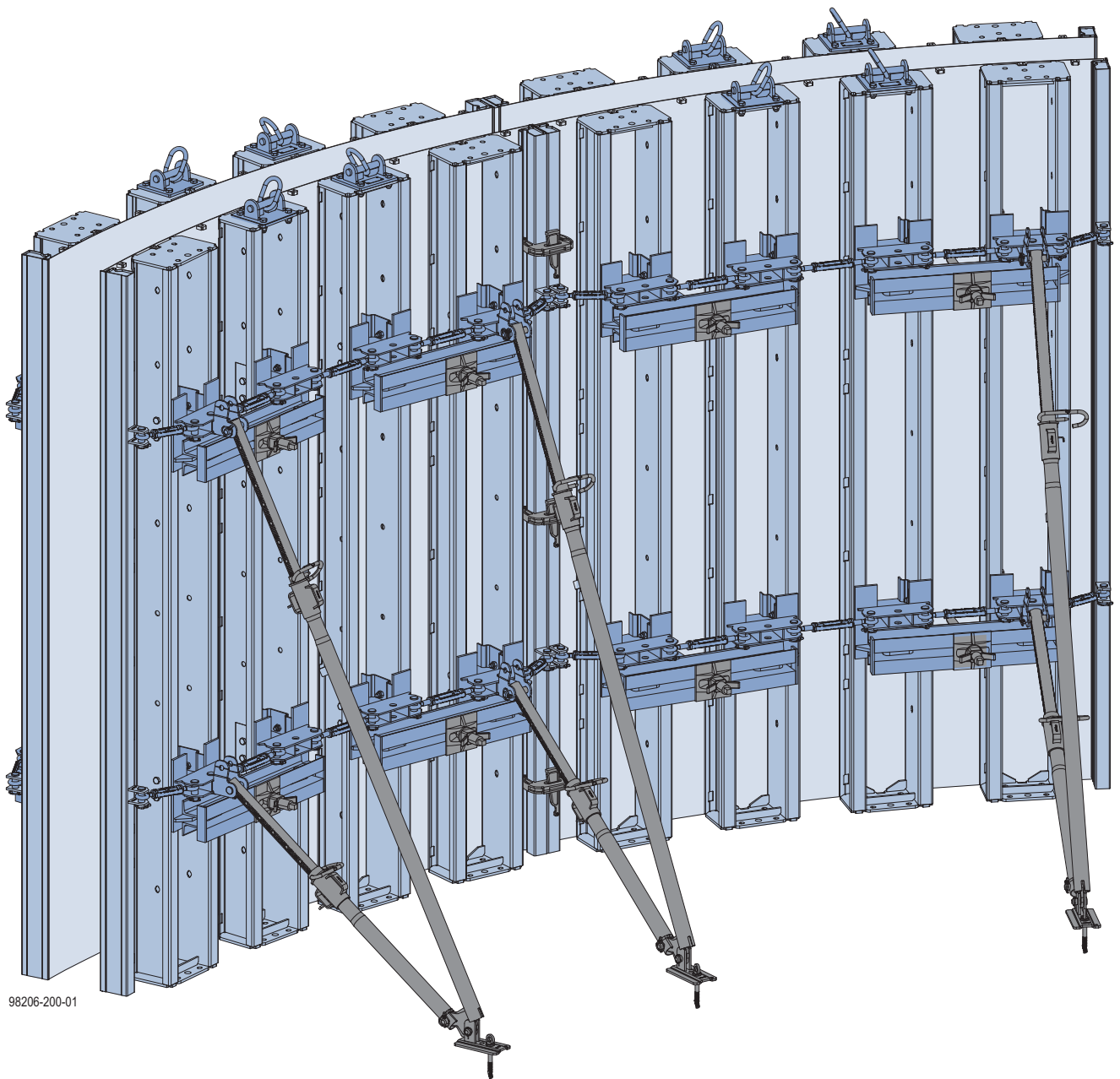


SuperCurve

User Information

Instructions for assembly and use



98206-200-01

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Introduction

Basic 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 utilization 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 insure that the information materials provided by Doka (e.g. User Information booklets, Method Statements, Operating Instruction manuals, plans etc.) are up to date and available to all users, and that users have been made aware of them and have easy access to them at the usage location.
- In the relevant technical documentation and form-work utilization 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 must ensure compliance with the national applicable laws, standards and rules 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 utilize 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; occupational health & safety

- All laws, Standards, industrial safety regulations and other safety rules applying to the application and utilization 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 shall ensure that this product is erected and dismantled, repositioned 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 shall 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).
- The functional / technical instructions, safety warnings and loading data shall all be strictly observed and complied with. Non-compliance can cause accidents and severe injury (risk of fatality) and serious 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 prohibited to weld or heat Doka products, particularly parts for anchoring, suspension or connecting, and also cast parts, etc.
Welding radically changes the micro-structure of the materials of which these components are made. This leads to a drastic reduction in failure load, constituting a serious safety risk.
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.
Welding work can be done only on the articles expressly mentioned in the Doka documents as being suitable for work of this nature.

Assembly

- The equipment/system must be inspected by the customer before use, to ensure that it is in suitable condition. Steps must be taken to rule out the use of components that are damaged, deformed, or weakened due to wear, corrosion or rot (e.g. fungal decay).
- The use of our safety systems and formwork systems in combination with those of other manufacturers could be dangerous, risking injury to health and damage to property, and therefore requires separate verification by the user.
- The equipment/system must be assembled and erected in accordance with the applicable laws, standards and rules by suitably skilled personnel of the customer's, having regard to any and all required safety inspections.
- It is not permitted to modify Doka products; any such modifications constitute a safety risk.

Erecting the formwork

- Doka products and systems must be set up in such a way that all loads acting upon them are safely transferred!

Pouring

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

Stripping the formwork

- Do not strip the formwork until the concrete has reached sufficient strength and the person in charge has given the order for the formwork to be stripped!
- When stripping 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 S bias-cut corners.
- When stripping 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 booklet, 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 authorized facilities.

Miscellaneous

The weights are averages on the basis of new material. Actual weights can vary due to material tolerances. Weights can also differ on account of dirtying, moisture absorption, etc.

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

Eurocodes at Doka

The permissible values stated in Doka documents (e.g. $F_{perm} = 70 \text{ kN}$) are not design values (e.g. $F_{Rd} = 105 \text{ kN}$), unless specified!

- It is essential not to confuse permissible values with design values!
- Doka documents will continue to state the permissible values.

Allowance has been made for the following partial factors:

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

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

Symbols

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.



NOTE

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.



Visual inspection

Indicates that actions performed must be checked by means of a visual inspection.



Tip

Draws attention to a useful tip for best-practice usage.



Reference

Cross-references other documents.

Intended use

SuperCurve is a formwork system for manufacturing curved walls in a site-placed concrete design. SuperCurve is designed for crane-assisted formwork.

Boundary conditions of use:

- Max. formwork height: 8.25 m (27'-3/ 4")
- Max. wall thickness: 183 cm (6'-0")
- Radii: 2.14 m to 40 m (7'-0" to 131')

Boundary conditions may vary depending on the particular application. Refer to the relevant information in the Doka technical documentation.

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!

System description

The curved formwork uses special spindles to curve the form-ply into a “genuine” arced shape.

This system of adjustment permits **continuous setting of the radii**. The curved formwork is designed for radii from 2.14 m to 40 m (7'-0" to 131').

The curved formwork panels are supplied to the site **pre-assembled**.

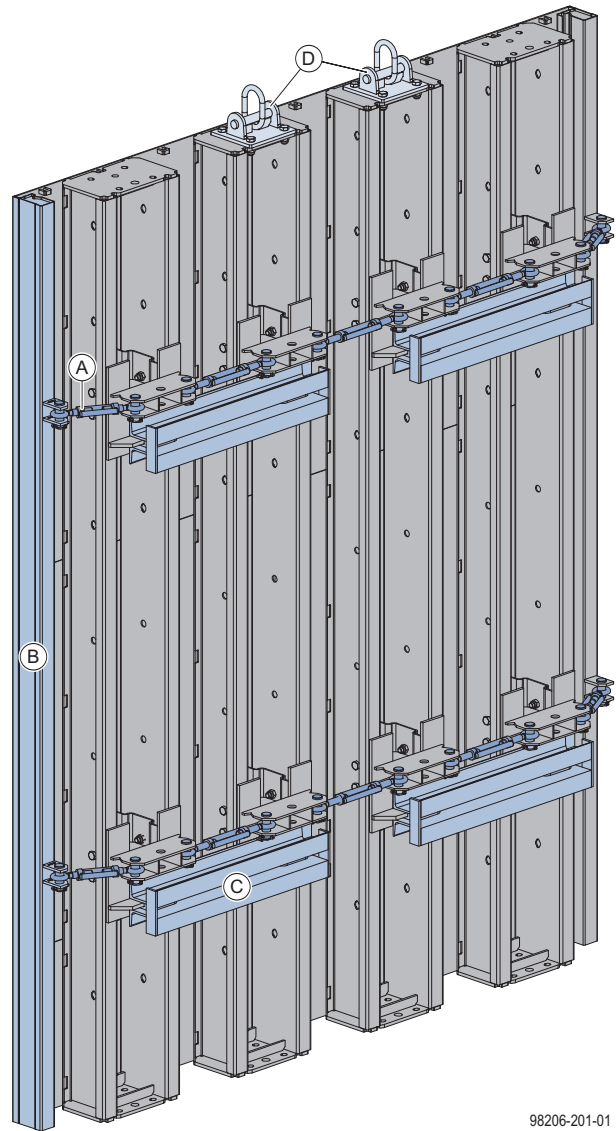
Special connecting profiles enable combination with Framax Xlife.

