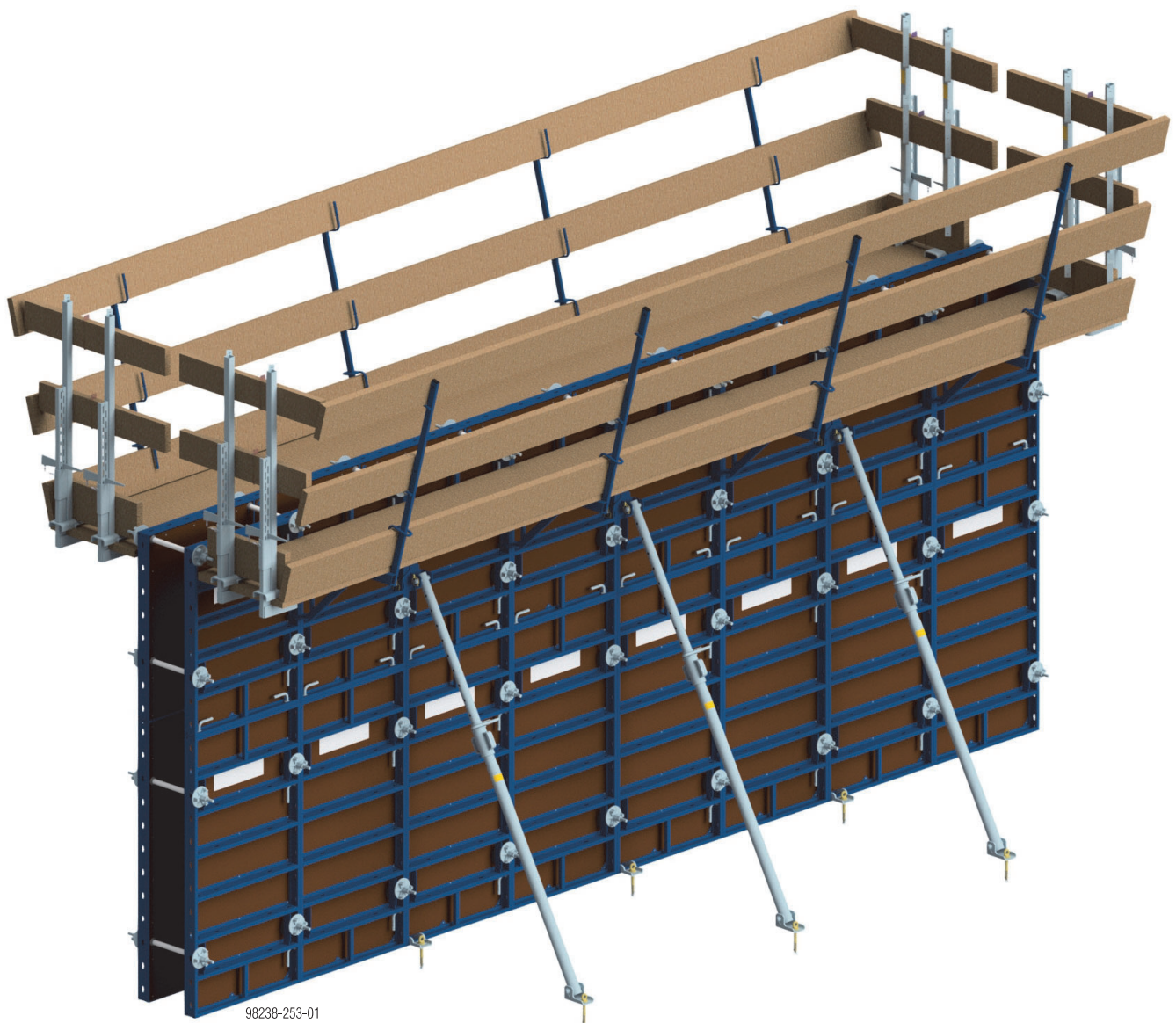


DokaFit Handset

User Information

Instructions for assembly and use (Method statement)



98238-253-01

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Introduction

Elementary safety warnings

User target groups

- This booklet is aimed at all persons who will be working with the Doka product or system that it describes. It contains information on the standard design for setting up this system, and on correct, compliant utilisation of the system.
- All persons working with the product described herein must be familiar with the contents of this booklet and with all the safety instructions it contains.
- Persons who are incapable of reading and understanding this booklet, or who can do so only with difficulty, must be instructed and trained by the customer.
- The customer is to ensure that the information materials provided by Doka (e.g. User Information booklets, Instructions for Assembly and Use, Operating Instruction manuals, plans etc.) are up to date and available to all users, and that they have been made aware of them and have easy access to them at the usage location.
- In the relevant technical documentation and form-work 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 form-work (e.g. for when it is being erected/dismantled, modified or repositioned etc). It must be possible to get to and from these workplaces via safe access routes!
- **If you are considering any deviation from the details and instructions given in this booklet, or any application which goes beyond those described in the booklet, then revised static calculations must be produced for checking, as well as supplementary assembly instructions.**

Regulations; industrial safety

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

Rules applying during all phases of the assignment

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

Assembly

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

Closing the formwork

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

Pouring

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

Stripping the formwork

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

Transporting, stacking and storing

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

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

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

Maintenance

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

Miscellaneous

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

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

Symbols used

The following symbols are used in this document:



DANGER

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



WARNING

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



CAUTION

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



NOTICE

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



Instruction

Indicates that actions have to be performed by the user.



Sight-check

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



Tip

Points out useful practical tips.



Reference

Cross-references other documents.

Intended use

DokaFit Handset is a formwork system for the construction of in-situ concrete walls, foundations, shafts and columns. DokaFit Handset is designed for forming by hand and for crane-assisted forming of large areas.

Boundary conditions for use:

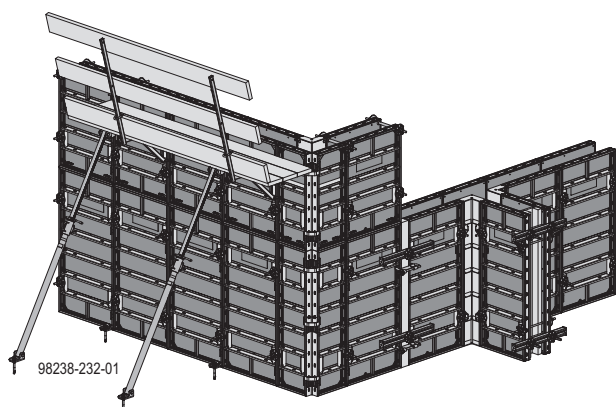
- Max. formwork height: 6.00 m
- Max. wall thickness: 55 cm

In special cases, boundary conditions can vary. The relevant information in the Doka technical documents must be observed.

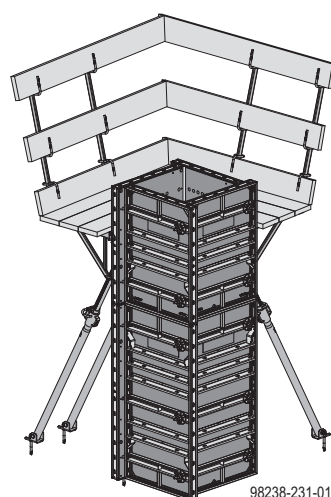
Other use or use not in conformity with that stated above is non-intended use and requires the prior written approval of the Doka company!

Areas of use

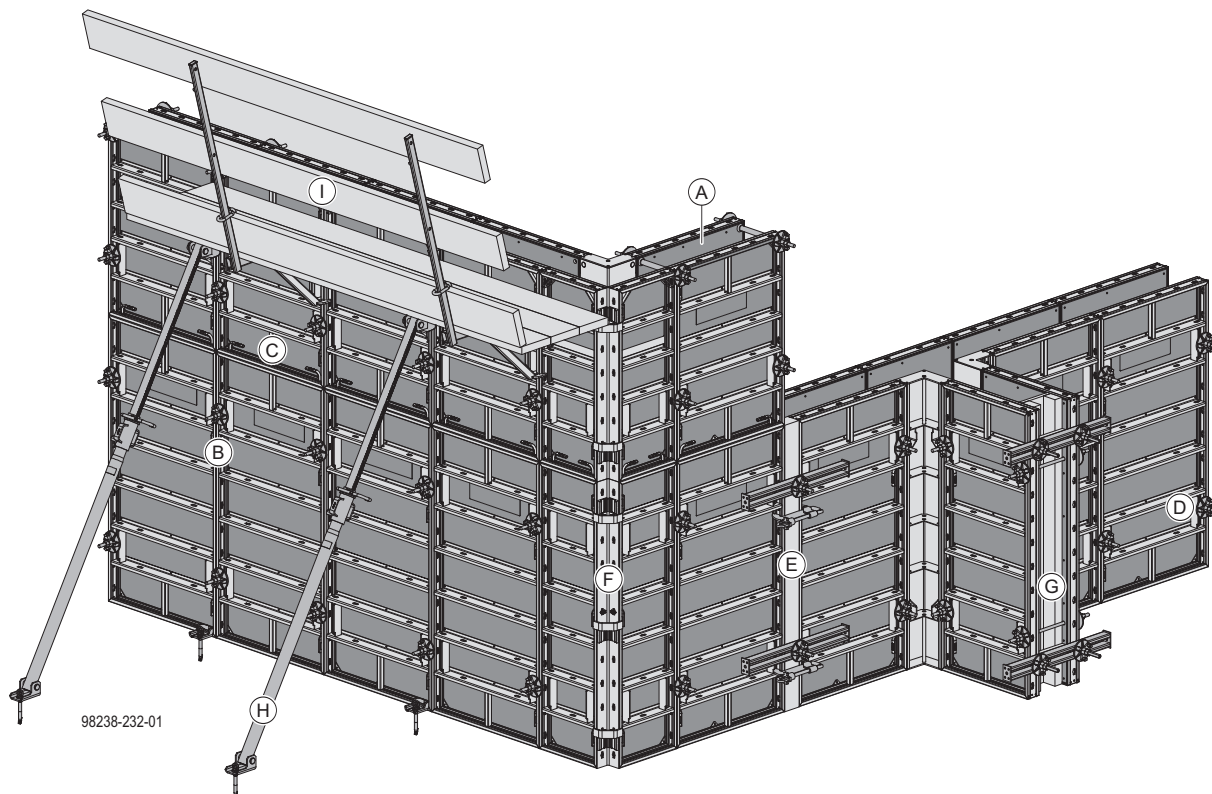
Wall formwork



Column formwork



Wall formwork



Section:

- A [DokaFit Handset panels in detail](#)
- B [Inter-panel connections](#)
- C [Vertical stacking of panels](#)
- D [Tie rod system](#)
- E [Length adjustment using closures](#)
- F [90 degree corners](#)
- G [Stop-end formwork](#)
- H [Plumbing accessories](#)
- I [Pouring platforms with single brackets](#)

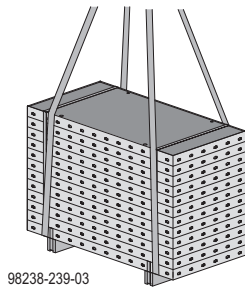
Instructions for assembly and use (Method statement)

DokaFit Handset as a hand-set formwork

The sequence shown here is based on a straight wall. However, you should always start to form from the corner outwards.

Transporting / handling the panels

- For offloading panels from a truck, or lifting them on-site a stack at a time, use the Dokamatic Lifting strap 13.00m (see [Transporting, stacking and storing](#)).



Closing the formwork

- Spray the formwork sheet with release agent (see the section headed [Cleaning and care of your equipment](#)).



WARNING

- DokaFit Handset panels must be securely braced in every phase of the construction work!
- Fix the first two panels to the ground with plumbing struts (see the section headed [Plumbing accessories](#)). This stabilises the panels so that they cannot fall over.

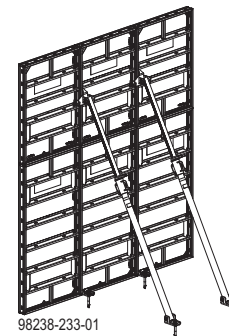


NOTICE

Never use a sledge hammer to plumb and align the panels!
This would damage the profiles of the gangs.

- Use only proper aligning tools that cannot cause any damage.

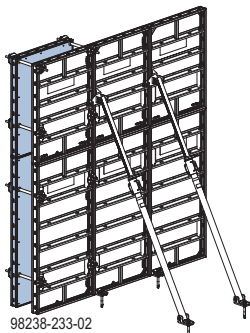
- Continue lining up panels in this way, clamp them together (see the section headed [Inter-panel connections](#)) and install panel struts. The panel assembly can now be exactly plumbed and aligned.



Erecting the opposing formwork:

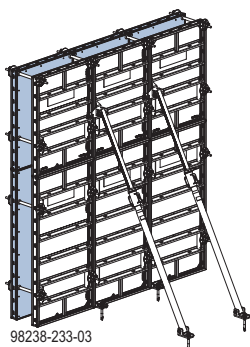
Once the reinforcement has been placed, the formwork can be closed.

- Spray the formwork sheet of the opposing formwork with release agent.
- Set up the first panel of the opposing formwork.
- Fit the form ties (see the section headed [Tie rod system](#)).



Now the opposing formwork is also secured against tipping over.

- In the same way, carry on lining up panels, clamping them together and fitting form ties.



Pouring



NOTICE

Do not exceed the maximum permissible rate of placing.

DokaFit Handset:

Permitted fresh-concrete pressure: See the section headed [Permissible fresh-concrete pressure](#).



See the section headed 'Pressure of fresh concrete on vertical formwork, DIN 18218' in the Calculation Guide 'Doka formwork engineering'



DIN 4235 Part 2 - 'Compacting of concrete by vibrating; compacting by internal vibrators'.

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

Stripping the formwork



NOTICE

- Comply with the stipulated stripping times.
- Beginning with the opposing formwork, dismantle the panels one by one - take out the form ties and remove the connectors to the neighbouring panel.
- Lift the panel away and clean concrete residue off the formwork sheet (see the section headed [Cleaning and care of your equipment](#)).

DokaFit Handset as a crane-handled formwork

Large gang-forms can be pre-assembled face-down on a prepared flat area. For detailed instructions on installing the connectors, see the section headed [Vertical stacking of panels](#).

These gangs can be lifted and reset with lifting chains and Frami lifting hooks. For detailed information, see the section headed [Lifting by crane](#).

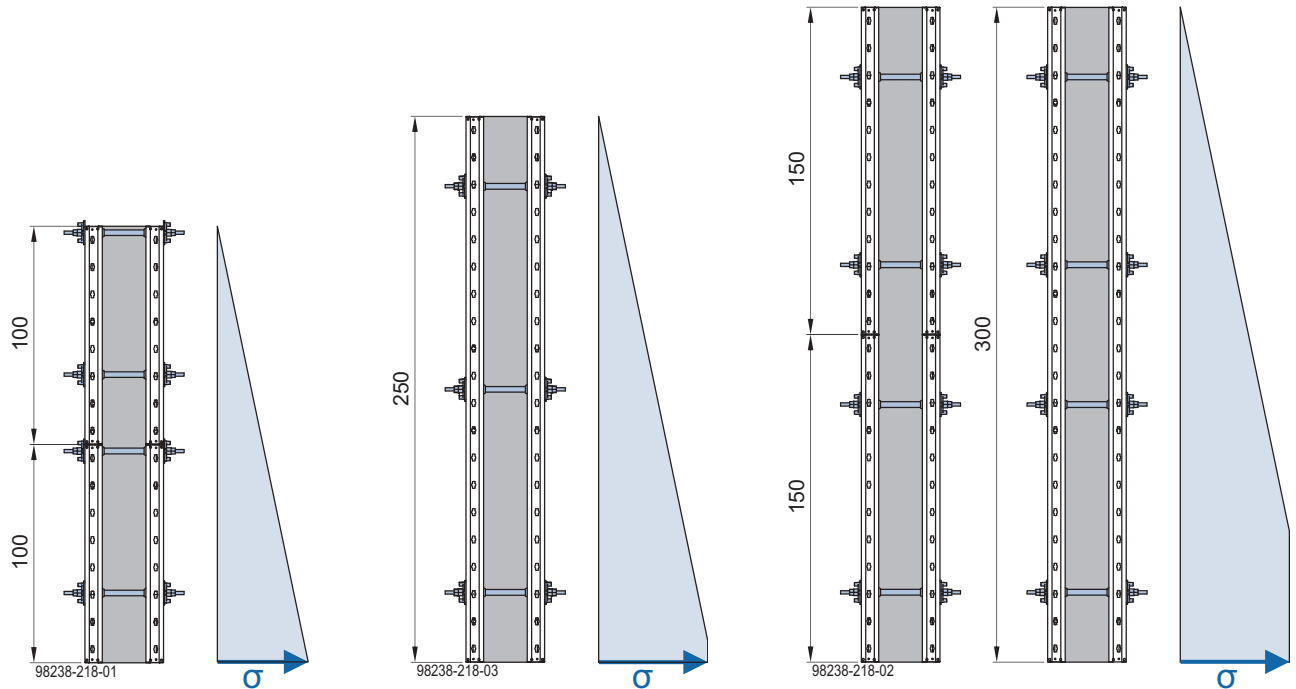
Permissible fresh-concrete pressure

Permitted fresh-concrete pressure as defined by DIN 18218, and subject to compliance with the surface

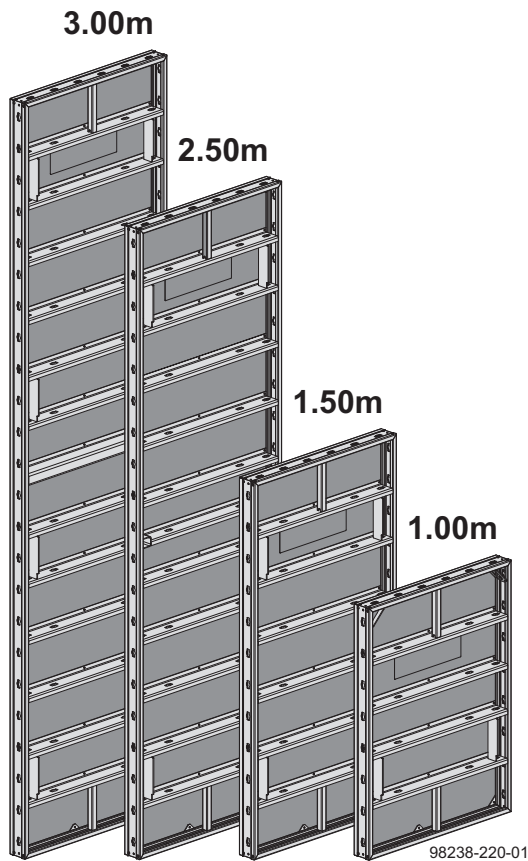
planeness tolerances specified in DIN 18202 Table 3 Line 6:

$$\sigma_{hk, \max} = 60 \text{ kN/m}^2$$

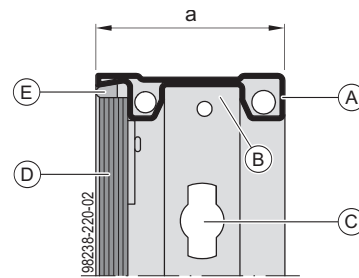
DokaFit Handset panels can be hydrostatically loaded up to a **pour height of 2.40 m**.



