



Formwork & Scaffolding. We make it work.

User Information

Instructions for assembly and use (Method statement)





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Introduction

Elementary safety warnings

User target groups

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

In all cases, users are obliged to ensure compliance with national laws, standards and regulations throughout the entire project and to take appropriate additional or alternative workplace safety precautions where necessary.

Hazard assessment

The customer is responsible for drawing up, documenting, implementing and continually updating a hazard assessment at every job-site.

This booklet serves as the basis for the site-specific hazard assessment, and for the instructions given to users on how to prepare and utilise the system. It does not substitute for these, however.

Remarks on this booklet

- This document can be used as general Instructions for Assembly and Use (Method Statement) or be incorporated into site-specific Instructions for Assembly and Use (Method Statement).
- The graphics, animations and videos in this document or app sometimes depict partially assembled assemblies and may require additional safety equipment and/or measures to comply with safety regulations.

The customer must ensure all applicable regulations are complied with, even if they are not shown or implied in the graphics, animations and videos provided.

 Individual sections contain further safety instructions and/or special warnings as applicable.

Planning

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

Regulations; industrial safety

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

Rules applying during all phases of the assignment

- The customer must ensure that this product is erected and dismantled, reset and generally used for its intended purpose in accordance with the applicable laws, standards and rules, under the direction and supervision of suitably skilled persons.
 These persons' mental and physical capacity must not in any way be impaired by alcohol, medicines or drugs.
- Doka products are technical working appliances which are intended for industrial / commercial use only, always in accordance with the respective Doka User Information booklets or other technical documentation authored by Doka.
- The stability and load-bearing capacity of all components and units must be ensured during all phases of the construction work!
- Do not step on or apply strain to cantilevers, closures, etc. until suitable measures to ensure their stability have been correctly implemented (e.g. by tie-backs).
- Strict attention to and compliance with the functional instructions, safety instructions and load specifications are required. Non-compliance can cause accidents and severe injury (risk of fatality) and considerable damage to property.
- Sources of fire in the vicinity of the formwork are prohibited. Heaters are permissible only when used correctly and situated a correspondingly safe distance from the formwork.
- Customer must give due consideration to any and all effects of the weather on the equipment and regards both its use and storage (e.g. slippery surfaces, risk of slipping, effects of the wind, etc.) and implement appropriate precautionary measures to secure the equipment and surrounding areas and to protect workers.
- All connections must be checked at regular intervals to ensure that they are secure and in full working order.

In particular threaded connections and wedged connections have to be checked and retightened as necessary in accordance with activity on the jobsite and especially after out-of-the-ordinary occurrences (e.g. after a storm).

 It is strictly forbidden to weld Doka products – in particular anchoring/tying components, suspension components, connector components and castings etc. – or otherwise subject them to heating.

Welding causes serious change in the microstructure of the materials from which these components are made. This leads to a dramatic drop in the failure load, representing a very great risk to safety.

It is permissible to cut individual tie rods to length with metal cutting discs (introduction of heat at the end of the rod only), but it is important to ensure that flying sparks do not heat and thus damage other tie rods.

The only articles which are allowed to be welded are those for which the Doka literature expressly points out that welding is permitted.

Assembly

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

Closing the formwork

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

Pouring

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

Stripping the formwork

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

Transporting, stacking and storing

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

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

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

Maintenance

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

Miscellaneous

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

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

Eurocodes at Doka

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

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

Allowance has been made for the following partial factors:

γ_F = 1.5

- γ_{M, timber} = 1.3
- γ_{M, steel} = 1.1
- k_{mod} = 0.9

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

Symbols used

The following symbols are used in this document:

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

WARNING

DANGER

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.

Indicates that actions have to be performed



Sight-check

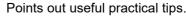
Instruction

by the user.

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



Tip





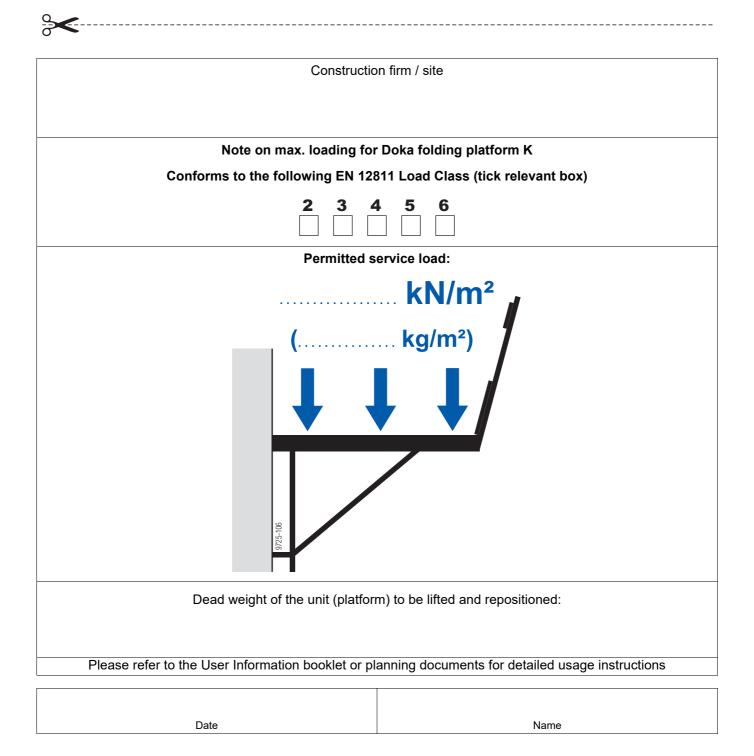
Reference

Cross-references other documents.



Labelling of platforms (loading data)

National regulations may require platforms to be labelled with their loading data. The form below can be used as a master copy, making it easier to label each platform. Before the loading-data labelling is affixed, technically qualified personnel from the company responsible for erecting the system must verify that it has been properly assembled and erected in accordance with the applicable laws, standards and regulations.



System description

The comprehensive range of readyto-use platforms for every field

The Doka folding platforms K are pre-assembled (and thus immediately work-ready) scaffold platforms.

They are delivered to the site folded closed, to save space.

At the site, it takes only an instant to unfold them before they are craned to the prepared suspension points and hung into place.

A range of practical accessories makes work on the site a lot easier and does away with the need for costly jobsite improvisations.

Among the many advantages of the Doka folding platform K:

- High load-bearing capacity of up to 6 kN/m² (600 kg/m²) - Load Class 6
- The 3.00 or 4.50 m long platforms are easy to plan
- Safe corner transition with the Folding platform K outside corner and the Folding platform K inside corner
- Closure platform 3.00m for length adjustment and corner solutions – all-in-one, with integral railings
- Retractable crane lifting points for an even, safe platform deck – no projecting parts that anybody might trip over
- Long service life thanks to its sturdy design, varnished floor planking and galvanised steel construction
- Deck-boards are protected by a steel profile at either end of the platform
- Climbing formwork K simply adding a few standard Doka components to the platforms transforms them into a fully-fledged tiltable climbing formwork system
- Support lengthening piece and suspended platform

 as system components for bridging storey-high
 openings and for safe finishing-work
- Good bridging of wall and window openings
- Handrail extension K and safety netting for extending and reinforcing the rooftop fall barrier function
- Side handrail clamping unit T the quick way of putting up safe end-railings at the ends of the platforms
- Very little space required for storage and transport

Areas of use

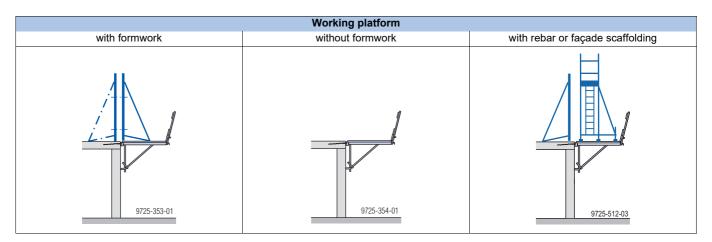
The comprehensive ready-to-use platform-range of the Folding platform K series meets the following requirements:

- EN 12811-1 and ČSN 738101 compliant working platforms
- DIN 4420-1, ÖNORM B4007 and ČSN 738106 compliant protection platforms

Practical examples of Load Classes

Load Class 2	Load Class 3	Load Class 4, 5, 6		
For service and maintenance work, especially for cleaning operations on facades	e.g. for external rendering and stucco work, coating, pointing or repair work; as a reinforce- ment or pouring platform in reinforced-concrete construction work.	Normally for masonry and external rendering work, tiling and squared-stone facing work, and heavy site-erection work.		
Only for work in which it is not necessary to store building materials or parts on the platform decking.	The materials and equipment stored on the platform decking may not be set down on the platform by lifting appliances.	Building materials and parts may be set down on the platform by lifting appliances and stored on the platform decking.		
	Precondition: When materials are stored on the platform decking, a clear access passage at least 0.20 m wide must be left free.	Precondition: When materials are stored on the platform decking, a clear access passage at least 0.20 n wide must be left free.		
Permitted service load: 1.5 kN/m² (150 kg/m²)	Permitted service load: 2.0 kN/m² (200 kg/m²)	Load Class Permitted service load 4 5 6 3.0 kN/m² 4.5 kN/m² 6.0 kN/m² (600 (300 kg/m²) (450 kg/m²) kg/m²) or partial-area load 6		
	The actual load is made up of the weight of the stored material and of the persons on the plat- form. For each person, a weight of 100 kg must be assumed.	The actual load is made up of the weight of the stored material and of the persons on the plat- form. For each person, a weight of 100 kg must be assumed.		

Overview of possible areas of use





Note:

For detailed information on the different areas of use, see section <u>Working platform</u> or <u>Protection platform</u>!

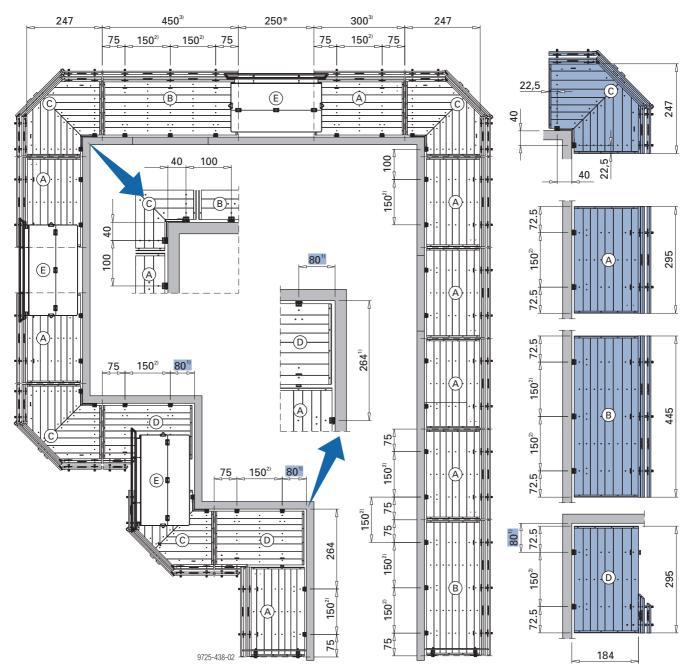
Utilisation planning

The suspension points of the Folding platforms K 3.00m and 4.50m always have the same grid spacing of 150 cm (distance from edge 75 cm). This greatly facilitates planning and site erection.

Exception: On the Folding platform K inside corner, the distance from the edge is 80 cm.

Note:

The narrow side of the Folding platform K inside corner where the back railing is open must be facing the wall.



* ... The actual closure length is 5 cm more than the stated system dimension.