SuperCurve:

- Permitted fresh-concrete pressure: 60 kN/m² (1250 psf)
- Permitted fresh-concrete pressure when using She-bolt system 1 1/4": 40 kN/m² (835 psf)

Additional product features:

- Continuous adaptation to different radii using spindles.
- Only 2 panel widths:
 - Inside panel: 2.40m (7'-10")
 - Outside panel: 2.50m (8'-3")
- Ideal height grid provided by the panel heights of:
 - 0.75m (2'-5 1/2")
 - 1.50m (4'-11")
 - 3.00m (9'-10") (special order only)
- Fixings:
 - Adjustable clamp 10cm
 - Framax quick acting clamp RU
- Heavy-duty, flexible formwork sheeting:
 - Steel sheeting 5mm
- Smooth, constant curvature ensured by uniform support for the formwork sheeting.
- Very rigid connection between connecting profile and formwork sheeting ensures perfect curvature even at the edges of the panels.
- Low form-tie ratio:
 - Only 1 form tie per 1.8 m² (19.3 sqft) of area to be formed



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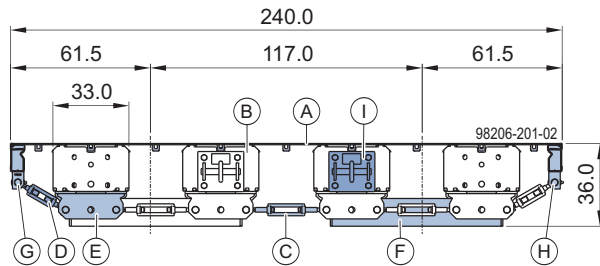
- A** Special spindle:
For setting the panel bending radius.
- B** Connecting profile:
Connection to other curved-formwork panels or Framax Xlife panels.
- C** Steel waling RD:
For distributing the form-tie forces.
- D** SuperCurve lifting bracket:
For repositioning the panel.

System grid

Widths of panels

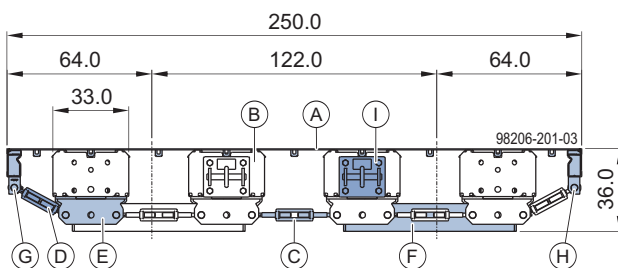
The 2.40-meter elements are used for the inside formwork, and the 2.50-meter elements are used for the outside formwork. This speeds up work by making it easy to see which element belongs where.

SuperCurve panel 2.40m - inside



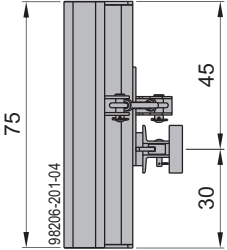
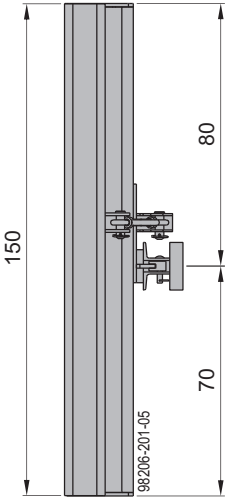
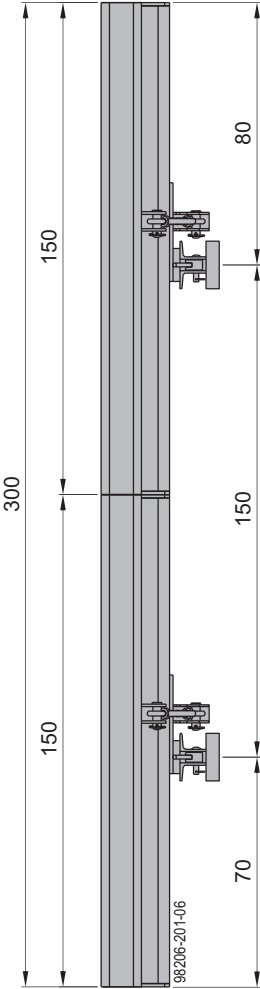
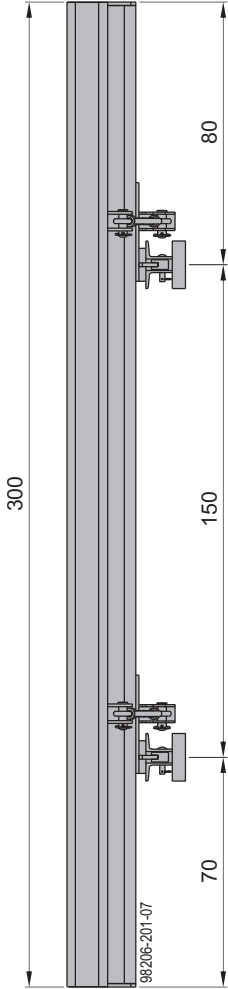
- A** Steel sheeting 5mm
- B** Beam
- C** Turnbuckle C
- D** Turnbuckle D
- E** Beam mount
- F** Steel waling RD 0.75m
- G** Connecting profile (left)
- H** Connecting profile (right)
- I** SuperCurve lifting bracket

SuperCurve panel 2.50m - outside



- A** Steel sheeting 5mm
- B** Beam
- C** Turnbuckle A
- D** Turnbuckle C
- E** Beam mount
- F** Steel waling RD 0.75m
- G** Connecting profile (left)
- H** Connecting profile (right)
- I** SuperCurve lifting bracket

Heights of panels

0.75m (2'-5½")	1.50m (4'-11")	1.50 + 1.50m (4'-11" + 4'-11")	3.00m (9'-10")
			

Vertical stacking

Note:

Make sure that the panels are the right way up.
The spindles must always be above the steel walings.

- Stack the panels tight, face down on an assembly bench.
- Bolt the panels together at the inter-panel joint.
Tighten the connecting bolts and nuts only slightly
- Install SuperCurve wedges with Spring cotters 4mm.
- Tighten the bolts.
- Install SuperCurve lifting brackets (see the section headed 'Repositioning').

Preparing the formwork

As-delivered condition: panel = straight

Note:

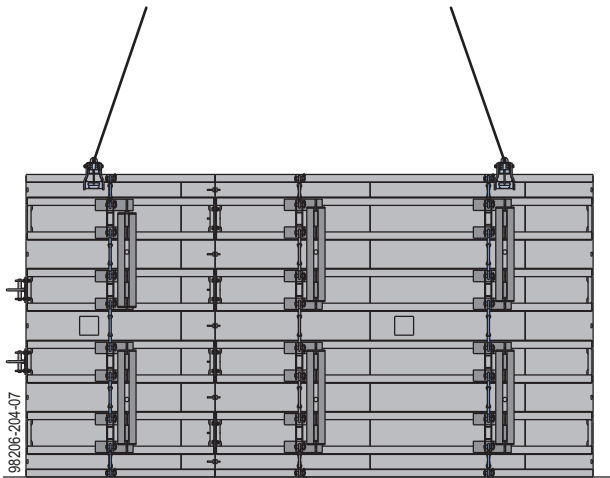
Tightest bending radius: 2.14m (7'-0")



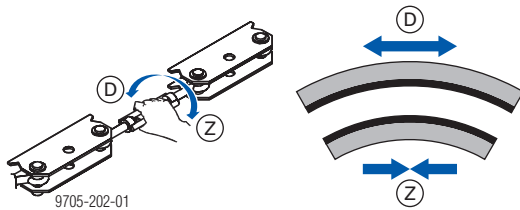
WARNING

► Use rigging with the necessary rated strength!

- Put up the curved formwork panel and secure it so that it cannot topple over.
- Place tall panels on their sides, as shown in the illustration, so that the spindle-levels are in the vertical. In this way, all the spindles are within easy reach.



- Uniformly pre-tension all the spindles by hand.



D Outside panel pushed into curvature

Z Inside panel pulled into curvature

Adjusting radius

Note:

- Always use the correct template to adjust the panel.
- Turn each spindle exactly as far as the spindles above and below it.
- Check the radius with the template before every pour.

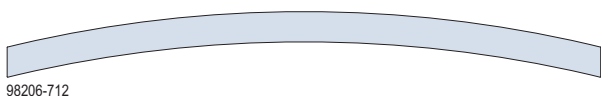


There is an indicator on the spindles to show which way to turn them, either **(Z)** (for German 'Zug', i.e. pull), or **(D)** (for German 'Druck', i.e. push).

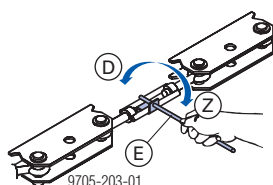


The formwork is easier to set up if there is an in-line connection to an existing wall.

- Prepare the template.



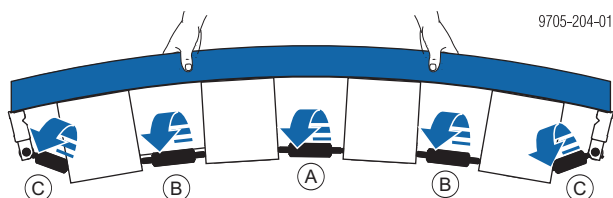
- Adjust the spindles using the Wrench for Circular formwork H20.



D Outside panel pushed into curvature

Z Inside panel pulled into curvature

E Wrench for circular formwork H20



Sequence of spindle turns:

	(C)	(B)	(A)	(B)	(C)
1	—	—	1½	—	—
2	—	1½	—	1½	—
3	½	—	—	—	½

- Repeat this procedure until the formwork sheeting is uniformly snug against the template. To return the panels to the "straight" position, simply reverse the spindling procedure.



If spindling has gone badly wrong:

- Straighten out the panel and start again!
- Once you have adjusted the curved formwork panels to the desired radius, set them up next to one another in the same way as straight panels, connect them with Framax quick acting clamps RU or Adjustable clamps 10cm.

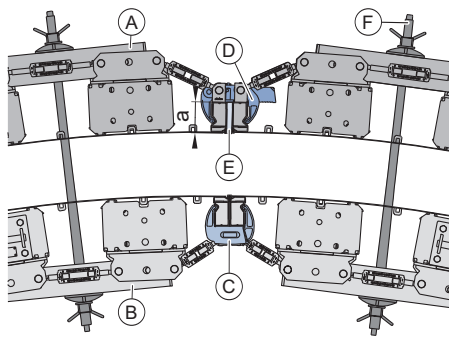
Storage

- Straighten out the panels again before storing them for any length of time.

