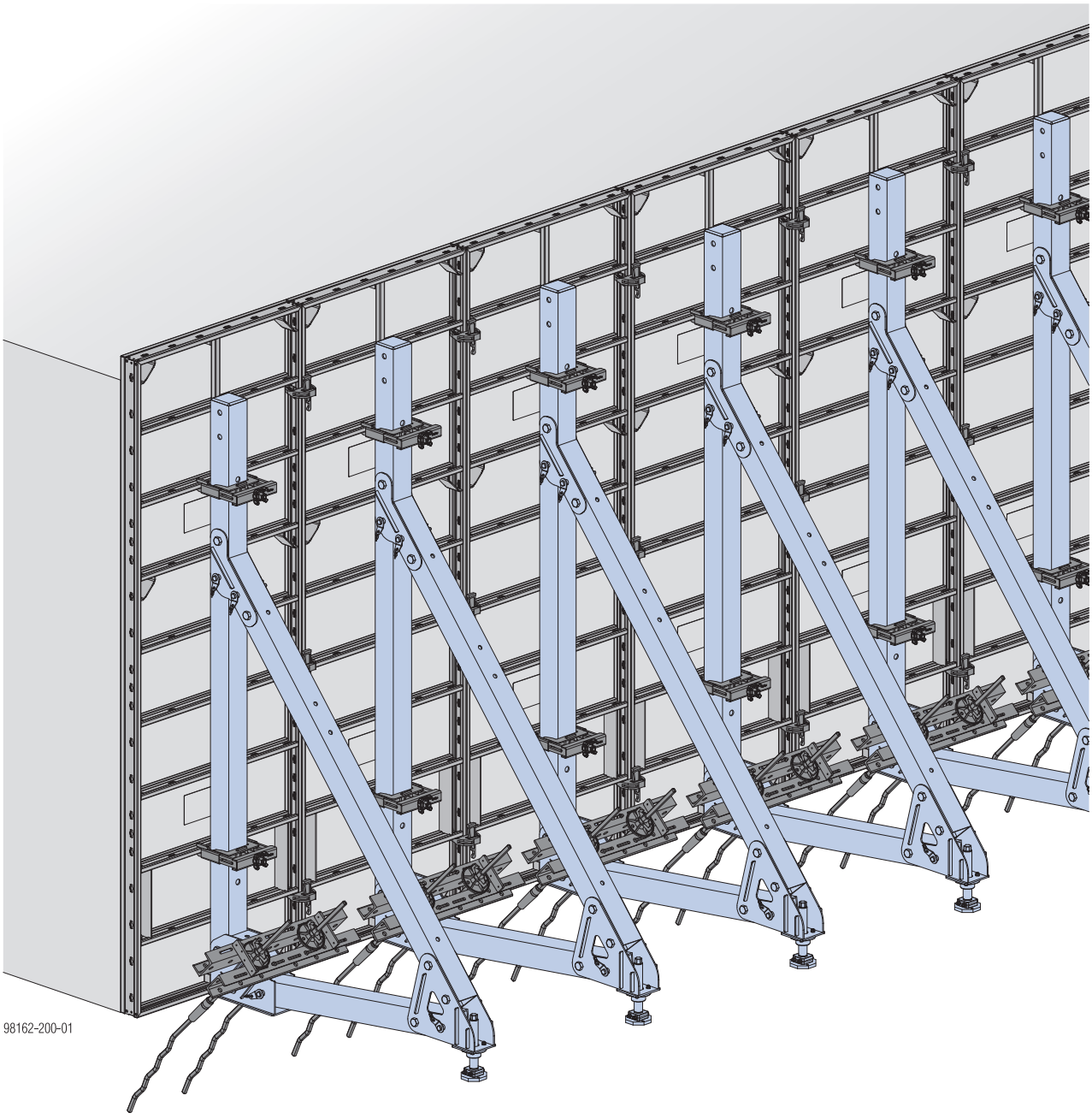
999816202 - 10/2022
en-GB

The Formwork Experts.

Supporting construction frame AL

User Information

Instructions for assembly and use (Method statement)



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 by the user.
- The equipment/system must be assembled and erected in accordance with the applicable laws, standards and rules by trained customer personnel whilst maintaining any applicable safety inspections that may be required.
- It is not permitted to modify Doka products; such modifications constitute a safety risk.

Closing the formwork

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

Pouring

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

Stripping the formwork

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

Transporting, stacking and storing

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

Maintenance

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

Miscellaneous

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

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

Eurocodes at Doka

The permissible values stated in Doka documents (e.g. F_{perm} = 70 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.

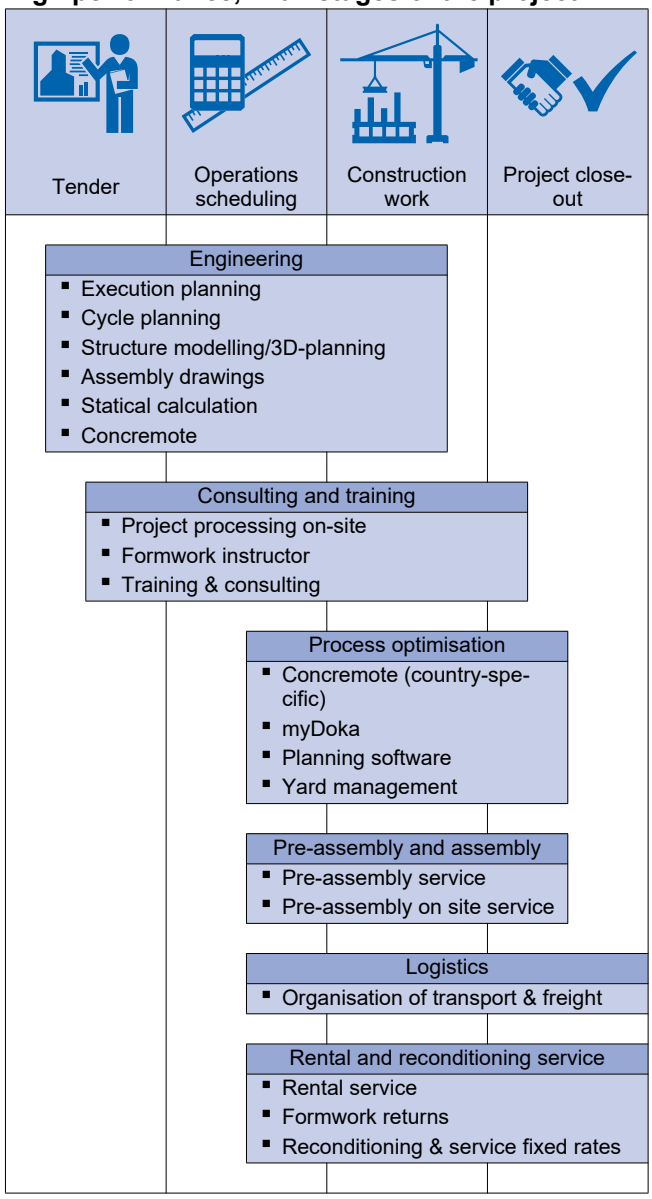
Just-in-time availability

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



Digital Services
for higher productivity in construction

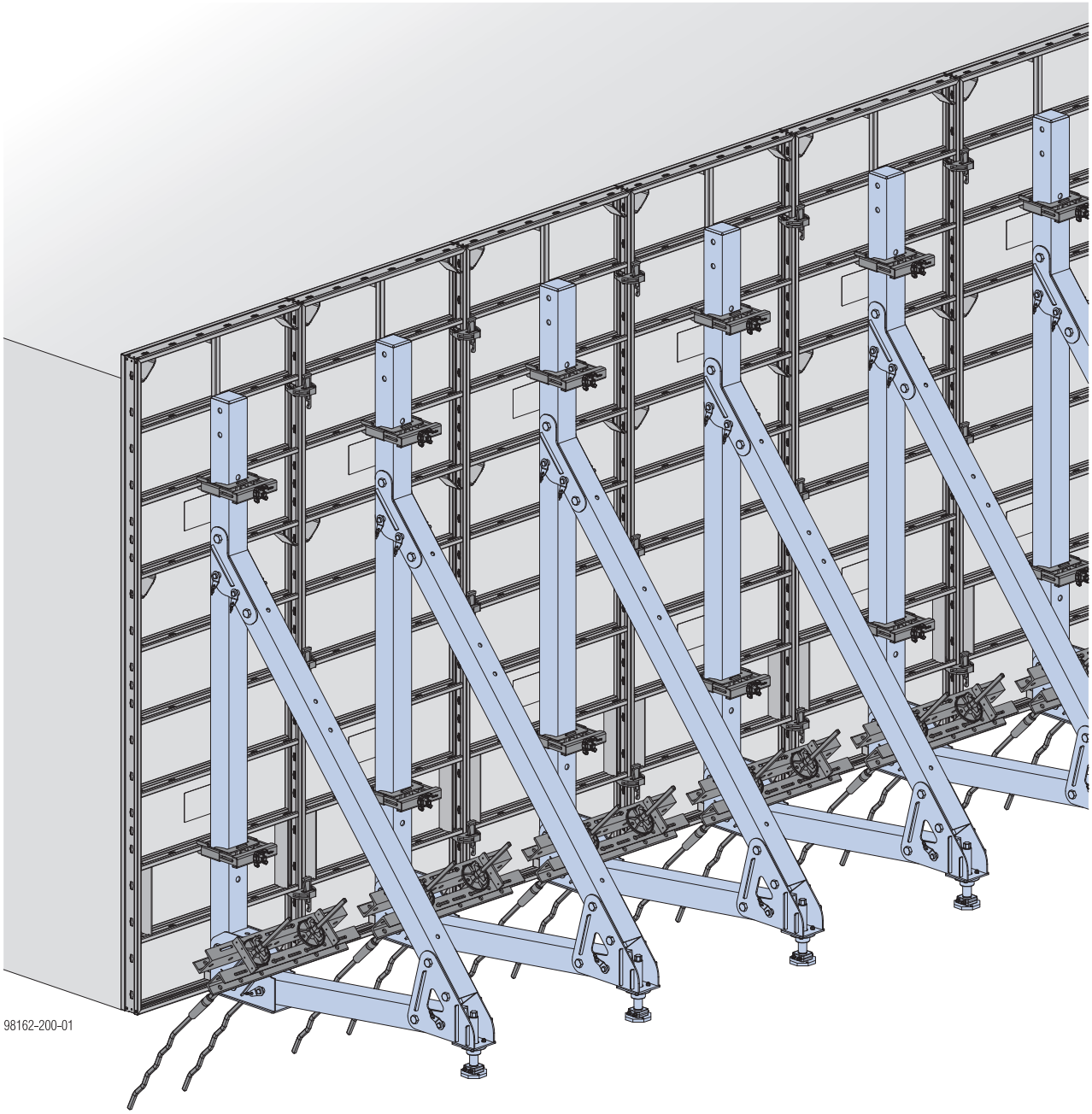
From planning to completion of construction - with our digital services we want to set the pace for boosting productivity in construction. Our digital portfolio includes solutions for planning, procuring and managing to performing on site. Learn more about our digital offer at doka.com/digital.

System description

Supporting construction frame AL

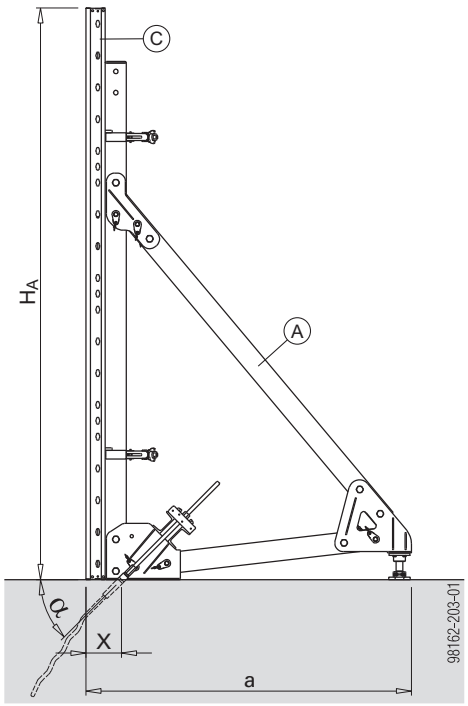
- The Supporting construction frame AL is an extremely light supporting structure for single-sided wall formwork up to 3.00 m in height. With an extension, pour heights up to 3.30 m are possible.
- The light aluminium frame means that the Supporting construction frame AL can be opened and set up by hand.
- Total weight is 55 kg, so repositioning by hand is also easy.
- The Supporting construction frame AL can be combined with all Doka framed formwork systems, so it is a light and easy-to-use alternative to heavy supporting construction frames in all areas.

Note:
Your regional Doka branch will be pleased to advise you on the exact planning and dimensioning.

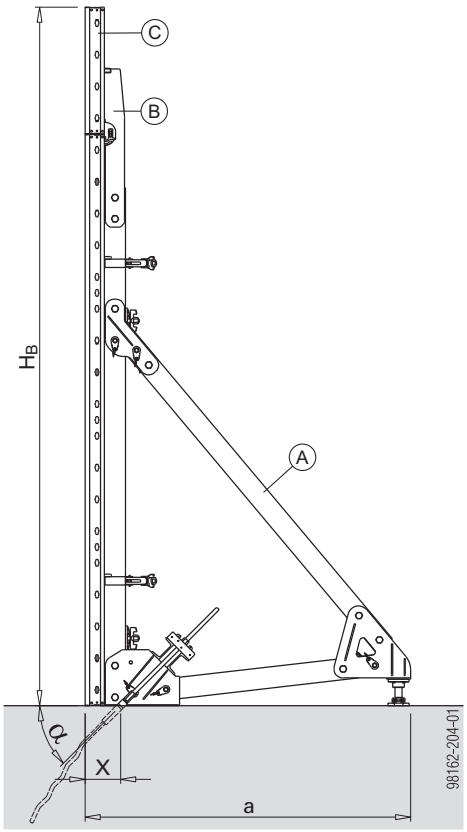


System dimensions

without Extension AL



with Extension AL



α ... 45°

A Supporting construction frame AL 3.00m

B Extension AL 0.30m

System dimensions for each formwork system (C) [cm]

	DokaXlight	Frami Xlife	Alu-Framax Xlife Framax Xlife Framax Xlife plus
H_A (max.)	275.0	300.0	300.0
H_B (max.)	330.0	330.0	330.0
X	18.0	17.0	20.0
a	155.0	154.0	157.0

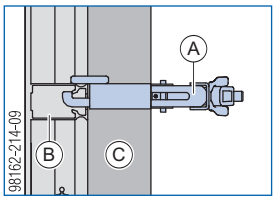
Used with Framed formwork DokaXlight

Follow the directions in the 'Framed formwork DokaXlight' User Information booklet.

NOTICE

- It is not permissible to use the basic panels turned on their sides!
- Secure the supporting construction frames directly to the formwork panel - distribution walings are not permitted!
- Secure each supporting construction frame to the formwork panel at two points at least (with Universal clamps or universal walings)!
- Check for possible collisions between the supporting construction frames and Frami clamps. Use DokaXlight I-Connectors for the inter-panel connections, if applicable.