- 1) ... Fixed dimension in corner zone (Folding platform K inside corner)
- 2) ... Centre-to-centre spacing of suspension points
- 3) ... Nominal dimensions of platforms
- A Doka folding platform K 3.00m
- B Doka folding platform K 4.50m
- C Doka folding platform K outside corner
- D Doka folding platform K inside corner
- E Closure platform 3.00m



Main components

Doka folding platform K

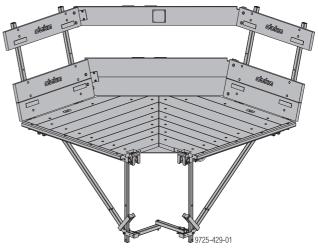
- 2 possible lengths of platform, as required by the situation:
 - 3.00 m (2 brackets)
 - 4.50 m (3 brackets)
- The suspension points always have the same grid spacing of 1.50 m



Corner solutions

Safe corner transition with the Folding platform K outside corner and the Folding platform K inside corner

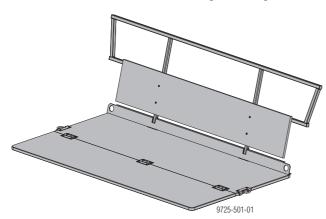
Doka folding platform K outside corner



Doka folding platform K inside corner

Length adjustment

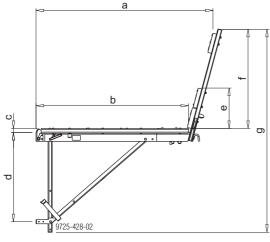
Closure platform 3.00m for length adjustment and corner solutions – all-in-one, with integral railings





Doka folding platform K in detail

System dimensions:

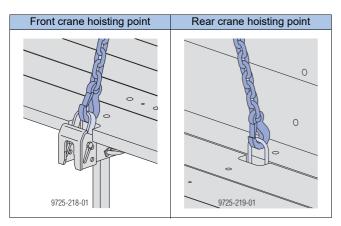


- a ... 2120 mm
- b ... 1840 mm
- c... 50 mm
- d ... 1080 mm e ... 530 mm
- e ... 530 mm f ... 1210 mm
- g ... 2450 mm

g ... 2400 mm

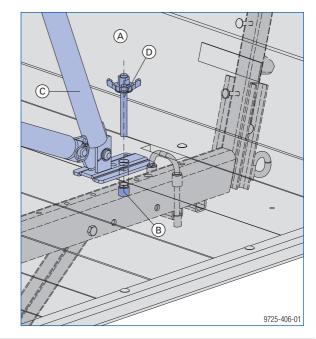
Crane hoisting points

• No projecting parts: The retractable crane hoisting points leave an even, safe work-deck.

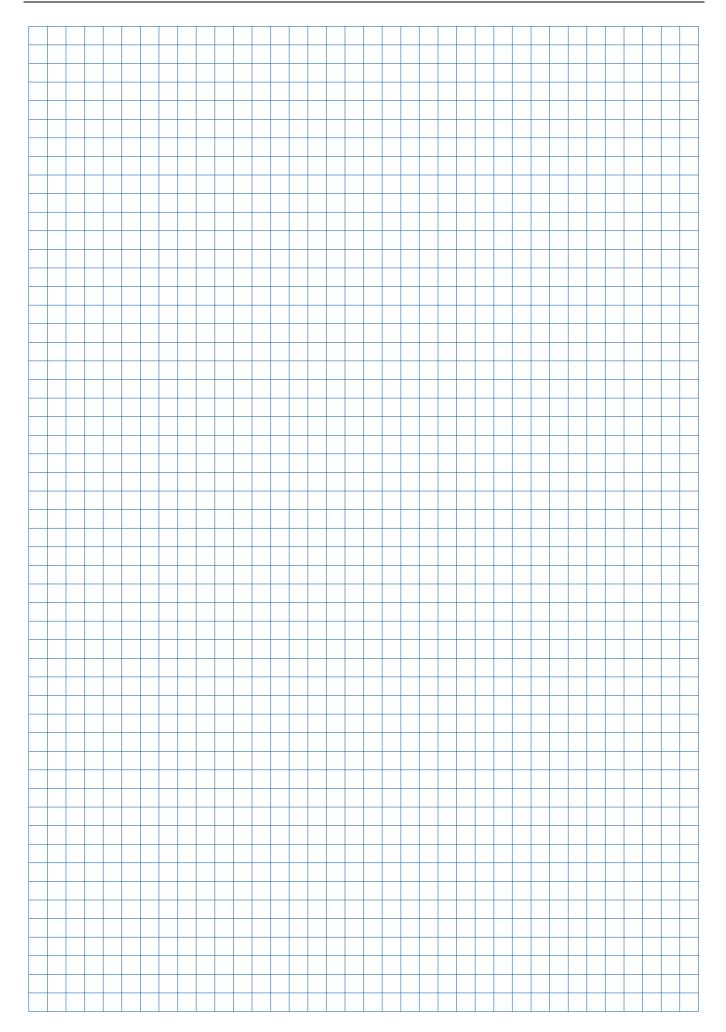


Attaching panel struts

• Connection sockets for attaching the panel struts are integrated in the platform.



- A Doka folding platform K
- B Connection socket
- C Panel strut
- D Star screw



Working platform

Working platform with formwork

H (horizontal load) and V (vertical load) refer to the loads at the suspension point. These loads cover all the usage situations given here. The structure, and all its applicable parts, must be verified for stability based on this data.

- H = 14.0 kN
- V = 24.0 kN
- Closure length 1.00 m

Possible types of suspension point¹):

Suspension cone 15.0 5cm

Suspension cone 15.0 5cm (retrofitted suspension point) Suspension cone 15.0 with collar (retrofitted suspension point) Rock anchor spreader unit 15.0 + Suspension cone 15.0 with collar (retrofitted suspension point)

Suspension cone 15.0 f. insulation up to 11cm (insulation thickness up to 6cm) $\,$

¹⁾ See also section <u>Anchoring on the structure</u>.

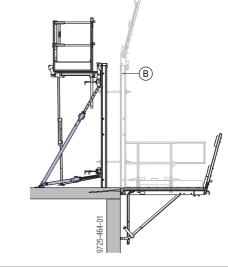
Note:

The values stated for the permitted service load and closures must also be complied with when using inside corners and outside corners.

- Load Class 2 (permitted service load 1.5 kN/m² (150 kg/m²) on folding platform and pouring platform) due to additional loads from formwork and wind.
- Max. width of pouring platforms 1.20 m.
- Wind speeds up to 55 km/h (as per 'UVV' accident prevention rule for cranes). At wind speeds of up to 45 km/h, a formwork height of 4.00 m is possible.
- If higher wind speeds are likely, and when work finishes for the day or before prolonged work-breaks, the formwork must be closed. Fix the panel struts of the opposing formwork to the floor slab stably.

Panel struts supported on floor slab

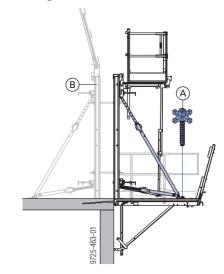
Formwork height max. 5.50 m



B Opposing formwork

Panel struts supported on folding platform

Formwork height max. 3.00 m



A Star screw

B Opposing formwork

CAUTION

- ▲ ➤ Only position in the axis of the bracket!
- > Only fit into the special connection sockets!
- > Only fix with star screws!
 - Tie rod 15.0mm is forbidden!



Working platform without formwork

Doka folding platform K 3.00m and 4.50m

H (horizontal load) and V (vertical load) refer to the loads at the suspension point. These loads cover all the usage situations given here. The structure, and all its applicable parts, must be verified for stability based on this data.

t 1)	Suspensior	uspension cone 15.0 5cm							
point	Suspension	uspension cone 15.0 5cm (retrofitted suspension point)							
	Suspension	n cone 15.0 with colla	ar (retrofitted susper	ision point)					
ISIO	Rock ancho	or spreader unit 15.0	+ Suspension cone	15.0 with collar (ret	rofitted suspension p	ooint)			
ben	Suspension	n cone 15.0 f. insulat	ion up to 11cm (insu	lation thickness up t	o 6cm)				
suspension	Suspension	Suspension cone 15.0 f. insulation up to 11cm (insulation thickness up to 11cm)							
oť	Bridge edge	e beam anchor 15.0							
ypes	Suspension	n profile AK							
Typ	Suspension	n plate AK							
		H = 9.2 kN	H = 16.2 kN H = 25.0 kN						
		V = 9.2 kN V = 16.0 kN V = 26.0 kN							
		Load Class 2	Load Class 2						

	Load Class 2	Load Class 2	Load Class 3	Load Class 4	Load Class 5	Load Class 6
	Permitted service					
	load	load	load	load	load	load
	1.5 kN/m ²	1.5 kN/m ²	2.0 kN/m ²	3.0 kN/m ²	4.5 kN/m ²	6.0 kN/m ²
	(150 kg/m ²)	(150 kg/m ²)	(200 kg/m ²)	(300 kg/m ²)	(450 kg/m ²)	(600 kg/m ²)
Closures	1.00 m	2.50 m ²⁾	1.50 m ²⁾	1.00 m	0.75 m	0.50 m

¹⁾ See also <u>Anchoring on the structure</u>.

²⁾ For closures of longer than 1.00 m, only use the Closure platform 3.00m.

Doka folding platform K inside corner

	Load Class 2	Load Class 2	Load Class 3	Load Class 4	Load Class 5	Load Class 6
	Permitted service					
	load	load	load	load	load	load
	1.5 kN/m ²	1.5 kN/m ²	2.0 kN/m ²	3.0 kN/m ²	4.5 kN/m ²	6.0 kN/m ²
	(150 kg/m ²)	(150 kg/m ²)	(200 kg/m ²)	(300 kg/m ²)	(450 kg/m ²)	(600 kg/m ²)
Closures	1.00 m	2.50 m ²⁾	1.50 m ²⁾	Not allowed	Not allowed	Not allowed

²⁾ For closures of longer than 1.00 m, only use the Closure platform 3.00m.

Doka folding platform K outside

corner

	Load Class 2 Permitted service load 1.5 kN/m ²	Load Class 3 Permitted service load 2.0 kN/m ²	Load Class 4 Permitted service load 3.0 kN/m ²
	(150 kg/m ²)	(200 kg/m ²)	(300 kg/m ²)
Closures	2.50 m ²⁾	1.50 m ²⁾³⁾	Not allowed

²⁾ For closures of longer than 1.00 m, only use the Closure platform 3.00m.

³⁾ Closures of up to 2.50 m long are permitted if the closure platform is resting on a Folding platform K outside corner on both sides (e.g. pier).

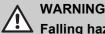
Folding platform K as a base on which to stand rebar and façade scaffolding

The Folding platform K can be used as a base on which to stand rebar and façade scaffolding (e.g. if it is not possible to erect the scaffolding on the ground due to an open excavation pit or traffic routes and footpaths that have to be kept clear).

NOTICE

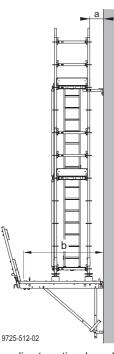
- Observe the Instructions for Assembly and Use of the scaffolding used!
- Only use suspension points that are permitted for Load Classes 5 and 6.

Ringlock



Falling hazard!

> Observe the maximum distance between the scaffolding and the wall according to national regulations (e.g. 30 cm)!



a ... max. distance according to national regulations b ... board width of Folding platform K: 1.84 m



Follow the directions in the 'Ringlock' User Information booklet!

Ringlock as rebar scaffolding

Rebar scaffolds are crane-liftable working scaffolds used primarily for reinforcing work and for accessing wall formwork.

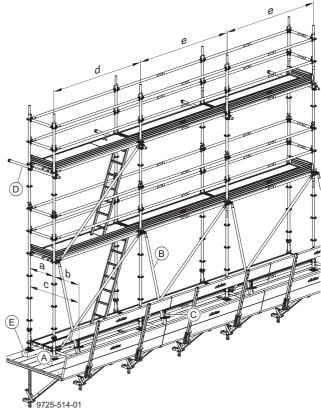


- max. topmost deck height 4.50 m / 2 working areas
- max. 3 bays
- up to Load Class 3 (permitted service load 2.0 kN/m² (200 kg/m²))

WARNING

Risk of the scaffolding tipping over!

Comply with national regulations regarding necessary anchoring of the scaffolding and refer to the 'Ringlock' User Information booklet!



- a ... system width: max. 0.73 m
- b ... 0.73 m
- c ... 1.46 m
- d ... single bay / access bay: 2.57 m or 3.07 m
- e ... Expansion bay: 1.57 3.07 m
- A Ledger 0.73m
- B Bay brace 200/73cm
- C Base jack handle
- D Pressure tie
- E Support for load distribution (see section Load distribution)

Ringlock as façade scaffolding



NOTICE

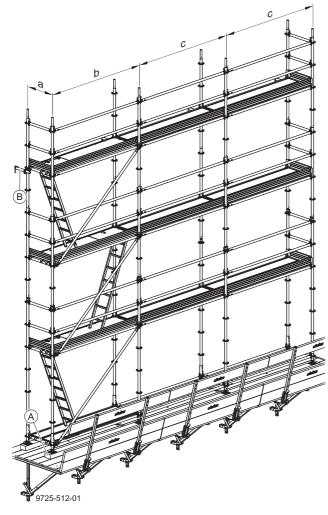
 max. topmost deck height 10.50 m / 5 working areas

- max. 3 bays without access system
- up to Load Class 5

WARNING

Risk of the scaffolding tipping over!