Joining gangs

- As a rule, 2.50 m wide panels are used for the outside formwork.
- As a rule, 2.40 m wide panels are used for the inside formwork.
- The inter-panel connections are made using **Adjustable clamps 10cm** or **Framax quick acting clamps RU**. Use at least 1 clamp for every meter (3'-3") of panel height!
 - Do not oil or grease wedge-clamped joints.
- Place the inside and outside formworks opposite one another.

Bridge gaps between the panels with fitting timbers, e.g. Framax fitting timbers (see the section headed 'Determining the required widths of fitting timbers').



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a ... Height of fitting timber: 4 $\frac{3}{4}$ " (122 mm)

A Outside formwork

B Inside formwork

C Framax quick acting clamp RU

D Adjustable clamp 10cm

E Wood filler

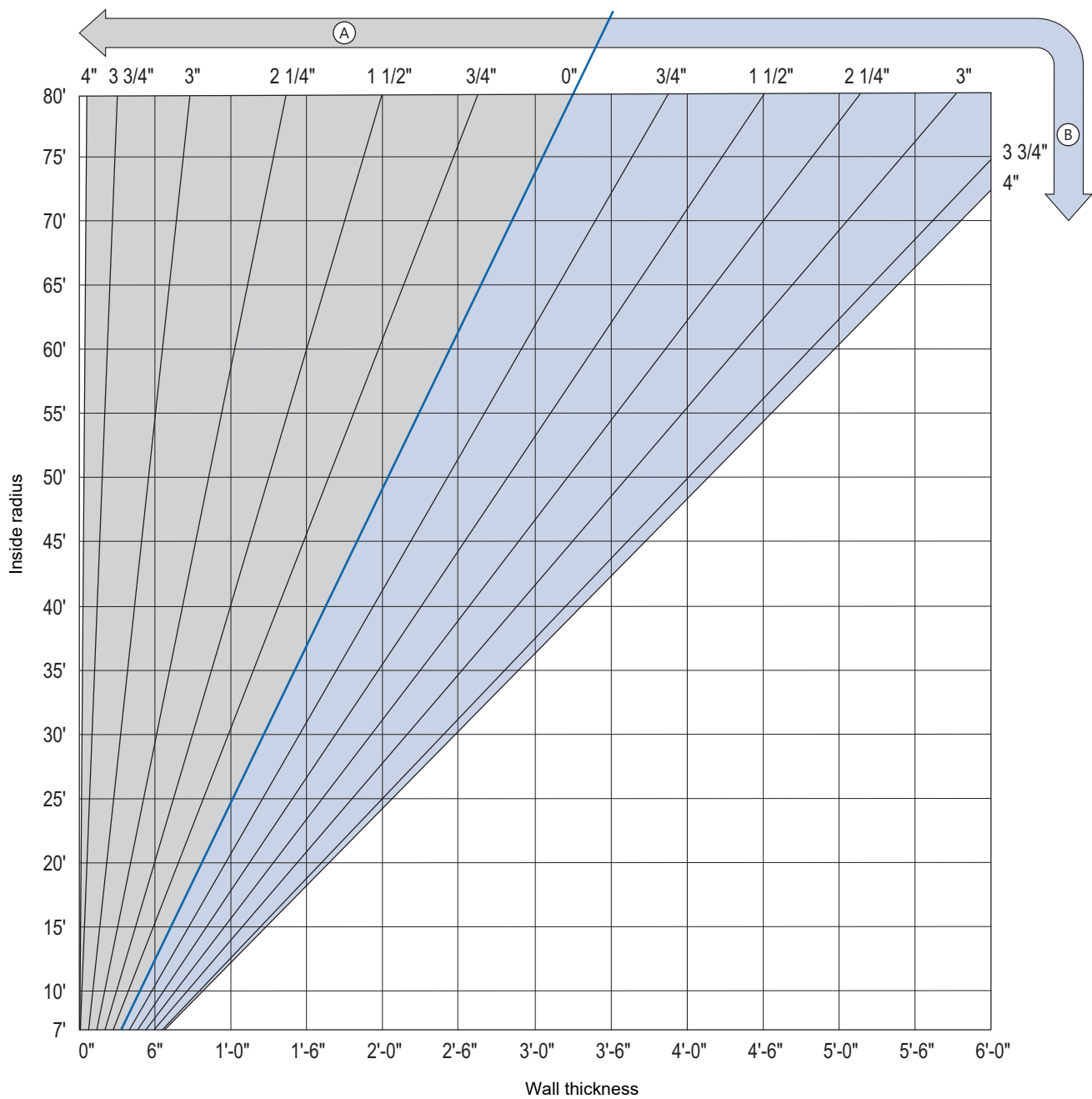
F Tying the panels

Combining with Framed formwork Framax Xlife

The connecting profile of the curved formwork elements permits the direct connection of Framax panels.

Determining the required widths of fitting timber

Closure diagram



- A Closure on inside
- B Closure on outside

Form-tie system

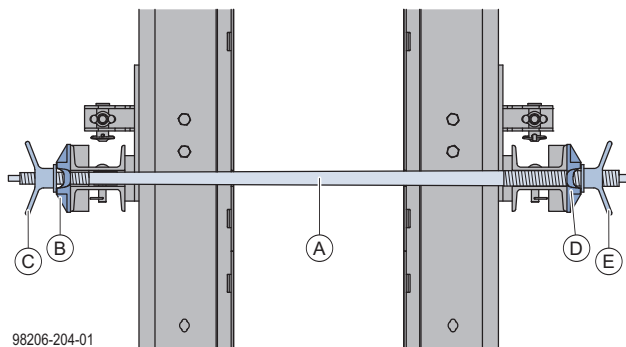


WARNING

Rod steel susceptible to damage!

- Never weld or heat tie rods.
- Tie rods that are damaged or have been weakened by corrosion or wear must be withdrawn from use.

Taper-tie system 1 1/4" to 1"



A Tapered tie rod 1 1/4" to 1"

B Battered washer 1"

C Wing nut 1"

D Battered washer 1 1/4"

E Wing nut 1 1/4"

Taper-tie system 1 1/4" to 1":

Permitted load-bearing capacity allowing a 2 : 1 factor of safety against failure:
150 kg (34000 lbs)

Taper ties for SuperCurve

Wall thickness	Taper-tie size
0" to 9"	42"
5" to 15"	48"
11" to 21"	54"
17" to 27"	60"
23" to 33"	66"
29" to 39"	72"

A technical diagram of a double door assembly. Two vertical door panels are shown, each with a handle and a lock mechanism. The left handle is labeled 'C' and the right handle is labeled 'B'. The central horizontal bar connecting the two doors is labeled 'D'. The top hinge area is labeled 'E'. The bottom hinge area is labeled 'A'.

Minimum length of the tie rods: Wall thickness + 1.00 m

Note:

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

Tie rod 20.0mm:

Permitted load-bearing capacity allowing a 2 : 1 factor of safety against failure:
169 kN (38000 lbs)



Tie-rod wrench 15.0/20.0

For turning and holding the tie rods.

Technical drawing of a door handle assembly. The drawing shows a cross-section of the handle mechanism, including the handle body, the internal spindle, and the mounting plate. The components are labeled as follows:

- A**: The internal spindle or shaft.
- B**: The handle body or grip.
- C**: The mounting plate or base.

The drawing also includes a dimension line labeled **a**, indicating the distance between the mounting plates.

98206-208-01

a ... 10.2 cm (4")

- A** She-bolt 20.0 mm x 24"

She-bolt system 7/8" [20.0 mm]:

Permitted capacity allowing a 2 : 1 factor of safety
against failure:
166 kN (37500 lbs)

Formwork for protruding projecting reinforcement

SuperCurve reinforcing panels are used in cases where projecting reinforcement is protruding.

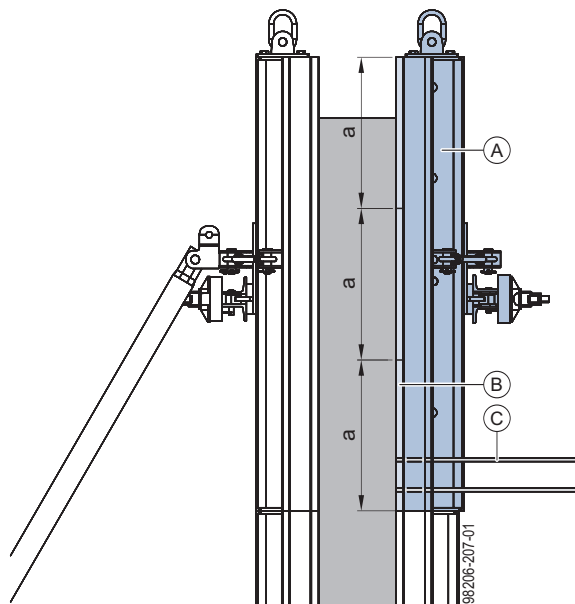
The SuperCurve reinforcing panels consist of 3 strips of formwork sheeting, which are bolted to plastic ledges from the front.

Depending on the requirements, the strips of formwork sheeting can be removed to allow the projecting reinforcement to protrude.

Note:

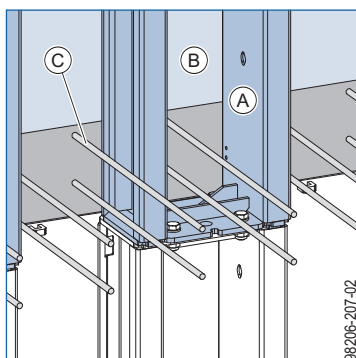
The SuperCurve reinforcing panel allows for continuous adjustment of the radius from 3.50 m to 40 m (11-5 3/4 to 131') (a radius of 2.50 m (8'-3") is an option in certain cases).