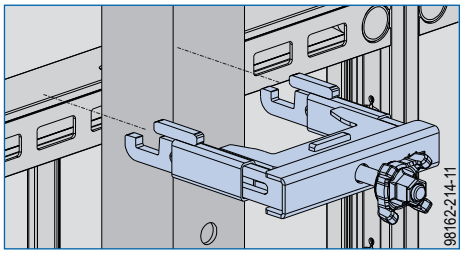
with Universal clamp AL



A Universal clamp AL
B Function profile, DokaXlight panel
C Supporting construction frame AL 3.00m

Installation:

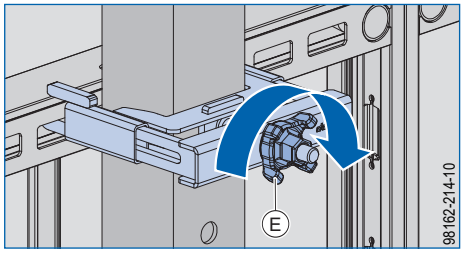
➤ Engage the Universal clamp in the function profile of the DokaXlight panel.



The hook of the clamp faces up.

➤ Tighten the Star-grip nut 15.0 with combination wrench 27 mm or similar.

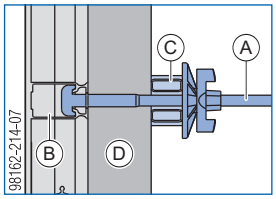
Tightening torque:
Star grip nut 15.0: max. 100 Nm



E Star grip nut 15.0

with universal walings

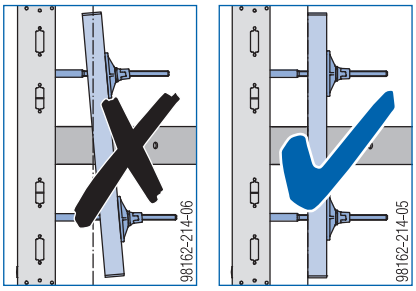
The supporting construction frame is secured to the formwork panel with **Frami universal walings** and **Framax universal fixing bolts 10-25cm**.



A Framax universal fixing bolt 10-25cm + Super plate 15.0
B Function profile, DokaXlight panel
C Frami universal waling 0.70m
D Supporting construction frame AL 3.00m

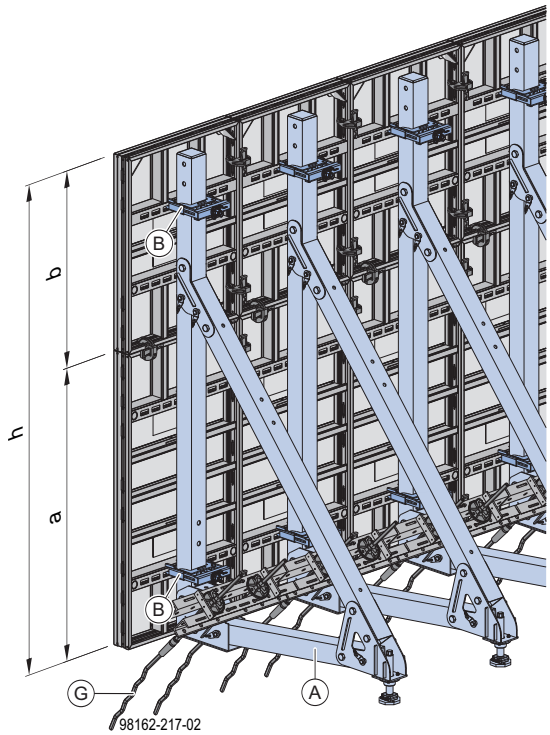
NOTICE

Make sure that the Frami universal walings make full-surface contact with the supporting frame.



Pour height 2.50 m

- Influence width 0.75 m

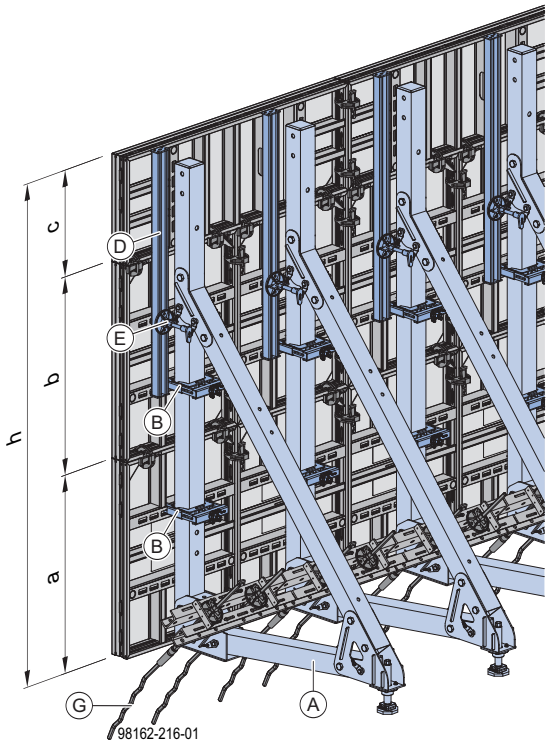


Pour height h	Panel height a	Panel height b
2.50 m	1.50 m	1.00 m

A Supporting construction frame AL 3.00m
B Universal clamp AL
G Anchorage

Pour height up to 2.75 m (1.00 + 1.00 m, stacked horizontally)

- Influence width 0.75 m
- Bracing with universal walings

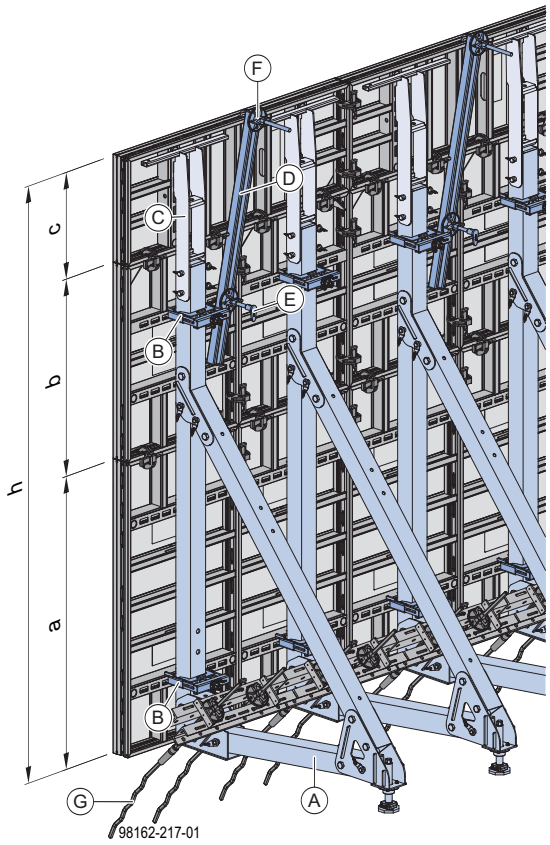


Pour height h	Panel height a	Panel height b	Vertical stacking **c**
2.55 m	1.00 m	1.00 m	0.55 m
2.60 m	1.00 m	1.00 m	0.60 m
2.75 m	1.00 m	1.00 m	0.75 m

A Supporting construction frame AL 3.00m
B Universal clamp AL
D Frami universal waling 1.25m
E Universal clamp 5-10cm
G Anchorage

Pour height up to 3.25 m (1.50 + 1.00 m, stacked horizontally)

- with Extension AL 0.30m
- Influence width 0.75 m
- Bracing with universal walings

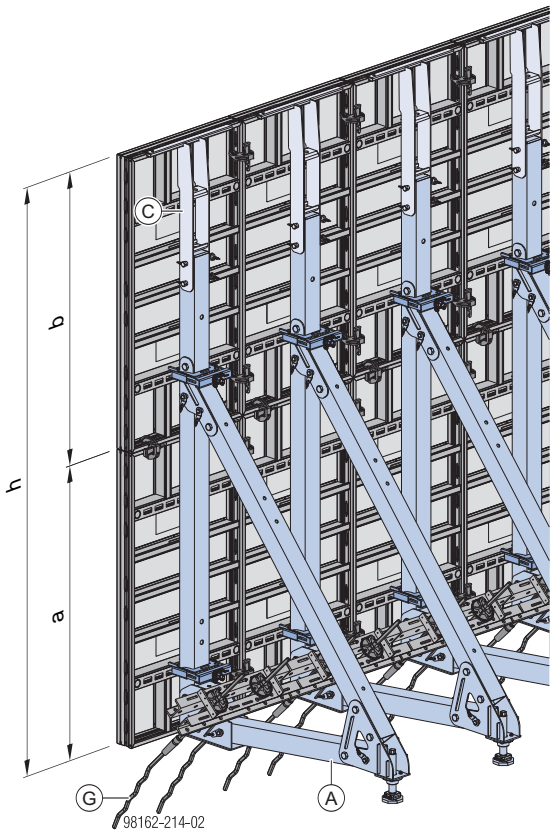


Pour height h	Panel height a	b	Vertical stacking c
2.80 m	1.50 m	1.00 m	0.30 m
2.95 m	1.50 m	1.00 m	0.45 m
3.05 m	1.50 m	1.00 m	0.55 m
3.10 m	1.50 m	1.00 m	0.60 m
3.25 m	1.50 m	1.00 m	0.75 m

A Supporting construction frame AL 3.00m
B Universal clamp AL
C Extension AL 0.30m
D Frami universal waling 1.25m
E Universal clamp 5-10cm
F Frami profile connector 5-18cm + Super plate 15.0
G Anchorage

Pour height 3.00 m

- with Extension AL 0.30m
- Influence width 0.75 m

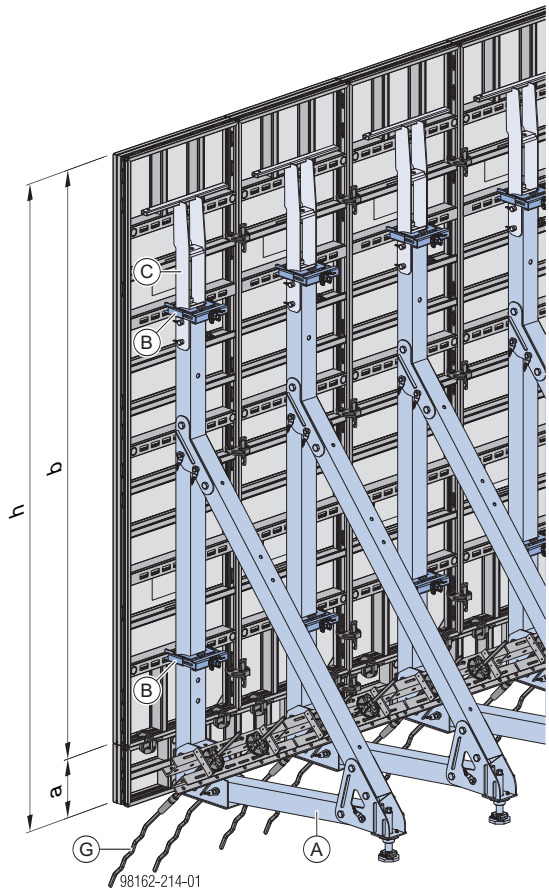


Pour height h	Panel height a	b
3.00 m	3.00 m	—
	1.50 m	1.50 m

A Supporting construction frame AL 3.00m
B Universal clamp AL
C Extension AL 0.30m
G Anchorage

Pour height 3.30 m (extension panel below basic panel)

- with Extension AL 0.30m
- Influence width 0.75 m
- Extension panel below basic panel



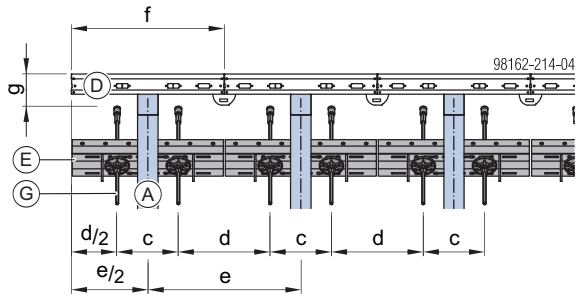
Pour height h	Panel height	
	Extension panel **a**	**b**
3.30 m	0.30 m	3.00 m

A Supporting construction frame AL 3.00m
B Universal clamp AL
C Extension AL 0.30m
G Anchorage

Panel width 0.75m

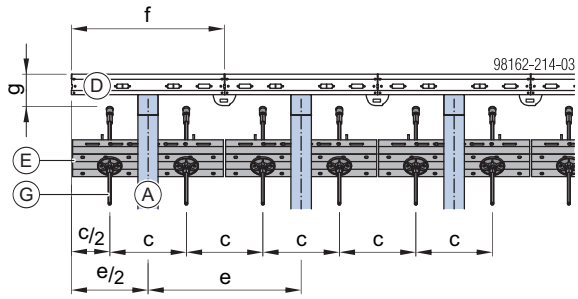
- **Centre-to-centre distance e = 75 cm**
- Panel width f = 75 cm

Version 1:



Anchorage centre-to-centre distance c ... 30 cm
Anchorage centre-to-centre distance d ... 45 cm
g ... 18 cm

Version 2:



Anchorage centre-to-centre distance c **(uniform) ...** 37.5 cm
g ... 18 cm

A Supporting construction frame AL 3.00m
D DokaXlight panel
E Multi-purpose waling WS10 Top50 0.75m
G Anchorage

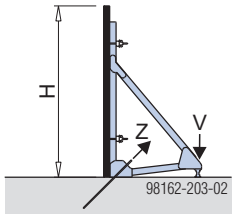
Structural design

The values given in the table are only applicable to forming situations where there is no kicker. In cases with large kickers, the overall stability of the supporting construction frame must be reviewed.

The loading data is stated per girderframe unit for an anchor inclination of 45°.

Pour height up to 2.75 m

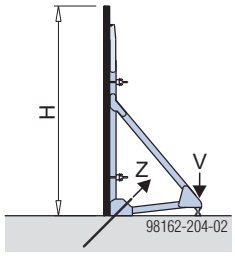
Supporting construction frame AL



Influence width 0.75 m				
Permitted fresh-concrete pressure	Pour height **H** [m]	Anchor force $\mathbf{Z_k}$ [kN]	Shoring force $\mathbf{V_k}$ [kN]	Deformation top [mm]
40 kN/m²	2.50	73	32	2
	2.75	83	44	3

Pour height up to 3.30 m

Supporting construction frame AL extended



Influence width 0.75 m				
Permitted fresh-concrete pressure	Pour height **H** [m]	Anchor force $\mathbf{Z_k}$ [kN]	Shoring force $\mathbf{V_k}$ [kN]	Deformation top [mm]
40 kN/m²	2.95	92	54	9
	3.00	94	57	12
	3.30	107	75	24

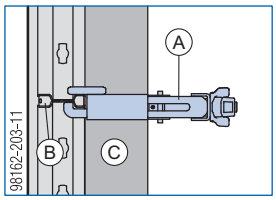
Used with Framed formwork Frami Xlife

Follow the directions in the 'Framed formwork Frami Xlife' User Information booklet.

NOTICE

- It is not permissible to use the basic panels turned on their sides!
- Secure the supporting construction frames directly to the formwork panel - distribution walings are not permitted!
- Secure each supporting construction frame to the formwork panel at two points at least (with Universal clamps or universal walings)!
- Check for possible collisions between the supporting construction frames and Frami clamps. If necessary, use Frami clips for the inter-panel connection.