- Comply with national regulations regarding necessary anchoring of the scaffolding and refer to the 'Ringlock' User Information booklet!
- Install necessary anchoring continuously during erection of the scaffolding.



a ... system width: 0.73 - 1.57 m

b ... single bay*) / access bay: 2.57 m or 3.07 m

c ... Expansion bay: 1.57 - 3.07 m

*) as single bay only up to a height of 8.40 m

A Support for load distribution (see section Load distribution)

B Anchorage

Load distribution



NOTICE

Suitable supports (e.g. wooden planks, multipurpose walings) must be used on the Folding platform K to distribute the load!

The following table shows possible supports depending on the scaffold width, load class and number of working areas.

Supports for load distribution¹⁾

	(11)	Ê		Sup	port be	ing f er	tim-	g
	Load class (EN 12811	Scaffold width max. [cm]	Number of working areas	12 ×10 cm (W × H)	16 ×10 cm (W × H)	14 ×12 cm (W × H)	16 ×14 cm (W × H)	Multi-purpose waling WS10 Top50
Rebar scaffold		73.0	2	√ ²⁾	\checkmark	\checkmark	\checkmark	\checkmark
	3	73.0	3	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark
	5	104.0 - 157.0		—	\checkmark	\checkmark	\checkmark	\checkmark
		73.0 - 157.0	5	_	\checkmark	\checkmark	\checkmark	\checkmark
		73.0		_	\checkmark	\checkmark	\checkmark	\checkmark
		104.0		_	\checkmark	—	\checkmark	\checkmark
Façade scaffold		109.0	3	_	\checkmark	—	\checkmark	\checkmark
	5	140.0		—	—	—	\checkmark	\checkmark
		157.0		—	—	—	\checkmark	\checkmark
		73.0		—	\checkmark	—	\checkmark	\checkmark
		104.0 - 140.0	5	—	—	—	\checkmark	\checkmark
		157.0		—	—	—	—	\checkmark

1) with bay length 3.07 m

2) only without staircase access

Protection platform

- Protection platforms must conform to Load Class 2 or higher.
- For the types of suspension point and closures, refer to the specifications given for working platforms without formwork.
- Folding platform K has been tested as a fall barrier for a maximum fall height of 3.00 m. Observe national regulations for permitted falling height!

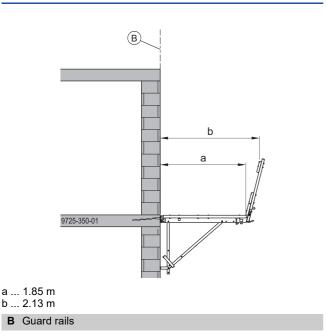
NOTICE

I

Regarding the use of our products in safety relevant applications, it is essential that all latest applicable industrial safety laws, regulations and standards as issued or amended by any country or state, where they are to be used, are strictly complied with.

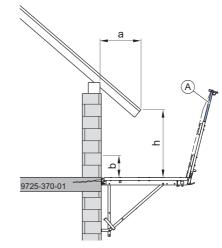
In accordance with the applicable regulations, guard rails are the first measure to be taken.

Fall-stop scaffold



Sloping-rooftop fall barrier

As per DIN 4420-1



- a ... eaves depth
- b ... min. 30 cm h ... max. 1.50 m
- A Handrail extension K

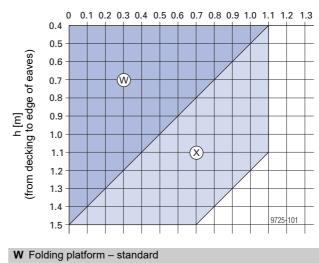


NOTICE

- When the Handrail extension K is used, the max. closure length is 1.00 m
- Allow for the min. lift-out distance b of 30 cm!

Areas of use

Dimension a [m]



X with Handrail extension K

Dimensioning example

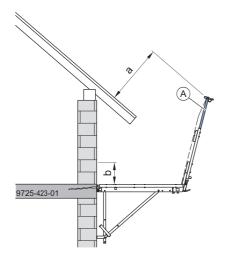
for determining the max. dimension 'h' (from decking to edge of eaves).

Given: Eaves depth 'a' = 0.80 m

Results (possibilities):

- Folding platform (standard), as shown in area (W)
 h = max. 0.70 m or
- Folding platform with Handrail extension K, as shown in area (X)
 h = max. 1.40 m

As per ÖNORM B 4007



a ... min. 60 cm

- b ... min. 30 cm
- A Handrail extension K



NOTICE

- When the Handrail extension K is used, the max. closure length is 1.00 m
- Allow for the min. lift-out distance b of 30 cm!

Handrail extension K

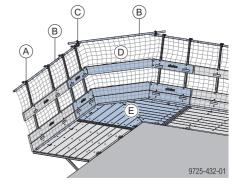
The **Handrail extension K** extends the range of use of the Folding platform K as a fall barrier for work on sloping roofs (see diagram in section <u>Sloping-rooftop fall</u> <u>barrier</u>).



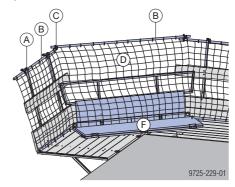
NOTICE

When the Handrail extension K is used, the max. closure length is 1.00 \mbox{m}

Folding platform K outside corner



Closure platform 3.00m



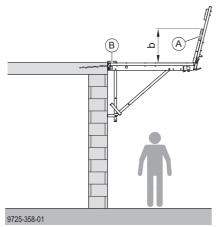
- A Handrail extension K
- B Scaffold tube 48.3mm
- C Swivel coupler 48mm
- D Safety net
- E Doka folding platform K outside corner
- F Closure platform 3.00m

Assembly

- Push the Handrail extension K all the way into the handrail posts of the Folding platform K and the Folding platform K outside corner.
- Insert the scaffold tubes into the quick-acting couplings on the handrail extensions. Wedge in place firmly.
- Link the scaffold tubes at the corners with Swivel couplers 48mm.
- Fix the safety nets in place.

Protective canopy

The components of the Folding platform K comply with the requirements for erecting protective canopies as per EN 12811-4.



- b ... Sidewall height
- A Extra guardrail board
- B Cover for gap

	Sidewall height b
As per DIN 4420-1	60.0 cm Extra guardrail board required
As per ÖNORM B 4007	50.0 cm Corresponds to the standard height – therefore no extra guardrail board required

Cover the gaps between the decking and the wall, and between the platforms.

Board thicknesses:

- 20/3.5 cm for spans of up to 1.50 m
- 24/4.5 cm for spans of up to 2.50 m



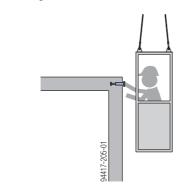
Anchoring on the structure

Overview of suspension methods

NOTICE

1

 Installation and dismantling of the suspension must be carried out from a safe workplace, such as an aerial work platform, crane cage, etc.!



NOTICE

!

- Only tested and approved original Doka parts may be used for the suspension points of the Folding platform K!
- Any plastic, steel or aluminium sleeves and angles available on the market have not been tested by Doka in combination with the Folding platform K and constitute a high safety risk!

Suspension point in concrete

Standard suspension point (without insulation)

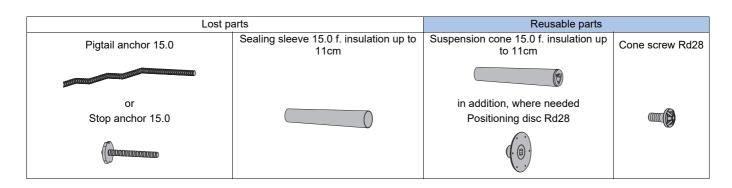
Lost parts		Reusable parts			
Stop anchor 15.0	Sealing sleeve 15.0/5cm	Positioning cone 15.0/5cm	Tie rod 15.0, length approx. 20 cm	Super plate 15.0	Suspension cone 15.0/5cm
annannan					
or	or	or	or		
Pigtail anchor 15.0	Sealing sleeve S 15.0/5cm	Cantilever posi- tioning cone 15.0/5cm	Fixing plate 15.0		
			Ó		

Other possible anchorages

Variant using bridge edge beam anchor

Lost pa	arts	Reusable parts
Bridge edge beam anchor 15.0	Nailing cone 15.0	Screw-in cone 15.0
	<_₽-	

Suspension points with insulation up to 11 cm thick



Retrofitted suspension points

Drilling a hole for the suspension point through the wall

with Suspension cone 15.0 with collar

Reusable parts						
Super plate 15.0	Tie rod 15.0	Suspension cone 15.0 with collar				
	Contraction of the Contraction 					

with Suspension cone 15.0 5cm

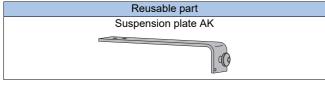
Lost parts		Reusable parts	
Sealing sleeve 15.0 5cm	Super plate 15.0	Tie rod 15.0	Suspension cone 15.0 5cm
		41111111111111111111111111111111111111	

Using Rock anchor spreader unit 15.0 + Suspension cone 15.0 with collar

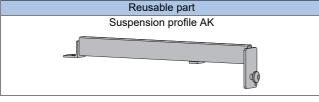
Lost parts	Reusable parts		
Rock anchor spreader unit 15.0	Tie rod 15.0 Rock anchor installation tube		Suspension cone 15.0 with collar
(INEHICE	CONTRACTOR OF CONT		

Attachment to the concrete slab

without insulation, or with insulation up to 10 cm thick



with insulation and/or facing brickwork between 10 and 30 cm thick





Distances from edges

Dimensioning the suspension point

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

- load actually occurring
- wall thickness
- reinforcement / extra reinforcement steel
- distance from edge

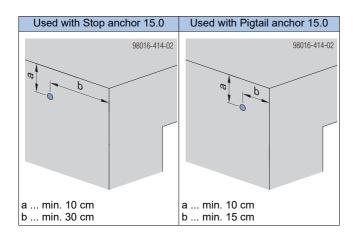
The introduction of the forces, the transfer of these forces into the structure, and the stability of the overall construction, must all be verified by the structural designer.

The required cube compressive strength $f_{ck,cube,current}\xspace$ must be at least 10 $N/mm^2,$ however.

! NOTICE

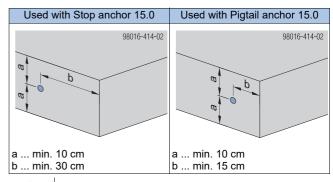
- It is essential to comply with the following distances from edges!
- Actual loads have to be ascertained on a project-specific basis.

Used in the wall or in a floor slab with wall underneath



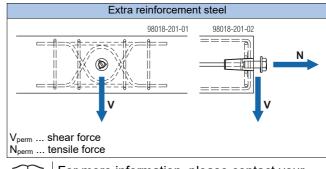
Used in the floor slab (without wall)

It is essential to install extra reinforcement for tensile and shear forces if there is no wall underneath the slab.



NOTICE

The installation of extra reinforcement always has to be agreed with the structural engineer!

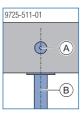




For more information, please contact your Doka technician.

NOTICE

Floor props directly underneath the suspension points reduce the global and local load of the slab. Their positioning must be ensured throughout the entire construction process.

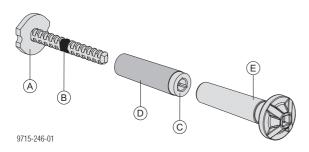


A Suspension point for Folding platform K

B Floor prop

Suspension point in concrete

Standard suspension point (without insulation)



- A Stop anchor 15.0 (expendable anchoring component)
- B Depth mark
- C Positioning cone 15.0 5cm
- D Sealing sleeve 15.0 5cm (expendable anchoring component)
- E Suspension cone 15.0 5cm

Stop anchor

- Expendable anchoring component for anchoring the suspension cone (and thus the climbing unit) in the concrete from one side.

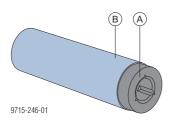
Positioning cone

- Placeholder for the suspension cone on the positioning point.
- The Positioning cone 15.0 5cm or the Cantilever positioning cone 15.0 5cm can be used as positioning cone.

Suspension cone

- For safe suspension of the Folding platform K or climbing unit.

Positioning cone 15.0 5cm



A Positioning cone 15.0 5cm

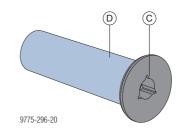
B Sealing sleeve 15.0 5cm (orange)



NOTICE

Positioning cones 15.0 5cm are supplied together with Sealing sleeves 15.0 5cm. Fit **new sealing sleeves every time the cones are re-used**.