DokaFit Handset panels in detail



Dimensionally stable steel frame made of hollow profiles



a ... 80 mm

- A** Frame profile
- B** Slot for inter-panel connection with clamps
- C** Cross hole for inter-panel connection with clip Ø 18.5 mm
- D** 12 mm film-coated formwork sheet
- E** Silicone sealing strip

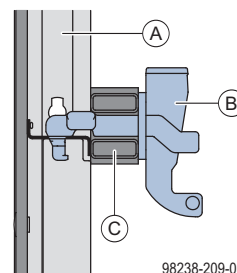
- Dimensionally stable frame profiles
- Long lifespan
- Edges are easy to clean - panels always butt tightly
- All-round hardware slot for fastening the inter-panel connectors at any point required
- Sheet is edge-protected by the frame profile
- Cross holes for corner configurations and stop-ends



WARNING

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

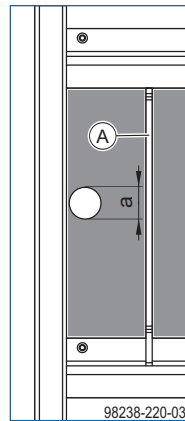
Accessories are easy to fasten in the cross profile



98238-209-03

- A** DokaFit Handset panel
- B** Frami wedge clamp
- C** Frami universal waling

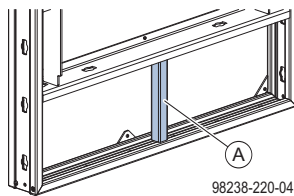
Form-tie hole



a ... $\varnothing$ 20 mm

A Bracing at form-tie hole

Handles



A Integral handle



WARNING

Do not use these handles as lifting points for crane-handling!

Danger of formwork dropping from crane!

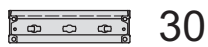
► Use only suitable lifting accessories and lifting points. See the sections headed [Lifting by crane](#) and [Transporting, stacking and storing](#).

System grid

DokaFit Handset panels

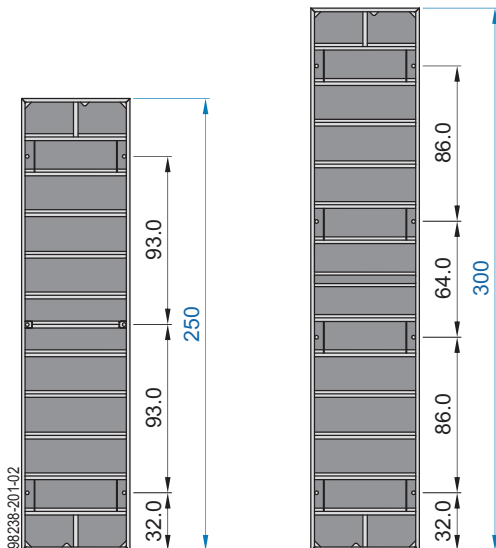
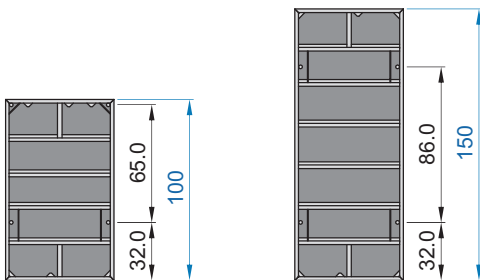
The widths and heights of the DokaFit Handset panels result in a logical grid.

Panel widths



98238-201-01

Panel heights



Dimensions in cm

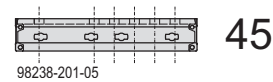
DokaFit Handset universal panels

The special hole pattern makes these panels particularly suitable for efficient forming of:

- corners
- wall junctions
- stop-ends
- columns

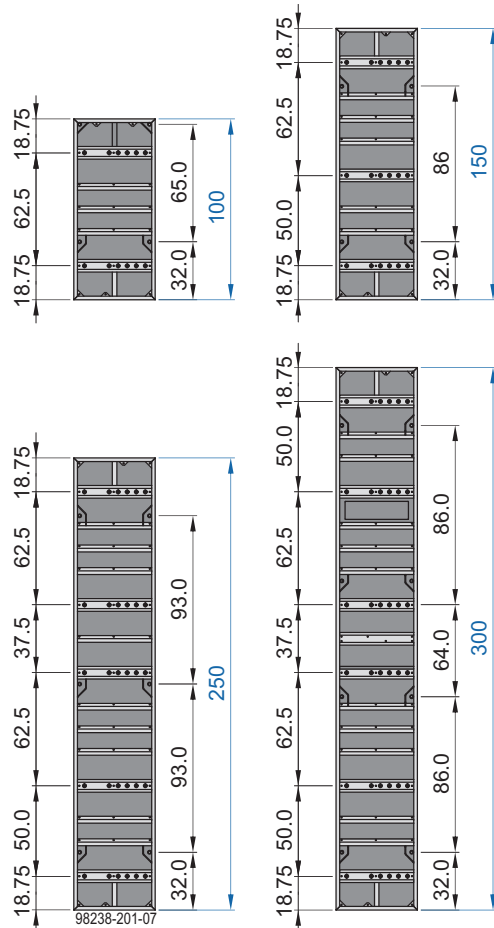
DokaFit Handset universal panel 0.45m

Panel width



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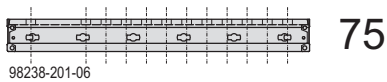
Panel heights



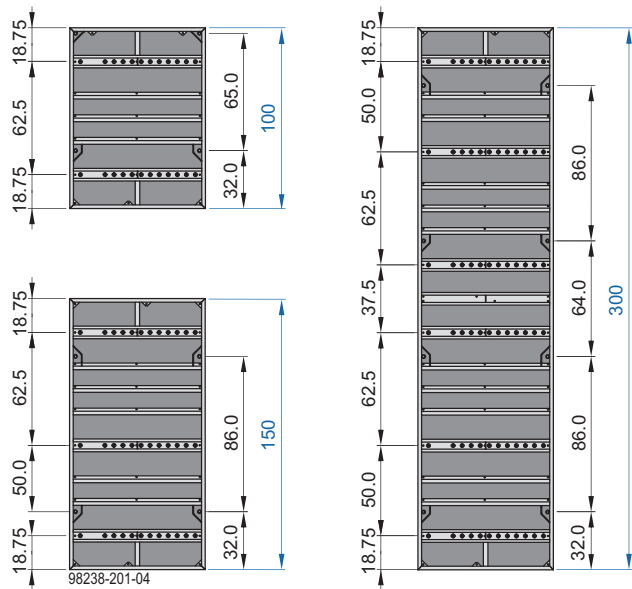
Dimensions in cm

DokaFit Handset universal panel 0.75m

Panel width

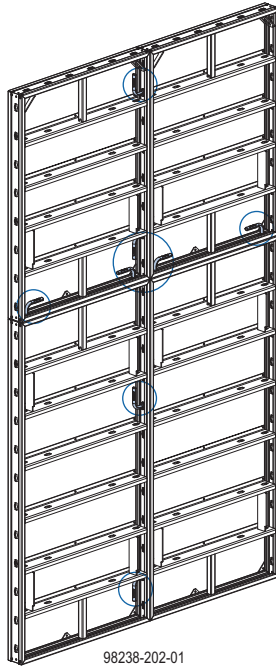


Panel heights



Dimensions in cm

Inter-panel connections



Attributes of the panel connectors:

- provide self-aligning, crane-handleable connections between the panels
- have no loose parts which might get lost
- dirt-resistant and hard-wearing for site use
- easy to fix, with a formwork hammer



NOTICE

Use a formwork hammer weighing max. 800 g.

Panels upright:

Panel height	Number of panel connectors
1.00 m	2
1.50 m	
2.50 m	4
3.00 m	

Panels on their sides:

Panel width	Number of panel connectors
0.30 - 0.50m	1
0.60 - 0.75m	2

Note:

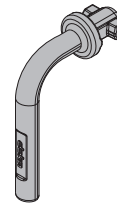
For details regarding extra inter-panel connections on outside corners (for increased tensile loads) see the section headed [Inter-panel connections for increased tensile loads](#).

Note:

For details on the position of the connector components needed for vertical stacking, see the section headed [Vertical stacking of panels](#).

Simple inter-panel connections

with DokaFit HS clip

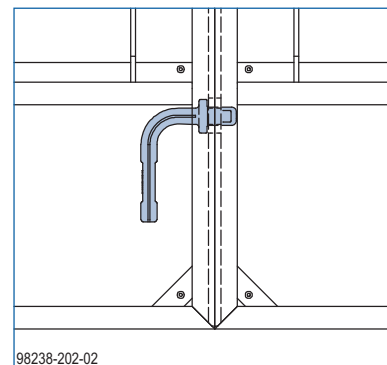
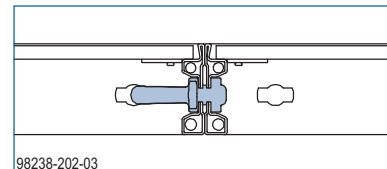


DokaFit HS clip:

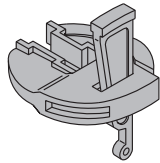
Permitted tensile force: 10.0 kN

Permitted shear force: 5.0 kN

Permitted moment: 0.2 kNm



with the Frami clamp



Frami clamp:

Permitted tensile force: 10.0 kN

Permitted shear force: 5.0 kN

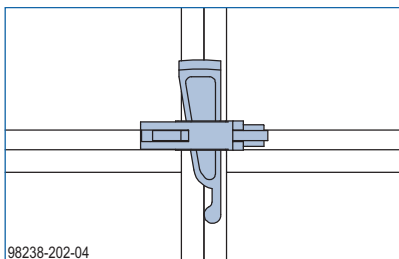
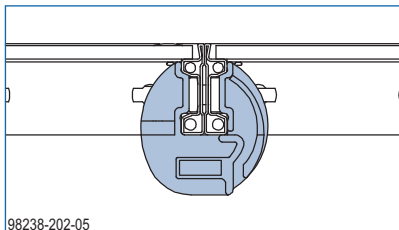
Permitted moment: 0.2 kNm

The continuous hardware slot running around the inside of the DokaFit Handset profile means that the Frami clamp can be fitted at any point desired. Any height offset between adjacent panels is possible.



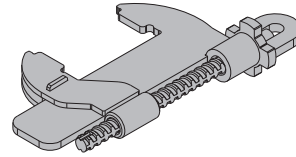
NOTICE

Do not oil or grease the components of wedge-clamped joints.



Inter-panel connection with closure possibility

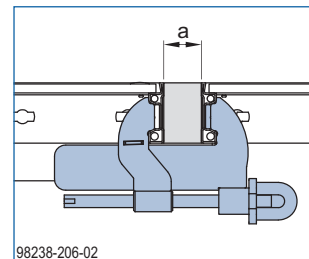
with DokaFit HS adjustable clamp 10cm



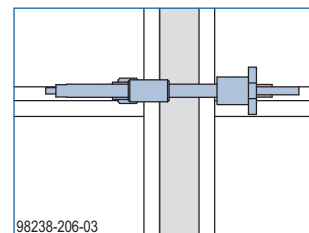
DokaFit HS adjustable clamp 10cm:

Permitted tensile force: 7.5 kN

Closures can be bridged very easily and economically with squared timbers. The DokaFit HS adjustable clamp joins the panels so that they are resistant to tensile forces.



a ... max. 10 cm



Vertical stacking of panels

Positions of the interconnecting and form-tie components and accessories needed for:

- Lifting and setting down
- Crane-handling
- Pouring platform
- Pouring
- Wind loads

DokaFit HS clip and Frami clamp:

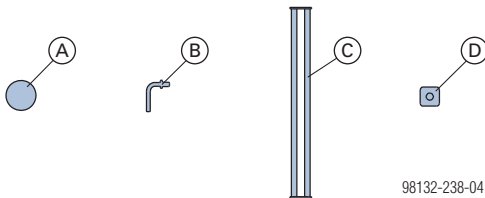
Permitted tensile force: 10.0 kN

Permitted shear force: 5.0 kN

Permitted moment: 0.2 kNm

Frami universal waling:

Permitted moment: 1.3 kNm



A Tie rod 15.0mm + form-tie nut 15.0 or Super plate 15.0

B DokaFit HS clip or Frami clamp

C Frami universal waling 0.70m or 1.25m

D Frami wedge clamp

or

Frami universal fixing bolt 5-12cm + Form-tie nut 15.0



NOTICE

Use the Frami clamp at points where the DokaFit HS clip cannot be fitted (e.g. if the cross holes in the panels are offset).



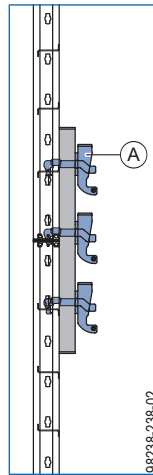
NOTICE

Do not oil or grease the components of wedge-clamped joints.

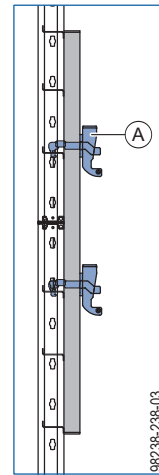
Fixing universal walings to the panel joint:

Frami universal waling 0.70m

Frami universal waling 1.25m



Number of fixing points: 3



Number of fixing points: 2

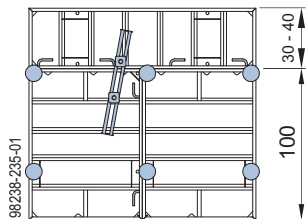
A Frami wedge clamp

or

Frami universal fixing bolt 5-12cm + Form-tie nut 15.0

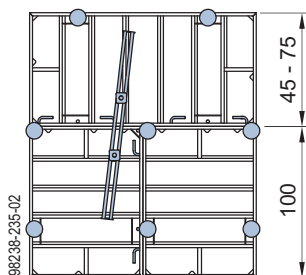
DokaFit Handset panel 1.00 and 1.50m

Formwork height: 130 and 140 cm *)



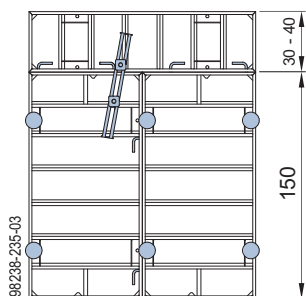
*) Universal waling needed only when pouring platforms are used and panel bracing is secured to the bottom panel.

Formwork height: 145, 150, 160 and 175 cm *)



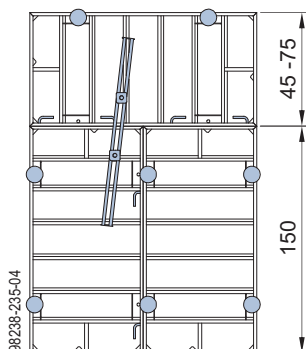
*) Universal waling needed only when pouring platforms are used and panel bracing is secured to the bottom panel.

Formwork height: 180 and 190 cm *)



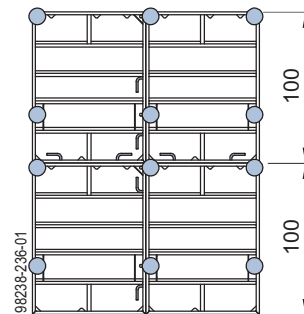
*) Universal waling needed only when pouring platforms are used and panel bracing is secured to the bottom panel.

Formwork height: 195, 200, 210 and 225 cm *)

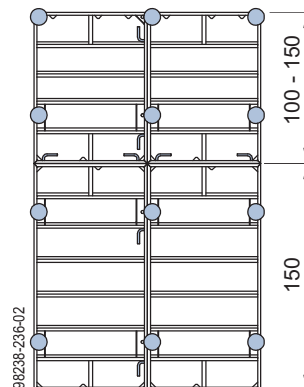


*) Universal waling needed only when pouring platforms are used and panel bracing is secured to the bottom panel.

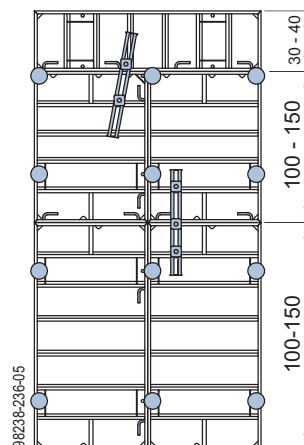
Formwork height: 200 cm



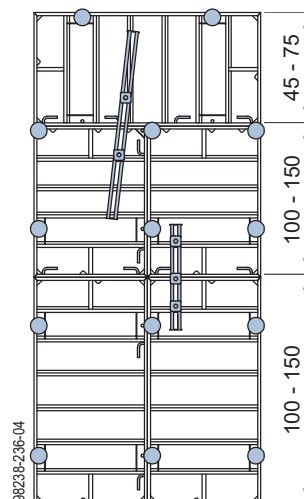
Formwork height: 250 cm and 300 cm

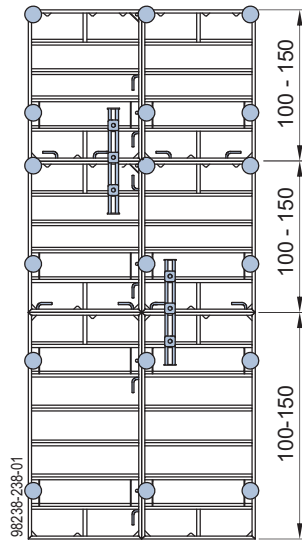
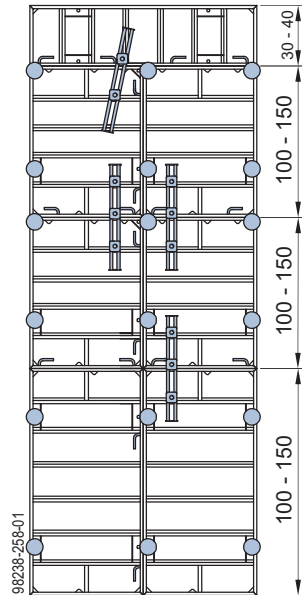
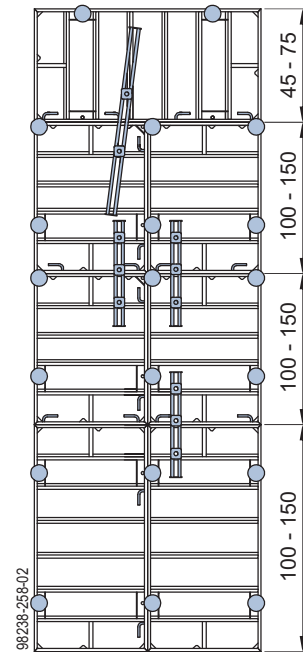
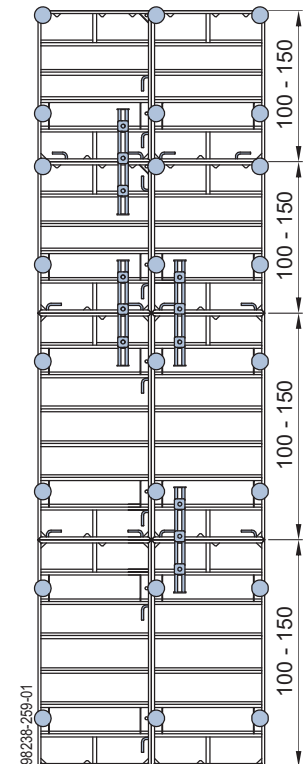


Formwork height: 230, 240, 280, 290, 330 and 340 cm



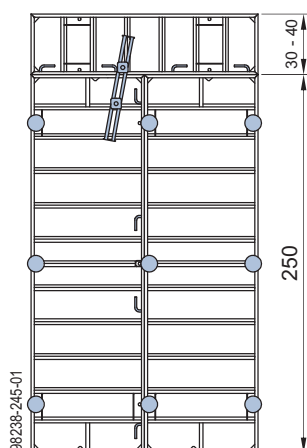
Formwork height: 245, 250, 260, 275, 295, 300, 310, 325, 345, 350, 360 and 375 cm