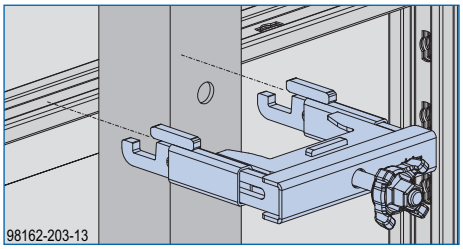
with Universal clamp AL



A	Universal clamp AL
B	Cross profile of the Frami Xlife panel
C	Supporting construction frame AL 3.00m

Installation:

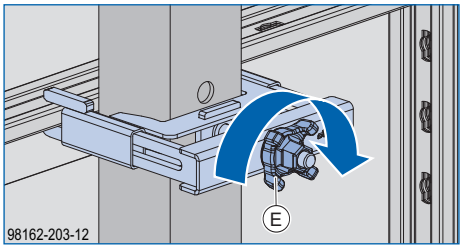
➤ Position the Universal clamp at the cross profile of the Frami Xlife panel



The hook of the clamp faces up.

➤ Tighten the Star-grip nut 15.0 with combination wrench 27 mm or similar.

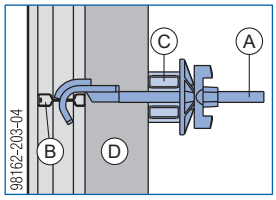
Tightening torque:
Star grip nut 15.0: max. 100 Nm



E	Star grip nut 15.0

with universal walings

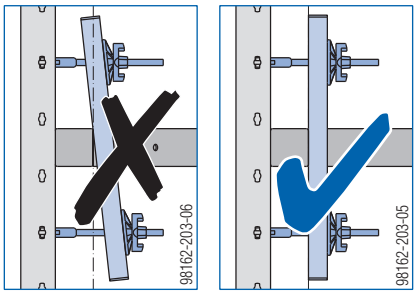
The supporting construction frame is secured to the formwork panel with **Frami universal walings** and **Frami profile connectors 5-18cm**.



A	Frami profile connector 5-18cm + Super plate 15.0
B	Cross profile of the Frami Xlife panel
C	Frami universal waling 0.70m
D	Supporting construction frame AL 3.00m

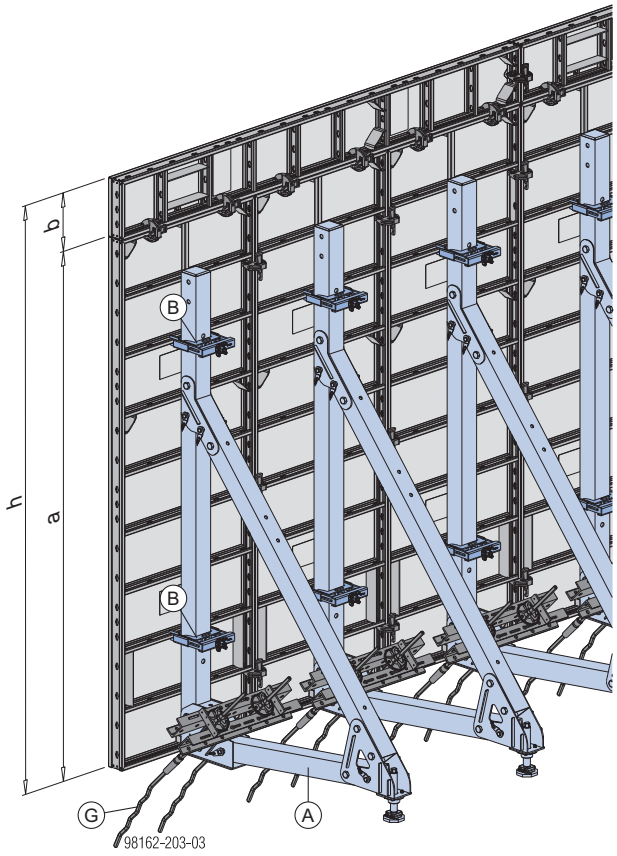
NOTICE

Make sure that the Frami universal walings make full-surface contact with the supporting frame.



Pour height up to 3.00 m

Influence width 0.90 m



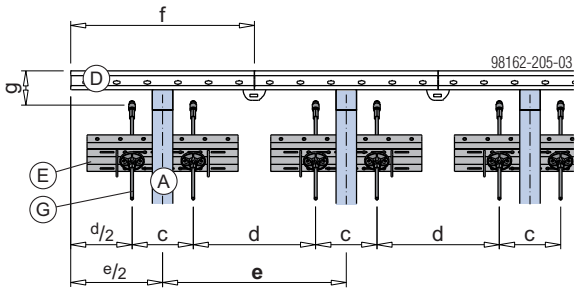
Pour height h	Panel height a	Height, vertical stacking b
2.70 m	2,70 m (or 1,20 + 1,50 m)	—
3.00 m		0.30 m
	3,00 m (or 1,50 + 1,50 m)	—

A Supporting construction frame AL 3.00m
B Universal clamp AL
G Anchorage

Panel width 0.90 m

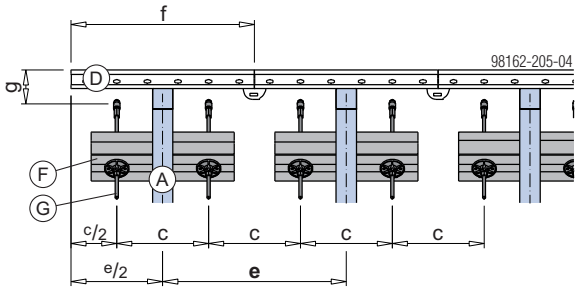
- **Centre-to-centre distance e = 90 cm**
- Panel width f = 90 cm

Version 1:



Anchorage centre-to-centre distance c ... 30 cm
Anchorage centre-to-centre distance d ... 60 cm
g ... 17 cm

Version 2:



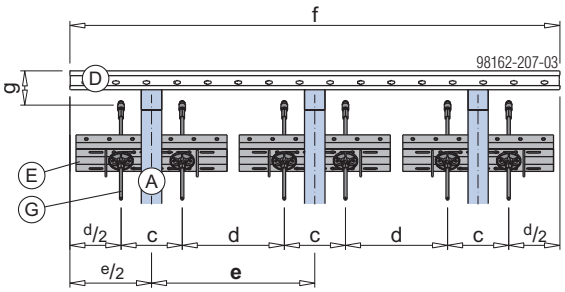
Anchorage centre-to-centre distance c **(uniform) ...** 45 cm
g ... 17 cm

A Supporting construction frame AL 3.00m
D Frami Xlife panel
E Multi-purpose waling WS10 Top50 0.75m
F Multi-purpose waling WU12 Top50 or Anchor waling 0.70m
G Anchorage

Frami Xlife panel 2.40x2.70m

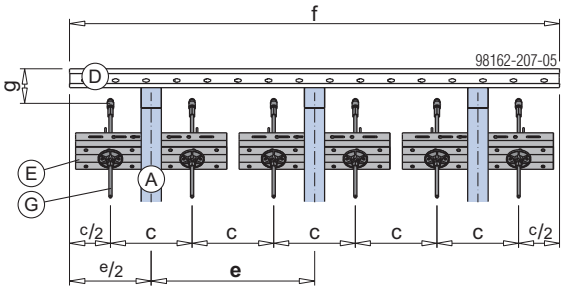
- **Centre-to-centre distance e = 80 cm**
- Panel width f = 240 cm

Version 1:



Anchorage centre-to-centre distance c ... 30 cm
Anchorage centre-to-centre distance d ... 50 cm
g ... 17 cm

Version 2:

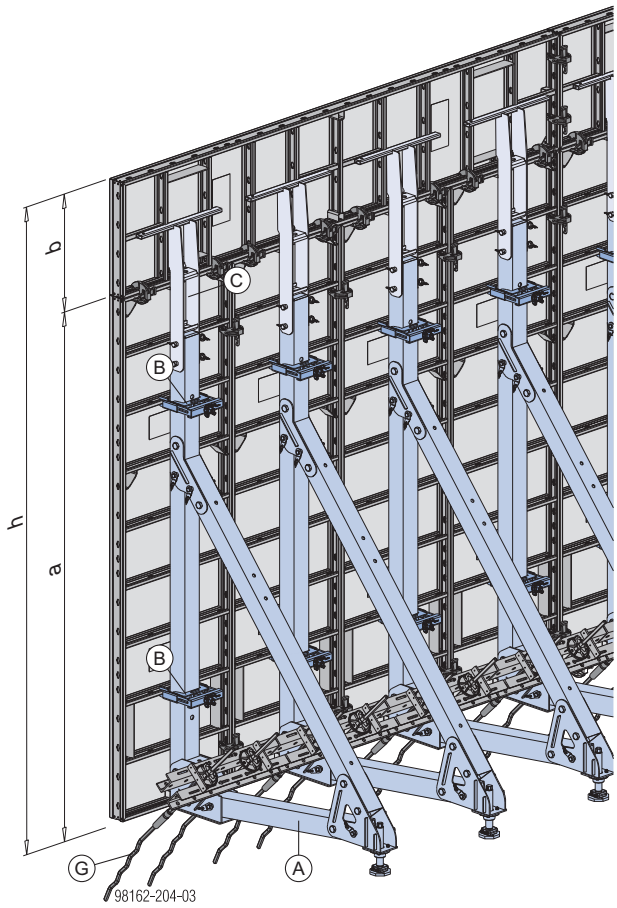


Anchorage centre-to-centre distance c **(uniform)...** 40 cm
g ... 17 cm

A	Supporting construction frame AL 3.00m
D	Frami Xlife panel 2.40x2.70m
E	Multi-purpose waling WS10 Top50 0.75m
G	Anchorage

Pour height up to 3.30 m

- with Extension AL 0.30m
- Influence width 0.75 m

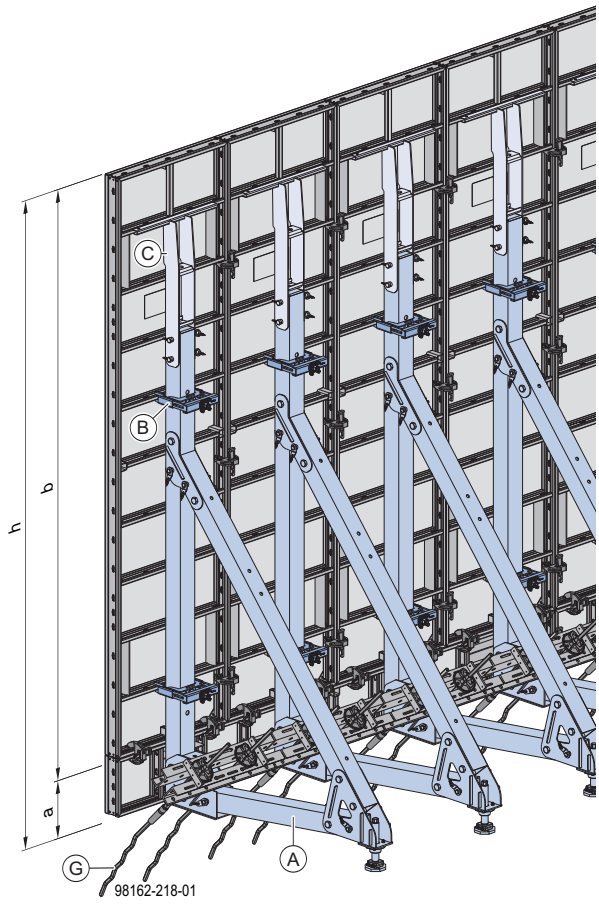


Pour height h	Panel height a	Height, vertical stacking b
3.15 m	2.70 m (or 1.20 + 1.50 m)	0.45 m
3.30 m		0.60 m

A	Supporting construction frame AL 3.00m
B	Universal clamp AL
C	Extension AL 0.30m
G	Anchorage

Pour height 3.30 m (extension panel below basic panel)

- with Extension AL 0.30m
- Influence width 0.75 m
- Extension panel below basic panel



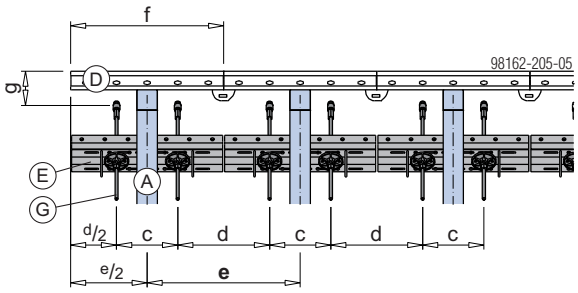
Pour height h	Panel height	
	Extension panel **a**	**b**
3.30 m	0.30 m	3.00 m (or 1.50 +1.50 m)

A Supporting construction frame AL 3.00m
B Universal clamp AL
C Extension AL 0.30m
G Anchorage

Panel width 0.75m

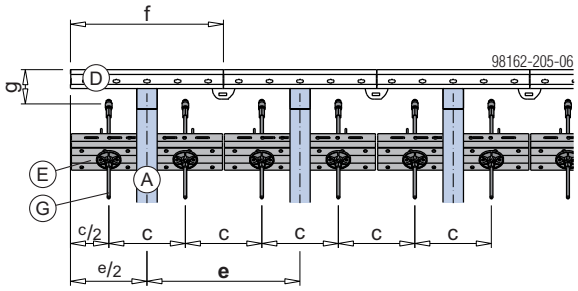
- **Centre-to-centre distance e = 75 cm**
- Panel width f = 75 cm

Version 1:



Anchorage centre-to-centre distance c ... 30 cm
Anchorage centre-to-centre distance d ... 45 cm
g ... 17 cm

Version 2:



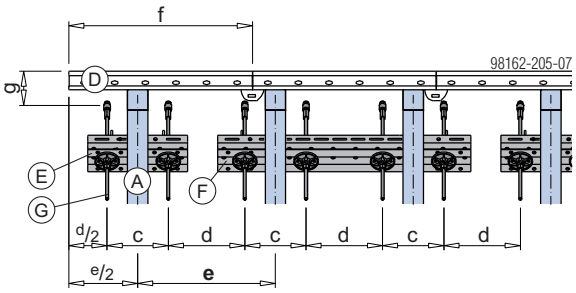
Anchorage centre-to-centre distance c **(uniform) ...** 37.5 cm
g ... 17 cm

A Supporting construction frame AL 3.00m
D Frami Xlife panel
E Multi-purpose waling WS10 Top50 0.75m
G Anchorage

Panel width 0.90 m

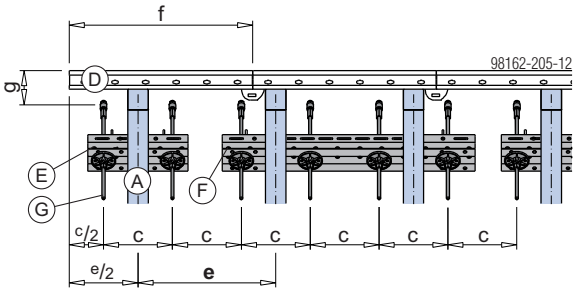
- **Centre-to-centre distance e = 67.5 cm**
- Panel width f = 90 cm

Version 1:



Anchorage centre-to-centre distance c ... 30 cm
Anchorage centre-to-centre distance d ... 37.5 cm
g ... 17 cm

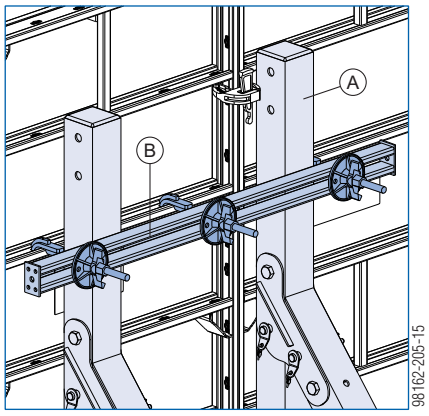
Version 2:



Anchorage centre-to-centre distance c **(uniform) ...** 33.75 cm
g ... 17 cm

A	Supporting construction frame AL 3.00m
D	Frami Xlife panel
E	Multi-purpose waling WS10 Top50 0.50m
F	Multi-purpose waling WS10 Top50 1.25m
G	Anchorage

Close-up of fixing for SC frame:



A	Supporting construction frame AL 3.00m
B	Frami universal waling 1.25m

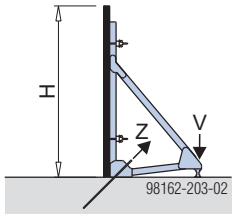
Structural design

The values given in the table are only applicable to forming situations where there is no kicker. In cases with large kickers, the overall stability of the supporting construction frame must be reviewed.