Cantilever positioning cone 15.0 5cm

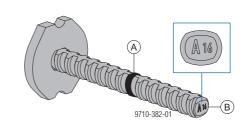


- C Cantilever positioning cone 15.0 5cm
- D Sealing sleeve S 15.0 5cm (orange)

NOTICE

Cantilever positioning cones 15.0 5cm are supplied together with Sealing sleeves S 15.0 5cm. Fit **new sealing sleeves every time the cones are re-used**.

Types of stop anchor



- A Mark for screw-in depth
- **B** Code for stop-anchor type

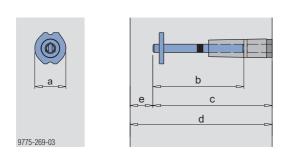


The stop anchor has an identification code on the end face.

- The code is a combination of a letter and a number and it unequivocally describes the features of the stop anchor:
 - Letter: Tie-rod size and size of the stopanchor plate.
 - Number: Length of the stop anchor in cm
- Easy identification of the stop-anchor type before and after the concrete has been poured



Stop anchor 15.0 A16 and A21



•	Stop anchor 15.0	
A	a size of stop-anchor plate: 55 mm	
16	b tie-rod length: 16,0 cm	

c ... installation depth: 21.0 cm

d ... minimum wall thickness: 23.0 cm (where the concrete cover is 2 cm)

d ... minimum wall thickness: 24.0 cm (where the concrete cover is 3 cm) e ... concrete cover

	Α	Stop anchor 15.0
		a size of stop-anchor plate: 55 mm
	21	b tie-rod length: 21,0 cm

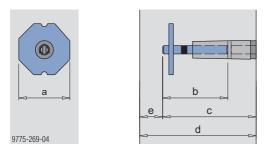
c ... installation depth: 26.0 cm

d ... minimum wall thickness: 28.0 cm (where the concrete cover is 2 cm)

d ... minimum wall thickness: 29.0 cm (where the concrete cover is 3 cm)

e ... concrete cover

Stop anchor 15.0 B11



в	Stop anchor 15.0	
B	a size of stop-anchor plate: 90 mm	
11	b tie-rod length: 11.5 cm	

c ... installation depth: 16.5 cm

d ... Minimum wall thickness: 19 cm (where the concrete cover is 2 cm)

d ... Minimum wall thickness: 20 cm (where the concrete cover is 3 cm)

e ... concrete cover



WARNING

- The short Stop anchor 15.0 B11 has a much lower load-bearing capacity than the Stop anchor 15.0 A16.
- > The short stop anchor may only be used on systems with low tensile loads at the anchoring location, such as on climbing systems inside shafts.
- > If the geometry will only allow installation of short stop anchors, then revised static calculations and/or extra reinforcement steel may be required where any higher tensile loads are expected.
- > The Stop anchor 15.0 B11 is only permitted for wall thicknesses < 24 cm. For wall thicknesses \geq 24 cm, the Stop anchor 15.0 A16 (or larger) must be used.



WARNING

The Stop anchor 15.0 B11 may accidentally come unscrewed from the positioning cone while low-viscosity concrete is being poured.

Take additional precautions to prevent the Stop anchor 15.0 B11 from being turned.

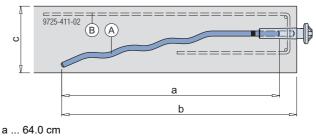
Pigtail anchor

It is also possible to use a pigtail anchor for a positioning point / suspension point in the floor-slab, instead of a stop anchor.



A Mark for screw-in depth

B Code on end face 'S' (= Pigtail anchor 15.0)



b ... 69.0 cm

c ... min. 20.0 cm

A Pigtail anchor 15.0

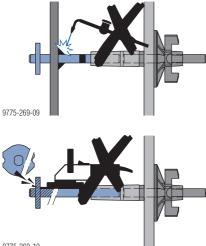
Longitudinal reinforcement and U-reinforcements, min. diam. в 8 mm, spaced max. 15 cm apart

Preparing the positioning point

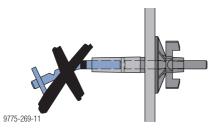


WARNING

- Sensitive anchoring, suspension and connector components!
- Never weld or heat these components.
- Any components that are damaged or weakened by corrosion or wear must be withdrawn from use.

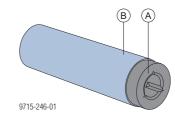


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Preparing the positioning point

Push the sealing sleeve all the way onto the positioning cone.



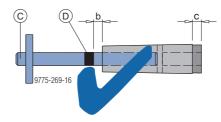
- A Positioning cone 15.0 5cm
- **B** Sealing sleeve 15.0 5cm (orange)

Note:

Do not screw the stop anchor in until the sealing sleeve is pushed fully on to the positioning cone.

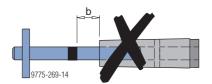
WARNING

 Always screw the stop anchor into the positioning cone until it fully engages. Not screwing the stop anchor fully into the cone may lead to reduced load-bearing capacity and failure of the suspension point – resulting in possible injury and/or damage.

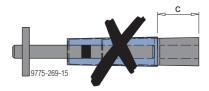


- b ... 10 mm
- c ... 10 mm
- **C** Stop anchor 15.0 (lost anchoring component)
- D Depth mark

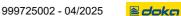
 Always screw in components until they are fully engaged. When correctly fitted, there will still be 10 mm of thread visible between the part and the depth mark on the stop anchor or pigtail anchor.



b... > 10 mm not permitted
The sealing sleeve must be completely pushed onto the positioning cone.



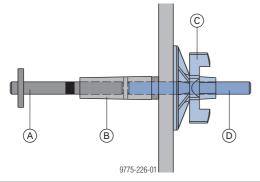
c ... > 10 mm not permitted



Positioning point with Positioning cone 15.0 5cm (with hole drilled through form-ply)

Installation:

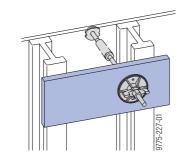
- Drill a diam. 18 mm hole in the form-ply (position as shown in shop drawing / assembly plan).
- Insert a Tie rod 15.0 (length approx. 20 cm) through the hole drilled in the form-ply, screw it into the positioning cone and tighten it with a Super plate 15.0.



- A Stop anchor 15.0
- **B** Positioning cone 15.0 5cm + Sealing sleeve 15.0 5cm
- C Super plate 15.0
- D Tie rod 15.0mm

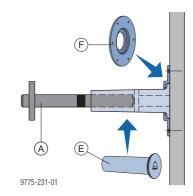


If the positioning point is located too close to a Doka beam, a board can be nailed to this and the adjoining beam to provide a support surface for the super plate.



Positioning point with Cantilever positioning cone 15.0 5cm (with no hole drilled through form-ply)

For special applications only, when it is not possible to drill through the form-ply (e.g. where there are Doka beams or formwork panel frame profiles directly behind the positioning point).



- A Stop anchor 15.0
- E Cantilever positioning cone 15.0 5cm + Sealing sleeve S 15.0 5cm
- F Fixing plate 15.0



NOTICE

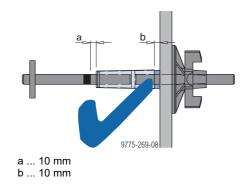
It is not permitted to use the Fixing plate 15.0 more than once in the same position, as it cannot be fixed firmly and securely in the old nailholes.

Installation:

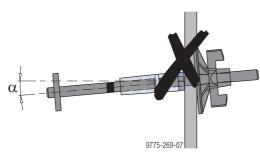
Nail a cantilever positioning cone to the form-ply using a Fixing plate 15.0 (position as shown in project plan).

Check of the positioning point

- Before pouring, check all positioning points and suspension points again.
 - The sealing sleeve must be completely pushed onto the positioning cone.
 - Always screw in components until they are fully engaged. When correctly fitted, there will still be 10 mm of thread visible between the part and the depth mark on the stop anchor or pigtail anchor.
 - Tolerance for locating the positioning points and suspension points: ±10 mm in the horizontal and the vertical.



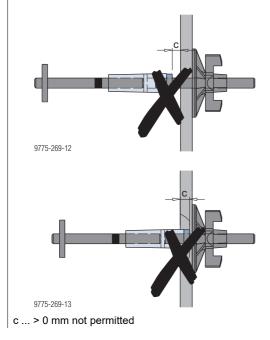
 The axis of the positioning cone must be at right-angles to the surface of the concrete – maximum angle of deviation 2°.



 $\alpha \ ... \ max. \ 2^\circ$

 \bigcirc

The positioning cone must be embedded so that it is flush with the concrete surface.



Pouring



Mark the positions of the anchoring points at the top edge of the formwork to make them easier to locate when the concrete is being poured.

- > Prevent the vibrator from touching the stop anchors.
- Do not place concrete from directly above the stop anchors.

These measures prevent the anchors from working loose during pouring and vibration.

Stripping the formwork

Remove the connecting parts holding the positioning point to the formwork either before or after stripping, depending on which connecting parts are used.

Positioning point with Positioning cone 15.0 5cm:

- Remove the Super plate 15.0 before stripping the formwork.
- Unscrew the Tie rod 15.0.

Preparing the suspension point

Dimensioning the suspension point

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

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

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

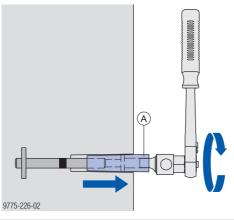
The required cube compressive strength $f_{ck,cube,current}$ must be at least 10 N/mm², however.

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

Lowering the working platform into engagement

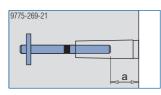
 Unscrew the Positioning cone, using a Reversible ratchet 1/2" and a Positioning-cone spanner 15.0 DK.



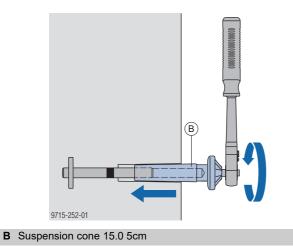
A Positioning cone 15.0 5cm

Check of the positioning point

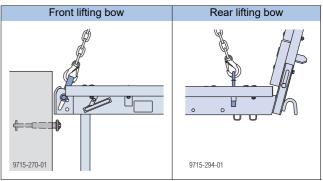
- > Check the code on the stop anchor.
- > Check the placement depth of the stop anchor.



- a ... placement depth: 50 mm
- Screw in Suspension cone 15.0 until fully engaged, and tighten using Reversible ratchet 1/2".

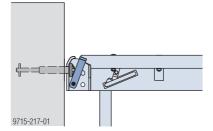


Lower the working platform into engagement in the prepared suspension point by crane.



This raises the front lifting bows, opening the lift-out guard.

Once the working platform has been hung into place on the suspension cone, the load is removed from the 4-part lifting chain.



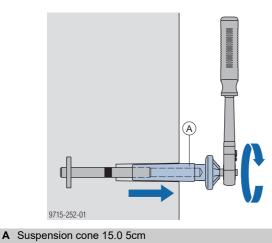
The lifting bows drop into the starting position, automatically securing the platform against accidental lift-out.



'Locked' position = lifting bow is flush with deck.

Dismounting the suspension point

 Unscrew the suspension cone with a Reversible ratchet 1/2".



Sealing the suspension point

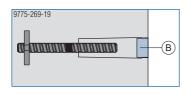
Grout level with the rest of the surface

Sealing of the suspension points can be a requirement, for reasons of rust prevention.

Fill the cavity of the suspension point with mortar and grout it smoothly.

Fibre concrete plugs

- > Remove the sealing sleeve.
- Glue the fibre concrete plug into the hole of the suspension point.

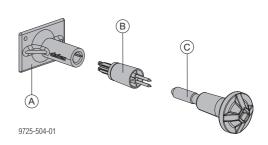


B Fibre concrete plug 30.7mm

The concrete plug is glued into place with standard concrete adhesive.

Other possible anchorages

Suspension points in concrete for reduced loading requirements



- A Bridge edge beam anchor 15.0 (expendable anchoring component)
- B Nailing cone 15.0 (expendable anchoring component)
- C Screw-in cone 15.0



WARNING



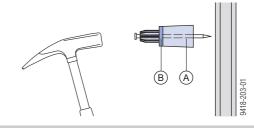
Use of the Bridge edge beam anchor 15.0 is only permitted up to Load Class 4. It is forbidden to place formwork or heavy loads on the platform!



Comply with the General Building-Inspectorate Approval (Z-21.6-1982)!