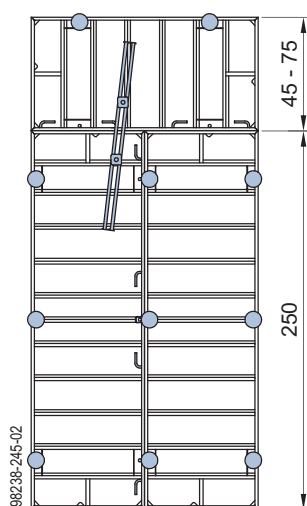
Formwork height: 300, 350, 400 and 450 cm**Formwork height: 330, 340, 380, 390, 430, 440, 480 and 490 cm****Formwork height: 345, 350, 360, 375, 395, 400, 410, 425, 445, 450, 460, 475, 495, 500, 510 and 525 cm****Formwork height: 400, 450, 500, 550 and 600 cm**

DokaFit Handset panel 2.50m

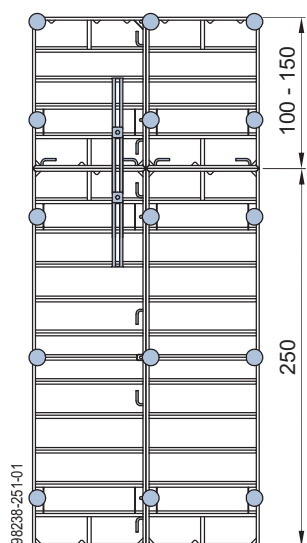
Formwork height: 280 and 290 cm



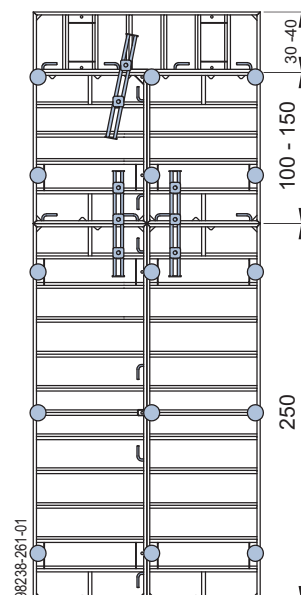
Formwork height: 295, 300, 310 and 325 cm



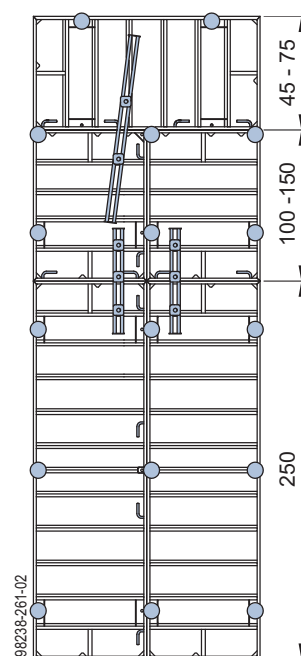
Formwork height: 350 and 400 cm

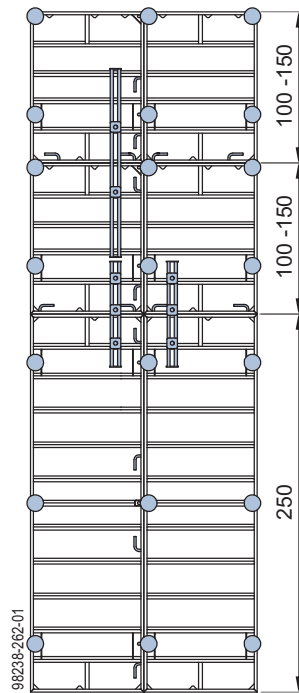
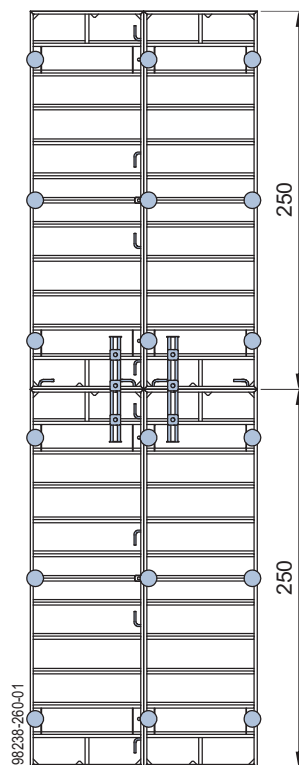
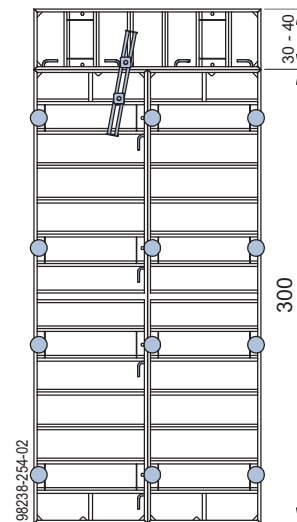
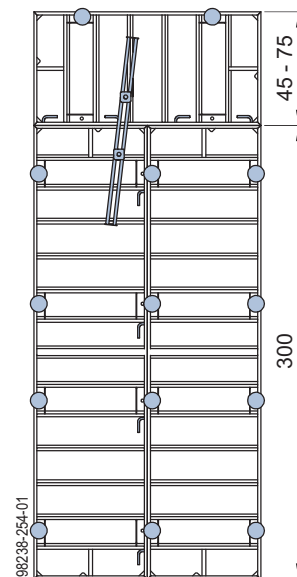
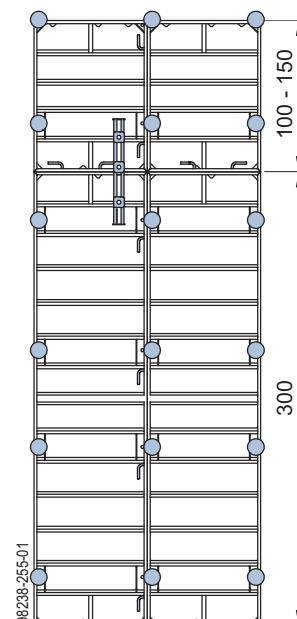


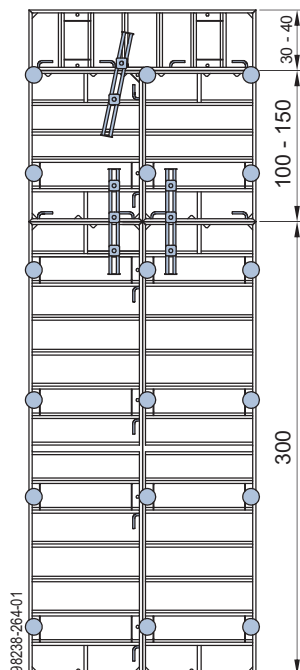
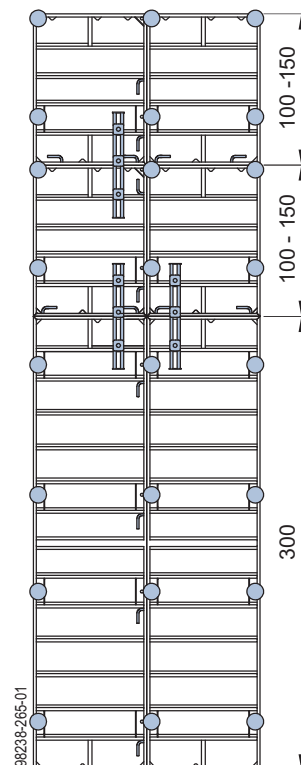
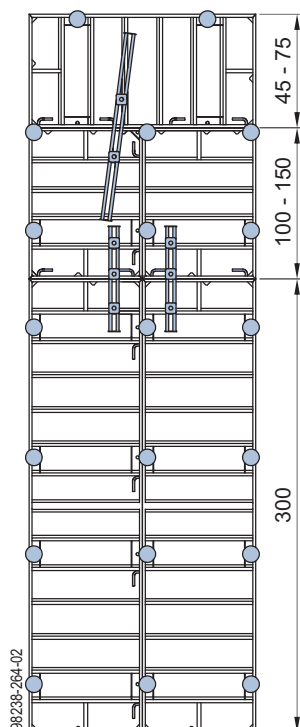
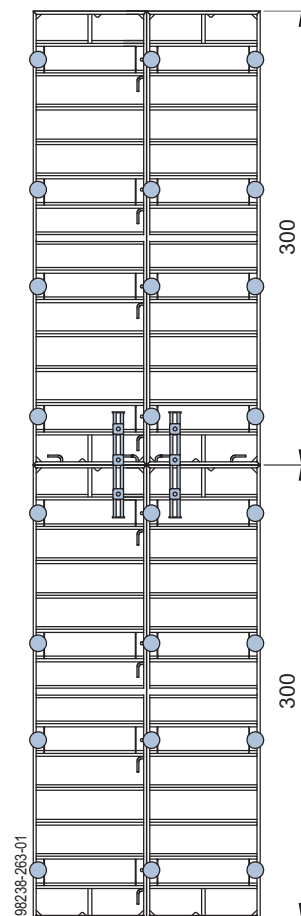
Formwork height: 380, 390, 430 and 440 cm

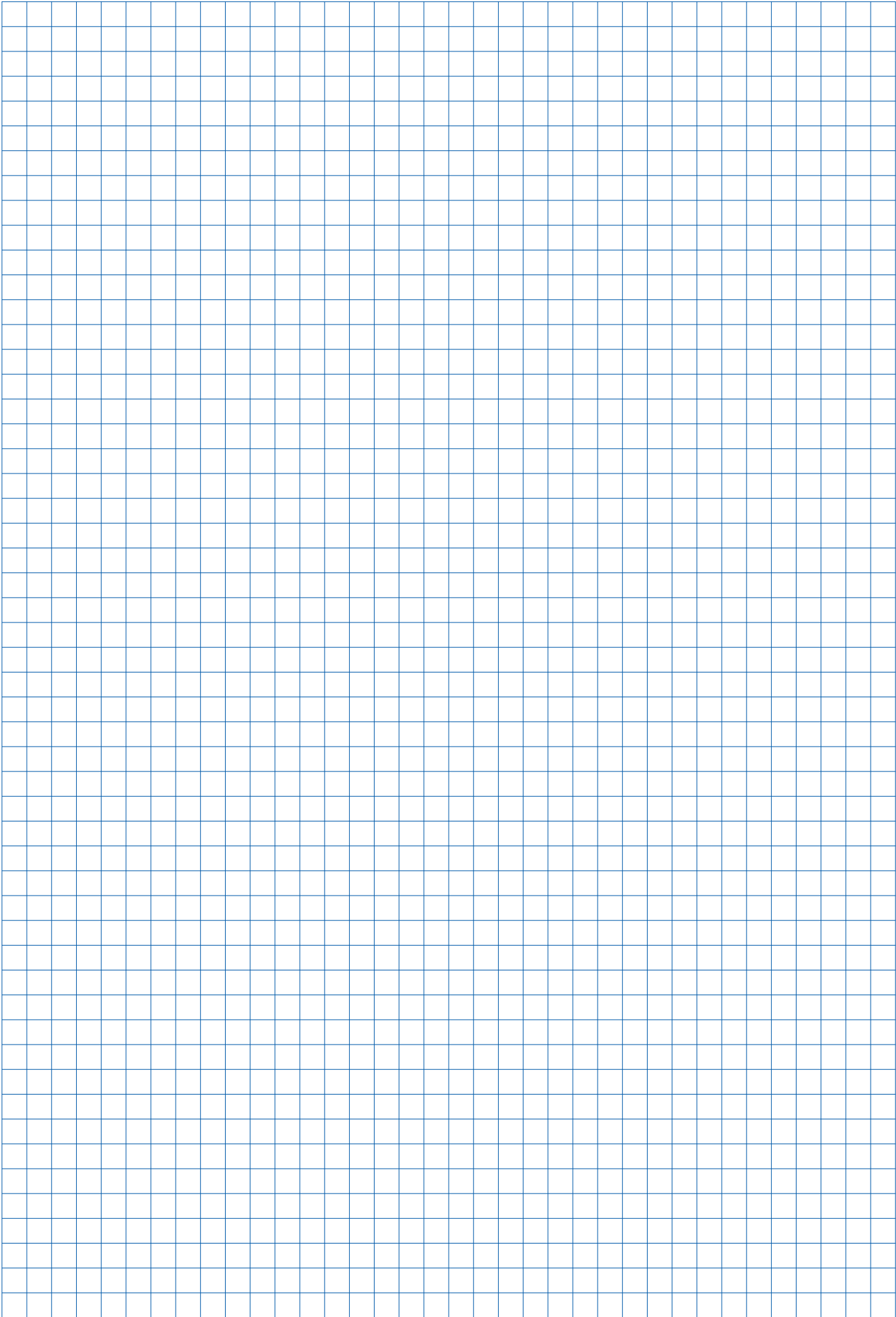


Formwork height: 395, 400, 410, 425, 445, 450, 460 and 475 cm



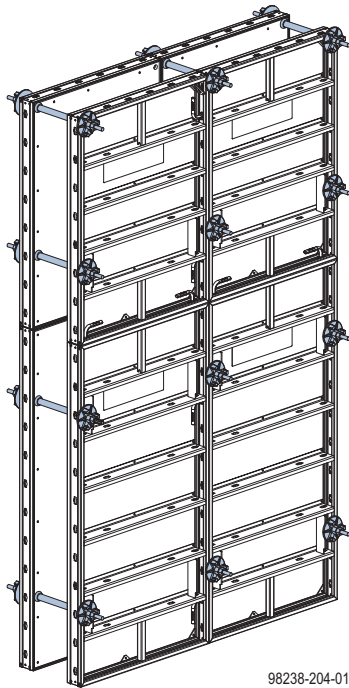
Formwork height: 450, 500 and 550 cm**Formwork height: 500 cm****DokaFit Handset panel 3.00m****Formwork height: 330 and 340 cm****Formwork height: 345, 350, 360 and 375 cm****Formwork height: 400 and 450 cm**

Formwork height: 430, 440, 480 and 490 cm**Formwork height: 500, 550 and 600 cm****Formwork height: 445, 450, 460, 475, 495, 500, 510 and 525 cm****Formwork height: 600 cm**



Tie rod system

Anchoring of the DokaFit Handset panels

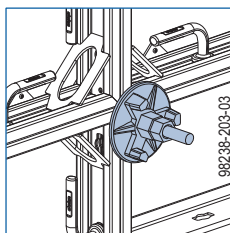
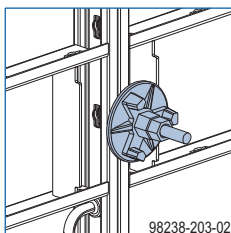


Shown here with DokaFit Handset panel 1.50m + 1.00m



NOTICE

- Place a form tie at every form-tie point that is not covered by a form-tie nut or super plate.
- Always tie in the larger (wider) of the two panels.
- For exceptions, see the section headed:
 - [Length adjustment using closures](#)
 - [Vertical stacking of panels](#)
 - [90 degree corners](#)



NOTICE

Delicate 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 and destroyed.

Note:

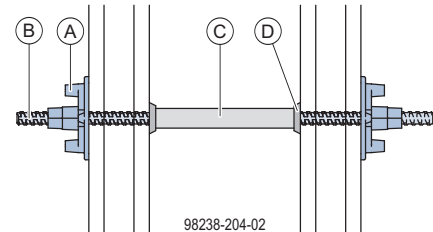
Close off any unneeded tie holes with **Frami frame hole plugs**.



Tie-rod wrench 15.0/20.0

For turning and holding the tie rods.

The Doka tie rod system 15.0



A Form-tie nut 15.0 or Super plate 15.0

B Tie rod 15.0mm

C Plastic tube 22mm

D Universal cone 22/10mm

Note:

The Plastic tubes 22mm are left in the concrete and are sealed off with **Plugs 22mm**.

Note:

Doka also offers cost-effective solutions for creating watertight form-tie points.



For more information, see the User Information booklet 'Doka form ties for special requirements'.

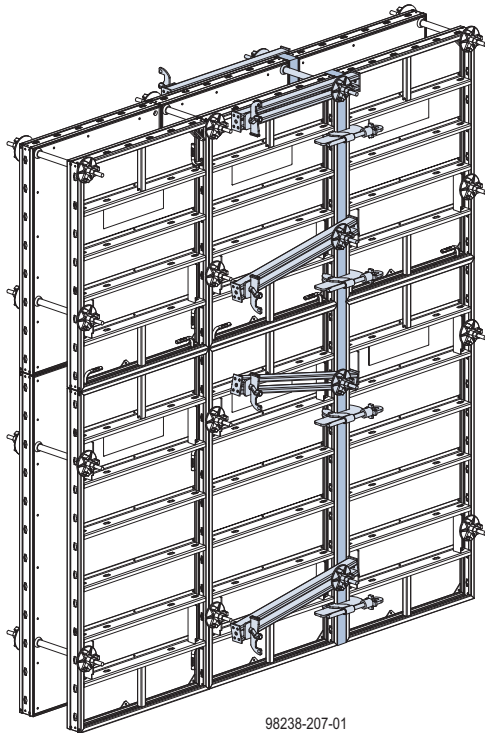
Tie rod 15.0mm:

Permitted load-bearing capacity, allowing a 1.6 : 1 safety factor against failure: 120 kN

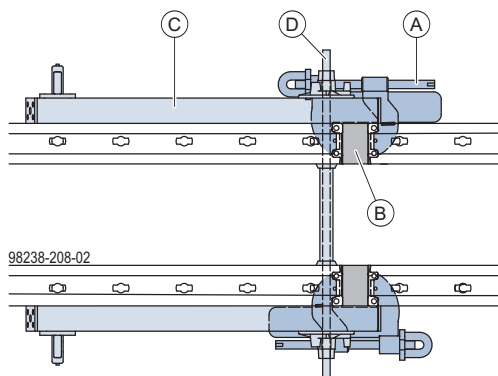
Permitted load-bearing capacity to DIN 18216: 90 kN

Length adjustment using closures

Closures: 0 - 10 cm

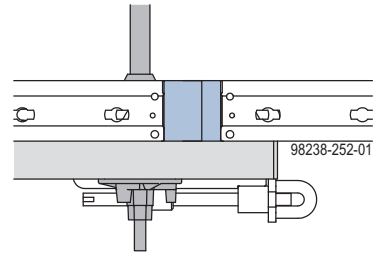


Shown here with DokaFit Handset panel 1.50m + 1.00m.



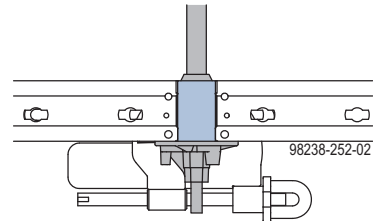
- A** DokaFit HS adjustable clamp 10cm
- B** Squared timber (by site) or DokaFit HS steel closure plate
- C** Frami universal waling (for supporting form-ties)
- D** Form tie

up to 7.5 cm closure:



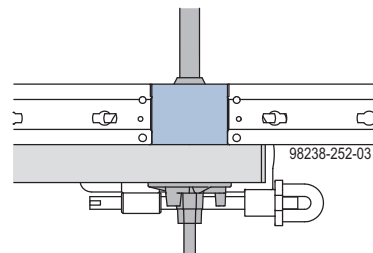
form tie in the panel with universal waling

3 to 5 cm closure:



form tie in squared timber without universal waling

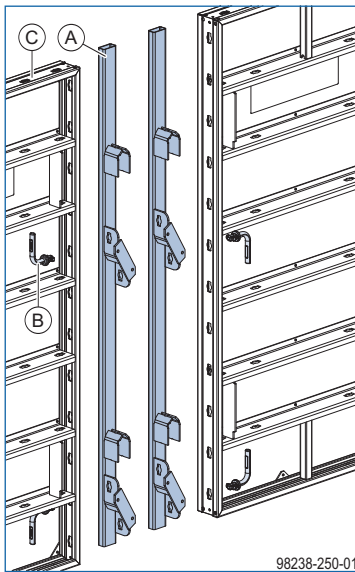
3 to 10 cm closure:



form tie in squared timber with universal waling

with steel closure plate and adjustable clamp

Closures of 5 cm or 10 cm are possible with the DokaFit HS steel closure plate.



