststoffrohr 26mm 2,00m PVC Grey Diameter: 3.1 cm 	**0.59**	**581463000**
Universal cone 26mm Universal-Konus 26mm Grey Diameter: 5 cm 	**0.008**	**581464000**
Plug 26mm Verschlussstopfen 26mm PE Grey 	**0.006**	**581465000**

Multi-trip packaging

Doka skeleton transport box 1.70x0.80m Doka-Gitterbox 1,70x0,80m Galvanised Height: 113 cm 	**87.0**	**583012000**
Doka multi-trip transport box 1.20x0.80m Doka-Mehrwegcontainer 1,20x0,80m Galvanised Height: 78 cm 	**70.0**	**583011000**
Multi-trip transport box partition 0.80m **Multi-trip transport box partition 1.20m** Mehrwegcontainer Unterteilung Steel parts galvanised Timber parts varnished yellow 	**3.7** **5.5**	**583018000** **583017000**
Doka multi-trip transport box 1.20x0.80x0.41m Doka-Mehrwegcontainer 1,20x0,80x0,41m Galvanised 	**42.5**	**583009000**

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

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