Fitting the bridge edge beam anchor

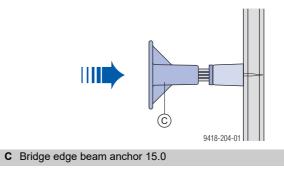
Nail a Nailing cone to the form-ply (position as shown in shop drawing / assembly plan).



A Nailing cone 15.0

B Sealing ring

- Make sure that the sealing ring is fitted correctly!
- Push the Bridge edge beam anchor onto the nailing cone.



Tie the Bridge edge beam anchor tightly to the reinforcements with binding wire.

This prevents it becoming detached during pouring and vibrating.

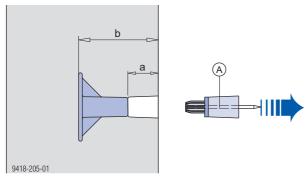


NOTICE

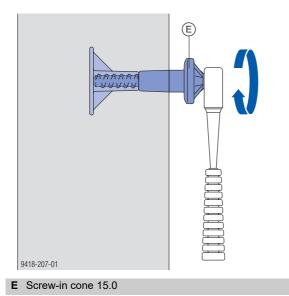
If statically required – place extra reinforcement steel.

After formwork has been struck

> Remove the nailing cone from the anchoring point.



- a ... concrete cover 4.0 cm
- b ... placement depth 11.5 cm
- A Nailing cone 15.0
- Using a Reversible ratchet 1/2", screw in the Screwin cone until it is fully engaged.



Making the suspension point reusable – lasting protection against corrosion

Where an ungalvanised 'standard' Bridge edge beam anchor 15.0 has been used, you can give the suspension point lasting (electrochemical) protection against corrosion by screwing a Zinc plug 15.0 into the anchor after the formwork has been removed.

Field of use:

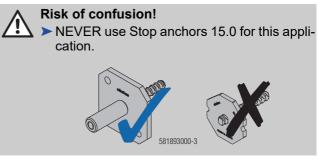
Especially in bridge-building:

- piers
- superstructures

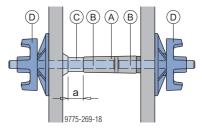
For suspension points which are intended to be re-usable in many years' time, when the time comes to rehabilitate the structure.

Thin walls

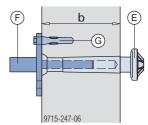
Wall thicknesses of 15 to 16 cm are prepared using the **Wall anchor 15.0 15cm**.



Positioning point



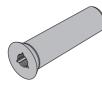
Suspension point



- a ... length of plastic tube 3 4 cm
- b ... 15 16 cm
- A Positioning cone 15.0 0.5cm + Sealing sleeve 15.0 5cm
- B Tie rod 15.0mm
- C Universal cone 22mm + Plastic tube 22mm
- D Super plate 15.0
- E Suspension cone 15.0 5cm
- F Wall anchor 15.0 15cm
- **G** Hexagon timber screw 10x50 + dowel Ø12

Suspension point for fair-faced concrete

The Fair-faced concrete positioning cone 15.0 5cm is particularly suitable for fair-faced concrete projects where the form-tie points and suspension points are required to make a uniform hole-pattern.

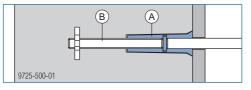


NOTICE

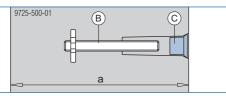
1

The Fair-faced concrete positioning cone may only be used on suspension points that are located within a maximum of 80 cm from the top edge of the concrete. The reason for this restriction is the reduced load-bearing capacity of such suspension points, due to the shallower screw-in depth of the end of the tie rod nearest the form-ply.

Anchoring situation



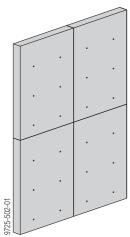
Illustrated inside the concrete



- a ... 26 cm (where there is 5 cm concrete cover on both sides)
- A Fair-faced concrete positioning cone 15.0 5cm
- B Stop anchor double-ended 15.0
- C Fair-faced concrete plug 41mm

If it is intended to use this type of suspension point, a Doka technician must be contacted before the project starts.

Result (in terms of appearance):



The form-tie points and/or suspension points have a uniform, regular hole-pattern

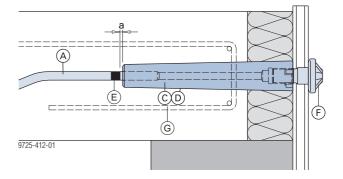
Suspension points with insulation up to 11 cm thick

Tools needed:

- Reversible ratchet 1/2"
- Reversible ratchet 3/4"
- Universal cone spanner 15.0/20.0

Positioning point (with hole drilled through form-ply)

- Drill a diam. 30 mm hole in the form-ply (position as shown in the project plan).
- Screw a stop anchor or pigtail anchor into the Suspension cone 15.0 for insulation up to 11 cm.
- Insert a Cone screw Rd28 through the hole drilled in the form-ply, screw it into the cone and tighten it.



- a ... 0.5 cm
- A Stop anchor 15.0 or Pigtail anchor 15.0
- C Suspension cone 15.0 f. insulation up to 11cm
- **D** Sealing sleeve 15.0 f. insulation up to 11cm
- E Depth mark
- F Cone screw Rd28
- **G** Longitudinal reinforcement and U-reinforcements, min. diam. 8 mm, spaced max. 15 cm apart

Note:

Suspension cones 15.0 for insulation up to 11cm are supplied with Sealing sleeves (D). Every time the cones are **re-used**, fit them with **new sealing sleeves** first.

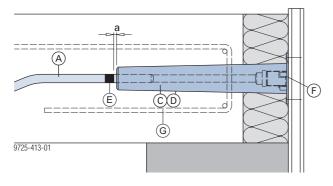


^{0.5} cm distance between depth mark and cone.

Positioning point (with no hole drilled through form-ply)

e.g. where there is a Doka beam or the profile of a framed formwork panel directly behind the location of the positioning point.

- Nail a Positioning disk Rd28 to the form-ply (position as shown in project plan).
- Screw the Suspension cone 15.0 for insulation up to 11 cm onto the Positioning disk Rd28.
- Screw the stop anchor or pigtail anchor into the Cantilever positioning cone until fully engaged.



a ... 0.5 cm

- A Stop anchor 15.0 or Pigtail anchor 15.0
- **C** Suspension cone 15.0 f. insulation up to 11cm
- D Sealing sleeve 15.0 f. insulation up to 11cm
- E Depth mark
- F Positioning disk Rd28

G Longitudinal reinforcement and U-reinforcements, min. diam. 8 mm, spaced max. 15 cm apart

Note:

Suspension cones 15.0 for insulation up to 11cm are supplied with Sealing sleeves (D) . Every time the cones are **re-used**, fit them with **new sealing sleeves** first.

Before pouring

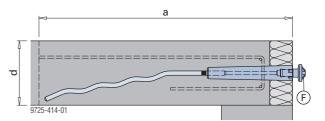
 Check all positioning points and suspension points once again.

Suspension point

- Warning Ensure the suspension cones are screwed in sufficiently. Any insertion deficiency may result in load bearing capacity reduction. This may cause the suspension point to fail, leading to possible injury and/or damage.
 - Always screw in components until they are fully engaged.
- Unscrew the Positioning disc Rd 28 with a Reversible ratchet 1/2".

When fitted and removed carefully, using minimum force, the Positioning disc RD 28 can be re-used several times.

Screw in the Cone screw Rd28 until fully engaged, and tighten using a Reversible ratchet 1/2".



F Cone screw Rd28

	Pigtail anchor 15.0	Stop anchor 15.0 A16	Stop anchor 15.0 A21
a placement depth	92.5 cm	44.6 cm	49.6 cm
d slab thickness	min. 20.0 cm	min. 26.4 cm	min. 26.4 cm

^{0.5} cm distance between depth mark and cone.

Retrofitted suspension points

Drilling a hole for the suspension point through the wall

e.g.: if the crew forgot to prepare a positioning point.

Dimensioning the suspension point

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

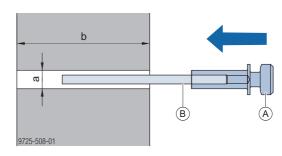
- Ioad actually occurring
- wall thickness
- reinforcement / extra reinforcement steel
- distance from edge

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

The required cube compressive strength fck.cube.current must be at least 10 N/mm², however.

Used with Suspension cone 15.0 with collar

- Drill a hole of diam. 36 mm.
- Screw the tie rod fully into the suspension cone with collar.



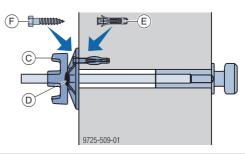
a ... 36 mm

- b ... min. 150 mm
- A Suspension cone 15.0 with collar
- B Tie rod 15.0mm
- Insert the unit so that it is flush with the concrete surface.



NOTICE

- > Weld a bead to the super plate to join the nut and the plate. Do this BEFORE screwing the super plate onto the tie rod.
- > On the other side of the concrete wall, screw on the super plate (now welded together) and secure it with a screw and dowel so that it cannot be unscrewed.



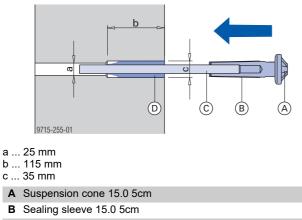
- C Super plate 15.0
- D Weld-seam
- E Dowel Ø12
- F Hexagon timber screw 10x50

Used with Suspension cone 15.0 5cm

- > Drill a hole of diam. 35 mm and 115 mm depth.
- Drill a hole of diam. 25 mm.
- > Push the sealing sleeve all the way onto the suspension cone.
- > Screw the tie rod into the suspension cone until fully engaged, and put the rod part-way into the hole.



Paste the ready-mix mortar (supplied by site) into the drilled hole with a spatula.



C Tie rod 15.0mm

1

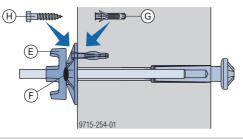
- D Ready-mix mortar
- Insert the unit so that it is flush with the concrete surface.

Scrap away the excess ready-mix mortar with a spatula.

NOTICE

Weld a bead to the super plate to join the nut and the plate. Do this BEFORE screwing the super plate onto the tie rod.

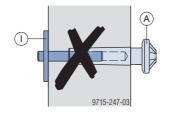
On the other side of the concrete wall, screw on the super plate (now welded together) and secure it with a screw and dowel so that it cannot be unscrewed.



- E Super plate 15.0
- F Weld-seam
- G Dowel Ø12
- H Hexagon timber screw 10x50

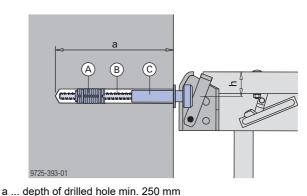
WARNING

Do NOT fit stop anchors with the anchor plate exposed! The anchor plate must always be embedded in the concrete.



- A Suspension cone
- I Stop anchor

Single-sided tie using Rock anchor spreader unit 15.0 and Suspension cone 15.0 with collar



- h ... 6.5 cm
- A Rock-anchor spreader unit 15.0 (expendable anchoring component)
- **B** Tie rod 15.0
- C Suspension cone 15.0 with collar

Before using, be sure to read and follow the directions in the Fitting Instructions for the "Rock anchor spreader unit 15.0" and "Suspension cone with collar 15.0"!

Extra components needed for preparing the suspension point:

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

or

- Tensioning instrument 300kN, consisting of
 - 1 hollow-piston cylinder RH302
 - 1 hydraulic hand pump
 - 1 pressure support C
 - 1 carrying case
 - 1 Rock anchor installation tube
- Tie-rod wrench 15.0/20.0
- Super plate 15.0
- Rock drill-bits diam. 37 or 38 mm



NOTICE

The Tensioning instrument B cannot be combined with the Tensioning instrument 300kN!

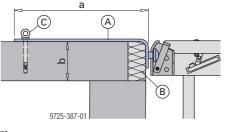
Acceptance test

Every anchoring point must undergo acceptance testing.

Attachment to the concrete slab

Without insulation, or with insulation up to 10 cm thick

with Suspension plate AK



- a ... 60.0 cm b ... min. 18.0 cm
- A Suspension plate AK
- B Insulation, max. 10 cm thick
- C Doka express anchor 16x125mm

WARNING

Use of the Suspension plate is permitted with Load Class 2 only. It is forbidden to place formwork or heavy loads on the platform!