A DokaFit HS steel closure plate 5cm

B DokaFit HS clip

C DokaFit Handset panel

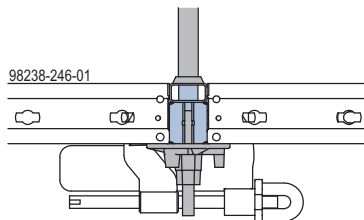


Fix steel closure plates with DokaFit HS clips to achieve a firm connection between closure and panel.

Note:

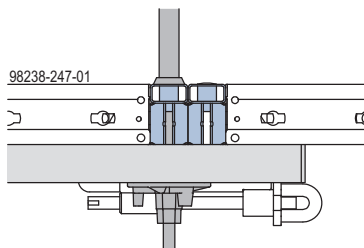
Unneeded tie-holes in the steel closure plate can be sealed with **Frami frame hole plugs**.

5 cm closure:



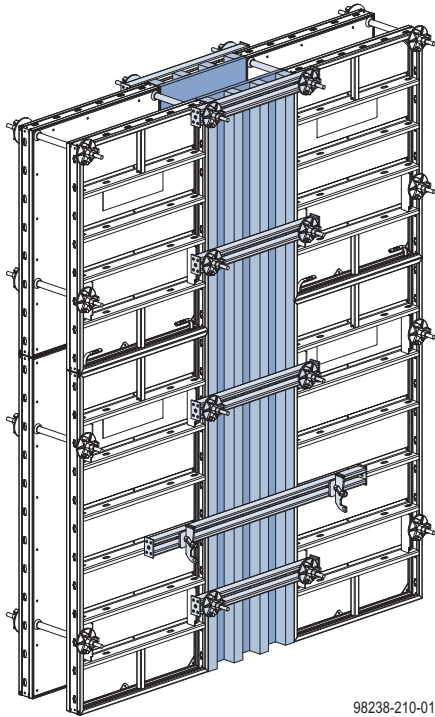
Form tie in steel closure plate without universal waling

10 cm closure:



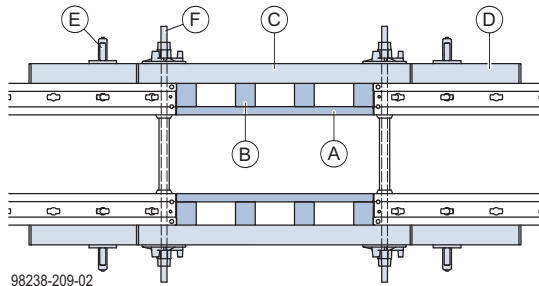
Form tie in steel closure plate with universal waling

Closures: 10 - 50 cm



98238-210-01

Shown here with DokaFit Handset panel 1.50m + 1.00m



98238-209-02

- A Formwork sheet
- B Squared timber
- C Frami universal waling 0.70m
- D Frami universal waling 1.25m
- E Frami wedge clamp
- F Form tie



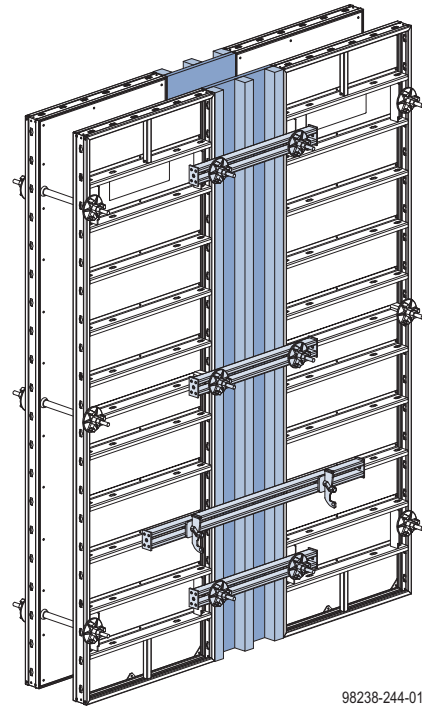
NOTICE

Where tensile loads occur (at corners and stop-ends), suitable tension anchoring must be provided by site.



NOTICE

When using the **DokaFit Handset panel 2.50m**, a closure of 10 up to **maximum 40cm** is possible.



98238-244-01

Means of securing universal walings and site-provided bracing

Overall height 5 cm	Overall height 5 to 10 cm
98238-209-03	98238-209-04

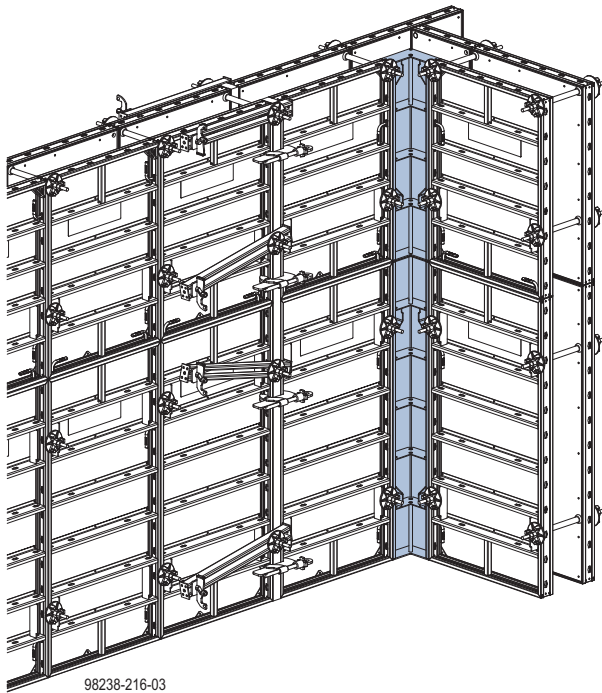
- A DokaFit Handset panel
- B Frami wedge clamp
- C Frami universal waling (or squared timber 5 cm)
- D Frami universal fixing bolt
- E Form-tie nut 15.0 or Super plate 15.0
- F Squared timber (by site)



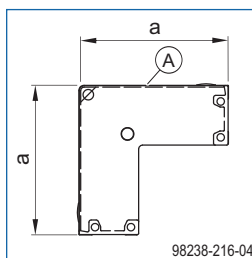
NOTICE

Do not oil or grease the components of wedge-clamped joints.

90 degree corners



The corner solution is based on the strong, torsionally rigid **DokaFit Handset inside corner**.



a ... 20 cm

A Steel form-facing

There are **2 ways** of forming right-angled **outside corners**:

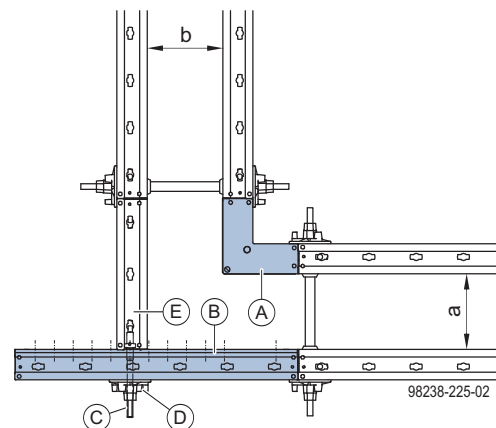
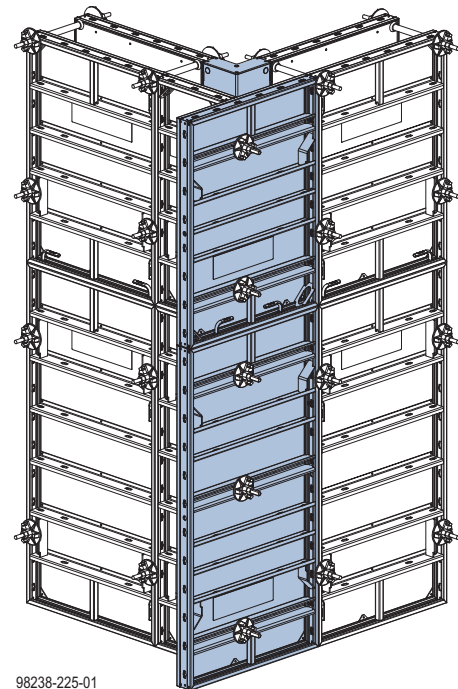
- with DokaFit Handset universal panel
- with DokaFit Handset outside corner

Note:

For details regarding extra inter-panel connections on outside corners (for increased tensile loads) see the section headed [Inter-panel connections for increased tensile loads](#).

with DokaFit Handset universal panel

When this panel is used, a wall-thickness grid with 5 cm increments is available.



a ... wall thickness

b ... wall thickness (5 - 45 cm)

A DokaFit Handset inside corner

B DokaFit Handset universal panel 0.75m

C DokaFit HS corner connector

D Form-tie nut 15.0 or Super plate 15.0

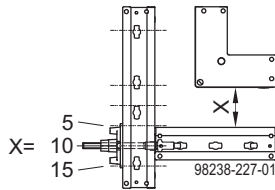
E DokaFit Handset panel

Note:

Close off unneeded grid holes in the formwork sheeting of the DokaFit Handset universal panels using **DokaFit HS plugs**.

DokaFit Handset universal panel 0.45m

Attainable wall thicknesses in 5 cm grid:

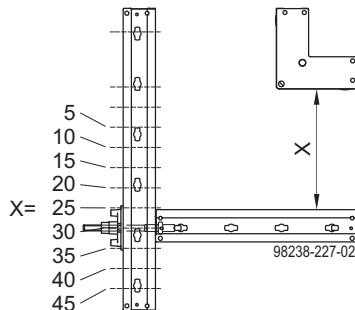


Number of connectors:

DokaFit Handset universal panel 0.45x1.00m	2
DokaFit Handset universal panel 0.45x1.50m	3
DokaFit Handset universal panel 0.45x2.50m	5
DokaFit Handset universal panel 0.45x3.00m	6

DokaFit Handset universal panel 0.75m

Attainable wall thicknesses in 5 cm grid:

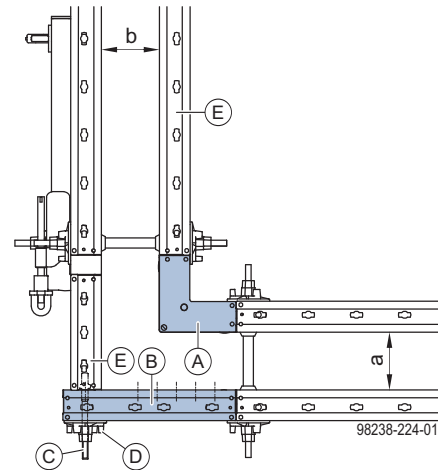


Number of connectors:

DokaFit Handset universal panel 0.75x1.00m	2
DokaFit Handset universal panel 0.75x1.50m	3
DokaFit Handset universal panel 0.75x3.00m	6

Panel height 2.50m

Wall thickness up to 15 cm



a ... wall thickness

b ... wall thickness (5 - 15 cm)

A DokaFit Handset inside corner 1.00m 20cm + 1.50m 20cm

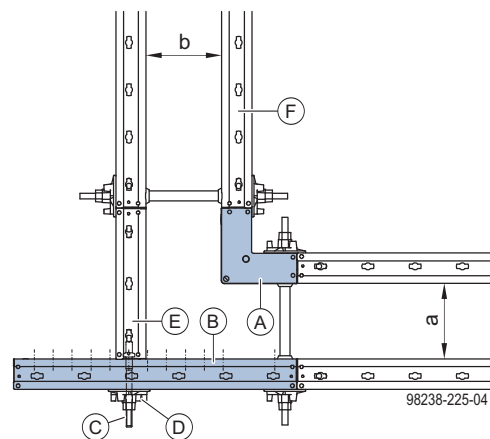
B DokaFit Handset universal panel 0.45x2.50m

C DokaFit HS corner connector

D Form-tie nut 15.0 or Super plate 15.0

E DokaFit Handset panel (height 2.50m)

Wall thickness up to 45 cm



a ... wall thickness

b ... wall thickness (5 - 45 cm)

A DokaFit Handset inside corner 1.00m 20cm + 1.50m 20cm

B DokaFit Handset universal panel 0.75x1.00m + 0.75x1.50m

C DokaFit HS corner connector

D Form-tie nut 15.0 or Super plate 15.0

E DokaFit Handset panel (height 1.00m + 1.50m)

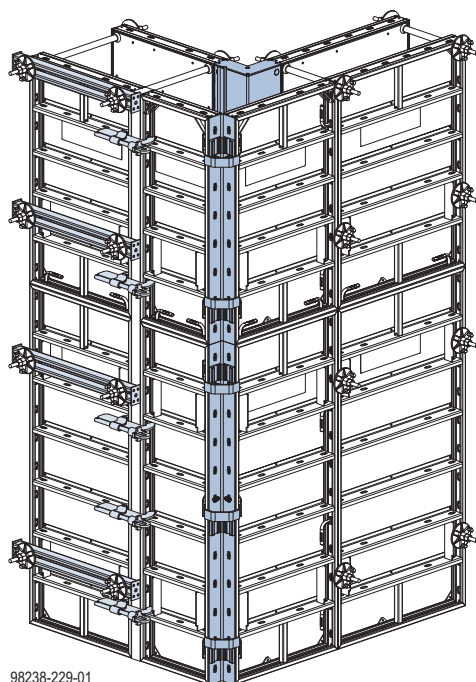
F DokaFit Handset panel (height 2.50m)

Note:

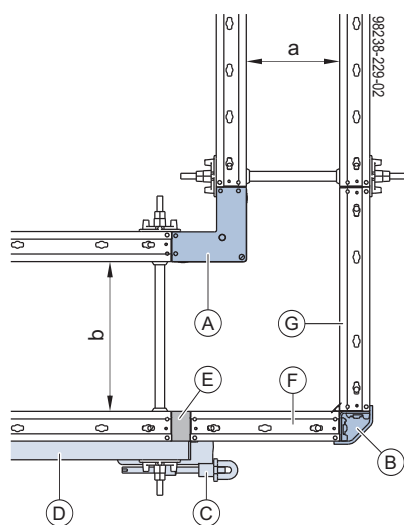
When wall thickness is >15 cm, tying must be through the inside corner!

with DokaFit Handset outside corner

The DokaFit Handset outside corner is an easy way of forming corners in narrow trench situations or where large wall thicknesses are called for.



98238-229-01



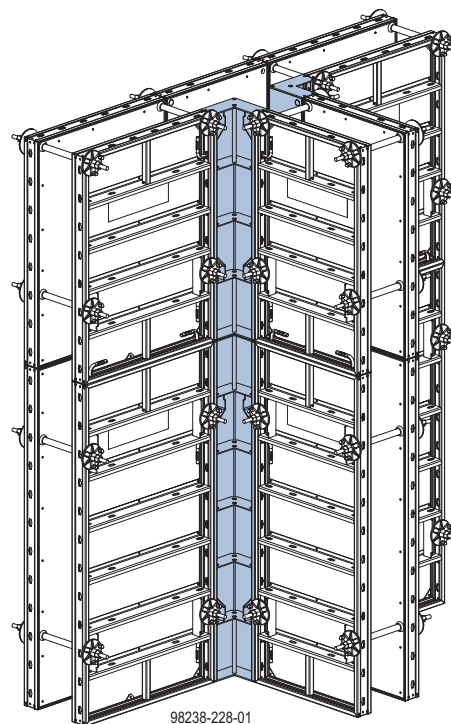
a ... 25 cm
b ... 30 cm

- A** DokaFit Handset inside corner
- B** DokaFit Handset outside corner
- C** DokaFit HS adjustable clamp 10cm
- D** Frami universal waling
- E** Closure on the outside (max. 7.5 cm),
with squared timber (by site)
or DokaFit HS steel closure plate 5cm
- F** DokaFit Handset panel

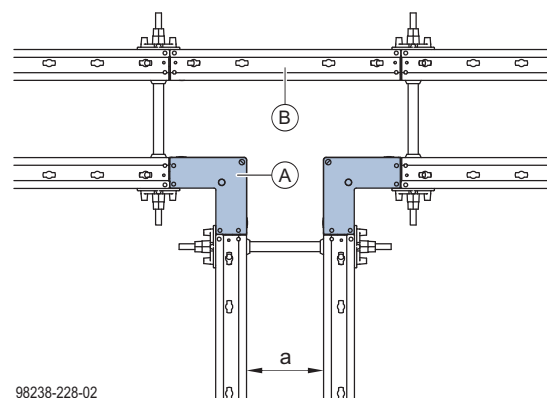
Required number of connectors:

	Up to wall thick- ness 45 cm	Up to wall thickness 55 cm	
		Situation 1	Situation 2
DokaFit Hand- set outside corner 1.00m	4 clips or 4 clamps	2 clips + 4 clamps	6 clips
DokaFit Hand- set outside corner 1.50m	6 clips or 6 clamps	4 clips + 6 clamps	8 clips

Example: T-junction



98238-228-01

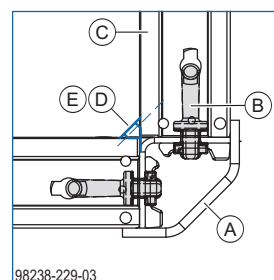


98238-228-02

a ... 20 cm

- A** DokaFit Handset inside corner
- B** DokaFit Handset panel 0.60m

Edges



98238-229-03

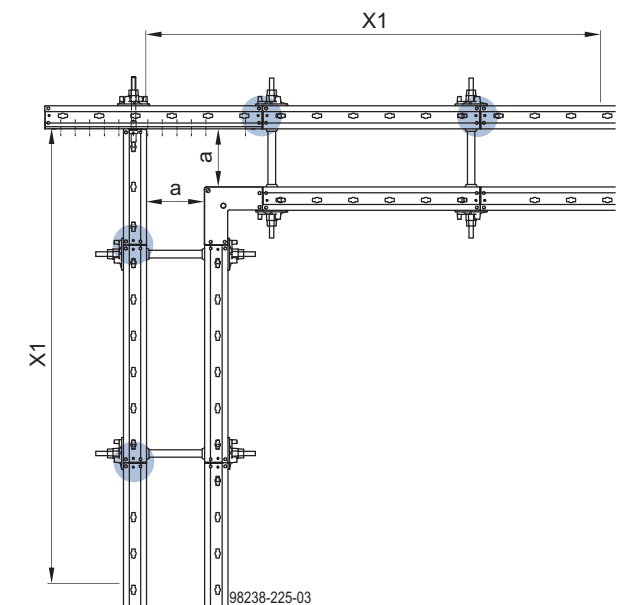
- A** DokaFit Handset outside corner
- B** DokaFit HS clip
- C** DokaFit Handset panel
- D** Framax triangular ledge
- E** Wire nail (fixing)

Inter-panel connections for increased tensile loads

Near outside corners

Where **increased tensile loads** need to be sustained near outside corners, **extra connectors are needed**.

for wall thickness more than 30 up to 55 cm

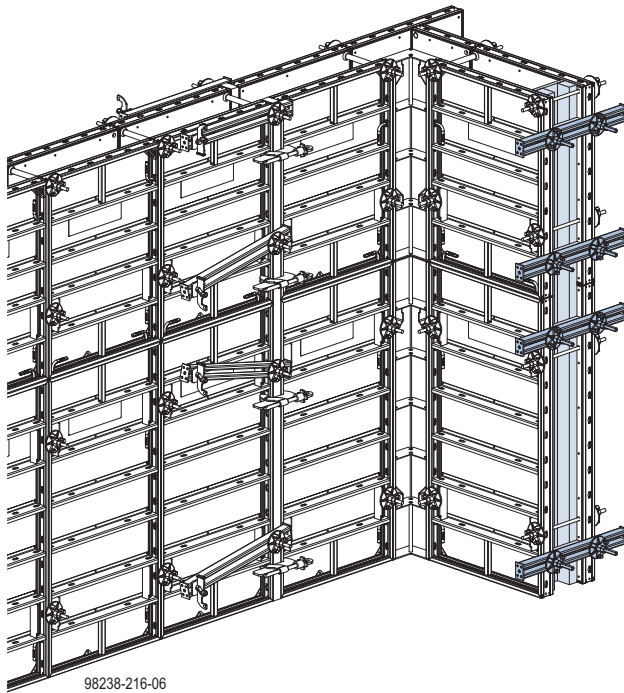


a ... > 30 and up to 55 cm

Panel height	Number of panel connectors in zone X1 *)
1.00 m	2
1.50 m	3
2.50 m	5
3.00 m	6

*) Panel joints **within 1.75 m** of an outside corner

Stop-end formwork



DokaFit HS corner connector / Frami universal fixing bolt:

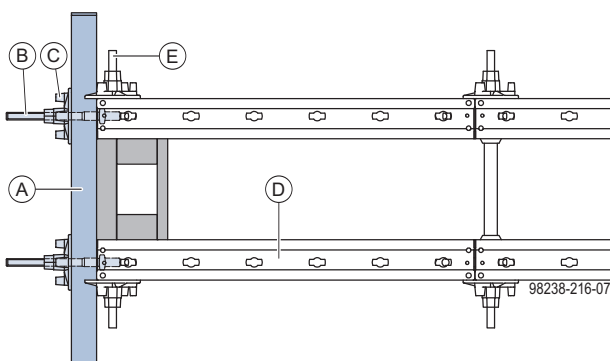
Permitted tensile load: 10.0 kN

with universal walings

The universal waling makes it possible to **precision-form continuously adjusted stop-ends across any wall thickness**.