The loading data is stated per girderframe unit for an anchor inclination of 45°.

Pour height up to 3.00 m

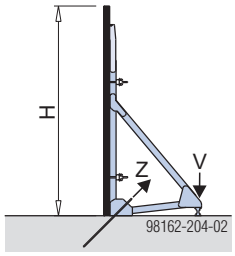
Supporting construction frame AL



Influence width 0.90 m				
Permitted fresh-concrete pressure	Pour height **H** [m]	Anchor force $\mathbf{Z_k}$ [kN]	Shoring force $\mathbf{V_k}$ [kN]	Deformation top [mm]
40 kN/m²	2.70	97	50	2
	3.00	112	68	11

Pour height up to 3.30 m

Supporting construction frame AL extended



Influence width 0.75 m				
Permitted fresh-concrete pressure	Pour height **H** [m]	Anchor force $\mathbf{Z_k}$ [kN]	Shoring force $\mathbf{V_k}$ [kN]	Deformation top [mm]
40 kN/m²	3.15	94	57	9
	3.30	107	75	31

Used with Framed formwork Framax

Note:
The illustrations in this section show Framed formwork Alu-Framax Xlife. They also apply for use with Framed formwork Framax Xlife or Framax Xlife plus!

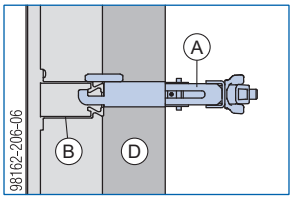
Follow the directions in the 'Framed formwork Alu-Framax Xlife', 'Framed formwork Framax Xlife', and/or 'Framed formwork Framax Xlife plus' User Information booklets.

NOTICE

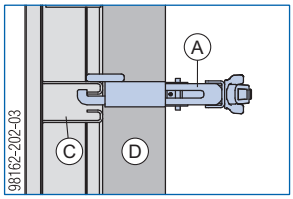
- It is not permissible to use the basic panels turned on their sides!
- Secure the supporting construction frames directly to the formwork panel - distribution walings are not permitted!
- Secure each supporting construction frame to the formwork panel at two points at least (with Universal clamps or universal walings)!

with Universal clamp AL

Alu-Framax Xlife



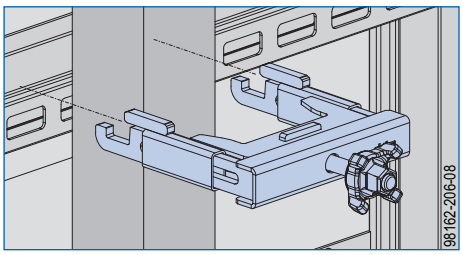
Framax Xlife



A Universal clamp AL
B Cross profile of the Alu-Framax Xlife panel
C Cross profile of the Framax Xlife panel
D Supporting construction frame AL 3.00m

Installation:

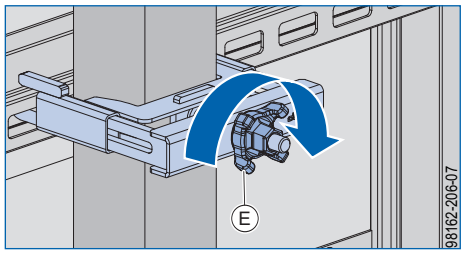
➤ Position the Universal clamp at the cross profile of the formwork panel



The hook of the clamp faces up.

➤ Tighten the Star-grip nut 15.0 with combination wrench 27 mm or similar.

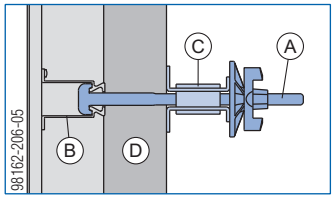
Tightening torque:
Star grip nut 15.0: max. 100 Nm



E Star grip nut 15.0

with universal walings

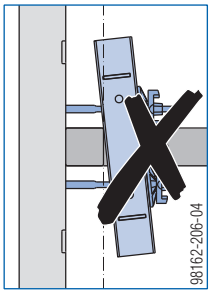
The supporting construction frame is secured to the formwork panel with **Framax universal walings** and **Framax universal fixing bolts 10-25cm**.

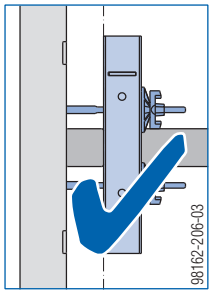


A Framax universal fixing bolt 10-25cm + Super plate 15.0
B Cross profile
C Framax universal waling 0.60m
D Supporting construction frame AL 3.00m

NOTICE

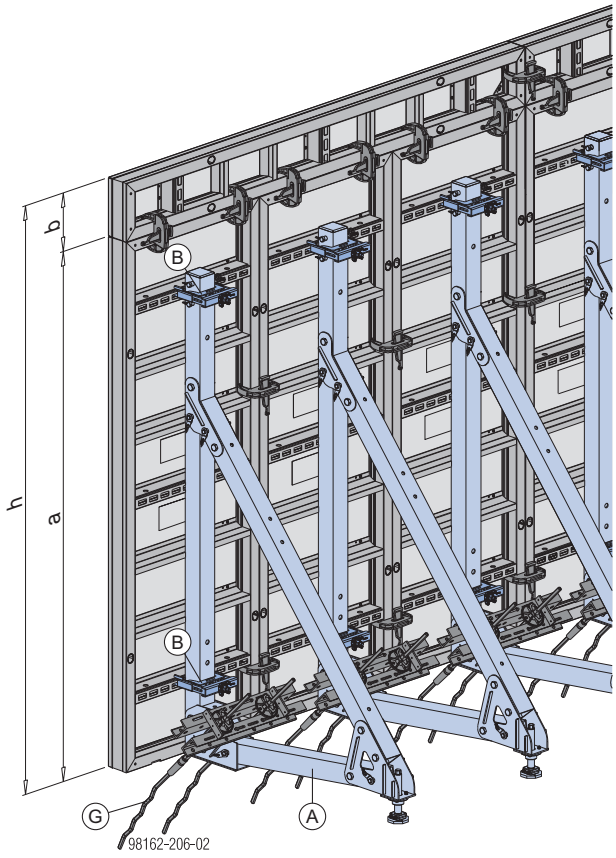
Make sure that the Framax universal walings make full-surface contact with the supporting construction frame.





Pour height up to 3.00 m

Influence width 0.90 m



Pour height h	Panel height a	Height, vertical stacking b
2.70 m	2.70 m	—
3.00 m		0.30 m
	3.00 m	—

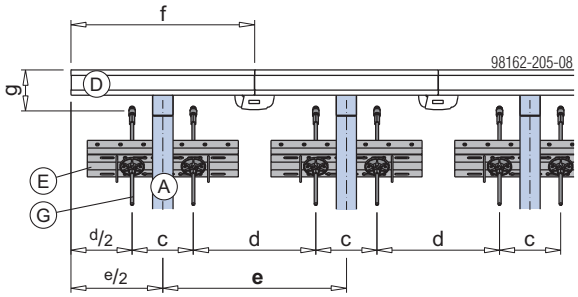
A Supporting construction frame AL 3.00m
B Universal clamp AL
G Anchorage

Panel width 0.90 m

Note:
Also applies for use with Framax Xlife or Framax Xlife plus panels 2.70x2.70m!

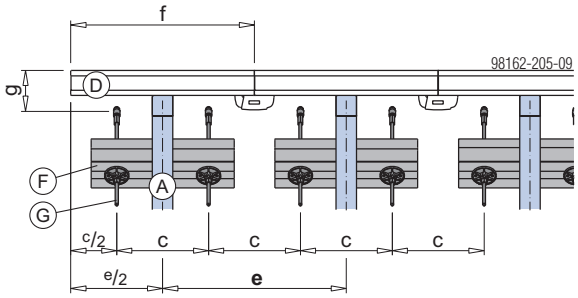
- **Centre-to-centre distance e = 90 cm**
- Panel width f = 90 cm (or 270 cm)

Version 1:



Anchorage centre-to-centre distance c ... 30 cm
Anchorage centre-to-centre distance d ... 60 cm
g ... 20 cm

Version 2:



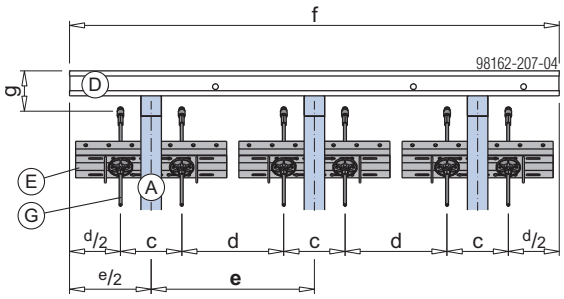
Anchorage centre-to-centre distance c **(uniform) ...** 45 cm
g ... 20 cm

A Supporting construction frame AL 3.00m
D Alu-Framax Xlife panel
E Multi-purpose waling WS10 Top50 0.75m
F Multi-purpose waling WU12 Top50 or Anchor waling 0.70m
G Anchorage

Framax Xlife panel 2.40x2.70m

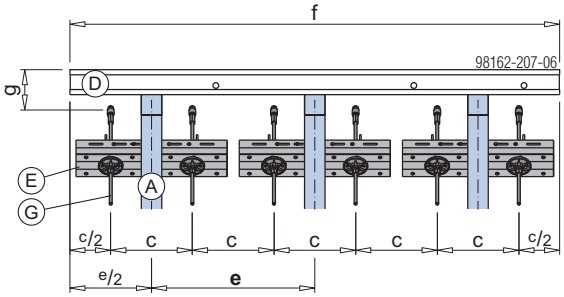
- **Centre-to-centre distance e = 80 cm**
- Panel width f = 240 cm

Version 1:



Anchorage centre-to-centre distance c ... 30 cm
Anchorage centre-to-centre distance d ... 50 cm
g ... 20 cm

Version 2:

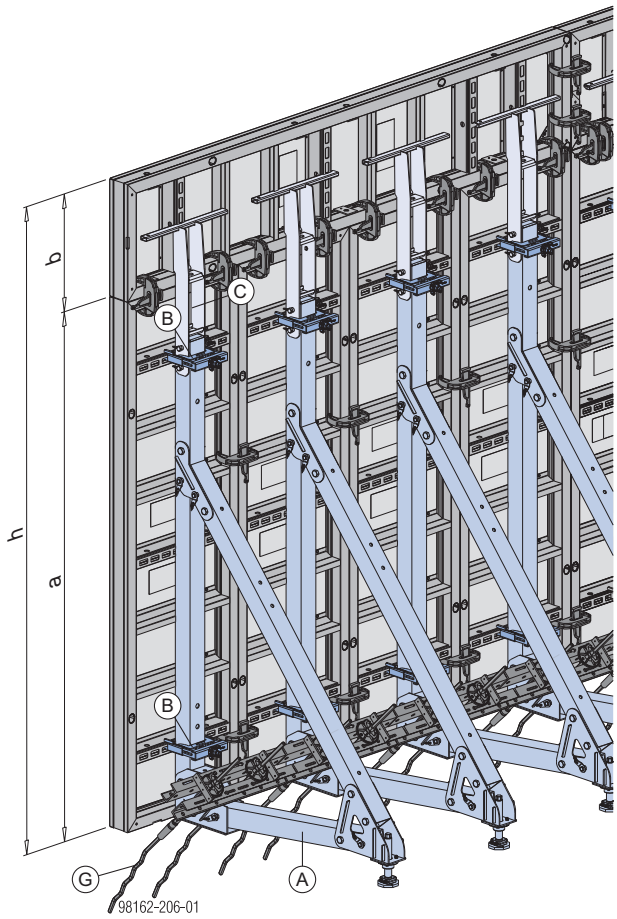


Anchorage centre-to-centre distance c **(uniform) ...** 40 cm
g ... 20 cm

A	Supporting construction frame AL 3.00m
D	Framax Xlife panel 2.40x2.70m
E	Multi-purpose waling WS10 Top50 0.75m
F	Multi-purpose waling WU12 Top50 or Anchor waling 0.70m
G	Anchorage

Pour height up to 3.30 m

- with Extension AL 0.30m
- Influence width 0.75 m



Pour height h	Panel height a	Height, vertical stacking b
3.15 m	2.70 m	0.45 m
3.30 m		0.60 m
	3.00 m	0.30 m
	3.30 m *)	—

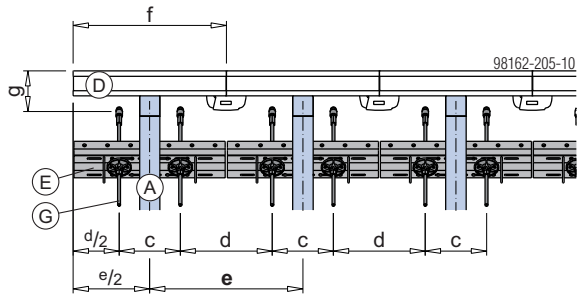
*) Only with Framed formwork Framax Xlife or Framax Xlife plus

A	Supporting construction frame AL 3.00m
B	Universal clamp AL
C	Extension AL 0.30m
G	Anchorage

Panel width 0.75m

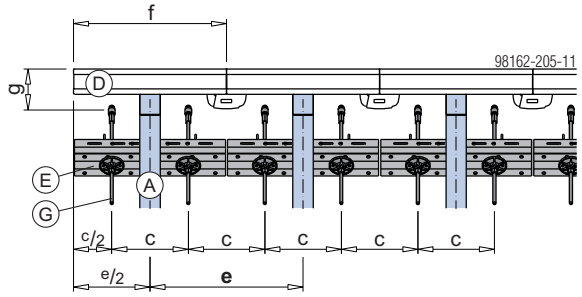
- **Centre-to-centre distance e = 75 cm**
- Panel width f = 75 cm

Version 1:



Anchorage centre-to-centre distance c ... 30 cm
Anchorage centre-to-centre distance d ... 45 cm
g ... 20 cm

Version 2:



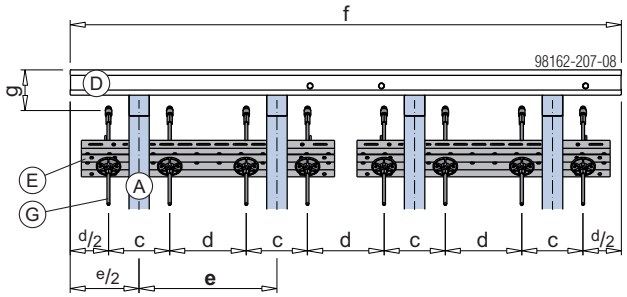
Anchorage centre-to-centre distance c **(uniform) ...** 37.5 cm
g ... 20 cm

A	Supporting construction frame AL 3.00m
D	Alu-Framax Xlife panel
E	Multi-purpose waling WS10 Top50 0.75m
G	Anchorage

Framax Xlife panel 2.70x2.70m bzw. 2.70x3.30m

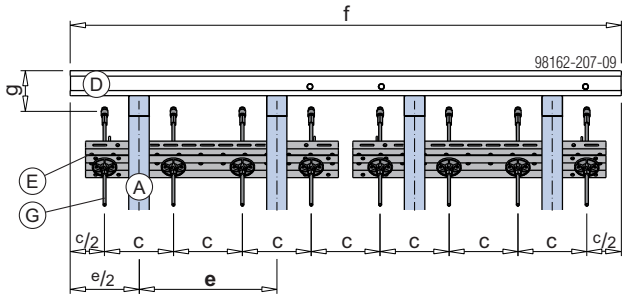
- **Centre-to-centre distance e = 67.5 cm**
- Panel width f = 270 cm

Version 1:



Anchorage centre-to-centre distance c ... 30 cm
Anchorage centre-to-centre distance d ... 37.5 cm
g ... 20 cm

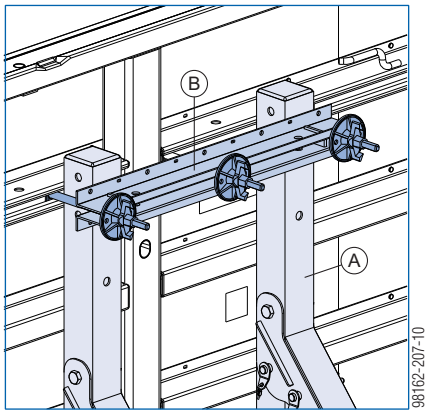
Version 2:



Anchorage centre-to-centre distance c **(uniform) ...** 33.75 cm
g ... 20 cm

A	Supporting construction frame AL 3.00m
D	Framax Xlife or Framax Xlife plus panel
E	Multi-purpose waling WS10 Top50 1.25m
G	Anchorage

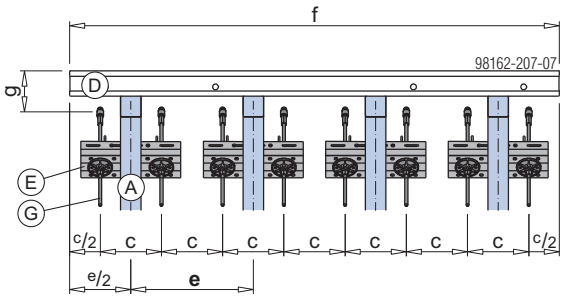
Close-up of fixing for SC frame:



A	Supporting construction frame AL 3.00m
B	Framax universal waling 0.90m

Framax Xlife panel 2.40x3.30m

- **Centre-to-centre distance e = 60 cm**
- Panel width f = 240 cm



Anchorage centre-to-centre distance c (uniform) ... 30 cm
g ... 20 cm

A	Supporting construction frame AL 3.00m
D	Framax Xlife panel 2.40x3.30m
E	Multi-purpose waling WS10 Top50 0.50m
G	Anchorage

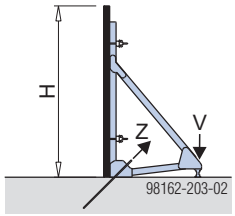
Structural design

The values given in the table are only applicable to forming situations where there is no kicker. In cases with large kickers, the overall stability of the supporting construction frame must be reviewed.

The loading data is stated per girderframe unit for an anchor inclination of 45°.

Pour height up to 3.00 m

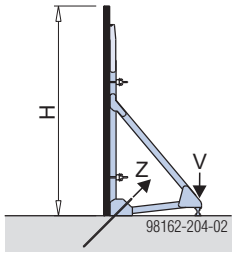
Supporting construction frame AL



Influence width 0.90 m				
Permitted fresh-concrete pressure	Pour height **H** [m]	Anchor force $\mathbf{Z_k}$ [kN]	Shoring force $\mathbf{V_k}$ [kN]	Deformation top [mm]
40 kN/m²	2.70	97	50	2
	3.00	112	68	11

Pour height up to 3.30 m

Supporting construction frame AL extended



Influence width 0.75 m				
Permitted fresh-concrete pressure	Pour height **H** [m]	Anchor force $\mathbf{Z_k}$ [kN]	Shoring force $\mathbf{V_k}$ [kN]	Deformation top [mm]
40 kN/m²	3.15	94	57	9
	3.30	107	75	31

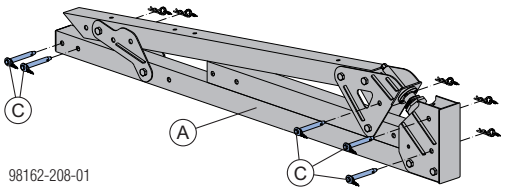
Assembly

Pre-assembly

NOTICE

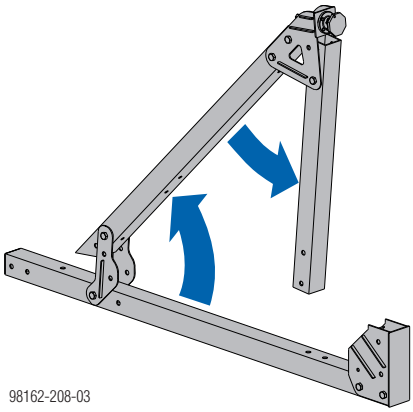
Throughout the assembly process, always make sure that the Supporting construction frame AL is adequately secured against tip-over!

➤ With the Supporting construction frame AL in its as-delivered condition, remove the safety pins from the parked positions.

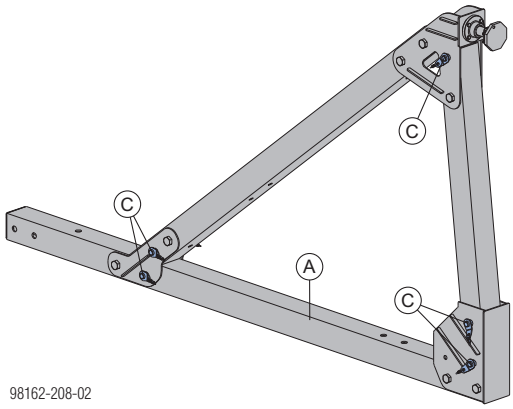


A Supporting construction frame AL 3.00m
C Safety pin

➤ Open up the Supporting construction frame AL.



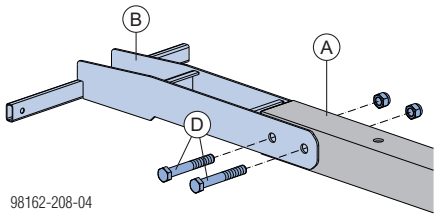
➤ Pin the Supporting construction frame AL with the safety pins and secure the safety pins.



A Supporting construction frame AL 3.00m
C Safety pin

Extending the Supporting construction frame AL

➤ Bolt the Extension AL 0.30m to the supporting construction frame.



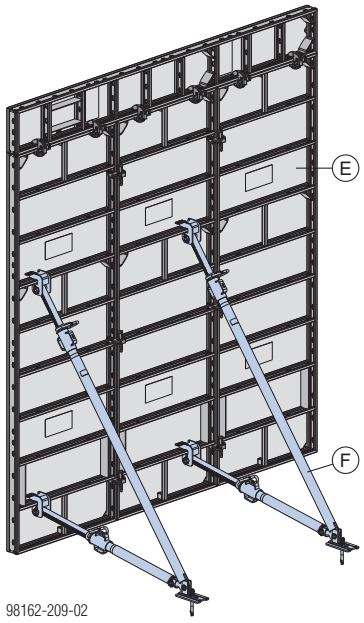
A Supporting construction frame AL 3.00m
B Extension AL 0.30m
D Bolt and lock nut M 20
(Included with product)

Animation: https://player.vimeo.com/video/367967718

Installation on the framed panel

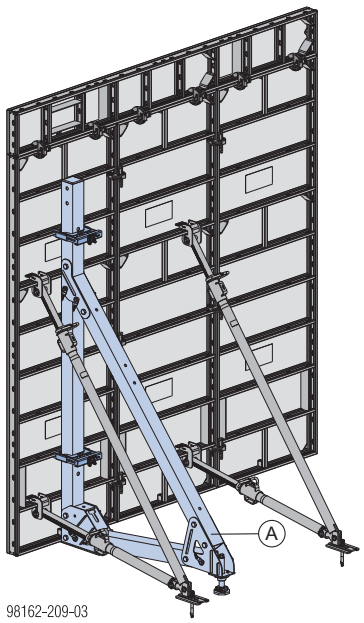
For set-up of the framed formwork (inter-panel connections, stiffening, ...) follow the directions in the User Information booklet of the framed formwork that is being used!

➤ Set up the formwork panels in position, connect them and use panel struts to prevent them from falling over.



E Formwork panel
F Panel strut

➤ Centre the Supporting construction frame AL 3.00m against the upright panel and secure it to the panel.

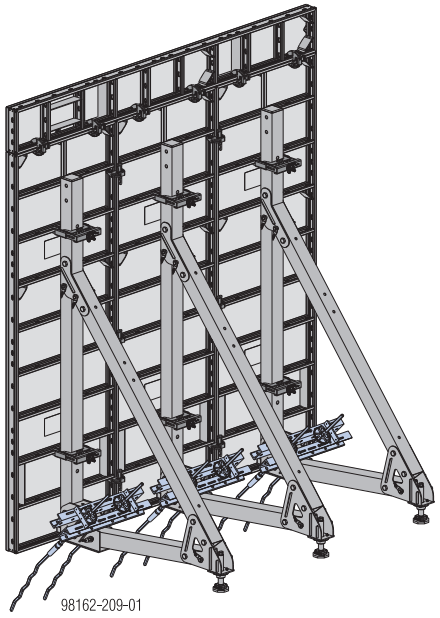


A Supporting construction frame AL 3.00m

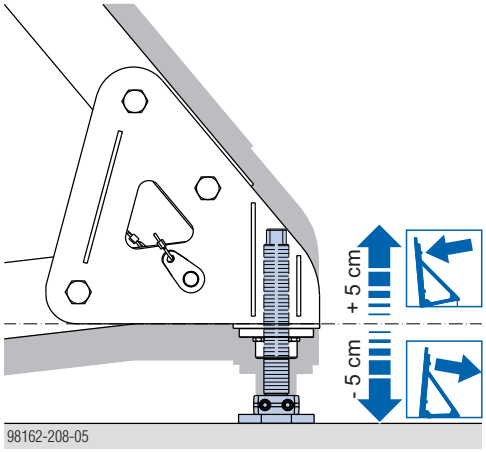
For positioning of the Supporting construction frames AL and securing to the formwork panel see the section applicable to the formwork system used.

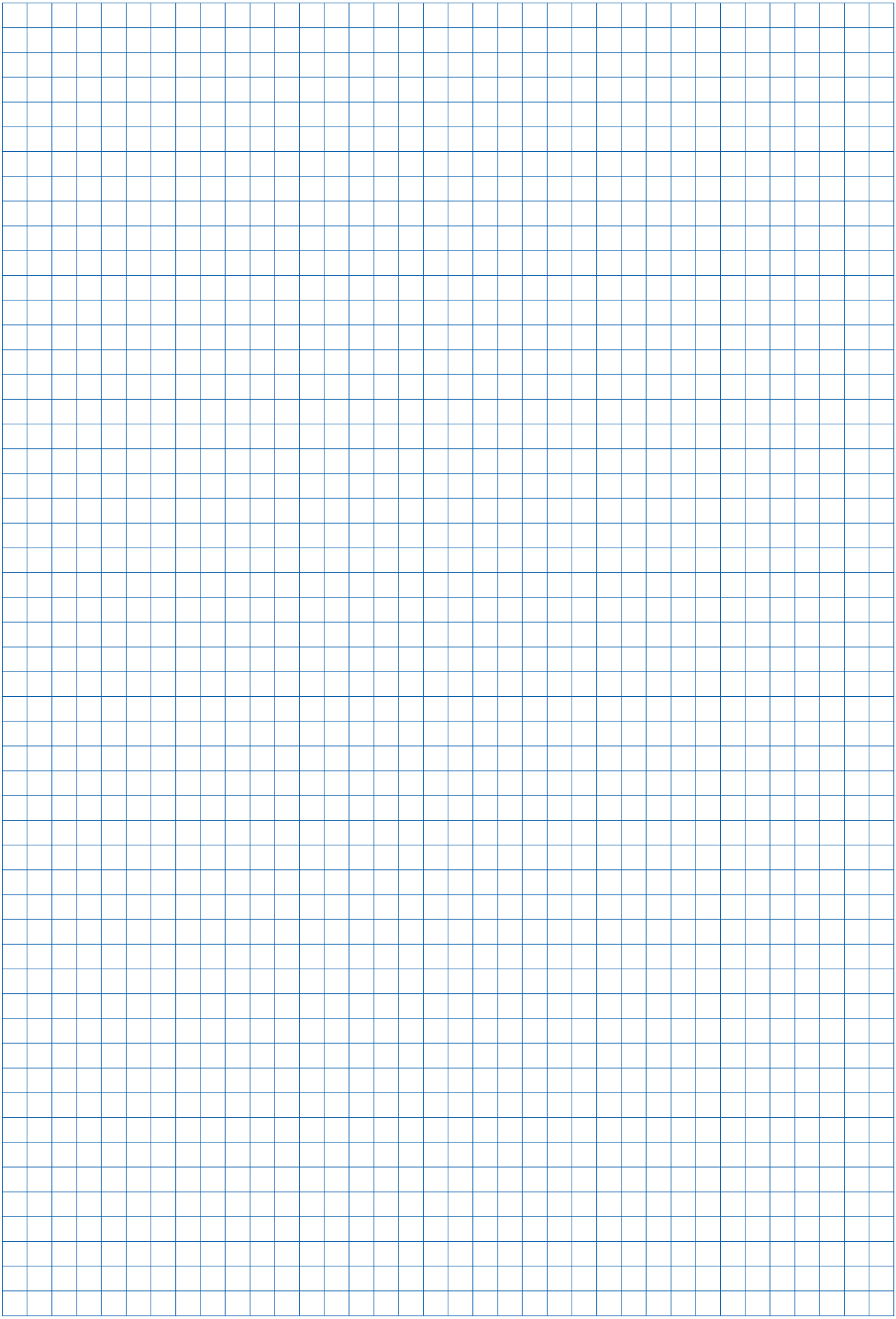
➤ Install the anchorages (follow the directions in the following sections: sections of the formwork system used,
'Transferring the forces which occur',
'Anchoring solutions for the supporting construction frames',
'Fitting diagonal anchors').