Minimum load-bearing capacity for dowel-type connections (these forces occur simultaneously):

Tensile force: ≥ 5.0 kN

Shear force: ≥ 9.2 kN

e.g.: Doka express anchor 16x125mm

Minimum value of the characteristic cube compressive strength ($f_{ck,cube}$):

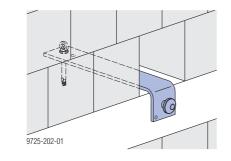
25 N/mm² (concrete C20/25)

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

Installation hint for masonry:

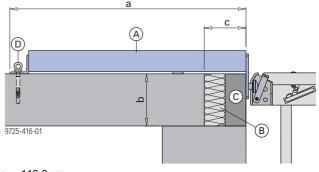
Leave out a brick where the suspension plate is to be mounted. The suspension plate can then be dismounted from inside the structure.



Before undoing the Express anchor or dowel, make sure that the platforms have been removed from the suspension points!

With insulation and/or facing brickwork between 10 and 30 cm thick

With Suspension profile AK



- a ... 113.0 cm b ... min. 18.0 cm
- c ... max. 30.0 cm
- A Suspension profile AK
- B Insulation
- **C** Facing brickwork
- D Doka express anchor 16x125mm

WARNING



Use of the Suspension profile is permitted with Load Class 2 only. It is forbidden to place formwork or heavy loads on the platform!

Minimum load-bearing capacity for dowel-type connections (these forces occur simultaneously):

Tensile force: ≥ 5.0 kN

Shear force: ≥ 9.2 kN

e.g.: Doka express anchor 16x125mm

Minimum value of the characteristic cube compressive strength ($f_{ck,cube}$):

25 N/mm² (concrete C20/25)

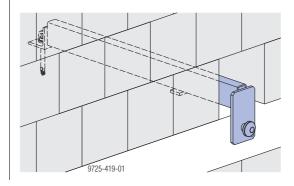


Follow the directions in the 'Doka express anchor 16x125mm' User Information booklet!

Installation hint for masonry:

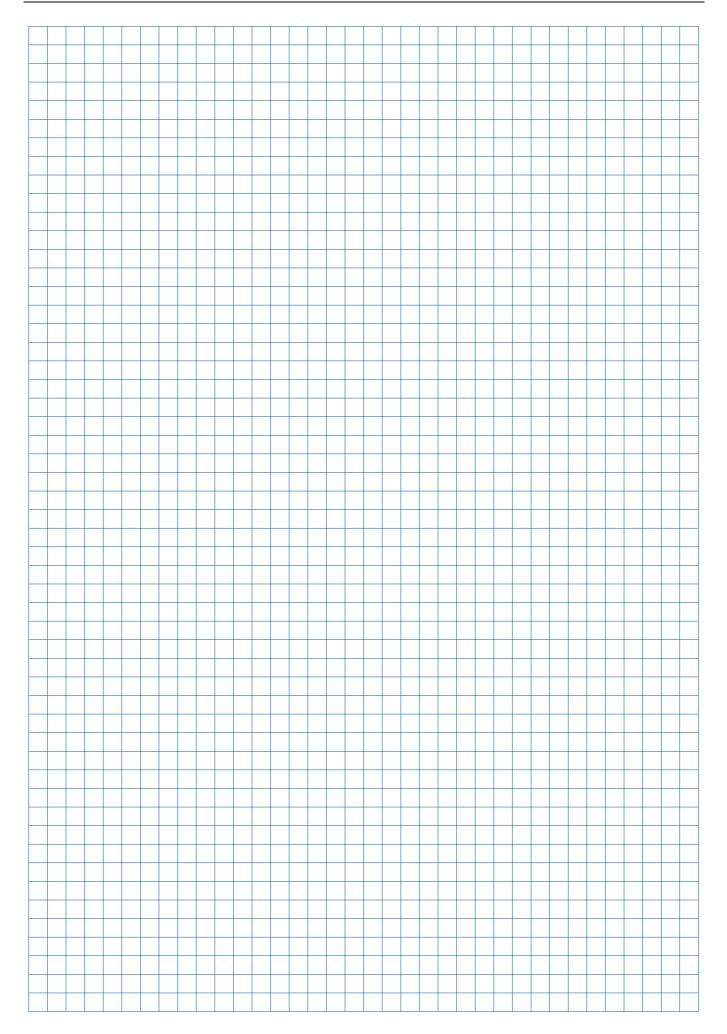


Leave out a brick where the suspension plate is to be mounted. The suspension plate can then be dismounted from inside the structure.





Before undoing the Express anchor or dowel, make sure that the platforms have been removed from the suspension points!



Assembly

Set-up procedure

Doka folding platform K

Lift the stacked platforms off the truck by crane or forklift truck, and set them down on a flat, paved surface.

Animation: https://player.vimeo.com/video/301157967

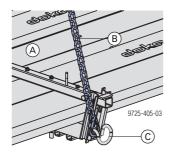
Separating the platforms

Attach the four-part lifting chain to the crane hoisting points at the front and to the extra lifting bows at the rear.

NOTICE

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Only attach and lift 1 platform at a time.

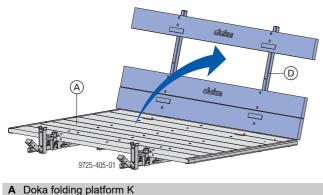


- A Doka folding platform K
- B Doka 4-part chain 3.20m
- C Lifting bow

Putting up the railings

Tilt up the rear railings. When you reach the stop, lift the railings and slot them into place.

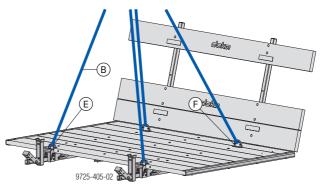
Folding platform K



D Rear railing

Attaching the crane

Pull the lifting bows up out of their recesses, attach the four-part lifting chain (e.g. Doka 4-part chain 3.20m) and raise the Folding platform K.

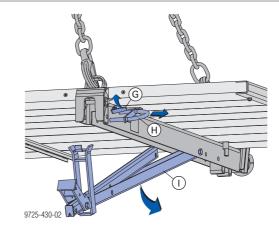


- B Doka 4-part chain 3.20m
- E Lifting bow (at front)
- F Lifting bow (at rear)

Pulling out the pressure rod



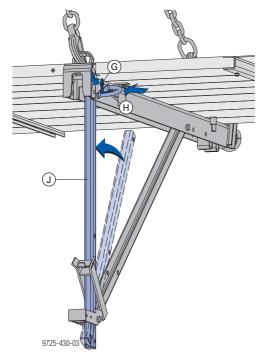
- After being released, the pressure rod swings downwards!
 - > Hold the pressure rod in one hand.
 - Then, with the other hand, lift up the red safety bow and pull out the fastening clamp as far as it will go.
 - Gradually lower the pressure rod by hand.



- G Safety bow (red)
- H Fastening clamp
- I Pressure rod

Bolting the vertical rod in place

- Tilt up the vertical rod and fix it by inserting the U-bolt.
- Secure the fastening clamp with the red safety bow to prevent it being opened accidentally.



- G Safety bow (red)
- H Fastening clamp
- J Vertical rod

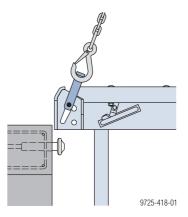
The Folding platform K is now ready for use.

Hanging the Folding platform K into place

NOTICE

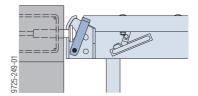
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- Remove any loose items from the platforms, or secure them firmly.
- Passenger transportation' is forbidden!
- Raise the Folding platform K with a 4-part lifting chain.



This raises the front lifting bows, opening the lift-out guard.

Once the Folding platform K is suspended from the suspension cone, the load is removed from the 4part lifting chain.



The lifting bows drop into the starting position, automatically securing the platform against accidental lift-out.



'Locked' position = lifting bow is flush with deck.

I

Length adjustment

NOTICE

In exposed locations (e.g. on tall buildings with closed facades where platforms are mounted near the top of the building and a storm warning has been given), loose deck-boards and closure platforms must be secured against accidental lift-out.

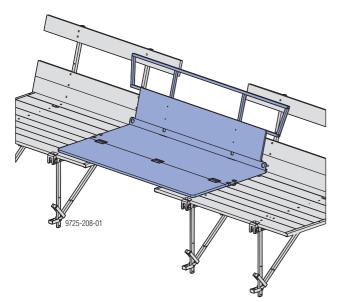
(e.g. join the platform railings and the guard rails of the closure platform using two connected Quick-locking straps 55cm).

with Closure platform 3.00m

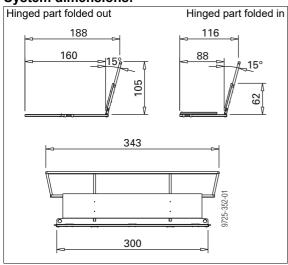
This ready-to-use, fold-down platform is the quick way of making closures up to 2.50 m long, and corner configurations.

Other features include:

 Long service life thanks to its sturdy design and galvanised steel railings.

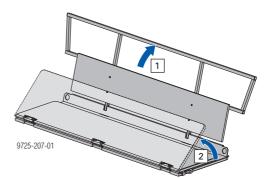


System dimensions:

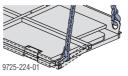


Preparing the platform

- 1) Tilt up the railings and slot them into place at 15°. In this form, the Closure platform is ready for use as a **corner decking unit**.
- Fold out the hinged part. In this form, it is ready for use as a closure decking unit.



The integral crane hoisting points enable the Closure platform to be lifted safely using a four-part lifting chain.





Length adjustment

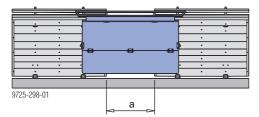
 Position the Closure platform 3.00m across the middle of the closure zone.



NOTICE

Do not exceed the max. closures **a**, depending on the usage situation.

- See sections:
- Working platform with formwork
- Working platform without formwork
- Protection platform



Manhole

 Position the Closure platform 3.00m across the middle of the closure zone.

Front hinged part must be folded back.

NOTICE

Do not exceed the max. closures, as stated for the length adjustment.

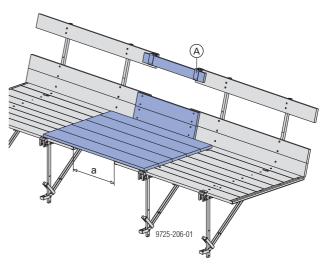
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9725-297-01							

b ... 86 cm

with planks

Closures and corner transitions can also be made using field-built solutions.

Length adjustment



A Attach a guardrail board with a Universal railing shackle or with two 2.8x65 nails on each side

Floor planking:

- Lay down planks with a min. cross-section of 20x5 cm.
 - Minimum overlap 75 cm!

NOTICE

Do not exceed the max. closures ${\bf a},$ depending on the usage situation.

See sections:

- Working platform with formwork
- Working platform without formwork
- Protection platform

Setting up guard rails using the Universal railing shackle:

- Attach the Universal railing shackles to the side railings of the folding platform using two 2.8x65 nails.
- Insert guardrail boards (min. 15x3 cm) into the Universal railing shackles and fix them with two 2.8x65 nails on each side. Minimum overlap 15 cm!

Nailing the railings on directly:

Fix the guardrail boards (min. 15x3 cm) with two 2.8x65 nails on each side. Minimum overlap 15 cm!

Note:

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

Observe all national regulations applying to deck and guardrail boards.

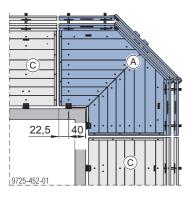
Outside corners

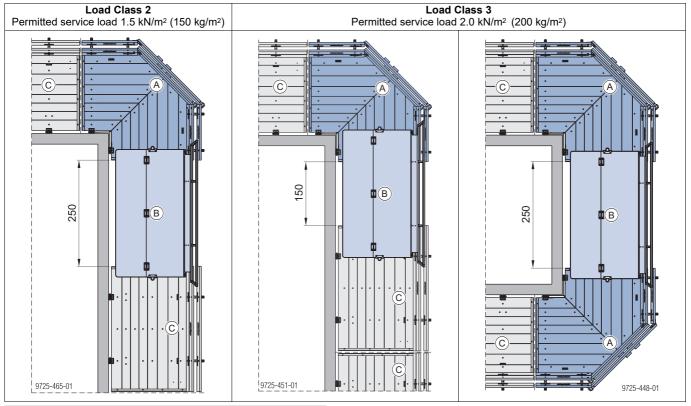
The system offers several different ways of dealing with corner zones.