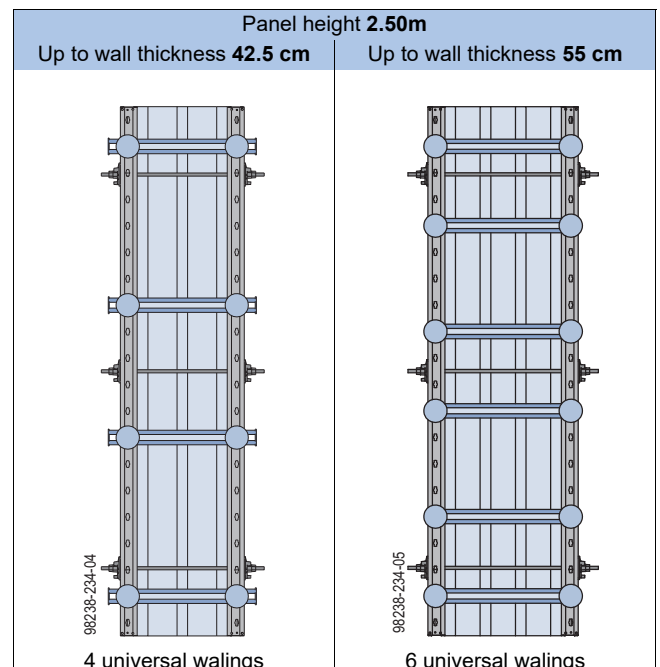
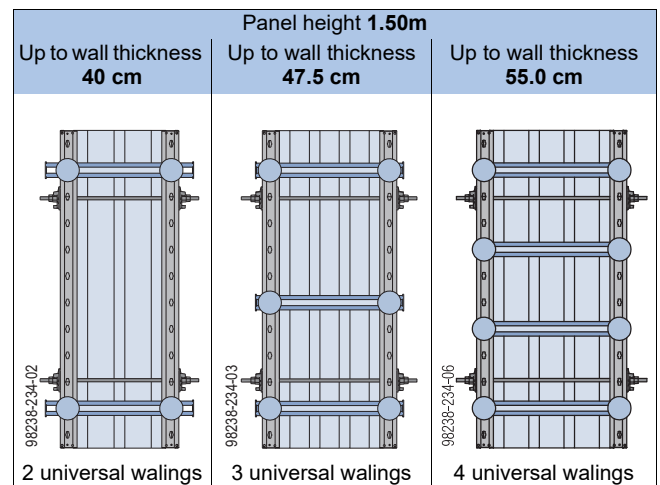
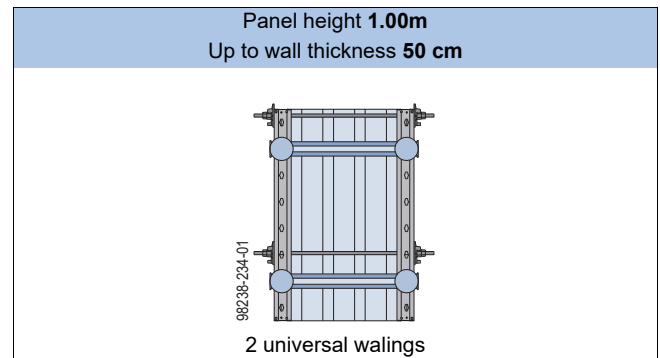
Frami universal waling:

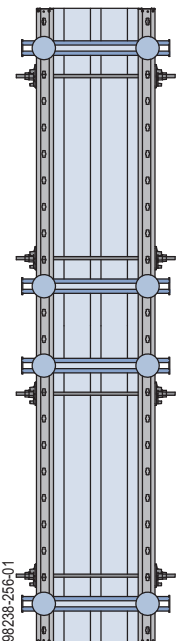
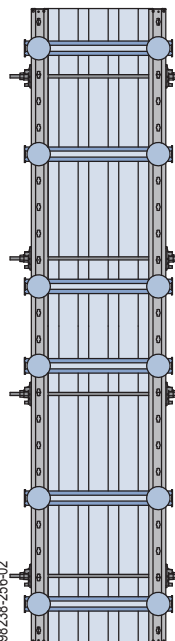
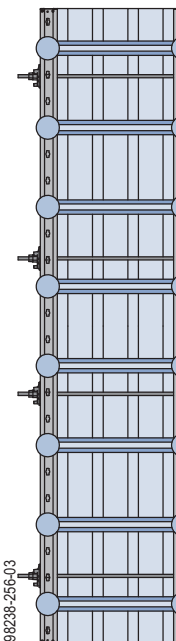
Permitted moment: 1.3 kNm



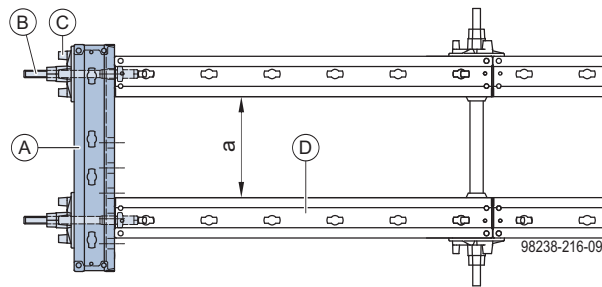
- A Frami universal waling
- B DokaFit HS corner connector or Frami universal fixing bolt
- C Form-tie nut 15.0 or Super plate 15.0
- D DokaFit Handset panel
- E Form tie

Number and position of universal walings:



Panel height 3.00m		
Up to wall thickness 40 cm	Up to wall thickness 47.5 cm	Up to wall thickness 55.0 cm
 98238-256-01	 98238-256-02	 98238-256-03
4 universal walings	6 universal walings	8 universal walings

with DokaFit Handset universal panel



- A** DokaFit Handset universal panel
- B** DokaFit HS corner connector or Frami universal fixing bolt
- C** Form-tie nut 15.0 or Super plate 15.0
- D** DokaFit Handset panel

	Dimension 'a'
DokaFit Handset universal panel 0.45m	up to 25 cm , in a 5 cm grid
DokaFit Handset universal panel 0.75m	up to 55 cm , in a 5 cm grid

Number of connectors:

Panel height	
1.00m	4
1.50m	6
2.50m	10
3.00m	12

Note:

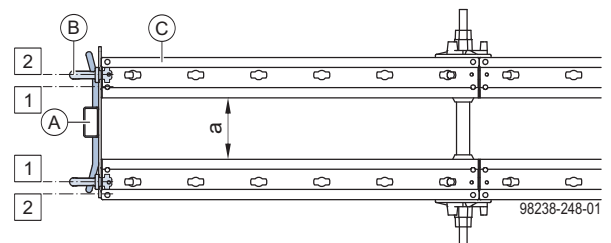
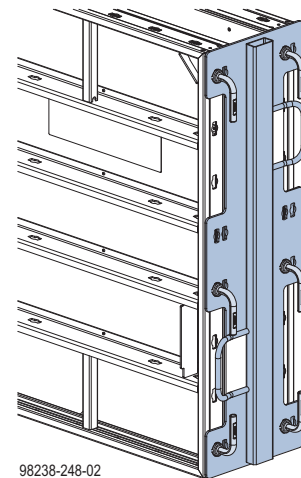
Close off unneeded grid holes in the formwork sheeting of the DokaFit Handset universal panels using **DokaFit HS plugs**.

with DokaFit HS stop-end plate

DokaFit HS clip:

Permitted tensile force: 10.0 kN

Permitted shear force: 5.0 kN



- A** DokaFit HS stop-end plate 10-15cm
- B** DokaFit HS clip
- C** DokaFit Handset panel

Fixing position	Dimension 'a'
Item 1 + Item 1	10.0 cm
Item 1 + Item 2	12.5 cm
Item 2 + Item 2	15.0 cm

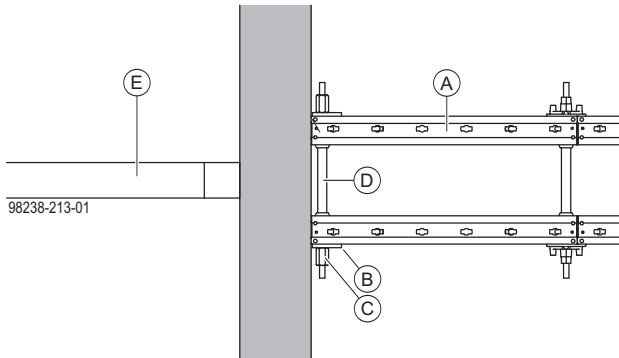
Number of connectors:

Panel height	
1.00m	6
1.50m	8

Wall junctions

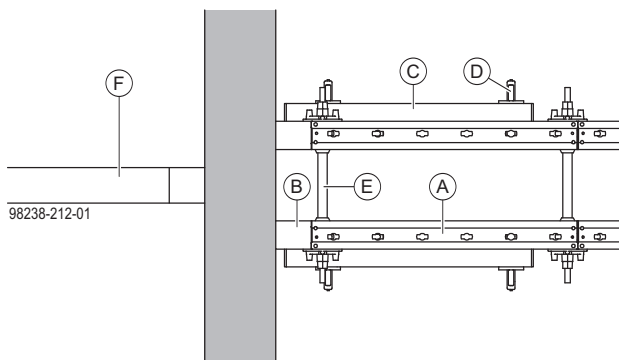
Right-angled connections

with DokaFit Handset panel and Frami pressure plate 8/9



- A** DokaFit Handset panel
- B** Frami pressure plate 8/9
- C** Hexagon nut 15.0
- D** Form tie
- E** Support

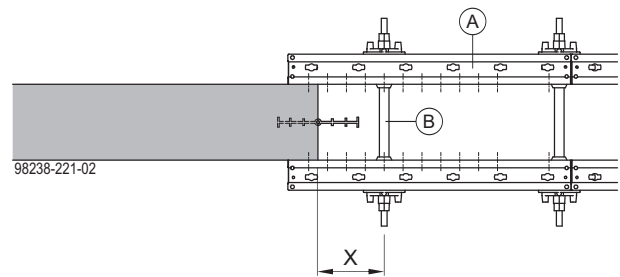
with DokaFit Handset panel and squared timber



- A** DokaFit Handset panel
- B** Squared timber (min. 3.0 cm up to max. 10 cm)
- C** Frami universal waling (not necessary with squared timbers up to 5 cm wide)
- D** Frami wedge clamp
- E** Form tie
- F** Support

In-line connections

with DokaFit Handset universal panel



X ... max. 20 cm

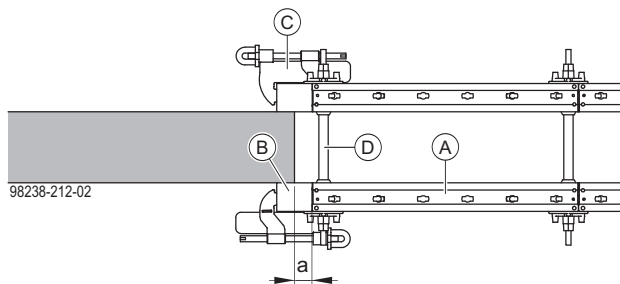
- A** DokaFit Handset universal panel
- B** Form tie



NOTICE

- In the connection area a form tie (**B**) has to be inserted in every perforated profile row of the universal panel!
- **Note with universal panel 1.50m:**
If one of the two universal panels is **turned longside horizontal** the hole pattern is not symmetrical and **no form ties can be inserted**.

with DokaFit Handset panel and squared timber

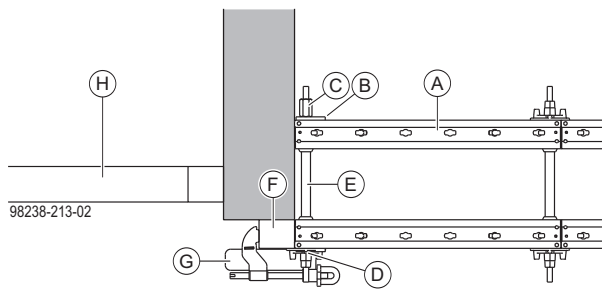


a ... max. 5 cm

- A** DokaFit Handset panel
- B** Squared timber (max. 10 cm)
- C** DokaFit HS adjustable clamp 10cm
- D** Form tie

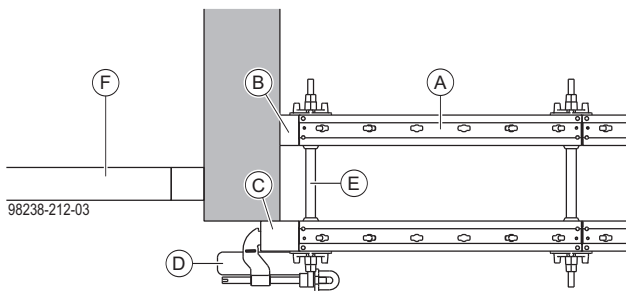
Corner connections

without closure

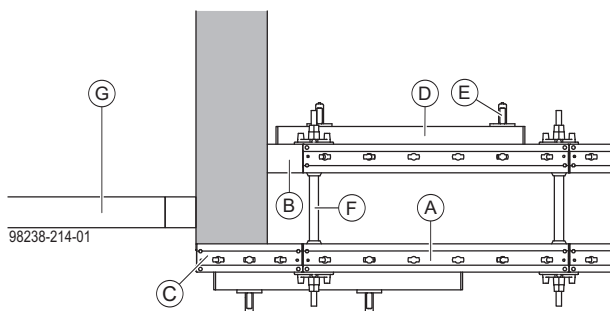


- A DokaFit Handset panel
- B Frami pressure plate 8/9
- C Hexagon nut 15.0
- D Form-tie nut 15.0 or Super plate 15.0
- E Form tie
- F Squared timber (max. 10 cm)
- G DokaFit HS adjustable clamp 10cm
- H Support

with closure

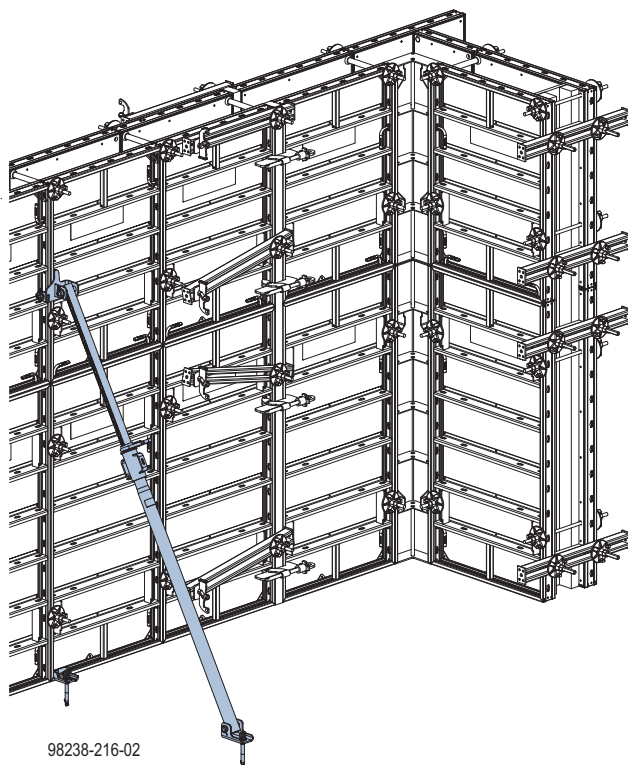


- A DokaFit Handset panel
- B Squared timber (min. 3 cm up to max. 5 cm)
- C Squared timber (max. 10 cm)
- D DokaFit HS adjustable clamp 10cm
- E Form tie
- F Support



- A DokaFit Handset panel
- B Squared timber (min. 3 cm up to max. 10 cm)
- C DokaFit Handset panel 0.30m
- D Frami universal waling (not necessary with squared timbers up to 5 cm wide)
- E Frami wedge clamp
- G Form tie
- H Support

Plumbing accessories



Plumbing accessories brace the formwork against wind loads and make it easier to plumb and align the formwork.

Product features:

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



WARNING

Risk of the formwork tipping over!

- ▶ Formwork panels must be securely braced **in every phase** of the construction work!
- ▶ Observe all applicable safety regulations!
- ▶ If **high wind speeds** are likely, and when work finishes for the day or before prolonged work-breaks, always take extra precautions to fix the formwork in place.
Suitable precautions:
 - set up the opposing formwork
 - place the formwork against a wall
 - anchor the formwork to the ground
- ▶ The safety pin is only for rough adjustment of the plumbing accessory. Do not attempt to remove or release the safety pin under load.

Plumbing strut 260 + DokaFit HS panel-strut head EB:

Formwork height [m]	Connection height [m]	Permissible spacing [m]
2.0	1.50	2.55
2.5	2.00	2.45
3.0	2.25	2.10
3.5	2.25	1.50

Max. anchoring load:
 $F_{\text{exist}} = 7.7 \text{ kN}$ (actual load)
 $F_d = 11.5 \text{ kN}$ (design value incl. safety factors)

Plumbing strut 340 + DokaFit HS panel-strut head EB:

Formwork height [m]	Connection height [m]	Permissible spacing [m]
3.0	2.12	3.40
3.5	2.12	2.70
4.0	2.57	2.40
4.5	2.87	2.00

Max. anchoring load:
 $F_{\text{exist}} = 9.0 \text{ kN}$ (actual load)
 $F_d = 13.5 \text{ kN}$ (design value incl. safety factors)

Plumbing strut 540 + DokaFit HS panel-strut head EB:

Formwork height [m]	Connection height [m]	Permissible spacing [m]
4.0	2.87	2.70
4.5	3.50	2.50
5.0	4.00	2.25
5.5	4.50	2.10
6.0	4.62	1.80

Max. anchoring load:
 $F_{\text{exist}} = 9.0 \text{ kN}$ (actual load)
 $F_d = 13.5 \text{ kN}$ (design value incl. safety factors)

The values apply where the wind pressure $w_e = 0.65 \text{ kN/m}^2$. This results in a peak velocity pressure $q_p = 0.5 \text{ kN/m}^2$ (102 km/h) where $c_{p, \text{net}} = 1.3$. 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!