➤ Remove the panel struts.



➤ Use the pressure spindle of the supporting construction frame (width across flats 24 mm) to adjust the formwork to the correct angle of inclination.





General

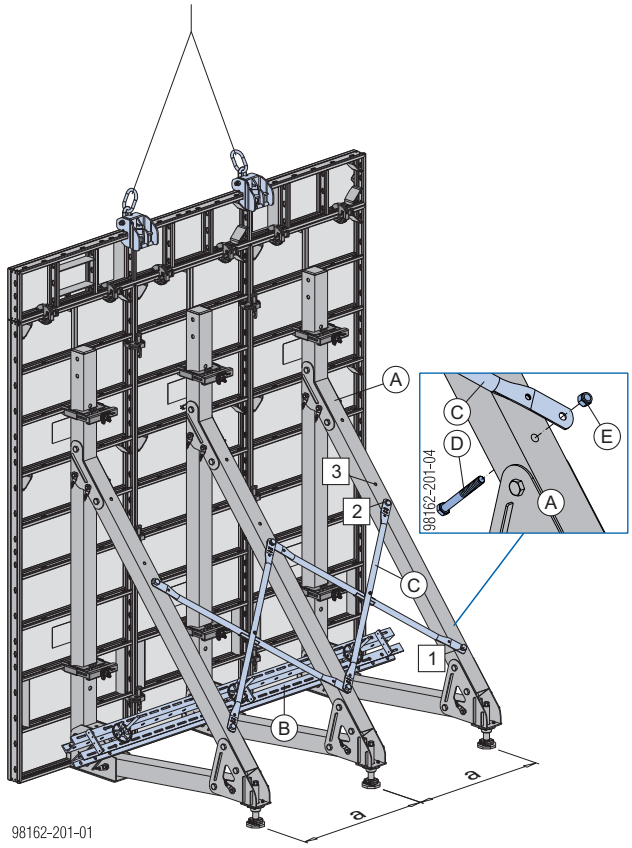
Repositioning unit for crane-lifting

For repositioning a supporting construction frame unit by crane, attach the lifting hooks of the formwork system used to the formwork panels.

NOTICE

- Supporting construction frame units have to be braced with diagonal crosses or scaffold tubes for repositioning.
- The anchor waling has to be secured against overturning and slipping!

Bracing with diagonal cross



Hole **(1)**: Installation of diagonal cross at bottom
Hole **(2)**: Installation of diagonal cross at top when **a**= 90 cm
Hole **(3)**: Installation of diagonal cross at top when **a**= 75 cm

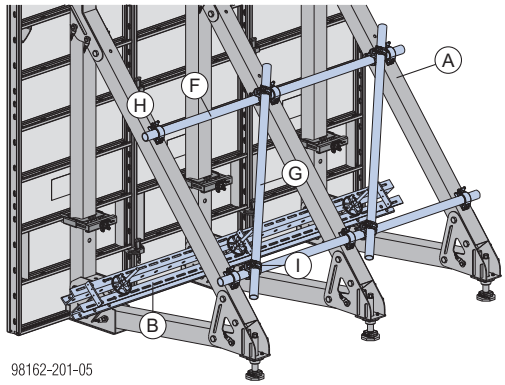
A Supporting construction frame AL 3.00m
B Anchor waling
C Diagonal cross 9.100

Items needed:

		2 girder-frame units		3 girder-frame units	
	Pour height max. [m]	3.00	3.30	3.00	3.30
(C)	Diagonal cross 9.100	1	1	2	2
(D)	Hexagon bolt M16x140 [1]	4	4	6	6
(E)	Hexagon nut M16, self-locking (DIN 982) [2]	4	4	6	6

1) alternatively, Screw-on coupler 48mm 135
2) alternatively, hexagon nut of the screw-on coupler (when screw-on coupler is used)

Bracing with scaffold tubes

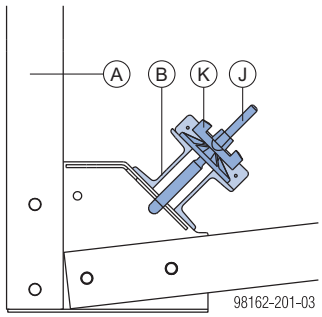


A Supporting construction frame AL 3.00m
B Anchor waling

Items needed:

		2 girder-frame units		3 girder-frame units	
	Pour height max. [m]	3.00	3.30	3.00	3.30
(F)	Scaffold tube 48.3mm 1.00m (horizontal)	2	2	—	—
	Scaffold tube 48.3mm 2.00m (horizontal)	—	—	2	2
(G)	Scaffold tube 48.3mm 1.50m (diagonal)	1	1	2	2
(H)	Screw-on coupler 48mm 135	4	4	6	6
(I)	Swivel coupler 48mm	2	2	4	4

Fixing the anchor waling



A Supporting construction frame AL 3.00m

Items needed:

		2 girder-frame units		3 girder-frame units	
	Pour height max. [m]	3.00	3.30	3.00	3.30
(B)	Multi-purpose waling WS10 Top50 1.50m	1	1	—	—
	Multi-purpose waling WS10 Top50 2.25m	—	—	—	1
	Multi-purpose waling WS10 Top50 2.50m	—	—	1	—
(J)	Framax universal fixing bolt	2	2	3	3
(K)	Super plate 15.0	2	2	3	3

Lifting by crane

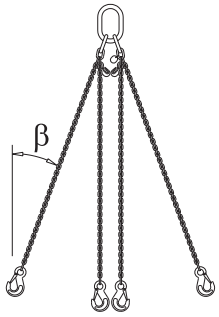
NOTICE

- Permitted lift-in-one unit:
  Supporting construction frame unit with **max. 4 girderframe units**.
- **Only lift/reposition units that have been correctly braced.**
- Before repositioning, **check that the formwork panel is correctly fixed** onto the Supporting construction frame.
- Lifting the supporting construction frames with the formwork attached is **only permitted at near-ground level**.
- Make sure that the **crane lifting tackle is sufficiently long** (oblique pull).
- **Never use the crane to break concrete cohesion!**

WARNING

➤ In all phases of the work, ensure sufficient stability when setting down the supporting construction frame units! (Where necessary, provide ballast, tie-backs or extra shoring.)

Doka 4-part chain 3.20m



CE

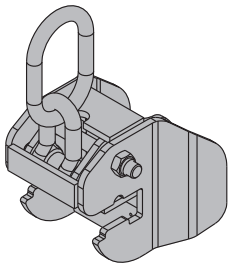
➤ Attach the Doka 4-part chain 3.20m to the lifting hooks.

➤ Hang the remaining chain-lengths back in place.

Max. load-bearing capacity (as 2-part chain):
Up to 30° spread angle β 2400 kg.

Follow the directions in the Operating Instructions!

Frami lifting hook



CE

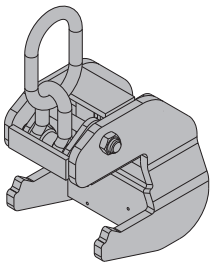
Max. working load limit:

- Sling angle β up to 30°:
  500 kg (1100 lbs) / Frami lifting hook
- Sling angle β up to 7.5°:
  750 kg (1650 lbs) / Frami lifting hook

Frami lifting hooks with the rated working load limit of max. 500 kg (1100 lbs) also comply with the requirements for a working load limit of 750 kg (1650 lbs) at a sling angle β ≤ 7,5°.

Follow the Operating Instructions!

Framax lifting hook



CE

Max. working load limit:

- Sling angle β up to 30°:
  1000 kg (2200 lbs) / Framax lifting hook
- Sling angle β up to 7.5°:
  1500 kg (3300 lbs) / Framax lifting hook

Framax lifting hooks with the rated working load limit of max. 1000 kg (2200 lbs) also comply with the requirements for a working load limit of 1500 kg (3300 lbs) at a sling angle β ≤ 7.5°.

Follow the Operating Instructions!

NOTICE

On larger gangs, the **Framax lifting hook 20kN** must be used together with a **two-part lifting chain with sufficient working load limit**.

Follow the directions in the 'Framax lifting hook 20kN' Operating Instructions!

Pouring platforms

NOTICE

Because of the great flexibility with which SC-frame units can be set up and combined with different formwork systems and heights, consideration should be given at the planning stage to which platform configuration is most suitable for the intended application (collision test, maximum drops etc.).

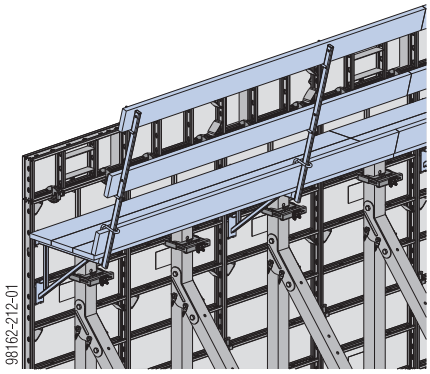
Also consider the situation applying during lifting of the SC-frame units, particularly when the platforms are above the crane hoisting points.

Observe all applicable safety regulations.

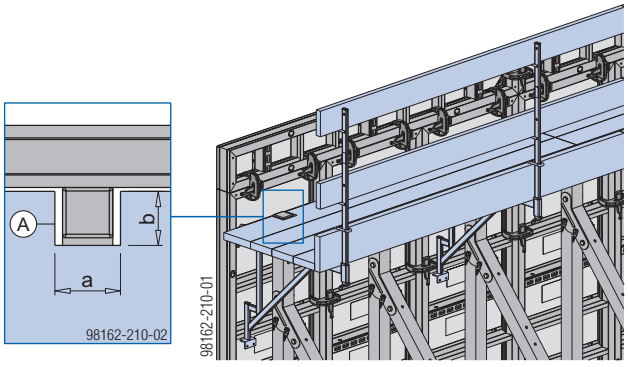
The pouring platforms and brackets belonging to the formwork system can still be used. As with normal wall formwork, these are mounted directly onto the formwork.

Follow the directions in the relevant User Information booklet.

Example:
Framed formwork Frami Xlife with Frami bracket 60



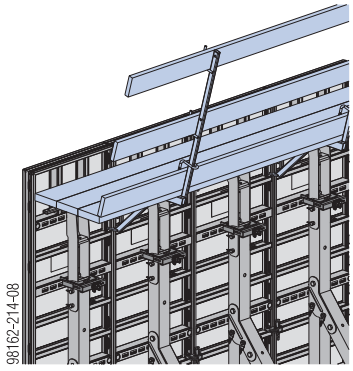
Example:
Framed formwork Alu-Framax Xlife with Framax bracket 90



a ... 13 cm
b ... 11 cm

A Cut-out in platform decking

Example:
Framed formwork DokaXlight with DokaXlight bracket 60

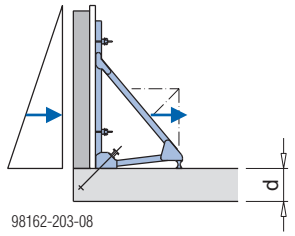


Transferring the forces which occur

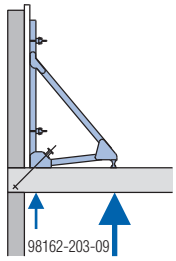
NOTICE

The high anchoring and reaction forces which occur when supporting construction frames are used necessitate a number of additional **safety precautions**.

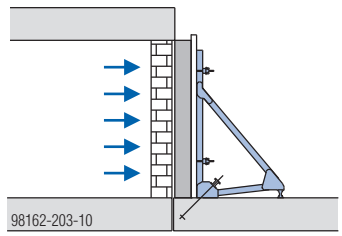
- For tension anchoring select the tie-rod system to suit statics requirements.
- Reinforce all structure members sufficiently.
- The forces can only be transferred safely into the anchorage foundation where the concrete slab (d) is sufficiently thick.



- Verify the stability of each of the structure members – and, if necessary, of the entire structure.
- Setting up supporting construction frames on floor-slabs: Use adequately dimensioned supports to transfer the loads to the floors below, and ultimately to the foundations, to the extent necessary to enable all floor slabs to withstand the load imposed on them by the SC-frames.



- Perform a calculation for punching, if necessary.
- Verify the capacity of the 'opposing side' (walls, rock) and secure with separate shoring if necessary.



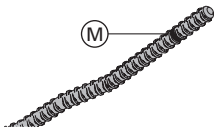
- Separate statical calculations are required for any versions deviating from those outlined in this booklet.

Anchoring solutions for the supporting construction frames

The loads from the diagonal anchors are transferred via anchor walings. Set two anchors for each supporting construction frame. Separate statics calculation is required for anchoring with only one anchor per supporting construction frame!

In each anchoring system, there are two variants to choose between:

- **With pigtail anchor**
  This is **the** anchorage method that can best transfer the high tensile forces from SC-frames into the foundation slabs.



M The depth mark must always be at the end fitted into the she-bolt

- **With stop anchor**

CAUTION

➤ It is forbidden to mix suspension components that have different depths of concrete cover!

➤ Always screw in components until they are fully engaged. When correctly fitted, there will still be 1 cm of thread visible between the part and the depth mark on the stop anchor or pigtail anchor.

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.

Permitted loads for anchor walings

Anchor waling	Permitted anchor force Z
Multi-purpose waling WS10 Top50	151 kN
Multi-purpose waling WU12 Top50	215 kN
Top100 tec waling WU14	285 kN
Multi-purpose waling SL-1 WU16	322 kN
Anchor waling 1.95m and 2.95	402 kN
Anchoring profile 0.55m	700 kN

NOTICE

The tensile forces that can be sustained only apply where the anchor is positioned exactly as required, i.e. 15 cm either side of the vertical axis of the SC-frame.

Dimensioning the anchorages

The required **cube compressive strength** of the concrete at the time of loading must be specified separately for each project **by the structural designer**. It will depend on the following factors:

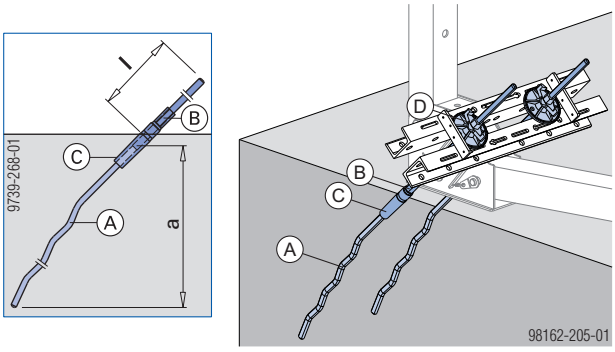
- load actually occurring
- length of stop anchor or pigtail anchor
- reinforcement / extra reinforcement steel
- distance from edge

The introduction of the forces, the transfer of these forces into the structure, and the stability of the overall construction, must all be verified by the structural designer.

Follow the directions in the Calculation Guide entitled 'Load-bearing capacity of anchorages in concrete', and/or ask your Doka technician!

Tie rod system 15.0

Variant using pigtail anchor



a ... min. 39.5 cm - max. 52 cm

A Pigtail anchor 15.0 (expendable anchoring component)

B She-bolt 15.0 5cm (nominal length l=65 cm) incl. **(C)**
She-bolt 15.0 5cm 1.20m (nominal length l=120 cm) incl. **(C)**

C Sealing sleeve 15.0 5cm (expendable anchoring component)

D Super plate 15.0

Note:
She-bolts are supplied with sealing sleeves. Before every re-use, fit a new sealing sleeve to facilitate removal.