Practical example



a ... Strips of formwork sheeting, 50 cm (1'-7 3/4)

Close-up



A SuperCurve reinforcing panel

B Formwork sheeting

C Projecting reinforcement

Note:

Closing the formwork sheeting between the projecting reinforcement rods for pouring is done on site.

Forming self-compacting concrete (SCC)

The SuperCurve system can also be used to pour self-compacting concrete.

Items needed:

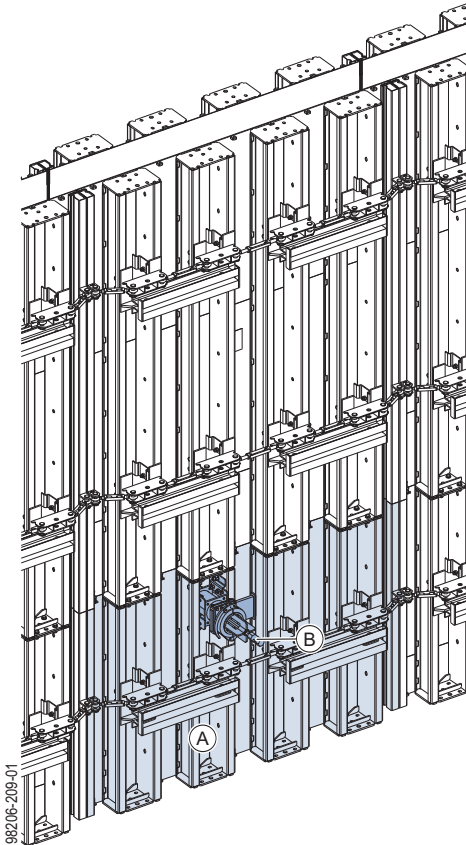
- SuperCurve panel SCC 2.40x1.50 m
- SuperCurve filler neck SCC



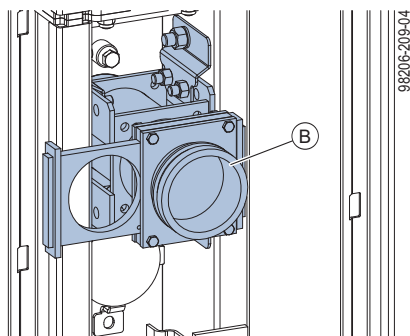
NOTICE

The connection for self-compacting concrete (SCC) is not suitable for pouring conventional concrete!

Practical example



Close-up: SCC SuperCurve filler neck



A SuperCurve panel SCC 2.40x1.50 m

B SuperCurve filler neck SCC



Follow the directions in the “Forming self-compacting concrete (SCC)” User Information booklet.

Bulkhead formwork

Bulkheads up to a wall thickness of 60 cm (24") are possible with the **Framax stop-end tie**.

Framax stop-end tie:

Permitted tensile force: 15 kN (3.37 kip)

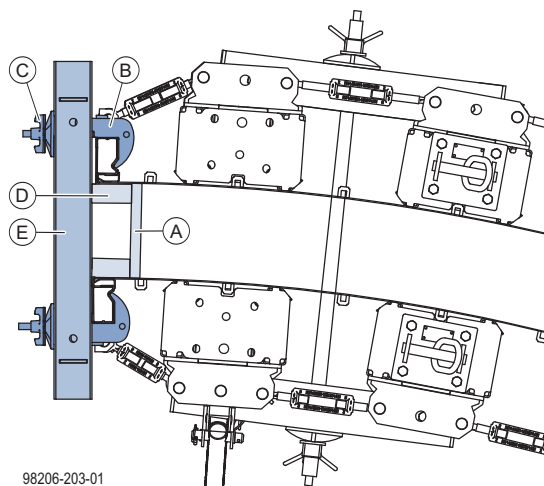
Panel height	Number of Framax stop-end ties
75cm (2'-5½")	1
150cm (4'-11")	2
300cm (9'-10")	4



NOTICE

- Permitted load of the stop end:
max. 18 kN/m at the profiles of the curved formwork panels.
- If wall thickness is greater than 60 cm (24") provide additional support for the stop end (e.g. with supporting construction frames).

Example:



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A Formwork sheeting

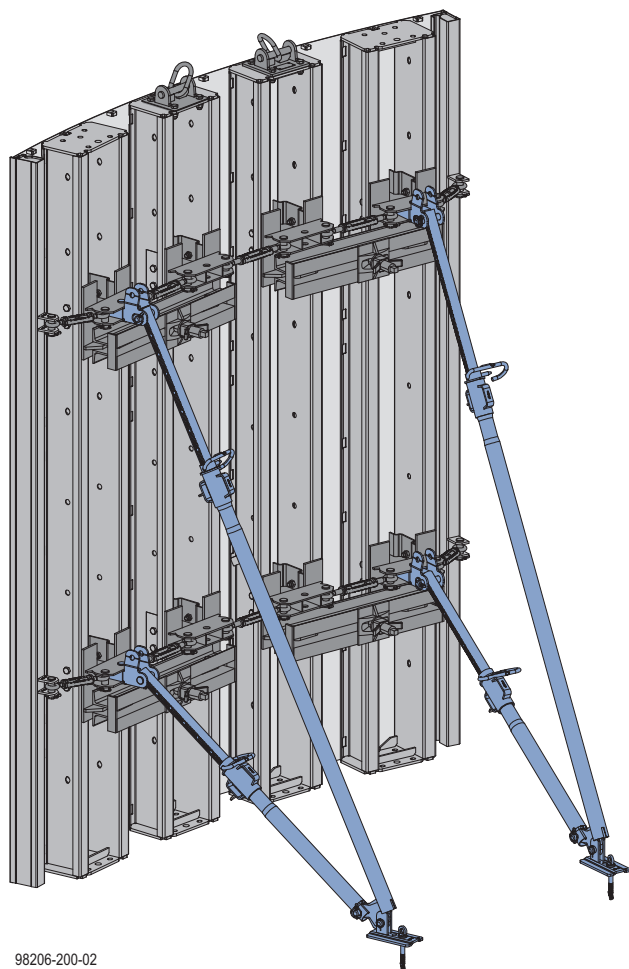
B Framax stop-end tie

C Super plate 15.0

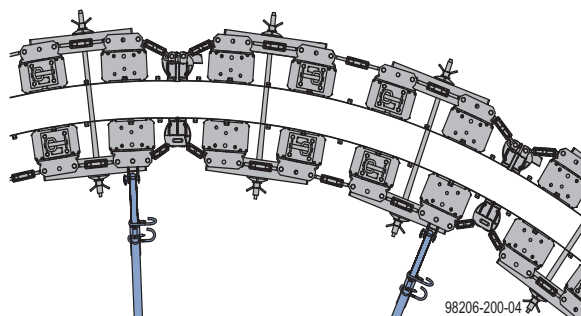
D Spacer

E Framax universal waling or
Multi-purpose waling WS10 Top50

Plumbing accessories



98206-200-02



98206-200-04

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



WARNING

Risk of the formwork tipping over!

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



For more information (wind loads etc.) see the section headed 'Plumbing Accessories' in the 'Doka Formwork Engineering (USA and Canada)' Calculation Guide.

Maximum influence widths of the plumbing accessories:

Formwork height	Panel strut / pipe brace / Eurex	Maximum influence width at wind pressure	
		15 psf (0.72 kN/m ²)	17 psf (0.8 kN/m ²)
8'-6" (2.59 m)	Panel strut 340	10'-8" (3.25 m)	9'-7" (2.92 m)
10'-0" (3.05 m)	Panel strut 340	8'-0" (2.44 m)	7'-2" (2.19 m)
12'-0" (3.66 m)	Panel strut 340	6'-0" (1.83 m)	5'-5" (1.64 m)
12'-0" (3.66 m)	Panel strut 540 or pipe brace 12'-21"	10'-8" (3.25 m)	9'-7" (2.92 m)
14'-6" (4.42 m)	Panel strut 540 or pipe brace 12'-21"	10'-8" (3.25 m)	9'-7" (2.92 m)
16'-6" (5.03 m)	Panel strut 540 or pipe brace 12'-21"	8'-0" (2.44 m)	7'-2" (2.19 m)
16'-6" (5.03 m)	Pipe brace 22'-40" or Eurex 60 550	10'-8" (3.25 m)	9'-7" (2.92 m)
19'-9" (6.02 m)	Panel strut 540 or pipe brace 12'-21"	6'-0" (1.83 m)	5'-5" (1.64 m)
19'-9" (6.02 m)	Pipe brace 22'-40" or Eurex 60 550	10'-8" (3.25 m)	9'-7" (2.92 m)
26'-4" (8.03 m)	Panel strut 540 or pipe brace 12'-21" and Pipe brace 22'-40" or Eurex 60 550	10'-8" (3.25 m)	9'-7" (2.92 m)
		10'-8" (3.25 m)	9'-7" (2.92 m)

Maximum anchoring loads: 3 kip (13.5 kN)

Values apply up to a wind pressure of 17 psf. The greater wind loads encountered at exposed formwork-ends must be constructionally sustained by additional plumbing accessories (e.g. struts or pipe-braces).