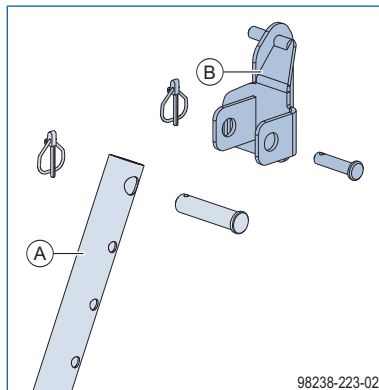
For more information, see the Calculation Guide 'Wind loads to the Eurocodes', or consult your Doka technician!

Note:

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

Pre-assembly

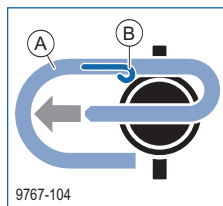
- Mount the panel-strut head on the plumbing strut.



- Fix the plumbing accessory to the formwork and to the ground (see connection possibilities below for details).
- Precision adjustment of the plumbing strut with adjusting nut.

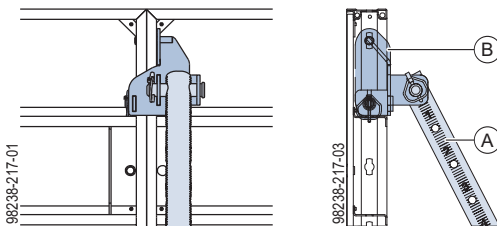


- The safety pin (A) must be fully inserted into the plumbing accessory and secured in this position by the locking spring (B).
- The function of the locking spring (B) must be ensured.



Fixing the struts to the formwork

- Pin the panel-strut head into the holes in the **frame profiles** and secure the pins.



- A Plumbing strut 260 IB
- B DokaFit HS panel-strut head EB

Fixing to the ground

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

Drilled holes in baseplate

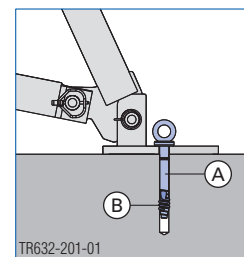
Plumbing strut 260	Panel struts

a ... Ø 26 mm

b ... Ø 18 mm (suitable for Doka express anchors)

Anchoring the footplate

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



A Doka express anchor 16x125mm

B Doka coil 16mm

Doka express anchor 16x125mm:

Concrete strength class: min. C20/25

Cube compressive strength of the concrete during loading: $f_{ck, cube, current} = \min. 15 \text{ N/mm}^2$ (corresponds to B15)



Follow the directions in the 'Doka express anchor 16x125mm' User Information booklet!

Required load-bearing capacity of alternative anchoring elements:

Max. anchoring load must be in accordance with the tables in the section headed 'Structural design'.

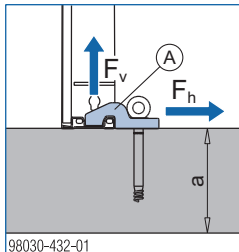
Follow the manufacturers' applicable fitting instructions.

Fixing the framed formwork panel to the ground

with floor fixing plates

The Frami floor fixing plate is used to fix and secure framed formwork panels:

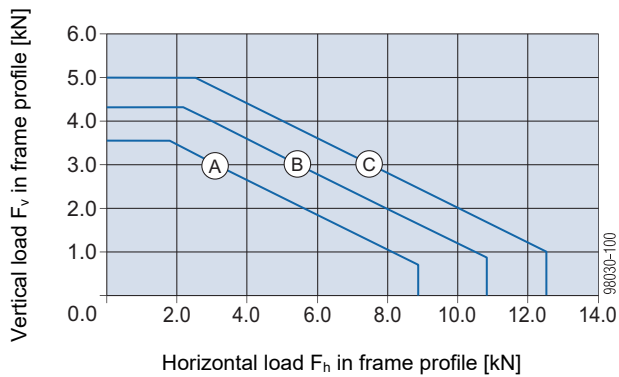
- As safeguard against lift-out by the wind.
- When panel struts are used without adjusting struts.



a ... min. 18 cm

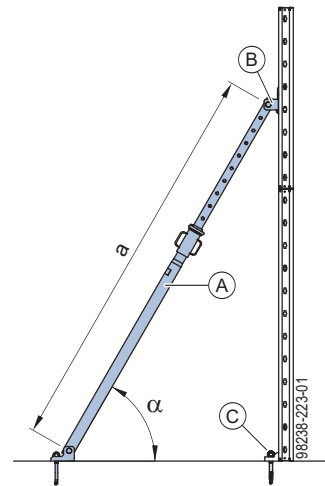
Distance from edge to panel outside edge: min. 15 cm

A Frami floor fixing plate



	Cube compressive strength $f_{ck, cube, current}$ of the foundation slab during loading	Max. anchoring load	
		F_{exist}	F_d
(A)	10 N/mm ² (corresponds to B10)	9.2 kN	13.8 kN
(B)	15 N/mm ² (corresponds to B15)	11.2 kN	16.8 kN
(C)	20 N/mm ² (corresponds to B20)	12.9 kN	19.4 kN

Plumbing strut 260



a ... min. 147 cm, max. 256 cm

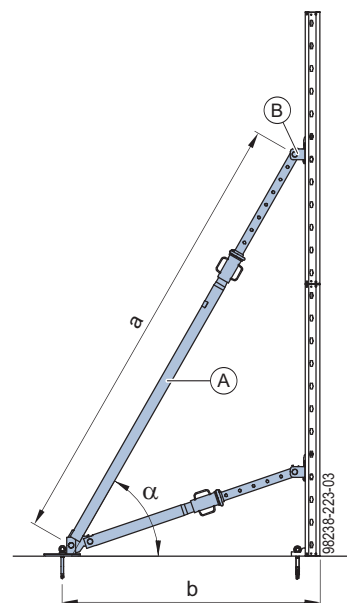
α ... approx. 60°

A Plumbing strut 260 IB

B DokaFit HS panel-strut head EB

C Frami floor fixing plate

Panel strut 340



a ... min. 191 cm, max. 341 cm

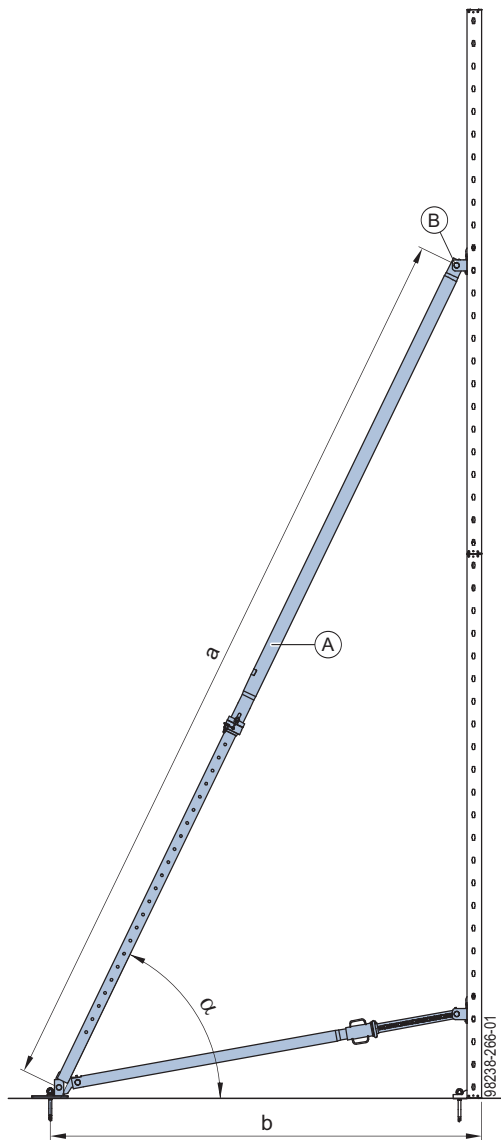
b ... min. 108 cm, max. 157 cm

α ... approx. 60°

A Panel strut 340 IB

B DokaFit HS panel-strut head EB

Panel strut 540



a ... min. 311 cm, max. 549 cm

b ... min. 173 cm, max. 221 cm

α ... approx. 60°

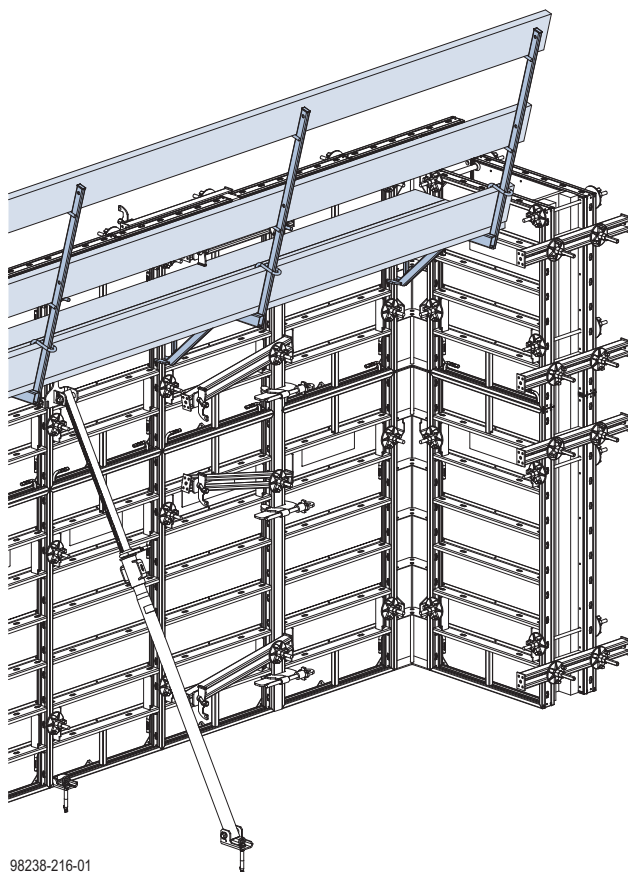
A Panel strut 540 IB

B DokaFit HS panel-strut head EB

Pouring platforms with single brackets

with DokaFit HS bracket 60

DokaFit HS brackets 60 are easy to assemble by hand and provide a 60 cm wide pouring platform.



98238-216-01

Precondition for use:

- Only fit pouring platforms to formwork structures of adequate stability ensuring that the expected loads can be taken.
- Brace the formwork in a windproof manner when erecting it or when it is temporarily placed in the standing position.
- Ensure that the formwork gang is sufficiently rigid.
- Observe all applicable safety regulations.



WARNING

Risk of the formwork tipping over!

- Multi-panel gang forms with pouring platforms and Plumbing struts 260, when without the opposing formwork, must be secured to the ground.

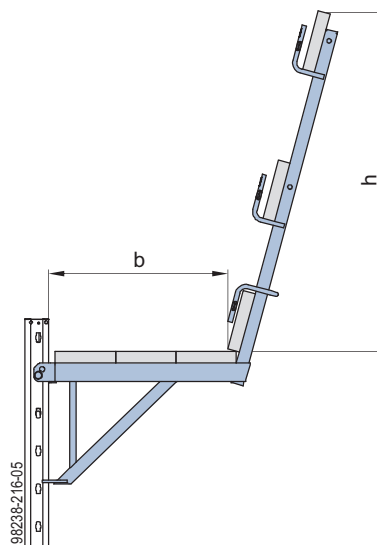
Suitable possibilities:

- with Frami floor fixing plates and Doka express anchors 16x125mm
- using Doka express anchors 16x125mm placed through the cross holes of the DokaFit Handset panels

Note:

The plank and board thicknesses stated comply with the EN 338 C24 timber.

Observe all national regulations applying to deck and guardrail boards.



b ... 60 cm
h ... 110 cm

Permitted service load: 1.5 kN/m² (150 kg/m²)

Load Class 2 to EN 12811-1:2003

Max. influence width: 1.50 m



NOTICE

The brackets must be secured against accidental lift-out.

Deck-boards and guardrail boards: Per 1 metre length of platform, 0.6 m² of deck-boards and 0.45 m² of guardrail boards are needed (provided on site).

Board thicknesses for centre-to-centre spans up to 2.50 m:

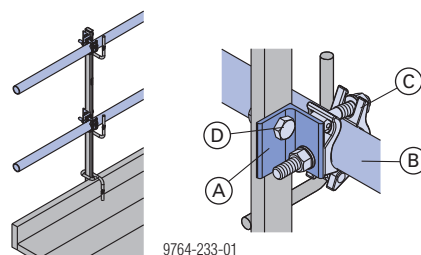
- Deck-boards min. 20/5 cm
- Guardrail boards min. 15/3 cm

Threaded-fastener material required for securing the deck-boards (fasteners per bracket):

- 3 cup square bolts M6x90
- 3 spring washers A6
- 3 hexagon nuts M6

Fixing the guardrail boards: use nails

Using scaffold tubes



9764-233-01

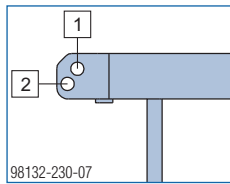
Tools required: Fork wrench 22 for mounting the couplers and scaffold tubes.

A Scaffold tube connection

B Scaffold tube 48.3mm

- C** Screw-on coupler 48mm 50
D Hexagon bolt M14x40 + hexagon nut M14
 (threaded-fastener material required)

Installation on DokaFit Handset panel



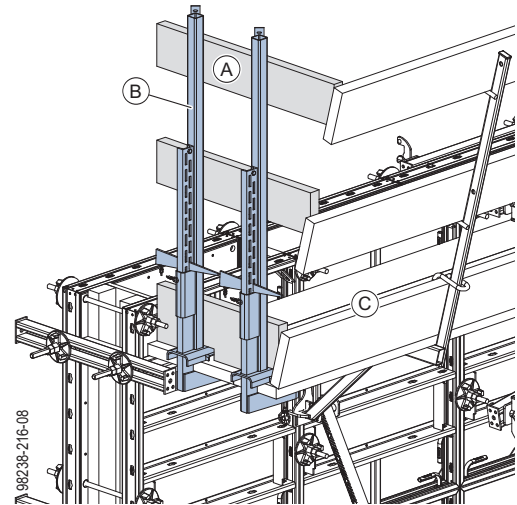
2 ... Hole for pinning to the DokaFit Handset profile

Possible ways of fixing	Pinning position
at a panel joint	
with horizontal panels in cross profile	

- A** DokaFit HS bracket 60
B Linch pin

Sideguards on exposed platform-ends

On pouring platforms that do not completely encircle the structure, suitable sideguards must be placed across exposed end-of-platform zones.



- A** Guardrail board min. 15/3 cm (provided on site)
B Handrail clamp S
C Pouring platform

Installation:

- ▶ To adjust the Handrail clamp S, remove the wedge from the wedge slot.
- ▶ Stand the Handrail clamp S in the chosen position and wedge it in place firmly.
- ▶ Fix guardrail boards to the handrail-post plates with nails (diam. 5 mm).

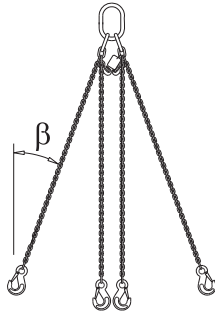


Follow the directions in the 'Handrail clamp S' User Information booklet.

Lifting by crane

Safe crane-handling of the DokaFit Handset is possible using the **Frami lifting hook** and the **Doka 4-part chain 3.20m**. The lifting hook locks automatically after being hung into place.

Doka 4-part chain 3.20m



CE

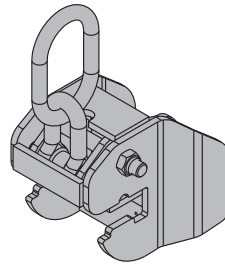
- ▶ Attach the Doka 4-part chain 3.20m to the Frami lifting hooks.
- ▶ Hang the remaining chain-lengths back in place.

Permissible working load limit (2-part chain):
Up to 30° sling angle β 2400 kg.



Follow 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 $\beta \leq 7.5^\circ$.

max. formwork area with 2 lifting hooks: 15 m²



Follow the directions in the Operating Instructions!

Securing the lifting hooks against sliding from side to side



NOTICE

Position the lifting hooks so that they cannot slide from side to side.

- over **inter-panel joints**
- over or between **cross profiles** (single panels installed on their side)
- over **handles**

For other suitable positions see the section headed [Position of the lifting hooks](#).

Position of the lifting hooks

Note:

The positions of the lifting hooks shown here also apply for vertically stacked gang-forms.

Single panel

Panels up to 0.40m wide



Panels over 0.40m wide



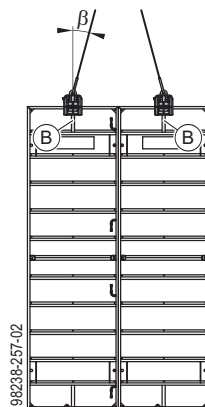
B Handle

Gang-form - two panels upright

Panel widths up to 0.40m



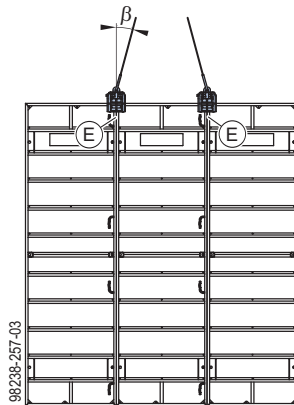
Panel widths more than 0.40m



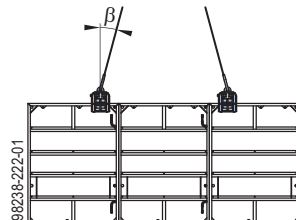
B Handle

Gang-form - three (or more) panels upright

Panel height over 1.00m

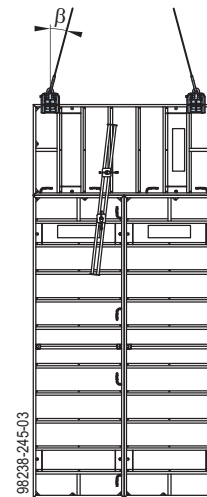


Panel height 1.00m



E Inter-panel joint

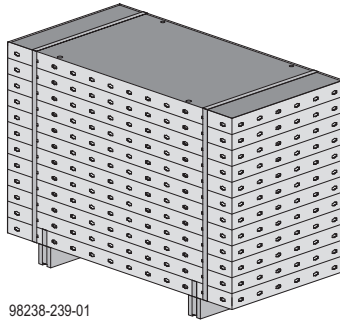
Gang-form - panel on its side (vertically stacked)



Transporting, stacking and storing

Bundling the panels

- 1) Position sleepers measuring approx. 8.0 x 10.0 (W x H) underneath the cross profile.
- 2) Strap the sleepers (hardwood blocking) and the bottom panel together with metal banding.
- 3) Strap the whole stack together tightly with metal banding.

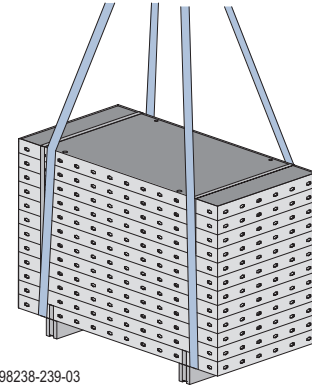


Stack max. 12 panels on top of one another!
(stack height incl. sleepers no higher than approx. 110 cm)

Transporting the panels

Dokamatic lifting strap 13.00m

The Lifting strap 13.00m is a practical tool for **unloading and loading trucks**, and for **lifting and setting down individual stacks of panels**.