Tools for removing she-bolts:

- Tie-rod wrench 15.0/20.0 or
- Fork wrench 24

Alternative method of preparing the positioning-point

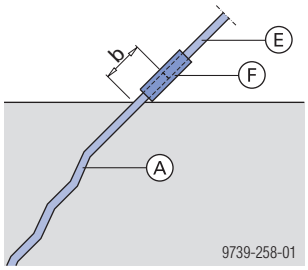
- Positioning cone 15.0 5cm with Sealing sleeve 15.0 5cm[1)]
- Tie rod 15.0mm (length as required)

Dismantling tools:

- for the Positioning cone: Positioning cone spanner 15.0 DK
- for turning the tie rod: Tie rod wrench 15.0/20.0

Another alternative:

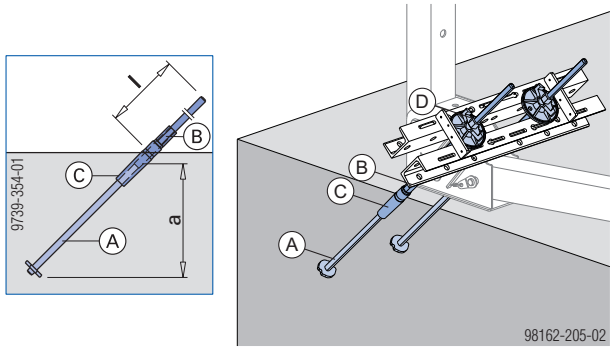
Pigtail anchor protrudes from concrete:
Instead of the she-bolt, fasten a Tie rod 15.0mm to the pigtail anchor using a Rod connector 15.0.



b ... min. 8.0 cm - max. 10.0 cm

A	Pigtail anchor 15.0
E	Tie rod 15.0mm
F	Rod connector 15.0

Variant using stop anchor



	a
Stop anchor 15.0 40cm 55	30 cm
Stop anchor 15.0 16cm 55	13 cm

A	Stop anchor 15.0 (expendable anchoring component)
B	She-bolt 15.0 5cm (nominal length l=65 cm) incl. **(C)** or She-bolt 15.0 5cm 1.20m (nominal length l=120 cm) incl. **(C)**
C	Sealing sleeve 15.0 5cm (expendable anchoring component)
D	Super plate 15.0

Note:
She-bolts are supplied with sealing sleeves. Before every re-use, fit a new sealing sleeve to facilitate removal.

Tools for removing she-bolts:

- Tie-rod wrench 15.0/20.0 or
- Fork wrench 24

Alternative method of preparing the positioning-point

- Positioning cone 15.0 5cm with Sealing sleeve 15.0 5cm[1)]
- Tie rod 15.0mm (length as required)

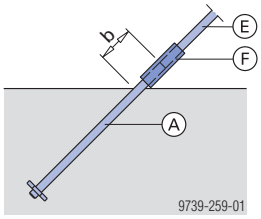
Dismantling tools:

- for the Positioning cone: Positioning cone spanner 15.0 DK
- for turning the tie rod: Tie rod wrench 15.0/20.0

Another alternative:

Stop anchor protrudes from concrete:
Instead of the she-bolt, fasten a Tie rod 15.0mm to the stop anchor using a Rod connector 15.0.

➤ The Stop anchor 15.0 16cm 55 is not suitable here!
Placement depth is too shallow!



b ... min. 8.0 cm - max. 10.0 cm

A	Stop anchor 15.0 40cm 55
E	Tie rod 15.0mm
F	Rod connector 15.0

Retrofitting anchorages in the concrete

Follow the directions in the ‘Rock-anchor spreader unit 15.0’ Fitting Instructions!

- Tie rod 15.0mm
- Rock anchor spreader unit 15.0 [1)]

[1)] Expendable anchoring component

Extra components needed for preparing the anchoring point:

- Tensioning instrument 300kN, consisting of
  - 1 hollow-piston cylinder
  - 1 hydraulic hand pump
  - 1 pressure support
  - 1 carrying case
  - 1 Rock anchor installation tube
- Tie-rod wrench 15.0/20.0
- Super plate 15.0
- Rock drill-bits diam. 37 or 38 mm

Observe load-bearing capacity as stated in the section headed ‘Carrying out the acceptance test’ in the ‘Rock anchor spreader unit 15.0’ Fitting Instructions!

Note:
Also, a slip-proof support surface must be provided so that the Tensioning instrument B can be used at a 45° angle.

Fitting diagonal anchors

In everyday site practice, there are various different ways of preparing positioning points for diagonal anchors at a precise angle (usually 45°), depending on the site situation.

The following examples show several possible and effective variants. These apply equally to the use of either pigtail anchors or stop anchors.

NOTICE

Fit the anchors at a 45° angle!

Fitting a diagonal anchor at a steeper angle than this increases the load!

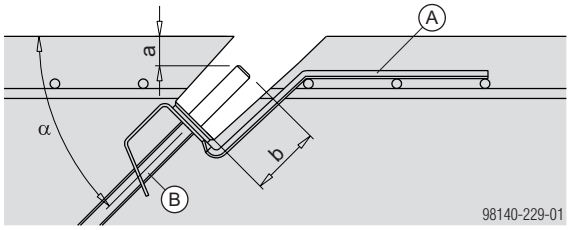
If the angle is increased by 10° (to 55°), this increases the load on the tie rod by over 20% and may thus lead to serious overloading.

Anchor holders and clearance cones

For precise location and directionally stable fitting of anchoring components at a 45° angle.

Follow the directions in the 'Clearance cones' Fitting Instructions!

Fitting dimensions



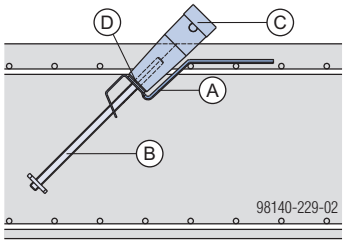
a ... Placement depth 30 mm (=concrete cover)
b ... Screw-in depth 70 mm
α ... 45°

A	Anchor holder
B	Stop anchor or pigtail anchor

Installation:

➤ Mount an anchor holder on the tie rod and fasten it to the top reinforcement.

➤ Insert a sealing disc and install the clearance cone.



A	Anchor holder
B	Stop anchor or pigtail anchor
C	Clearance cone
D	Sealing disc 15/43 15.0 (Anchor holder 15.0)

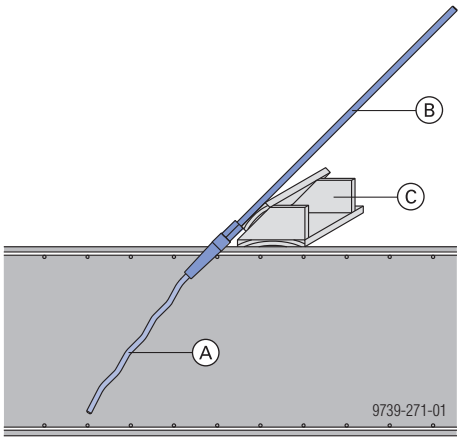
➤ After pouring, replace the clearance cone with a shebolt.

Wooden template

This method permits variable distribution of the positioning points, and can therefore be re-used in any situation.

Alternatively, a clear, fixed arrangement of the positioning points can be made with nailed-on wedges of square-sawn timber.

Many variations are possible on this theme, meaning that this example can be optimised for the case in hand.



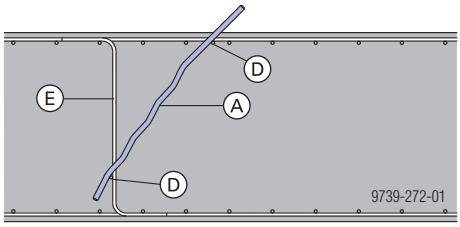
A Pigtail anchor or stop anchor
B She-bolt with sealing sleeve
C Wooden template

Fixing to reinforcements

Variant 1

By using two extra longitudinally-placed reinforcement rods, the anchor can be firmly fixed so that it safely withstands pouring.

The extra hoop means that the bottom reinforcement rod can be fitted in a relatively exact position.

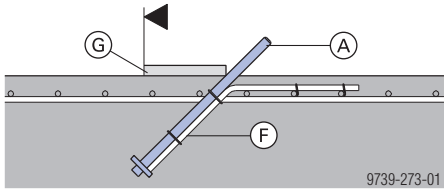


A Pigtail anchor or stop anchor
D Extra reinforcement rod
E Extra hoop

Variant 2

The stop anchor or pigtail anchor can be fixed to the longitudinal reinforcements with the aid of an extra hoop.

A suitably wide spacer board makes it easier to achieve exact positioning.



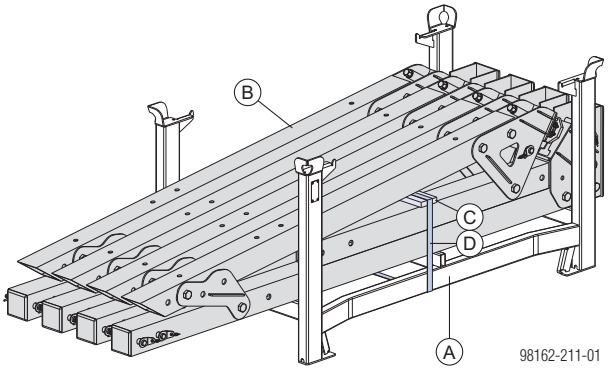
▲ ... Inside line of wall

A Stop anchor 15.0 40cm 55 or 20.0 40cm 55
F Hoop with stop anchor, fastened to reinforcement
G Spacer board

Transporting, stacking and storing

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

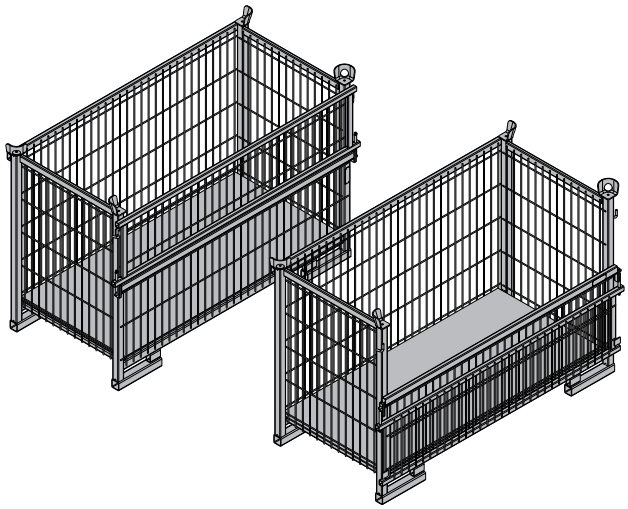
Transport of Supporting construction frames AL



A	Doka stacking pallet 1.55x0.85m
B	Supporting construction frame AL 3.00m
C	Sleeper, e.g. 2.2x10 cm
D	Strapping tape

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

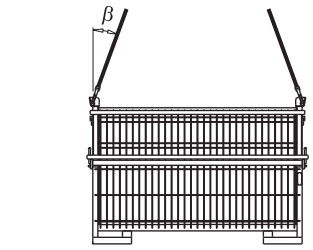
Stacked multi-trip boxes or pallets must have the heaviest boxes at the bottom and the lightest at the top.

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 working load limit.
- Sling angle β max. 30°!



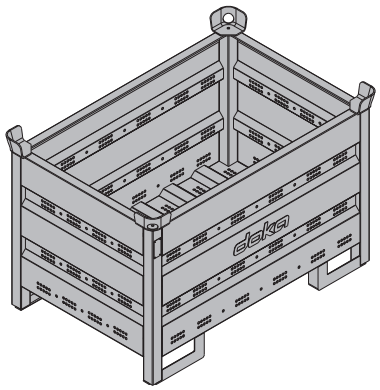
Repositioning by forklift truck or pallet stacking truck

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

Doka multi-trip transport box

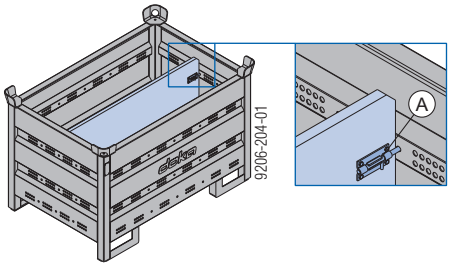
Storage and transport device for small items

Doka multi-trip transport box 1.20x0.80m



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

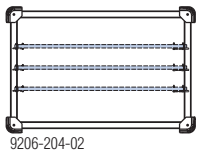
Different items in the Doka multi-trip transport box can be kept separate with the **Multi-trip transport box partitions 1.20m or 0.80m**.

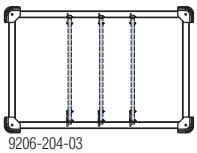


A Slide-bolt for fixing the partition

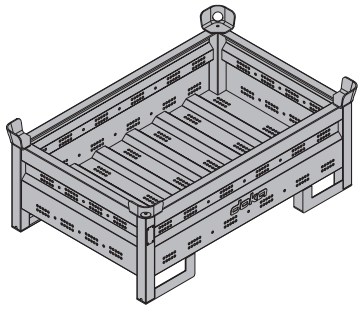
Possible ways of dividing the box

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

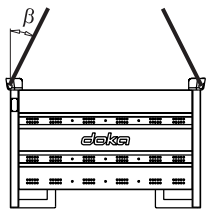
Stacked multi-trip boxes or pallets must have the heaviest boxes at the bottom and the lightest at the top.

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 working load limit.
- Sling angle β max. 30°!



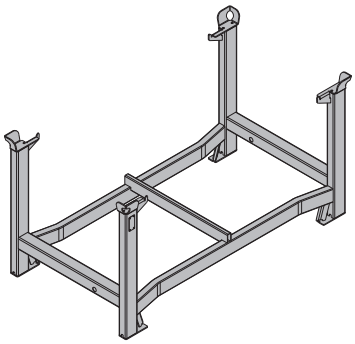
9206-202-01

Repositioning by forklift truck or pallet stacking truck

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

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

Storage and transport devices for long items.



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

Using Doka stacking pallets as storage units

Max. n° of units on top of one another

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

NOTICE

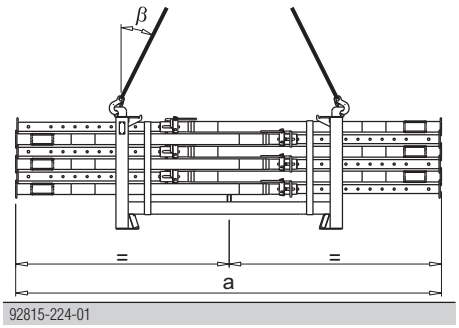
- Stacked multi-trip boxes or pallets must have the heaviest boxes at the bottom and the lightest at the top.
- **How to use with Bolt-on castor set B:**
  - Always apply the fixing brake when the container is 'parked'.
  - When Doka stacking pallets are stacked, the bottom pallet must NOT be one with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

Using Doka stacking pallets as transport devices

Lifting by crane

NOTICE

- Multi-trip packaging items may only be lifted one at a time.
- Use a suitable crane suspension tackle (e.g. Doka 4-part chain 3.20m).
  Do not exceed the permitted working load limit.
- Load the items centrically.
- Fasten the load to the stacking pallet so that it cannot slide or tip out.
- Sling 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

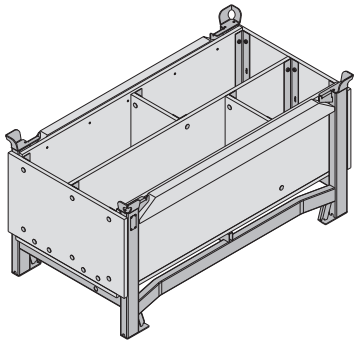
Repositioning by forklift truck or pallet stacking truck

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

NOTICE

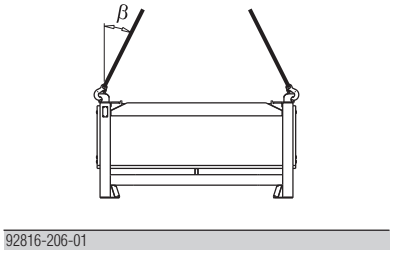
- Stacked multi-trip boxes or pallets must have the heaviest boxes at the bottom and the lightest at the top.
- **How to use with Bolt-on castor set B:**
  - Always apply the fixing brake when the container is 'parked'.
  - When Doka stacking pallets are stacked, the bottom pallet must NOT be one with a bolt-on 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 working load limit.
- Sling angle β max. 30°!