The number of plumbing accessories needed must be determined separately in the following cases:

- wind pressure above 17 psf
- formwork higher than 26'-4"

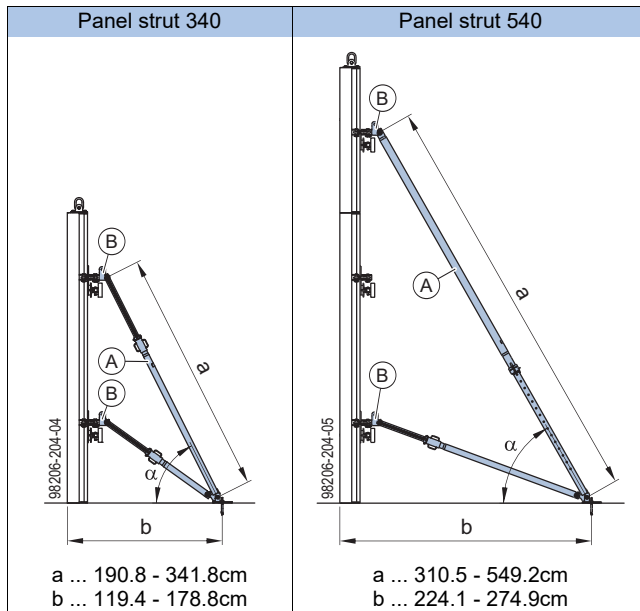
Note:

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

Panel struts 340 and 540

Product features:

- Can be telescoped in 8-cm (3") increments
- Fine adjustment by screw-thread
- All parts are captively integrated - including the telescopic tube (has safety stop to prevent drop-out)

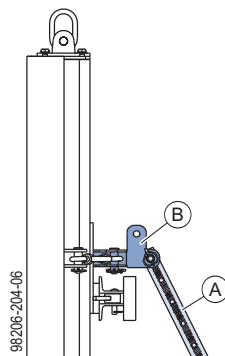


α ... approx. 60°

A Panel strut 340 IB or 540 IB

B SuperCurve prop head EB

Fixing the struts to the formwork



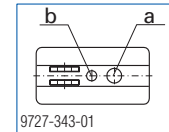
A Panel struts 340 IB and 540 IB

B SuperCurve prop head EB

Fixing to the floor

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

Drilled holes in the footplate of the panel strut:

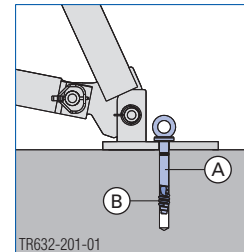


a ... Ø 26 mm (1")

b ... Ø 18 mm (¹¹/₁₆") (suitable for Doka express anchor)

Anchoring the footplate

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



A Doka express anchor 16x125mm

B Doka coil 16mm

Concrete:

Characteristic cube compressive strength ($f_{ck, cube}$)
min. 15 N/mm² (2200 psi) (C12/15 grade concrete)



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

Alternative anchors:

Required load-bearing capacity $R_d \geq 20.3$ kN (4.6 kip)
($F_{perm} \geq 13.5$ kN (3.0 kip))

Follow the manufacturers' applicable fitting instructions.

Eurex 60 550 used as a strut or pipe-brace

As the Doka plumbing strut Eurex 60 550 – fitted with the appropriate accessories – this prop can also be used **for shoring high wall formwork**.

- Can be connected directly – without modification – to Doka framed formwork and Doka timber-beam formwork.
- The Adjusting strut 540 Eurex 60 IB makes handling much easier, especially when the formwork is being repositioned.
- Can be telescoped in 10 cm (4") increments, with continuous fine adjustment.

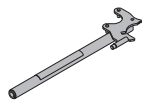


Follow the directions in the 'Eurex 60 550' User Information booklet!



Universal dismantling tool

The easy way to turn the spindle nuts.



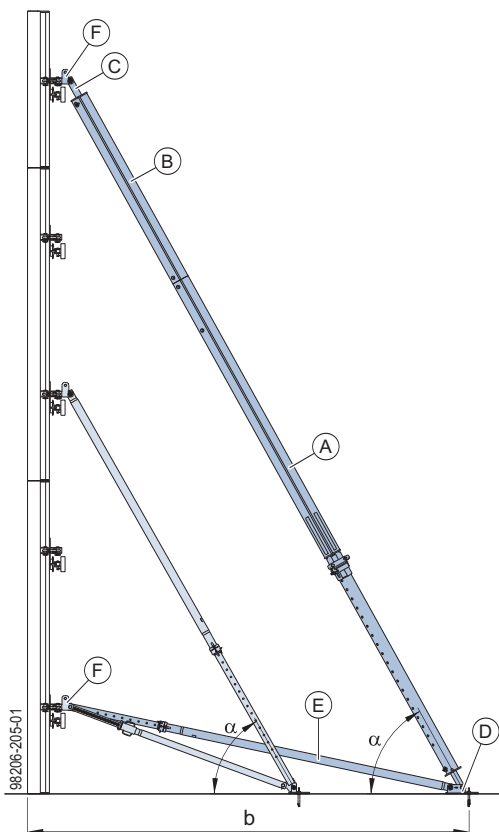
Material list:

Type	Extension length	Plumbing strut Eurex 60 550 (A)	Extension Eurex 60 2.00m (B)	Connector Eurex 60 IB (C)	Plumbing strut shoe Eurex 60 EB (D)	Adjusting strut 540 Eurex 60 IB (E)	SuperCurve prop head EB (F)	Weight
1	3.79 - 5.89 m (12'-5" - 19'-4")	1	—	1	1	1	2	88 kg (193 lbs)
2	5.79 - 7.89 m (19'-0" - 25'-10")	1	1	1	1	1	2	109 kg (240 lbs)

The rule-of-thumb here is:

The length of the shoring & plumbing accessory (i.e. the complete Eurex 60 550 plumbing-strut assembly) = the height of the formwork to be braced.

Example of a possible combination of Type 2:



b ... min. 360.8 cm - max. 602.1 cm

α ... approx. 60°

A Plumbing strut Eurex 60 550

B Extension Eurex 60 2.00m

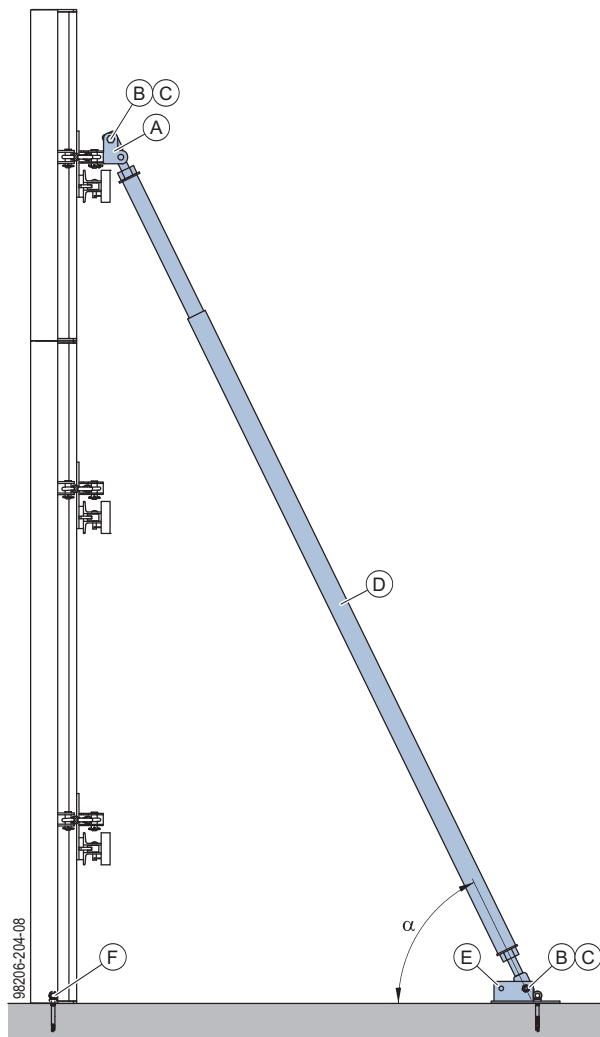
C Connector Eurex 60 IB

D Plumbing strut shoe Eurex 60 EB

E Adjusting strut 540 Eurex 60 IB

F SuperCurve prop head EB

Pipe brace



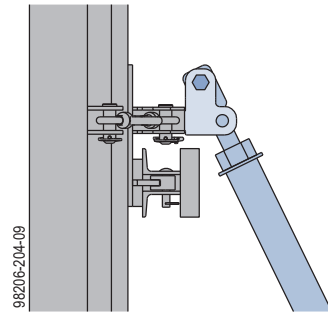
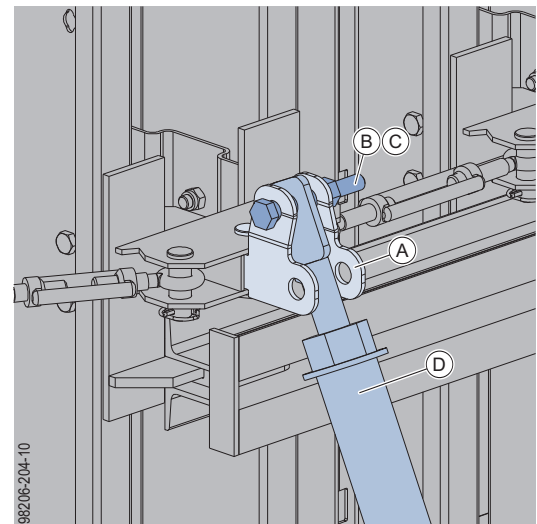
β ... min. 30°

- A** Prop head RD EB
- B** Speed bolt $\frac{3}{4}$ " x 4"
- C** Speed nut $\frac{3}{4}$ "
- D** Pipe brace
- E** Pipe brace shoe
- F** Floor anchorage (e.g. express anchors)

A good rule-of-thumb here is:

The length of the pipe brace = the height of the panel to be braced.

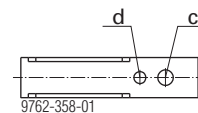
Fixing the struts to the formwork



Fixing to the floor

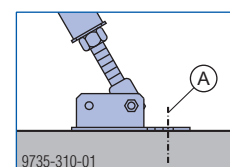
- Anchor the plumbing accessories in such a way as to resist tensile and compressive forces!

Boreholes in the footplates



- c ... $\varnothing \frac{1}{16}$ "
- d ... $\varnothing \frac{13}{16}$ " (suitable for Doka express anchor)

Anchoring the footplate

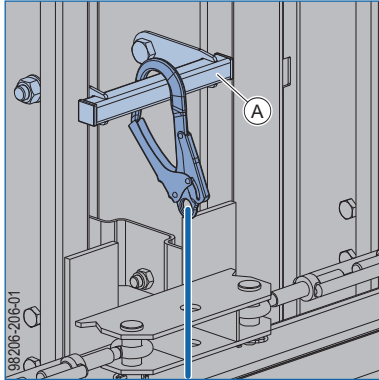


NOTICE

The Contractor shall supply a $\frac{3}{4}$ " $\varnothing$ drill-in anchor (**A**) with a combined minimum safe working load of 4200 lbs in tension and 2400 lbs in shear.