Permitted service load: 3.0 kN/m² (300 kg/m²) Load Class 4 to EN 12811-1:2003

Doka folding platform K outside corner

The whole unit can be lifted and repositioned in a single crane cycle. This makes it possible to arrange platform layouts very quickly, even in corner zones.





A Doka folding platform K outside corner

- B Closure platform 3.00m
- C Doka folding platform K

NOTICE

With Load Class 4, closures on the Folding platform K outside corner are forbidden.

Note:

When used with formwork, comply with the permitted service load and closures stated in section <u>Working</u> <u>platform with formwork</u>.

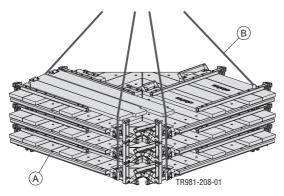


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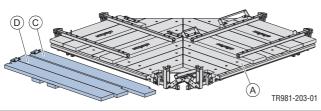
face.

Attach the 4-part lifting chain to the crane lifting points at the front and to the extra lifting bows at the rear.

The lifting chain can be attached to stacked platforms in the same way.



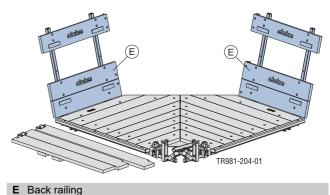
- A Doka folding platform K outside corner
- B Doka 4-part chain 3.20m
- Place the waist-level guardrail and toeboards to one side.



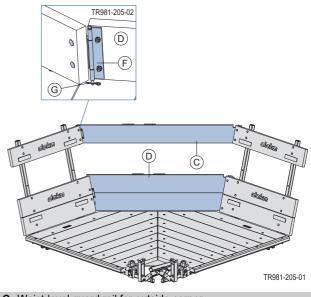
- A Doka folding platform K outside corner
- C Waist-level guard rail for outside corner
- **D** Toeboards for outside corner

Putting up the railings

Tilt up both back railings. When you reach the stop, lift the railings and slot them into place.



- Fit the waist-level guard rail and the toeboards into their respective holding plates.
- On the opposite side, secure each hinge with a hinge pin and spring cotter d2.



- C Waist-level guard rail for outside corner
- D Toeboards for outside corner
- F Hinge
- **G** Hinge pin + spring cotter d2

Attaching the crane

Pull the lifting bows up out of their recesses, attach the 4-part lifting chain (e.g. Doka 4-part chain 3.20m) and raise the Folding platform K outside corner.

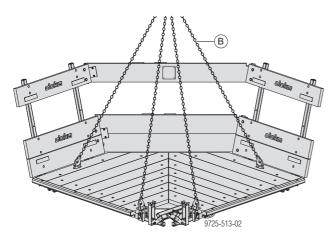


NOTICE

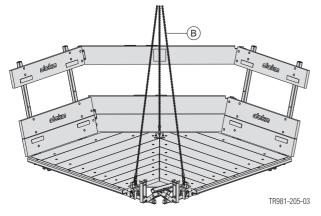
Only attach and lift 1 platform at a time.

Note:

From year of construction 2024, Folding platform K outside corners have 4 crane lifting points for greater stability. Existing Folding platforms K can be retrofitted. Please contact Doka for further information!



Version up to year of construction 2024:



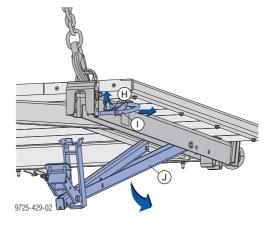
B Doka 4-part chain 3.20m

Pulling out the pressure rod

WARNING

After being released, the pressure rod swings downwards!

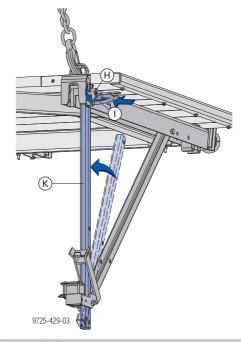
- Hold the pressure rod in one hand.
- Then, with the other hand, lift up the red safety bow and pull out the fastening clamp as far as it will go.
- Gradually lower the pressure rod by hand.



- H Safety bow (red)
- I Fastening clamp
- J Pressure rod

Bolting the vertical rod in place

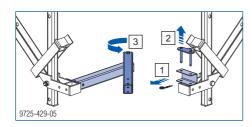
- Tilt up the vertical rod and fix it by inserting the fastening clamp.
- Secure the fastening clamp with the red safety bow to prevent it being opened accidentally.



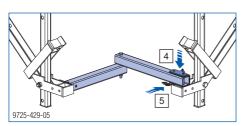
- H Safety bow (red)
- I Fastening clamp
- K Vertical rod

Assembling the pressure-strut unit

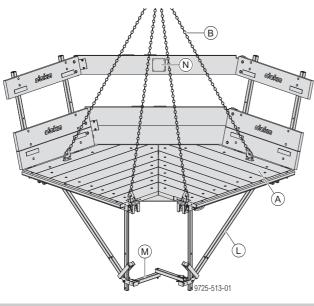
- 1) Pull out the spring cotter d3.
- 2) Pull out the Double bolt D10/85.
- 3) Turn the swivel profile to the fastening unit.



- 4) Push the Double bolt D10/85 into the fastening unit.
- 5) Secure the Double bolt D10/85 with the spring cotter d3.



The Folding platform K outside corner is now ready for use.



- A Doka folding platform K outside corner
- B Doka 4-part chain 3.20m
- L Folding bracket K
- M Pressure-strut unit of outside corner
- N 'No riding on unit during transport' sticker

Hanging the Folding platform K outside corner into place

NOTICE

!

- Remove any loose items from the platforms, or secure them firmly.
- Passenger transportation' is forbidden!

This is done in the same way as with the Folding platform K.

Corner solution with closure platform

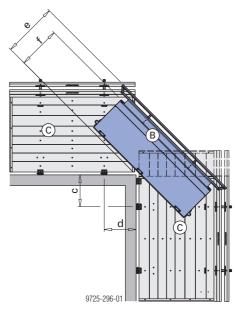
> Set down the Closure platform 3.00m on the two corner folding platforms with equal overlap to either side (no additional fixing required).

Front hinged part must be folded back.

NOTICE



Minimum overlap 20 cm!



- c ... 15 to 75 cm
- d ... 75 cm
- e ... min. 130 cm f ... min. 90 cm
- B Closure platform 3.00m
- C Doka folding platform K

Inside corners

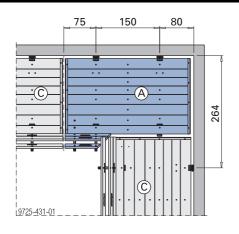
Doka folding platform K inside corner

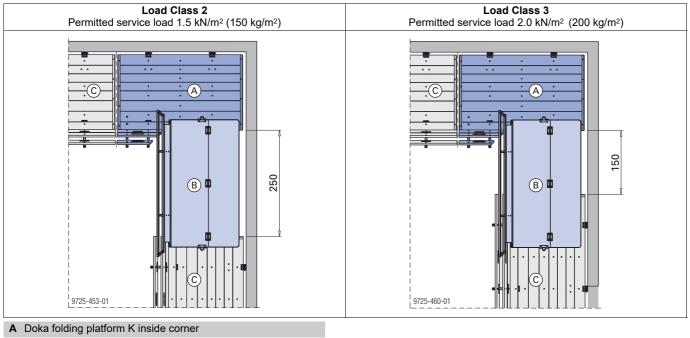
Its special back railing distinguishes the Folding platform K inside corner from the Folding platform K 3.00m. It ensures that safe guard rails are in place in the area of inside corners.

Note:

The narrow side of the Folding platform K inside corner where the back railing is open must be facing the wall.

Permissible service load: 6.0 kN/m² (600 kg/m²) Load Class 6 to EN 12811-1:2003





- B Closure platform 3.00m
- **C** Doka folding platform K

NOTICE

Closures on the Folding platform K inside corner are forbidden with Load Class 4 or higher.



!

WARNING

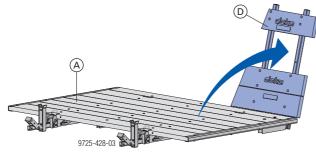
- Risk of platform tipping over when setting down formwork on the Folding platform K inside corner!
 - The anti-liftout guard of the Folding platform K inside corner must be active!
 - Set formwork down first on the long side of the Folding platform K inside corner and then on the narrow side.

Formwork must first be removed from the narrowside when stripping the formwork.

Note:

When used with formwork, comply with the permitted service load and closures stated in section <u>Working</u> <u>platform with formwork</u>.

Tilt up the rear railings. When you reach the stop, lift the railings and slot them into place.



- A Doka folding platform K inside corner
- D Rear railing

The set-up procedure from now on is the same as for the Doka folding platform K.

Hanging the Folding platform K inside corner into place

This is done in the same way as with the Folding platform K.



NOTICE

The Folding platform K inside corner must always be hung into place first, to prevent any collisions with adjacent folding platforms. When repositioning and dismounting the platforms, the Folding platform K inside corner is

always the last to be lifted away.

Platform assembled from single brackets

Makes it possible to choose any bracket spacing and any length of platform, for constructing closure platforms (of e.g. less than 3.0 m in length) and special shapes for use in corner zones.

Max. influence width per bracket 1.50 m

NOTICE

Assembly

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When making project-specific platforms, observe the following points:

- Position brackets as symmetrically as possible and keep their cantilever short.
- Ensure that all loads are applied centrally.
- The stability of the platforms must be ensured during all phases of the construction work!

CAUTION

Risk of platforms tipping over when **loads are applied eccentrically**.

If it is unavoidable to extend a cantilever to one side, observe the following points:

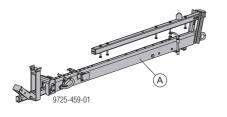
- Choose the widest possible bracket spacing in relation to the cantilever!
- Allow for the greater influence on the bracket in the cantilevering region!
- Contact your Doka technician for information on further measures to prevent platforms tipping over.

The anti-liftout guards are not suitable for sustaining planned forces! The anti-liftout guard is only designed to prevent the platform from being accidentally lifted out of its suspension point while work is in progress.

Assembly

Separating the brackets

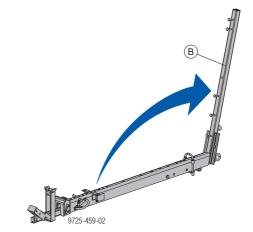
 Lift the Folding brackets K off the truck and set them down on a flat surface.



A Folding bracket K

Putting up the railings

Tilt up the railings. When you reach the stop, lift the railings and slot them into place.

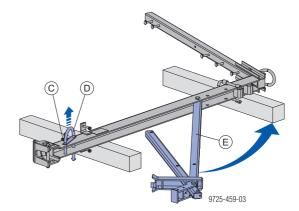


B Railing

Place the Folding bracket K on its side, on timber supports on the ground.

Pulling out the pressure rod

- Raise the red safety bow and pull out the fastening clamp as far as it will go.
- Pull out the pressure rod.



- C Red safety bow
- D Fastening clamp
- E Pressure rod

Note:

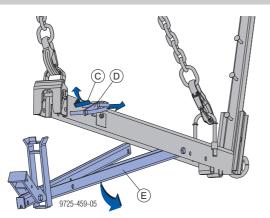
In cases where the bracket is unfolded while suspended from the crane:



WARNING

After being released, the pressure rod swings downwards!

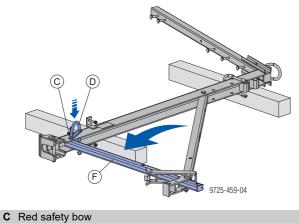
- Hold the pressure rod in one hand.
- Then, with the other hand, lift up the red safety bow and pull out the fastening clamp as far as it will go.
- Gradually lower the pressure rod by hand.



- C Safety bow (red)
- D Fastening clamp
- E Pressure rod

Bolting the vertical rod in place

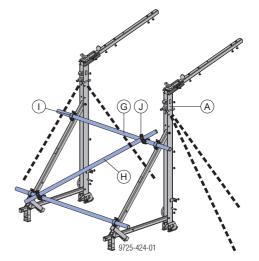
- Tilt up the vertical rod and fix it by inserting the U-bolt.
- Secure the fastening clamp with the red safety bow to prevent it being opened accidentally.



- D Fastening clamp
- F Vertical rod

Fitting the bracing

- Prepare an assembly bench.
- Prepare the bracing.
- > Tilt up the Folding brackets K and stand them spaced the specified centre-to-centre distance apart (see shop drawing / assembly plan).
- > Secure them so that they cannot topple over.
- > The length of the scaffold tubes used will depend on the centre-to-centre spacing of the brackets.
- Brace the Folding brackets K in the horizontal, with 4 screw-on couplers and 2 scaffolding tubes.
- > Mount a scaffold tube as a diagonal stiffening reinforcement between the brackets, using 2 swivel couplers.