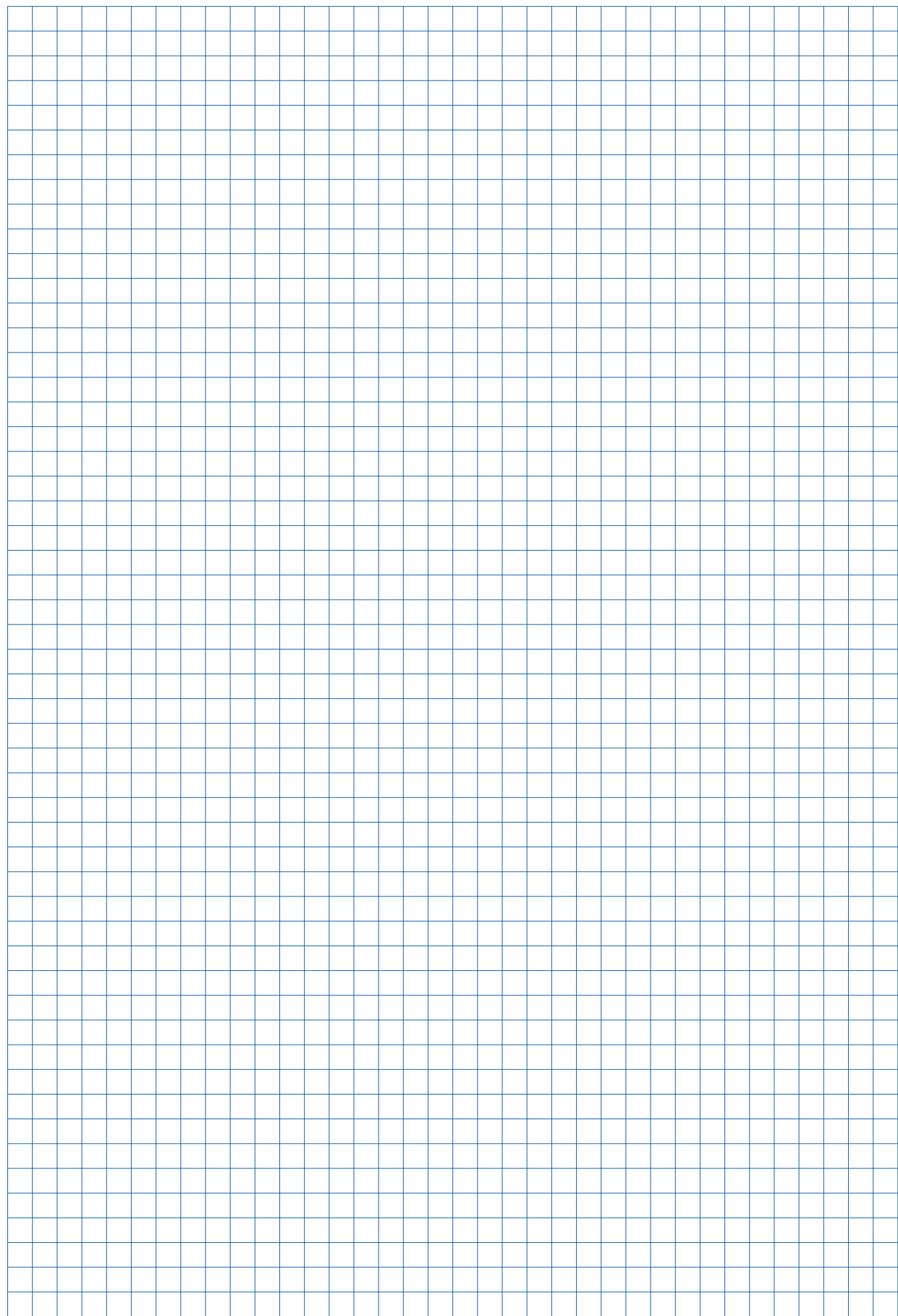


Dokamatic lifting strap 13.00m:

Permissible working load limit: 2000 kg / lifting strap



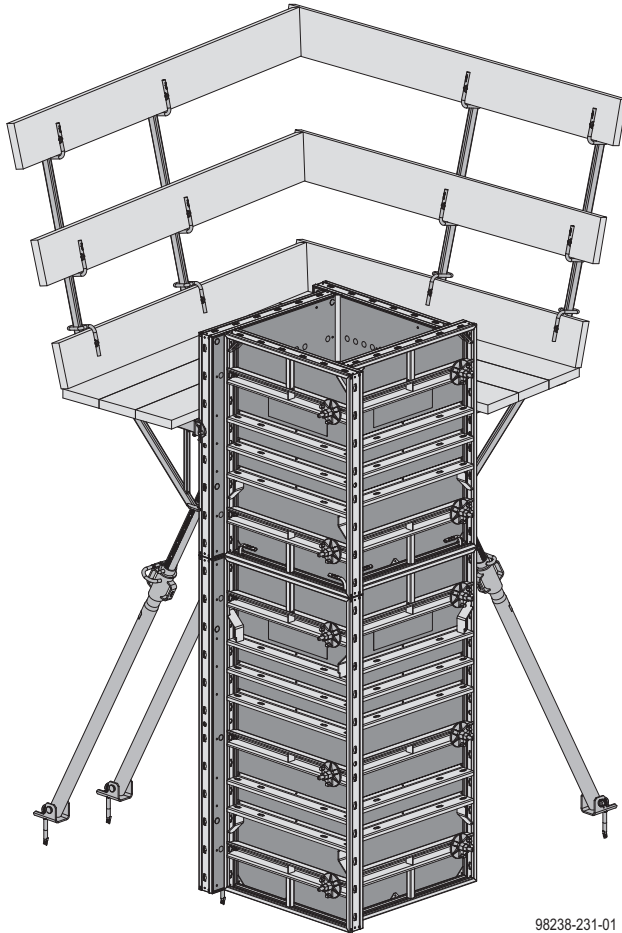
Follow the Operating Instructions!



Column formwork

There are several different ways of using DokaFit Handset to make column formwork:

- with **DokaFit Handset universal panels**
- Combination of **DokaFit Handset universal panels** and **DokaFit Handset panels**
- with **outside corners** and **DokaFit Handset panels**



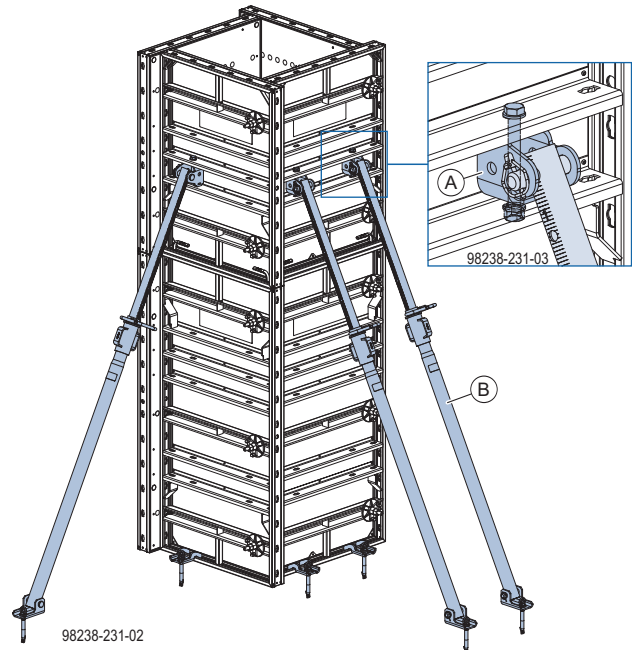
Design of column formwork



WARNING

Risk of the formwork tipping over!

- ▶ Always attach panel struts to column formwork to prevent the formwork from falling over.



A DokaFit HS universal-panel-strut head EB

B Plumbing strut 260

Note:

For precision plumbing of the column formwork, arrange the panel struts as shown here.

Note:

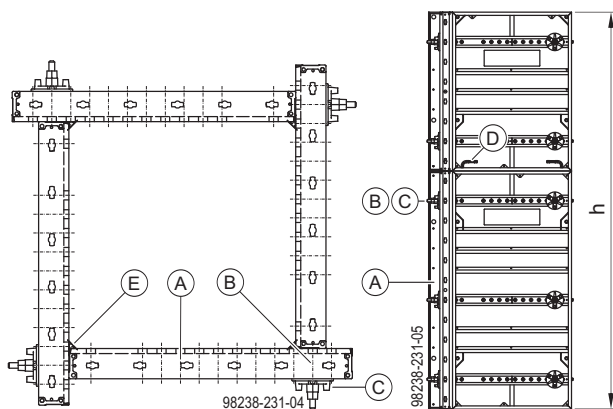
Close off unneeded grid holes in the formwork sheeting of the DokaFit Handset universal panels using **DokaFit HS plugs**.

with DokaFit Handset universal panel

The practical 5 cm hole grid is ideal for forming columns.

Column cross sections:

- Universal panel 0.45m: 15x15cm to 35x35 cm
- Universal panel 0.75m: 15x15cm to 65x65 cm



Example: column, 60 x 60 cm

- A** DokaFit Handset universal panel
- B** DokaFit HS corner connector
- C** Form-tie nut 15.0 or Super plate 15.0
- D** DokaFit HS clip or Frami clamp
- E** Framax triangular ledge

Permitted fresh-concrete pressure $\sigma_{hk, max}$: **75 kN/m²**

DokaFit HS corner connector:

Permitted tensile load: 12.5 kN (when used in DokaFit Handset universal panels)

Materials schedule

Formwork height (H)	DokaFit Handset universal panel (A)				DokaFit HS corner connector (B)	Form-tie nut or super plate (C)	DokaFit HS clip or Frami clamp (D)
	1.00m	1.50m	2.50m	3.00m			
1.00 m	4				8	8	
1.50 m		4			12	12	
2.00 m	8				16	16	8
2.50 m	4	4			20	20	8
2.50 m			4		20	20	
3.00 m		8			24	24	8
3.00 m				4	24	24	
3.50 m	8	4			28	28	16
3.50 m	4		4		28	28	8
4.00 m	4	8			32	32	16
4.00 m		4	4		32	32	8
4.00 m	4			4	32	32	8
4.50 m		12			36	36	16
4.50 m	8		4		36	36	16
4.50 m		4		4	36	36	8
5.00 m	8	8			40	40	24
5.00 m			8		40	40	8
5.00 m	8			4	40	40	16
5.50 m	4	12			44	44	24
5.50 m		8	4		44	44	16
5.50 m	4	4		4	44	44	16
6.00 m		16			48	48	24
6.00 m	4		8		48	48	16
6.00 m				8	48	48	8

The figures in the table give the number of items needed.

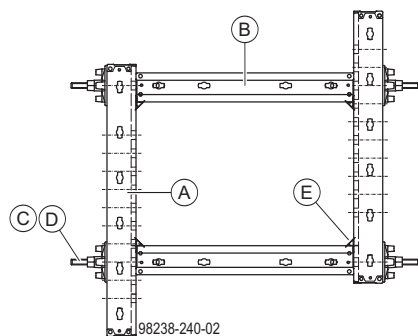
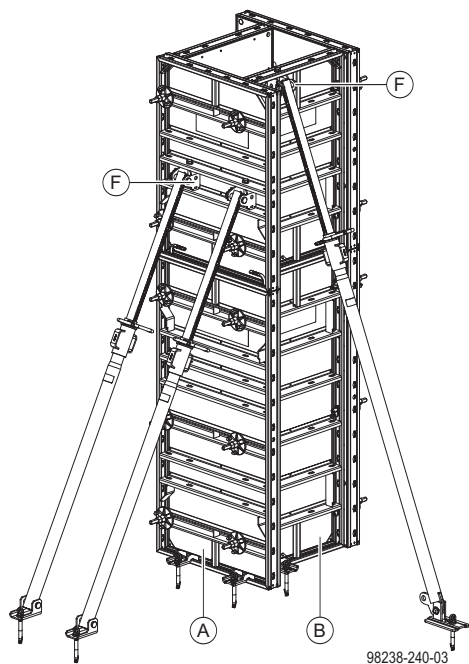
Versions with DokaFit Handset panels



WARNING

► When using DokaFit Handset panels, take the lower **permissible fresh-concrete pressure of 60 kN/m²** into account!

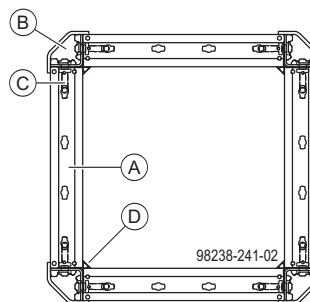
DokaFit Handset universal panels and DokaFit Handset panels



Example: column, 40 x 60 cm

- A DokaFit Handset universal panel
- B DokaFit Handset panel
- C DokaFit HS corner connector
- D Form-tie nut 15.0 or Super plate 15.0
- E Framax triangular ledge
- F DokaFit HS universal-panel-strut head EB

DokaFit Handset panels and DokaFit Handset outside corners



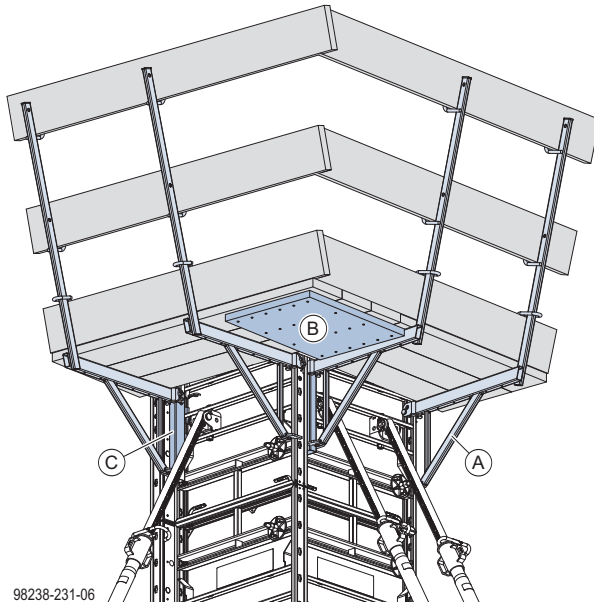
Example: column, 50 x 50 cm

- A DokaFit Handset panel
- B DokaFit Handset outside corner
- C DokaFit HS clip
- D Framax triangular ledge

Pouring platform with DokaFit HS bracket 60

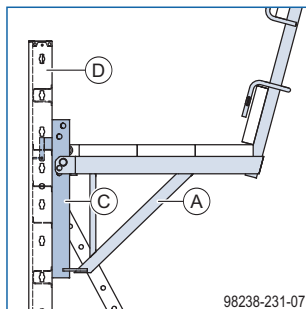
Note:

Where the two planks meet, a joining board must be screwed onto the underside.



- A** DokaFit HS bracket 60 (deck boards and guardrail boards provided on site)
- B** Board for screwing on the platform decks
- C** DokaFit HS column adapter

Close-up: DokaFit HS column adapter



- A** DokaFit HS bracket 60
- C** DokaFit HS column adapter
- D** DokaFit Handset universal panel



NOTICE

The brackets and column adapters must be secured against lift-out.

General

Using as downturned-beam formwork

Using **tie-holder brackets** for the **top and bottom ties** has the following effects:

- The tie-points are above/below the panel – no ties in the concrete
- Form-tie spacing freely selectable

Required numbers of Frami tie-holder brackets:

DokaFit Handset panel (horizontal)	Number of Frami tie-holder brackets	
	top	bottom
1.00m	2 / 1 *)	2 / 1 *)
1.50m	2 / 1 *)	2 / 1 *)
2.50m	2	3
3.00m		

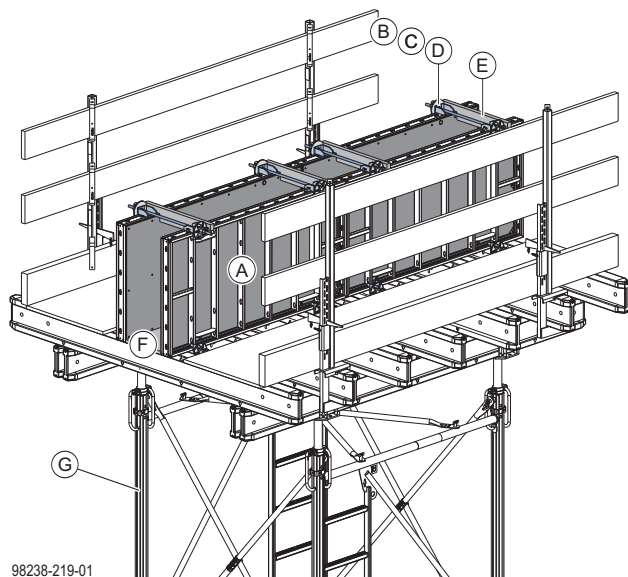
Downturned beam height: max.75 cm

*) In every other panel, only one Frami tie-holder bracket is needed. Two Frami tie-holder brackets are needed in the first panel, and two in the last panel.

Frami tie-holder bracket:

Permitted load-bearing capacity: 10 kN

Example with 0.75x1.50m panel



A DokaFit Handset panel 0.75x1.50m

B Frami tie-holder bracket

C Tie rod 15.0mm

D Form-tie nut 15.0 or Super plate 15.0

E Wooden spacer

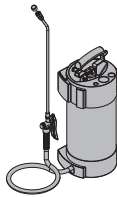
F Formwork sheet

G Load-bearing tower

Cleaning and care of your equipment

Release agents

Doka-Trenn and Doka-OptiX are 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.



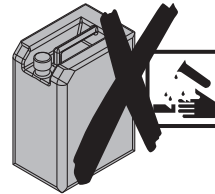
To determine the right dosage and to make sure that you are using the agent correctly, test it on less important parts of the structure first.

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 working platform at a suitable cleaning location.