Attachment points for personal fall-arrest systems (PFAS)

The SuperCurve tie-off set PPE can be installed if necessary into the holes along the steel beams.



A SuperCurve tie-off set PPE

Pouring-platforms with single brackets

Doka brackets can be used to make pouring platforms that can easily be assembled by hand.

Precondition for use

Engage pouring platforms only to formwork structures of adequate stability to ensure that the expected loads can be taken.

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

Make sure that the formwork gang is sufficiently rigid.

Observe all applicable safety rules.

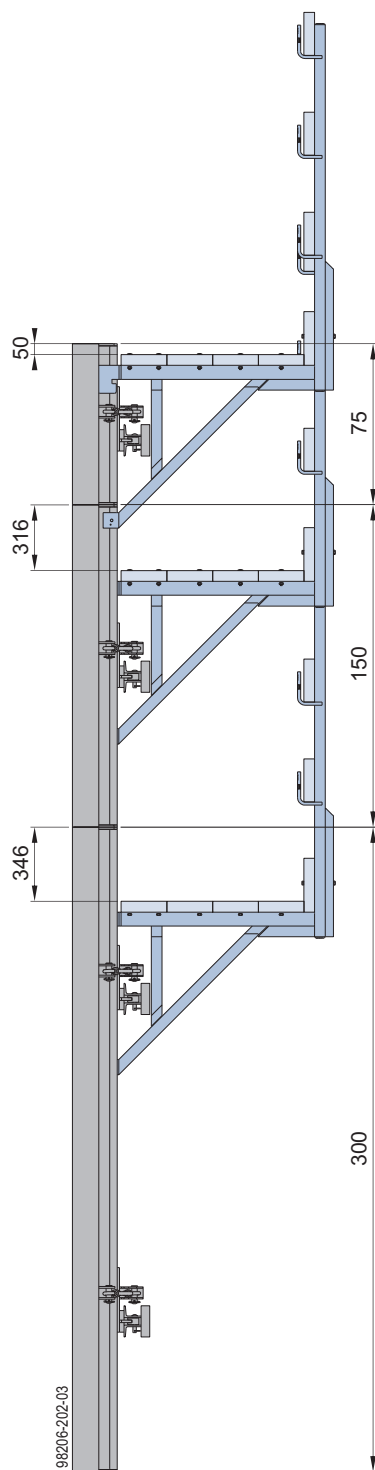


NOTICE

The brackets must be secured against accidental lift-out.

Universal bracket 90

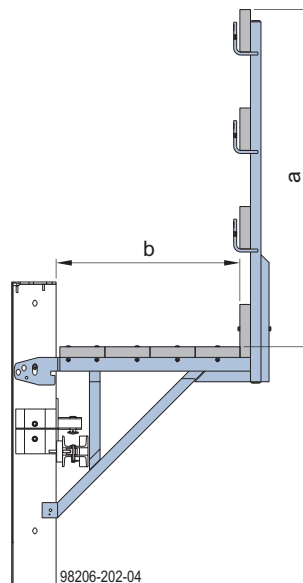
A 'use-anywhere' bracket for making working platforms.



Attaching the walkway boards: with 5 square bolts $\frac{3}{8}$ " x 3" and 1 square bolt $\frac{3}{8}$ " x 9" per bracket (not included in scope of supply).

Attaching the handrail boards: with 4 nails per bracket (not included in scope of supply).

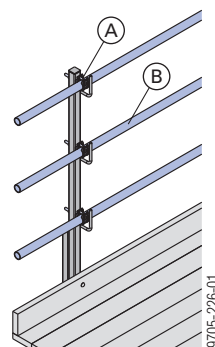
System dimensions:



a ... Guardrail height 160 cm (5'-3")

b ... Walkway width 87 cm (2'-10")

Using scaffold tubes



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

A Screw-on coupler 48mm 95

B Scaffold tube 48.3mm

Universal bracket 90:

Permitted live load: 1.5 kN/m² (150 kg/m²) (30 psf)

Load class 2 to EN 12811-1:2003

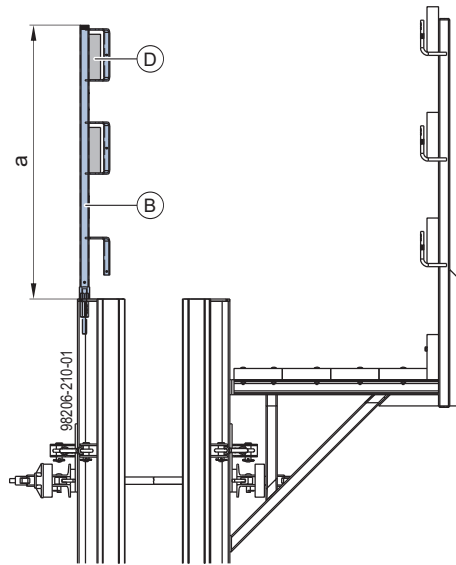
Max. influence width: 2.00m (6'-6")

Plank thicknesses for support centers of up to 2.50 m 8'-2":

- Walkway boards min. 20/5 cm (2" x 8")
- Handrail boards min. 15/3 cm (2" x 6")

Opposing guard-rail

Handrail post 1.10m



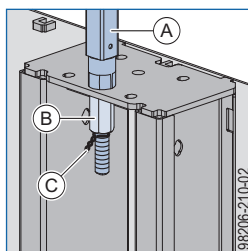
a ... 120 cm (4')

A Handrail post 1.10m

D Guardrail plank

Assembly:

- Secure the Handrail post 1.10m into the cross bore hole of the profile with a hexagon nut 20.0.



A Handrail post 1.10m

B Hexagon nut 20.0

C Hexagon nut secured by binding wire, for example

- Secure the hexagon nut 20.0.



NOTICE

Before the gang-form is repositioned by crane, the guard-rail planks must be removed!



Follow the directions in the "Handrail post 1.10m" User Information!

Repositioning

SuperCurve lifting bracket

Intended use

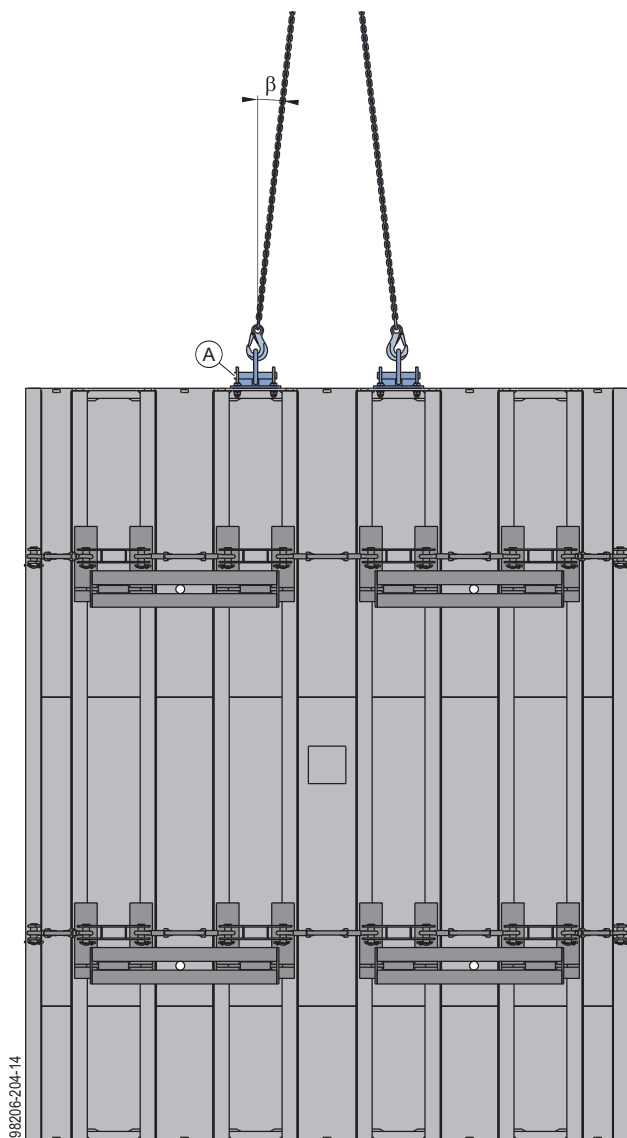
The SuperCurve lifting bracket is designed to be used for lifting, repositioning and laying down pre-assembled SuperCurve panels (intended use).



NOTICE

- 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!
- It is forbidden to lift other manufacturers' formwork with it.
- 2 SuperCurve lifting brackets are always needed for each SuperCurve panel.

Permitted load: 1750 kg (3850 lbs) / SuperCurve lifting bracket



β ... max. 30°

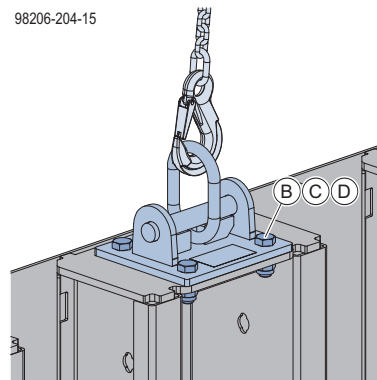
A SuperCurve lifting bracket

Assembly

- Secure each SuperCurve lifting bracket to the beam with **4 bolts**.
Required tightening torque: 80 Nm (60 lb-ft)
Bolting material is supplied with the lifting bracket.

SuperCurve lifting bracket in detail:

98206-204-15



B 4 hexagon bolts

ISO 4017 M16x45 8.8 galv.

(Steel, Grade 5, Zinc Plated, 5/8"-11, Coarse, 1 3/4 in lg, Fully Threaded)

C 4 hexagon nuts

ISO 7042 M16 8 galvanized, self-locking

(5/8"-11 Thread, 15/16 in Hex Wd, 35/64 in Hex Ht, Steel, Grade 5, Zinc Plated)

D

The rigging is hooked into the SuperCurve lifting brackets of the curved formwork panel.