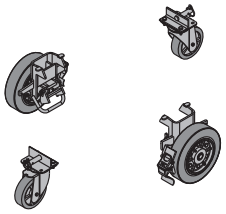


Repositioning by forklift truck or pallet stacking truck

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

Bolt-on castor set B

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

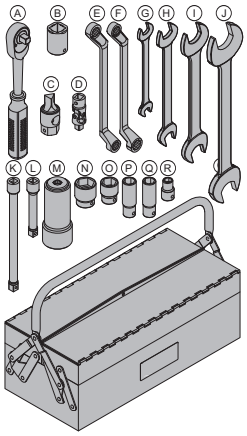
- Doka accessory box
- Doka stacking pallets
- Protective barrier Z pallet

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

	[kg]	Article N°
Supporting construction frame AL 3.00m Abstützbock AL 3,00m Aluminium Length: 145 cm Height: 245 cm	**55.0**	**582957000**
Extension AL 0.30m Verlängerung AL 0,30m Galvanised Width: 10.5 cm Height: 75 cm	**8.0**	**582958000**
Multi-purpose waling WS10 Top50 0.50m	**10.2**	**580001000**
Multi-purpose waling WS10 Top50 0.75m	**14.9**	**580002000**
Multi-purpose waling WS10 Top50 1.00m	**19.6**	**580003000**
Multi-purpose waling WS10 Top50 1.25m	**24.7**	**580004000**
Multi-purpose waling WS10 Top50 1.50m	**29.7**	**580005000**
Multi-purpose waling WS10 Top50 1.75m	**35.0**	**580006000**
Multi-purpose waling WS10 Top50 2.00m	**38.9**	**580007000**
Multi-purpose waling WS10 Top50 2.25m	**44.2**	**580008000**
Multi-purpose waling WS10 Top50 2.50m Mehrzweckriegel WS10 Top50 Painted blue	**48.7**	**580009000**
Multi-purpose waling WU12 Top50 1.00m	**25.3**	**580018000**
Multi-purpose waling WU12 Top50 1.25m	**32.0**	**580019000**
Multi-purpose waling WU12 Top50 1.50m	**37.5**	**580020000**
Multi-purpose waling WU12 Top50 1.75m	**44.2**	**580021000**
Multi-purpose waling WU12 Top50 2.00m	**50.0**	**580022000**
Multi-purpose waling WU12 Top50 2.50m Painted blue	**63.1**	**580023000**
Universal clamp AL Universalklemme AL Galvanised	**3.3**	**582959000**
Frami universal waling 0.70m	**3.7**	**588439000**
Frami universal waling 1.25m Frami-Klemmschiene Painted blue	**6.4**	**588440000**
Frami profile connector 5-18cm Frami-Profilverbinder 5-18cm Galvanised Length: 33 cm	**0.80**	**588493000**

	[kg]	Article N°
Framax universal waling 0.60m	**6.6**	**588689000**
Framax universal waling 0.90m Painted blue	**10.6**	**588150000**
Framax universal fixing bolt 10-16cm Framax-Universalverbinder 10-16cm Galvanised Length: 26 cm	**0.60**	**588158000**
Framax universal fixing bolt 10-25cm Framax-Universalverbinder 10-25cm Galvanised Length: 36 cm	**0.69**	**583002000**
Diagonal cross 9.100 Diagonalkreuz 9.100 Galvanised Delivery condition: folded closed	**4.1**	**582772000**
Screw-on coupler 48mm 135 Anschraubkupplung 48mm 135 Galvanised Width-across: 22 mm Follow the directions in the "Fitting instructions"!	**0.92**	**582892000**
Swivel coupler 48mm Drehkupplung 48mm Galvanised Width-across: 22 mm Follow the directions in the "Fitting instructions"!	**1.5**	**582560000**
Scaffold tube 48.3mm 1.00m	**3.6**	**682014000**
Scaffold tube 48.3mm 1.50m	**5.4**	**682015000**
Scaffold tube 48.3mm 2.00m	**7.2**	**682016000**
Scaffold tube 48.3mm 2.50m Gerüstrohr 48,3mm Galvanised	**9.0**	**682017000**
Testing truss for diagonal anchors 15.0/20.0 Prüfbock für Schräganker 15,0/20,0 Galvanised Length: 32 cm Width: 25 cm Height: 19 cm	**13.5**	**580514000**

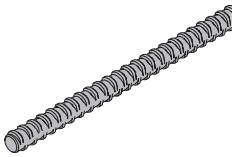
	[kg]	Article N°
Universal tool box 15.0 Universal-Werkzeugbox 15,0 included in scope of supply:	**8.4**	**580392000**
(A) **Reversible ratchet 1/2"** Galvanised	**0.73**	**580580000**
(B) **Square nut 22**	**0.31**	**580589000**
(C) **Positioning cone spanner 15.0 DK** Galvanised Length: 8 cm Width-across: 30 mm	**0.30**	**580579000**
(D) **Universal joint coupling 1/2"**	**0.16**	**580583000**
(E) **Ring spanner 16/18**	**0.23**	**580644000**
(F) **Ring spanner 17/19**	**0.27**	**580590000**
(G) **Fork wrench 13/17**	**0.08**	**580577000**
(H) **Fork wrench 22/24**	**0.22**	**580587000**
(I) **Fork wrench 30/32**	**0.80**	**580897000**
(J) **Fork wrench 36/41**	**1.0**	**580586000**
(K) **Extension 22cm 1/2"**	**0.31**	**580582000**
(L) **Extension 11cm 1/2"**	**0.20**	**580581000**
(M) **Box spanner 41**	**0.99**	**580585000**
(N) **Box nut 30 1/2"**	**0.20**	**580575000**
(O) **Box nut 24 1/2"**	**0.12**	**580584000**
(P) **Box nut 19 1/2" L**	**0.16**	**580598000**
(Q) **Box nut 18 1/2" L**	**0.15**	**580642000**
(R) **Box nut 13 1/2"**	**0.06**	**580576000**



Tie rod system 15.0

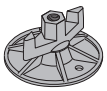
Tie rod 15.0mm galvanised 0.50m	**0.72**	**581821000**
Tie rod 15.0mm galvanised 0.75m	**1.1**	**581822000**
Tie rod 15.0mm galvanised 1.00m	**1.4**	**581823000**
Tie rod 15.0mm galvanised 1.25m	**1.8**	**581826000**
Tie rod 15.0mm galvanised 1.50m	**2.2**	**581827000**
Tie rod 15.0mm galvanised 1.75m	**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	**1.4**	**581873000**

Ankerstab 15,0mm



DIN 18216

	[kg]	Article N°
Super plate 15.0 Superplatte 15,0	**1.1**	**581966000**



Galvanised
Height: 6 cm
Diameter: 12 cm
Width-across: 27 mm

DIN 18216

Hexagon nut 15.0 Sechskantmutter 15,0	**0.23**	**581964000**

Galvanised
Length: 5 cm
Width-across: 30 mm

DIN 18216

Framax pressure plate 6/15 Framax-Druckplatte 6/15	**0.80**	**588183000**

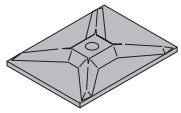
Galvanised

Wing nut 15.0 Flügelmutter 15,0	**0.31**	**581961000**

Galvanised
Length: 10 cm
Height: 5 cm
Width-across: 27 mm

DIN 18216

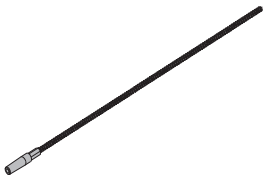
Anchor plate 15/20 Ankerplatte 15/20	**1.8**	**581929000**



Galvanised

DIN 18216

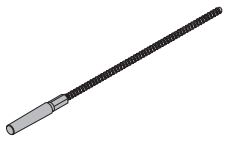
She-bolt 15.0 5cm 1.20m Ankerkopf 15,0 5cm 1,20m	**2.5**	**581832000**



Galvanised
Length: 131 cm
Width-across: 24 mm
Follow the directions in the "Fitting instructions"!

DIN 18216

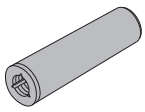
She-bolt 15.0 5cm Ankerkopf 15,0 5cm	**1.7**	**581972000**



Galvanised
Length: 76 cm
Width-across: 24 mm
Follow the directions in the "Fitting instructions"!

DIN 18216

Positioning cone 15.0 5cm Vorlaufkonus 15,0 5cm	**0.43**	**581969000**



Galvanised
Length: 11 cm
Diameter: 3 cm
Follow the directions in the "Fitting instructions"!

Sealing sleeve 15.0 5cm Dichtungshülse 15,0 5cm	**0.008**	**581990000**

Orange
Length: 10 cm
Diameter: 3 cm

Rod connector 15.0 Verbindungsmuffe 15,0	**0.49**	**581981000**

Non-treated
Length: 10.5 cm
Diameter: 3.2 cm

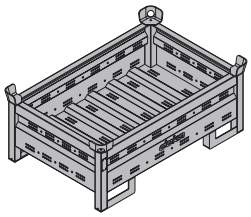
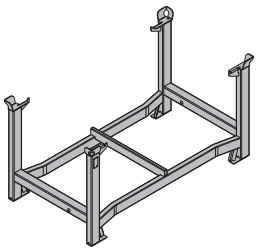
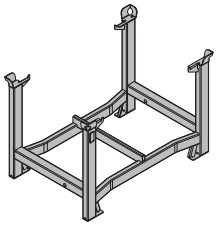
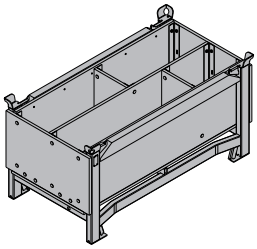
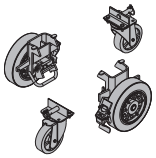
DIN 18216

	[kg]	Article N°
Pigtail anchor 15.0 Wellenanker 15,0 Non-treated Length: 67 cm	**0.92**	**581984000**
Stop anchor 15.0 A40 Sperranker 15,0 A40 Non-treated	**0.71**	**581999000**
Stop anchor 15.0 A21 Sperranker 15,0 A21 Non-treated	**0.44**	**581884000**
Anchor holder 15.0 Ankerhalter 15,0 Non-treated	**0.43**	**581835000**
Sealing disc 15/43 15.0 Dichtscheibe 15/43 15,0 Black Diameter: 4.2 cm	**0.002**	**581885000**
Clearance cone 15.0 Freistellkonus 15,0 Black Blue Length: 20.6 cm Diameter: 7 cm Follow the directions in the "Fitting instructions"!	**0.51**	**581865000**
Rock anchor spreader unit 15.0 Felsanker-Spreizeinheit 15,0 Galvanised Length: 9 cm Diameter: 4 cm Follow the directions in the "Fitting instructions"!	**0.41**	**581120000**
Rock anchor installation tube Felsanker-Einbaurohr Galvanised Length: 50 cm Diameter: 3 cm	**0.85**	**581123000**
Tensioning instrument 300kN Vorspanngerät 300kN Galvanised	**32.0**	**581815000**

	[kg]	Article N°
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	**1.8**	**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**

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**

	[kg]	Article N°
Doka multi-trip transport box 1.20x0.80x0.41m Doka-Mehrwegcontainer 1,20x0,80x0,41m Galvanised 	**42.5**	**583009000**
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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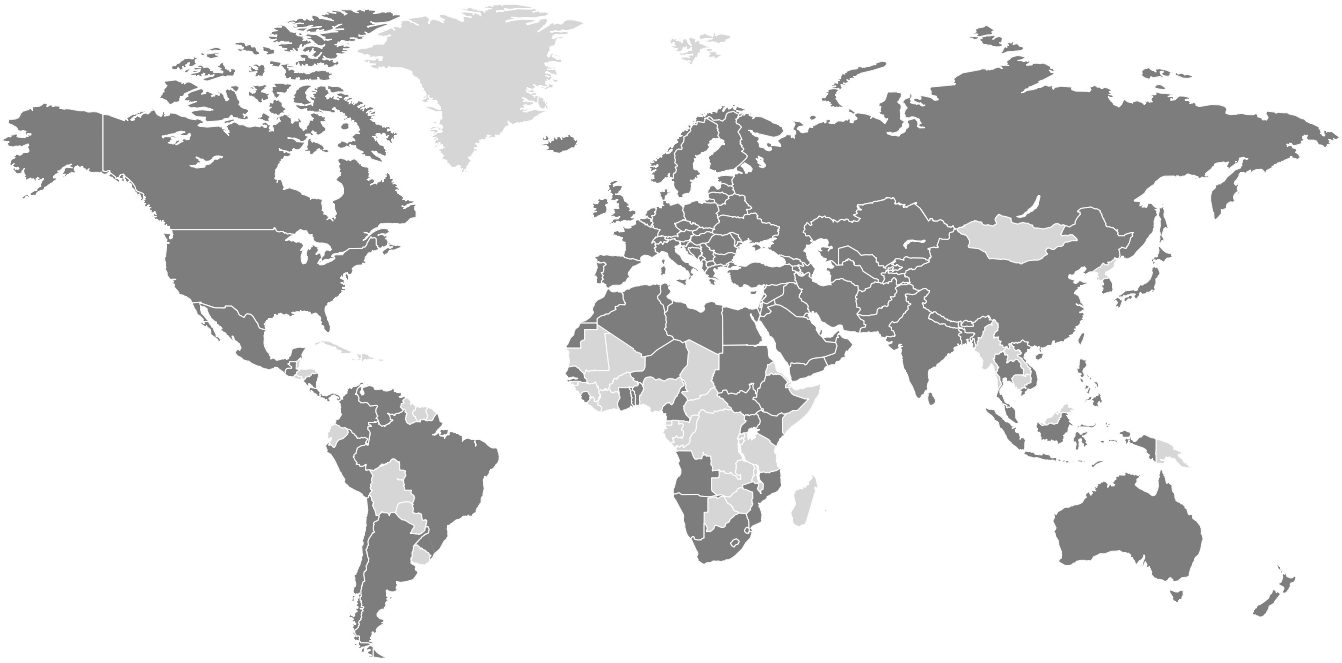

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