- Wheel-around scaffold DF (working heights of up to 3.50 m)
- Ringlock (working heights of up to 12.00 m)

Cleaning equipment

High-pressure spray cleaner

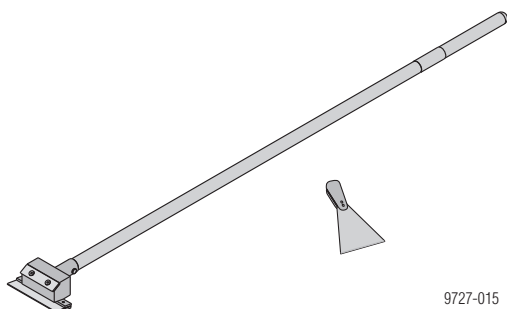


NOTICE

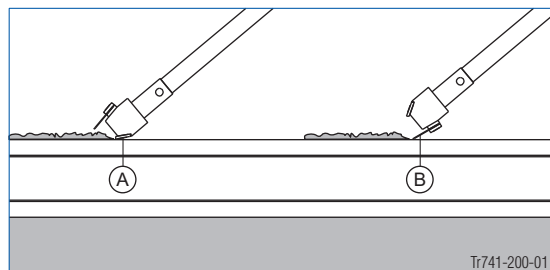
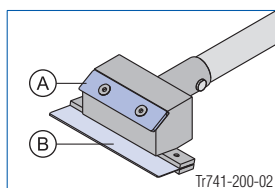
- Appliance pressure rating: 200 to max. 300 bar
- Keep the water-jet the correct distance from the formwork, and move it at the right speed:
 - The higher the pressure, the further away from the formwork you must keep the jet and the faster you must move it across the surface.
- Do not aim the jet at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



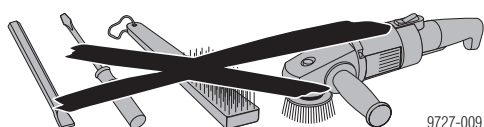
A Blade for dealing with heavy soiling

B Blade for dealing with slight soiling



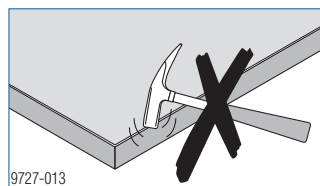
NOTICE

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

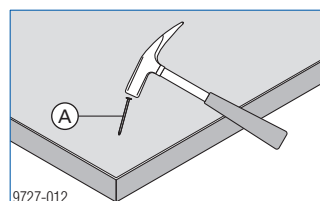


Care

- No hammer-blows to the frame profiles

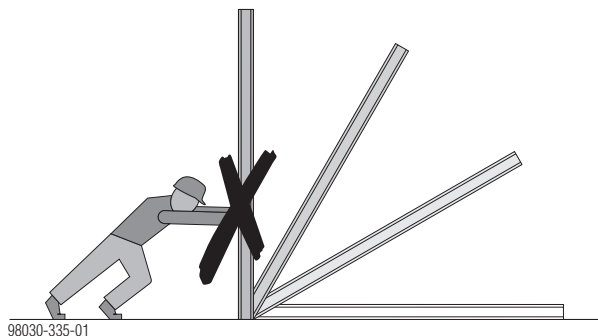


- Do not use nails on the formwork that are longer than 60 mm

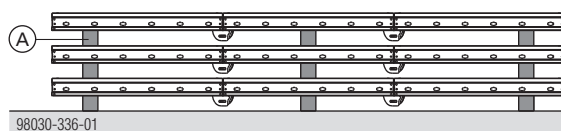


A max. l=60 mm

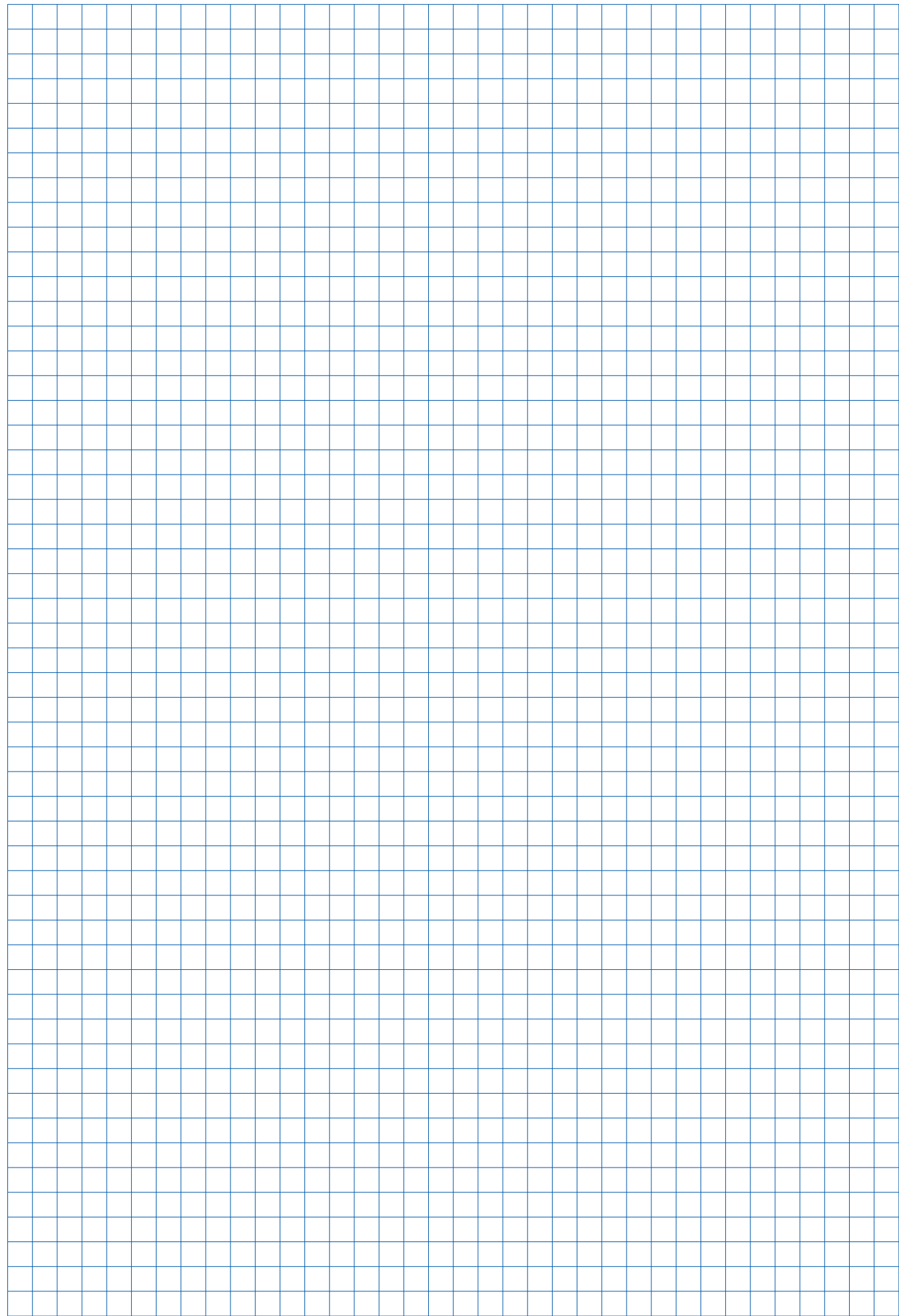
- Never push over panels or allow them to fall

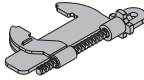
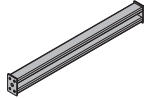
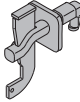
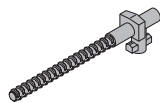
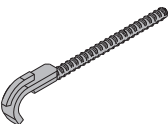
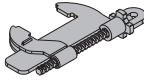
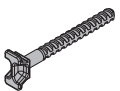
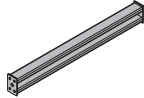
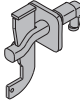
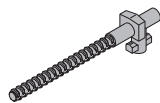
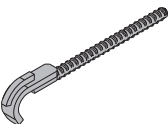
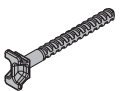


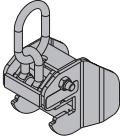
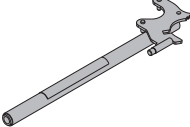
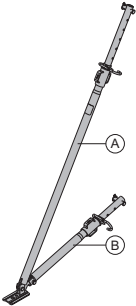
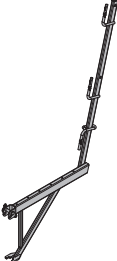
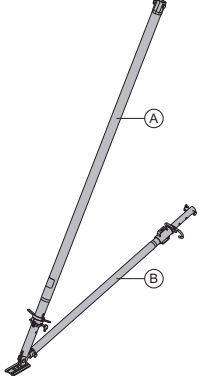
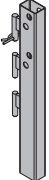
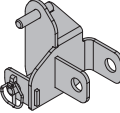
- Gang-forms with Frami clamps: always insert suitable wooden spacers (**A**) when placing these gang-forms one on top of another.

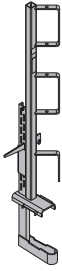
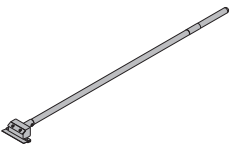
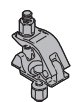
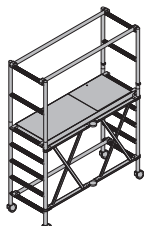
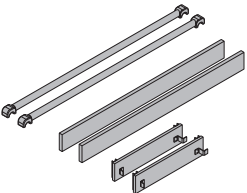
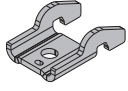


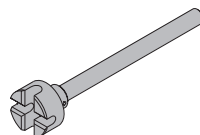
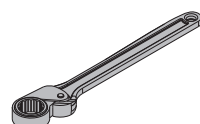
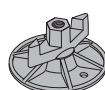
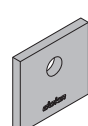
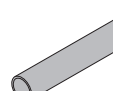
This prevents the formwork sheets from being damaged by the connector components.



	[kg]	Article N°		[kg]	Article N°
DokaFit Handset panel 0.30x1.00m	13.2	589514000	DokaFit HS stop-end plate 10-15cm 1.50m	17.6	589489000
DokaFit Handset panel 0.40x1.00m	15.5	589513000	DokaFit HS stop-end plate 10-15cm 1.00m	12.5	589488000
DokaFit Handset panel 0.50x1.00m	18.1	589512000	DokaFit HS-Stirnabschalblech 10-15cm		
DokaFit Handset panel 0.60x1.00m	20.4	589510000			
DokaFit Handset panel 0.75x1.00m	23.7	589508000			
DokaFit Handset panel 0.30x1.50m	18.9	589507000			
DokaFit Handset panel 0.40x1.50m	22.0	589506000			
DokaFit Handset panel 0.50x1.50m	25.4	589505000			
DokaFit Handset panel 0.60x1.50m	28.4	589503000			
DokaFit Handset panel 0.75x1.50m	33.0	589501000			
DokaFit Handset panel 0.30x2.50m	30.2	589525000			
DokaFit Handset panel 0.40x2.50m	38.5	589524000			
DokaFit Handset panel 0.50x2.50m	40.3	589523000			
DokaFit Handset panel 0.60x2.50m	45.2	589522000			
DokaFit Handset panel 0.75x2.50m	52.4	589521000			
DokaFit Handset panel 0.30x3.00m	37.1	589545000			
DokaFit Handset panel 0.40x3.00m	43.0	589544000			
DokaFit Handset panel 0.50x3.00m	49.1	589543000			
DokaFit Handset panel 0.60x3.00m	55.0	589542000			
DokaFit Handset panel 0.75x3.00m	63.7	589541000			
DokaFit Handset-Element					
		Powder-coated blue			
DokaFit Handset universal panel 0.45x1.00m	19.5	589518000	DokaFit HS clip	0.26	589470000
DokaFit Handset universal panel 0.45x1.50m	28.0	589516000	DokaFit HS-Stecker		
DokaFit Handset universal panel 0.45x2.50m	45.0	589519000			
DokaFit Handset universal panel 0.45x3.00m	54.8	589546000			
DokaFit Handset universal panel 0.75x1.00m	28.2	589517000			
DokaFit Handset universal panel 0.75x1.50m	40.4	589515000			
DokaFit Handset universal panel 0.75x3.00m	79.1	589520000			
DokaFit Handset-Uni-Element					
		Powder-coated blue			
DokaFit Handset inside corner 1.00m 20cm	18.8	589527000	Frami clamp	1.2	588433000
DokaFit Handset inside corner 1.50m 20cm	26.7	589526000	Frami-Spanner		
DokaFit Handset-Innenecke					
		Powder-coated blue			
DokaFit Handset outside corner 1.00m	7.4	589529000	DokaFit HS adjustable clamp 10cm	2.6	589471000
DokaFit Handset outside corner 1.50m	11.1	589528000	DokaFit HS-Ausgleichsspanner 10cm		
DokaFit Handset-Außenecke					
		Powder-coated blue			
DokaFit HS steel closure plate 5cm 1.50m	5.9	589491000	Frami universal waling 0.70m	3.7	588439000
DokaFit HS steel closure plate 5cm 1.00m	4.7	589490000	Frami universal waling 1.25m	6.4	588440000
DokaFit HS-Stahlausgleich 5cm			Frami-Klemmschiene		
		Powder-coated blue			
DokaFit HS stop-end plate 10-15cm 1.50m	17.6	589489000	Frami wedge clamp	1.1	588441000
DokaFit HS stop-end plate 10-15cm 1.00m	12.5	589488000	Frami-Klemme		
DokaFit HS-Stirnabschalblech 10-15cm					
					
DokaFit HS clip	0.26	589470000	Frami universal fixing bolt 5-12cm	0.43	588479000
DokaFit HS-Stecker			Frami-Universalverbinder 5-12cm		
					
Frami clamp	1.2	588433000	Frami profile connector 5-18cm	0.8	588493000
Frami-Spanner			Frami-Profilverbinder 5-18cm		
					
DokaFit HS adjustable clamp 10cm	2.6	589471000	DokaFit HS corner connector	0.35	589478000
DokaFit HS-Ausgleichsspanner 10cm			DokaFit HS-Eckverbinder		
					
Frami universal waling 0.70m	3.7	588439000			
Frami universal waling 1.25m	6.4	588440000			
Frami-Klemmschiene					
					
Frami wedge clamp	1.1	588441000			
Frami-Klemme					
					
Frami universal fixing bolt 5-12cm	0.43	588479000			
Frami-Universalverbinder 5-12cm					
					
Frami profile connector 5-18cm	0.8	588493000			
Frami-Profilverbinder 5-18cm					
					
DokaFit HS corner connector	0.35	589478000			
DokaFit HS-Eckverbinder					
					

	[kg]	Article N°		[kg]	Article N°
Frami lifting hook Frami-Umsetzbügel  Galvanised Width: 15 cm Height: 21 cm Follow the directions in the "Operating Instructions"! 	7.5	588438000	DokaFit HS universal panel-strut head EB DokaFit HS-Uni-Elementstützenkopf EB  Powder-coated blue Width: 9 cm Height: 16 cm	1.4	589474500
Plumbing strut 260 IB Justierstütze 260 IB  Galvanised Length: 146.8 - 256.7 cm	12.8	588437500	Universal dismantling tool Universal-Löswerkzeug  Galvanised Length: 75.5 cm	3.6	582768000
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	580365000	Doka express anchor 16x125mm Doka-Expressanker 16x125mm  Galvanised Length: 18 cm	0.31	588631000
Doka coil 16mm Doka-Coil 16mm  Galvanised Diameter: 1.6 cm	0.009	588633000	Gauge for Doka express anchor 16x125mm Lehre Doka-Expressanker 16x125mm  Black Length: 3 cm Diameter: 2 cm	0.03	588632000
Information plate for express anchor Plakette Expressanker  PS Width: 8 cm Height: 7.5 cm	0.004	588630000	DokaFit HS bracket 60 DokaFit HS-Konsole 60  Powder-coated blue Length: 100 cm Height: 152 cm	7.6	589472000
Panel strut 540 IB Elementstütze 540 IB consisting of: (A) Plumbing strut 540 IB Galvanised Length: 310.5 - 549.2 cm (B) Adjusting strut 220 IB Galvanised Length: 172.5 - 221.1 cm  Galvanised Delivery condition: folded closed	41.4	580366000	DokaFit HS column adapter DokaFit HS-Stützenadapter  Powder-coated blue Height: 40 cm	2.1	589477000
DokaFit HS panel-strut head EB DokaFit HS-Elementstützenkopf EB  Powder-coated blue	1.9	589531000			

	[kg]	Article N°		[kg]	Article N°
Handrail clamp S Schutzgeländerzwinge S  Galvanised Height: 123 - 171 cm	11.5	580470000	Doka 4-part chain 3.20m Doka-Vierstrangkette 3,20m  Follow the directions in the "Operating Instructions"!	15.0	588620000
Scaffold tube 48.3mm 0.50m Scaffold tube 48.3mm 1.00m Scaffold tube 48.3mm 1.50m Scaffold tube 48.3mm 2.00m Scaffold tube 48.3mm 2.50m Scaffold tube 48.3mm 3.00m Scaffold tube 48.3mm 3.50m Scaffold tube 48.3mm 4.00m Scaffold tube 48.3mm 4.50m Scaffold tube 48.3mm 5.00m Scaffold tube 48.3mm 5.50m Scaffold tube 48.3mm 6.00m Scaffold tube 48.3mmm Gerüstrohr 48,3mm  Galvanised	1.7 3.6 5.4 7.2 8.4 10.8 12.6 14.4 16.2 18.0 19.8 21.6 3.6	682026000 682014000 682015000 682016000 682017000 682018000 682019000 682021000 682022000 682023000 682024000 682025000 682001000	Dokamatic lifting strap 13.00m Dokamatic-Umsetzgurt 13,00m  Green Follow the directions in the "Operating Instructions"!	10.5	586231000
Scaffold tube connection Gerüstrohranschluss  Galvanised Height: 7 cm	0.27	584375000	Double scraper Xlife 100/150mm 1.40m Doppelschaber Xlife 100/150mm 1,40m 	2.8	588674000
Screw-on coupler 48mm 50 Anschraubkupplung 48mm 50  Galvanised Width-across: 22 mm	0.8	682002000	Wheel-around scaffold DF Mobilgerüst DF  Aluminium Length: 185 cm Width: 80 cm Height: 255 cm Delivery condition: separate parts	44.0	586157000
Frami frame hole plug Frami-Ankerstopfen  Blue Diameter: 2.5 cm	0.002	588444000	Wheel-around scaffold DF accessory set Zubehörset Mobilgerüst DF  Aluminium Timber parts varnished yellow Length: 189 cm	13.3	586164000
DokaFit HS plug DokaFit HS-Abdeckstopfen  Brown Diameter: 2.4 cm	0.002	589475000			
Framax triangular ledge 2.70m Framax-Dreikantleiste 2,70m 	0.38	588170000			
Frami tie-holder bracket Frami-Ankerhaltewinkel  Galvanised	0.58	588453000			
Frami floor fixing plate Frami-Bodenhalter  Galvanised Length: 12.7 cm Width: 6.7 cm	0.7	588495000			

	[kg]	Article N°		[kg]	Article N°		
Tie rod system 15.0							
Tie rod 15.0mm galvanised 0.50m	0.72	581821000	Protective cap 15.0/20.0 Schutzkappe 15,0/20,0	0.03	581858000		
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	Yellow Length: 6 cm Diameter: 6.7 cm				
Tie rod 15.0mm galvanised 1.75m	2.5	581828000	Tie-rod wrench 15.0/20.0 Ankerstabschlüssel 15,0/20,0	1.8	580594000		
Tie rod 15.0mm galvanised 2.00m	2.9	581829000					
Tie rod 15.0mm galvanised 2.50m	3.6	581852000					
Tie rod 15.0mm galvanisedm	1.4	581824000					
Tie rod 15.0mm non-treated 0.50m	0.73	581870000	Galvanised				
Tie rod 15.0mm non-treated 0.75m	1.1	581871000	Friction type ratchet SW27 Freilaufknarre SW27	0.49	581855000		
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	Manganese-phosphated Length: 30 cm				
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-treatedm	1.4	581873000					
Ankerstab 15,0mm							
							
Form-tie nut 15.0 Ankermutter 15,0	0.92	589476000					
			Galvanised Height: 5.5 cm Diameter: 11 cm Width-across: 27 mm				
Super plate 15.0 Superplatte 15,0	0.98	581966000					
			Galvanised Height: 6 cm Diameter: 12 cm Width-across: 27 mm				
							
Hexagon nut 15.0 Sechskantmutter 15,0	0.23	581964000					
			Galvanised Length: 5 cm Width-across: 30 mm				
							
Frami pressure plate 8/9 Frami-Druckplatte 8/9	0.55	588466000					
			Galvanised				
Plastic tube 22mm 2.50m Kunststoffrohr 22mm 2,50m	0.45	581951000					
			PVC Grey Diameter: 2.6 cm				
Universal cone 22/10mm Universal-Konus 22/10mm	0.005	581995000					
			Grey Diameter: 4 cm				
Plug 22mm Verschlussstopfen 22mm	0.003	581953000					
			PE Grey				



Formwork & Scaffolding.
We make it work.