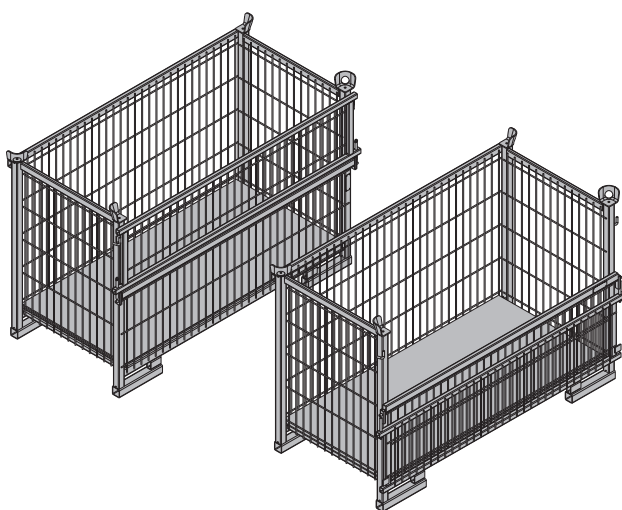
General remarks

Doka multi-trip packaging

Utilize the benefits of Doka multi-trip packaging on your worksite.

Our Multi-trip packaging such as transport boxes, stacking pallets, accessory boxes and skeleton transport boxes keep everything in place on the site.

Doka skeleton transport box 1.70x0.80m



Storage and transport devices for small items.

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

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

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

Max. n° of units on top of one another

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



NOTICE

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

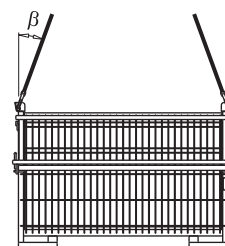
Using Doka skeleton transport boxes 1.70x0.80m as transport devices

Lifting by crane



NOTICE

- Multi-trip packaging items may only be lifted one at a time.
- Only lift the boxes when their sidewalls are closed!
- Use a suitable lifting tackle.
 - e.g. Doka 4-part chain 3.20m
 - Do not exceed the safe working load limit of the lifting tackle
- Sling angle β max. 30°!



9234-203-01

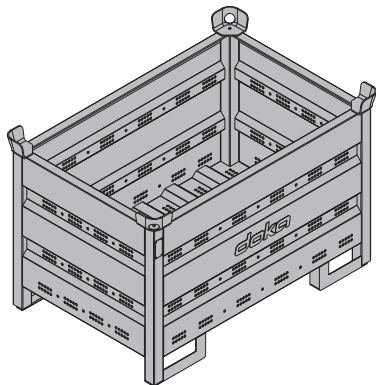
Shifting boxes with the forklift or pallet stacking truck

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

Doka multi-trip transport box

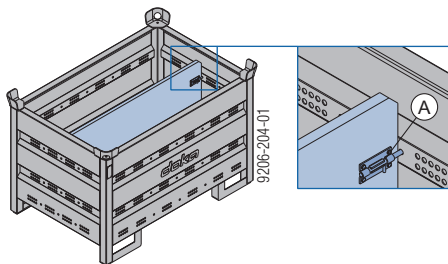
Storage and transport device for small items.

Doka multi-trip transport box 1.20x0.80m



Permitted load-bearing capacity: 1500 kg (3300 lbs)
Permitted imposed stacking load: 7850 kg (17300 lbs)

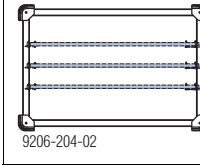
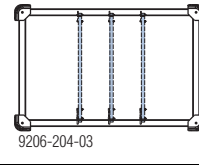
Different items in the Doka multi-trip transport box can be kept separate with the **Multi-trip transport box partitions 1.20m or 0.80m**.



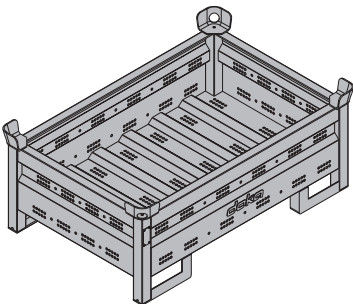
A Slide-bolt for fixing the partition

Possible ways of dividing the box

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



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



Permitted load-bearing capacity: 750 kg (1650 lbs)
Permitted imposed stacking load: 7200 kg (15870 lbs)

Using Doka multi-trip transport boxes as storage units

Max. n° of units on top of one another

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



NOTICE

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

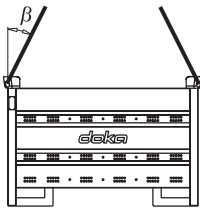
Using Doka multi-trip transport boxes as transport devices

Lifting by crane



NOTICE

- Multi-trip packaging items may only be lifted one at a time.
- Use a suitable lifting tackle.
 - e.g. Doka 4-part chain 3.20m
 - Do not exceed the safe working load limit of the lifting tackle
- Sling angle β max. 30°!



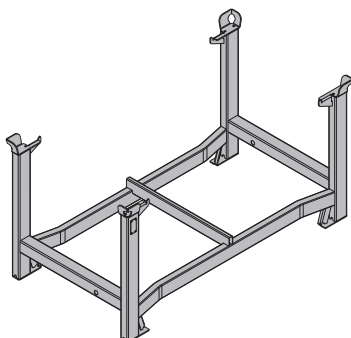
9206-202-01

Shifting boxes with the forklift or pallet stacking truck

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

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

Storage and transport devices for long items.



Permitted load-bearing capacity: 1100 kg (2420 lbs)
Permitted imposed stacking load: 5900 kg (13000 lbs)

Using Doka stacking pallets as storage units

Max. n° of units on top of one another

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



NOTICE

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

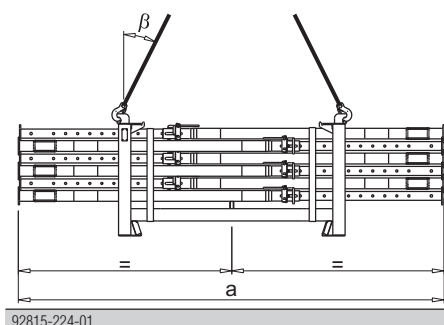
Using Doka stacking pallets as transport devices

Lifting by crane



NOTICE

- Multi-trip packaging items may only be lifted one at a time.
- Use suitable lifting chains:
 - e.g. Doka 4-part chain 3.20m
 - Do not exceed the permitted working load limit of the lifting chains.
- Load the items centrally.
- Fasten the load to the stacking pallet so that it cannot slide or tip out (e.g. with strapping tape or lashing strap).
- Sling angle β max. 30°!



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

Shifting boxes with the forklift or pallet stacking truck

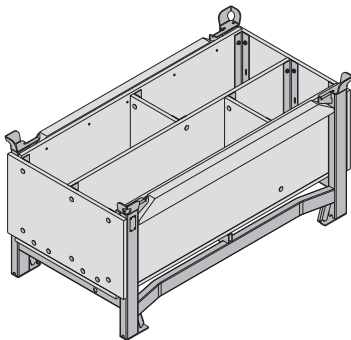


NOTICE

- Load the items centrally.
- Fasten the load to the stacking pallet so that it cannot slide or tip out (e.g. with strapping tape or lashing strap).

Doka accessory box

Storage and transport devices for small items.



Permitted load-bearing capacity: 1000 kg (2200 lbs)
Permitted imposed stacking load: 5530 kg (12190 lbs)

Using Doka accessory boxes as storage units

Max. n° of units on top of one another

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



NOTICE

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

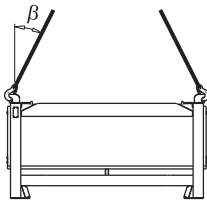
Using Doka accessory boxes as transport devices

Lifting by crane



NOTICE

- Multi-trip packaging items may only be lifted one at a time.
- Use a suitable lifting tackle.
 - e.g. Doka 4-part chain 3.20m
 - Do not exceed the safe working load limit of the lifting tackle
- When lifting stacking pallets to which Bolt-on castor sets B have been attached, you must also follow the directions in the 'Bolt-on castor set B' User Information booklet!
- Sling angle β max. 30°!

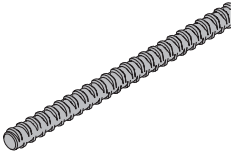
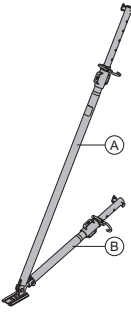
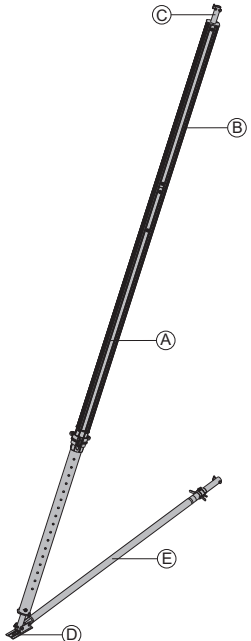
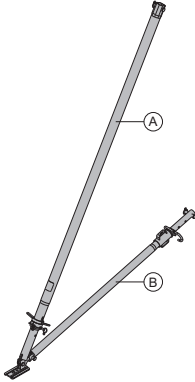
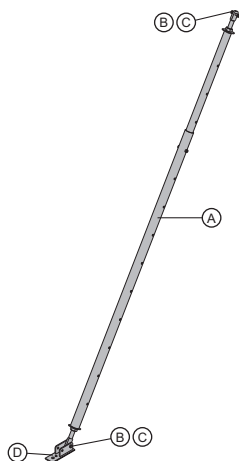


92816-206-01

Shifting boxes with the forklift or pallet stacking truck

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

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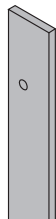
	[lbs]	Article #		[lbs]	Article #
Tie rod 15.0mm galvanizedm Ankerstab 15,0mm verzinktm  Galvanized	3.1	581824000	Eurex 60 550 Eurex 60 550 depending on length, comprising:		
			(A) Plumbing strut Eurex 60 550 Powder-coated, blue Aluminum Length: 11'-3" - 18'-2" (343 - 553 cm)	93.7	582658000
			(B) Extension Eurex 60 2.00m Powder-coated, blue Aluminum Length: 8'-2" (250 cm)	47.0	582651000
Hexagon nut 15.0 Sechskantmutter 15,0  Galvanized Length: 2" (5 cm) Width-across: 30 mm	0.51	581964000	(C) Connector Eurex 60 IB Galvanized Length: 6" (15 cm) Width: 6" (15 cm) Height: 1" (30 cm)	9.3	582657500
			(D) Plumbing strut shoe Eurex 60 EB Galvanized Length: 1' (31 cm) Width: 4 1/2" (12 cm) Height: 1'-1" (33 cm)	17.6	582660500
Panel strut 340 IB Elementstütze 340 IB consisting of:	53.6	580365000	(E) Adjusting strut 540 Eurex 60 IB Galvanized Length: 9'-11" - 17'-9" (303,5 - 542,2 cm) Delivery condition: separate parts	61.3	582659500
(A) Plumbing strut 340 IB Galvanized Length: 6'-3" - 11'-3" (190,8 - 341,8 cm)	36.8	588696000			
(B) Adjusting strut 120 IB Galvanized Length: 2'-8" - 4'-3" (81,5 - 130,6 cm) Galvanized Delivery condition: folded closed	16.8	588248500			
					
Panel strut 540 IB Elementstütze 540 IB consisting of:	91.3	580366000			
(A) Plumbing strut 540 IB Galvanized Length: 10'-2" - 18' (310,5 - 549,2 cm)	67.7	588697000			
(B) Adjusting strut 220 IB Galvanized Length: 5'-8" - 7'-3" (172,5 - 221,1 cm) Galvanized Delivery condition: folded closed	24.0	588251500			
			Pipe brace 12'-0"-21'-0" Rohrstütze 12'-0"-21'-0" consisting of:		
			(A) Pipe brace 12'-0"-21'-0"	160.0	585091000
			(B) Speed bolt 3/4"x4" 2 pcs.	0.64	585650000
			(C) Speed nut 3/4" 2 pcs.	0.2	585652000
			(D) Pipe brace shoe S Painted yellow	6.4	585088500
			Galvanized Delivery condition: separate parts		
					

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	[lbs]	Article #
Framax fitting timber 2x12cm 2.70m	6.8	176020000
Framax fitting timber 3x12cm 2.70m	10.4	176022000
Framax fitting timber 5x12cm 2.70m	17.2	176024000
Framax fitting timber 10x12cm 2.70m	34.2	176026000

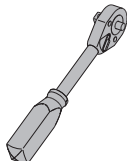
Framax-Passholz 2,70m

Varnished yellow



Reversible ratchet 1/2" Umschaltknarre 1/2"	1.6	580580000
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Galvanized



Box nut 24 1/2" Stecknuss 24 1/2"	0.26	580584000
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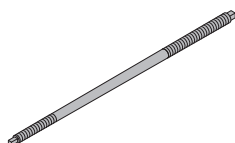
She-bolt 20.0mm x 24" Ankerkopf 20,0mm x 24"	4.2	588557000
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Galvanized

Taper tie system 1 1/4"-1"

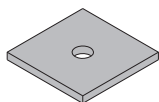
Taper tie 1 1/4" to 1"x36"	14.8	585545000
Taper tie 1 1/4" to 1"x42"	17.2	585546000
Taper tie 1 1/4" to 1"x48"	20.1	585547000
Taper tie 1 1/4" to 1"x54"	22.0	585548000
Taper tie 1 1/4" to 1"x60"	24.7	585549000
Taper tie 1 1/4" to 1"x66"	29.1	585550000
Taper tie 1 1/4" to 1"x72"	34.0	585551000

Konischer Ankerstab 1 1/4" auf 1"



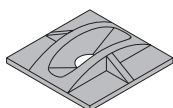
Flat washer 3/4" (5x5x3/8)	3.5	585529000
Flat washer 1" (5x5x3/4)	5.3	585530000
Flat washer 1 1/4" (5x5x3/4)	5.3	585531000

Ankerplatte



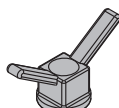
Battered washer 1"	4.0	585540000
Battered washer 1 1/4"	5.5	585635000

Winkelplatte



Wing nut 1"	1.1	585632000
Wing nut 1 1/4"	1.2	585633000

Flügelmutter

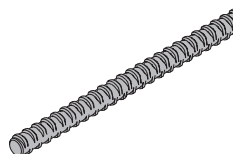


Tie rod system 20.0

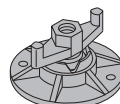
Tie rod 20.0mm galvanized 0.50m	2.9	581411000
Tie rod 20.0mm galvanized 0.75m	4.2	581417000
Tie rod 20.0mm galvanized 1.00m	5.5	581412000
Tie rod 20.0mm galvanized 1.25m	7.1	581418000
Tie rod 20.0mm galvanized 1.50m	8.4	581413000
Tie rod 20.0mm galvanized 2.00m	11.0	581414000
Tie rod 20.0mm galvanized 2.50m	13.9	581430000
Tie rod 20.0mm galvanizedm	5.5	581410000
Tie rod 20.0mm non-treated 0.50m	2.9	581405000
Tie rod 20.0mm non-treated 0.75m	4.2	581416000
Tie rod 20.0mm non-treated 1.00m	5.5	581406000
Tie rod 20.0mm non-treated 1.50m	8.4	581407000
Tie rod 20.0mm non-treated 2.00m	11.0	581408000
Tie rod 20.0mm non-treatedm	5.5	581403000

Ankerstab 20,0mm

Special order only!

DIN
18216

Super plate 20.0 B Superplatte 20,0 B	4.4	581424000
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Galvanized
Height: 2 3/4" (7 cm)
Diameter: 5 1/2" (14 cm)
Width-across: 34 mmDIN
18216

Wing nut 20.0mm Flügelmutter 20,0mm	0.79	585507000
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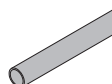
Hexagon nut 20.0 Sechskantmutter 20,0	0.88	581420000
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Galvanized
Length: 2 3/4" (7 cm)
Width-across: 41 mmDIN
18216

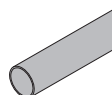
Battered washer 20.0mm Winkelplatte 20,0mm	4.0	585506000
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Round coupler 20.0mm (DSI Thread) Verbindungsmuffe 20,0mm (DSI Thread)	2.4	585514000
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Plastic tube 26mm 2.00m Kunststoffrohr 26mm 2,00m	1.3	581463000
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PVC
Gray
Diameter: 1 1/4" (3,1 cm)

Plastic tube 32mm 2.00m Kunststoffrohr 32mm 2,00m	1.3	581460000
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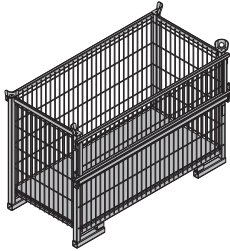
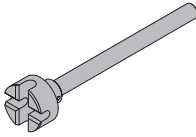
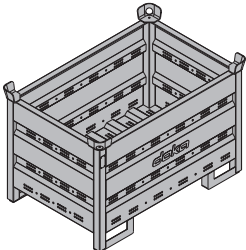
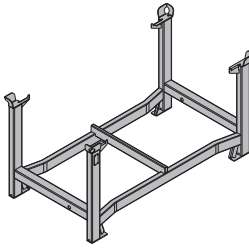
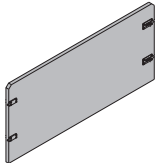
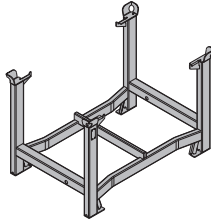
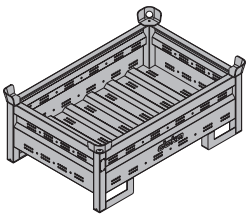
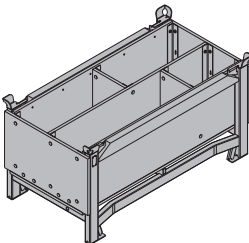
PVC
Gray
Diameter: 1 3/8" (3,6 cm)
Special order only!

Universal cone 26/10mm Universal-Konus 26/10mm	0.018	581464000
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Gray
Diameter: 2" (5 cm)

Universal cone 32/10mm Universal-Konus 32/10mm	0.018	581461000
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Gray
Diameter: 2" (5 cm)
Special order only!

	[lbs]	Article #		[lbs]	Article #
Plug 26mm Verschlussstopfen 26mm  PE Gray	0.013	581465000	Doka skeleton transport box 1.70x0.80m Doka-Gitterbox 1,70x0,80m  Galvanized Height: 3'-8" (113 cm)	192.0	583012000
Tie-rod wrench 15.0/20.0 Ankerstabschlüssel 15,0/20,0  Galvanized	4.0	580594000			
Multi-trip packaging					
Doka multi-trip transport box 1.20x0.80m Doka-Mehrwegcontainer 1,20x0,80m  Galvanized Height: 2'-7" (78 cm)	154.0	583011000	Doka stacking pallet 1.55x0.85m Doka-Stapelpalette 1,55x0,85m  Galvanized Height: 2'-6" (77 cm)	90.4	586151000
Multi-trip transport box partition 0.80m Multi-trip transport box partition 1.20m Mehrwegcontainer Unterteilung  Steel parts galvanized Timber parts varnished yellow	8.2 12.1	583018000 583017000	Doka stacking pallet 1.20x0.80m Doka-Stapelpalette 1,20x0,80m  Galvanized Height: 2'-6" (77 cm)	83.8	583016000
Doka multi-trip transport box 1.20x0.80x0.41m Doka-Mehrwegcontainer 1,20x0,80x0,41m  Galvanized	93.7	583009000			
Doka accessory box Doka-Kleinteilebox  Timber parts varnished yellow Steel parts galvanized Length: 5'-1" (154 cm) Width: 2'-9" (83 cm) Height: 2'-6" (77 cm) Special order only!	235.0	583010000			



Formwork & Scaffolding.
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