- A Folding bracket K
- G Scaffold tube 48.3mm (length = centre-to-centre distance + 20 cm)
- H Scaffold tube 48.3mm (length = centre-to-centre distance + 50 cm)
- Screw-on coupler 48mm 50 Т
- J Swivel coupler 48mm

Distance between screw-on coupler and swivel coupler: max. 160 mm.

This set-up scheme is for platform units with 2 brackets. On platform units with 3 brackets, the number of couplers and scaffolding tubes will need to be adjusted accordingly.

Attaching the platform decking

Note:

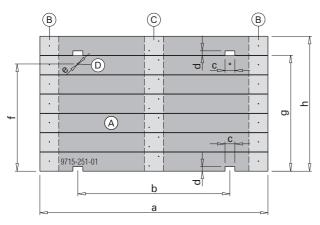
The plank and board thicknesses stated comply with the EN 338 C24 timber.

Observe all national regulations applying to deck and guardrail boards.

> Place the braced Folding brackets K onto a trestle.

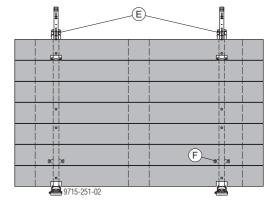


 Lay deck-boards onto the bracket. (Cut them to size as shown in the illustration)



- a ... platform length
- b ... centre-to-centre distance
- c ... 13 cm
- d ... 6 cm
- e ... diam. 2.4 cm f ... 141 cm
- g ... 154 cm
- h ... 177 cm
- A Deck-boards 25/5 cm
- B outside reinforcement plank min. 20/5 cm
- **C** middle reinforcement plank min. 20/5 cm
- **D** Drilled hole for securing panel strut
- Screw on an outside reinforcing plank at each end of the platform (secure each reinforcing board with 1 Torx TG 6x90 A2 universal countersunk-head screw per deck-board).
- Screw on the middle reinforcing plank centred between the brackets (2 Torx TG 6x90 A2 universal countersunk-head screws per deck-board).

Use the square bolts included in the scope of supply to secure the deck-boards to the brackets (6 pcs. included in scope of supply of the Folding bracket K).



E Folding bracket K

F Bolting items in scope of supply

NOTICE

- Attach guard rails so as to comply with the applicable national regulations.
- On each bracket, fasten handrail planks onto the handrail post using carriage bolts M 10x110, spring washers A 10 and hexagon nuts M 10 (5 bolts are included with each Folding bracket K).



Note:

In corner zones, or where the corners are not rightangled, the platform planking must be trimmed accordingly.

Mount passage units as shown in the shop drawing / assembly plan.



Repositioning

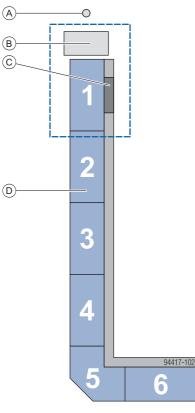
Instructions for safe repositioning of the Folding platform K



NOTICE

During the planning phase, consideration should also be given to the repositioning order and the removal of the last platform!

- Passenger transportation' is forbidden!
- Use tag-lines for safe guidance throughout the entire repositioning operation.
- In general, the last platform is where there are access and exit routes for the regular work sequence. Vertical access is usually provided by stair towers or aerial work platforms.
- If there are window or door openings in the façade, then access can also be enabled through these façade openings.



A Starting and finishing point

- B Stair tower or aerial work platforms
- **C** Façade opening
- D Folding platform K

NOTICE

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 Local regulations, or the result of a hazard assessment carried out by the erector, may necessitate the use of personal fall-arrest systems (e.g. safety harnesses) during repositioning.



 When one platform is repositioned, this leaves exposed fall-hazard locations on the remaining units. Each of these openings has to be closed off with a side railing or a barrier set up at least 2.0 m short of the drop-off edge (see <u>Sideguards on exposed</u> <u>platform-ends</u>).



• The personnel in charge of the repositioning operation are responsible for positioning the access prohibition barriers correctly.



The FreeFalcon mobile fall protection mast permits a secure attachment point to be created for the safety harness.



User instruction prior to use of the FreeFalcon is mandatory.

Follow the directions in the 'FreeFalcon' Operating Instructions.

Transport fork K/M plus

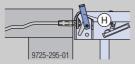
The platforms are normally lifted using suitable 4-part lifting chains such as the Doka 4-part lifting chain 3.20m.

Use a transport fork in the following situations:

- when it is not possible to walk onto the platform to attach the 4-part lifting chain;
- when the platform is being used as a sloping-rooftop fall barrier and cannot be lifted out by 4-part lifting chain because of the projecting eaves.

When using a transport fork, observe the following:

Working from the second-last platform, disengage the anti-liftout guard of the last platform. The red lifting bow (H) must be shifted into the stand-by position (fixed in the short slot).



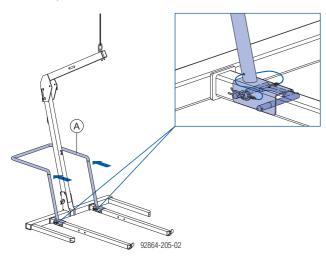
Re-lock the anti-liftout guard. After hanging the platform into place on the suspension cone, move the lifting bow back into the locked position (fixed in the long slot so that the lifting bow is flush with the platform decking).

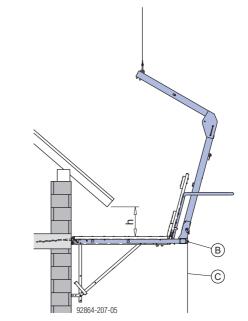
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Follow the directions in the 'Transport fork K/M plus' Operating Instructions!

Check before using with the Folding platform K:

The tilting unit must be in the rear pin-fixing position, and fixed in place.





h ... min. 13 cm

A Tilting unit

- B Slinging point for tag-line
- **C** Tag-line (not included with product)

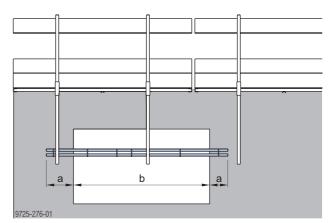
General

Other possible areas of use

Bridging openings in walls

Multi-purpose walings WS10 Top50 must be used for horizontal bridging of wall openings. These bridging beams are also suitable for use as supporting profiles in masonry construction.





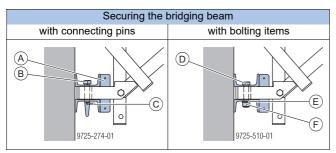
a ... min. 0.25 m

b ... 2.20 m with working platform

b ... 4.00 m with protection platform

NOTICE

Fix the bridging beam so that it cannot fall off!



- A Multi-purpose waling WS10 Top50 2.75m or 3.50m
- **B** Connecting pin 10cm
- C Spring cotter 5mm
- D Hexagon bolt ISO 4014 M20x90 8.8 galv.
- E Spring washer DIN 127 A20
- F Hexagon nut ISO 4032 M20 8 galv.

Can also be mounted to the folding platform when this is folded closed. The bridging beam can remain on the closed folding platform.

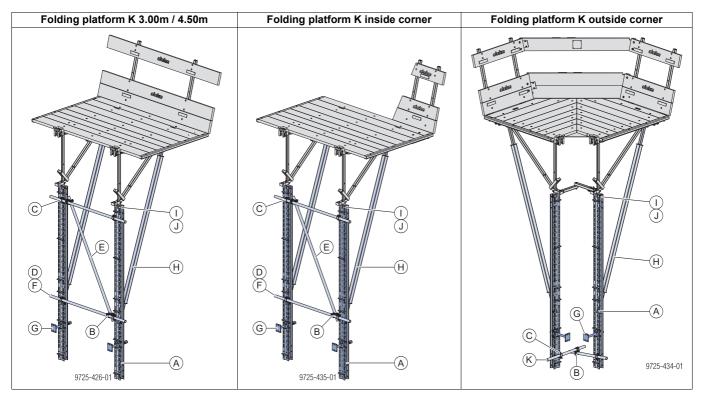
Bridging storey-high openings

Support lengthening pieces are required in situations where the pressure point of the folding platform is not resting against part of the structure (as in e.g. skeletontype construction, wall openings, etc.).

For loadability data, see:

General

- Working platform with formwork
- Working platform without formwork



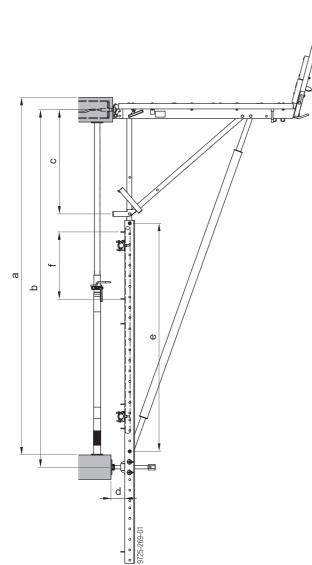
The support lengthening piece consists of:

		N° of items			
Item	Designation	Folding platform K 3.00m	Folding platform K 4.50m	Folding platform K inside corner	Folding platform K outside corner
A	Multi-purpose waling WS10 Top50 3.50m	2	3	2	2
В	Swivel coupler 48mm	2	4	2	1
С	Screw-on coupler 48mm 50	4	6	4	2
D	Scaffold tube 48.3mm 2.00m	2		2	
E	Scaffold tube 48.3mm 2.50m	1	2	1	
F	Scaffold tube 48.3mm 3.50m		2		
G	Façade precast member clamp V*	2	3	2	2
Н	Strut*	2	3	2	2
I	Pin D16/112 (Art. n° 500403330)	2	3	2	2
J	Linch pin 6x42 (DIN 11023)	2	3	2	2
К	Scaffold tube 48.3mm 1.00m				2

* Fixing items included with product.

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Practical example



a ... possible storey heights 212 to 457 cm

 b_1 ... with Façade precast member clamp V: 211 - 253 and 367 - 442 cm

- $b_2 \hdots$ with squared timber 211 456 cm
- c ... 107 cm
- d ... 14 cm
- e ... 232 cm
- f ... 92.5 cm

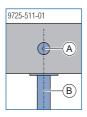
! |

NOTICE

- The Façade precast member clamp V must be installed in area 'b', irrespective of the length of the multi-purpose walings.
- Make sure that the multi-purpose waling is fitted the right way round!
 - Distance between the upper two fixing plates = 92.5 cm!



Floor props directly underneath the suspension points reduce the global and local load of the slab. Their positioning must be ensured throughout the entire construction process.



- A Suspension point for Folding platform K
- B Floor prop

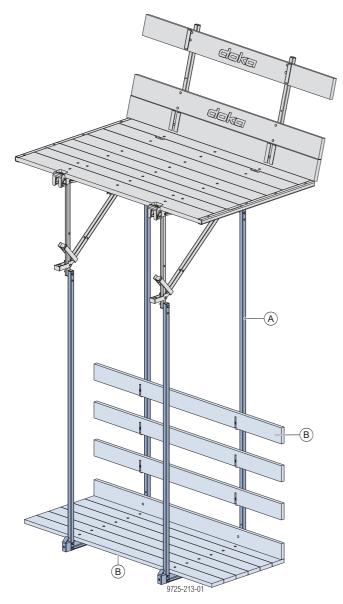
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Second workdeck level

For finishing-work on cured concrete surfaces or for dismantling work (e.g. dismounting unneeded suspension points).

NOTICE

It is not permitted to use the Folding platform K outside corner with a Suspended platform 120 4.30m!



Items needed:

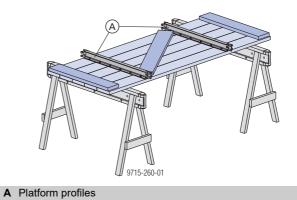
		N° of items		
Item	Designation	Folding plat- form K 3.00m	Folding plat- form K 4.50m	
Α	Suspended platform 120 4.30m	2	3	
В	Planks and guardrail boards*			

Supplied knocked-down, incl. all necessary fixing items (except for *). $\ensuremath{^*}$ supplied by site

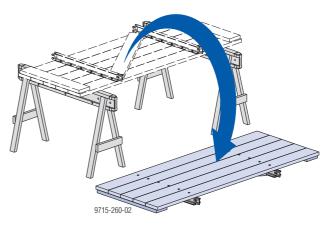
Preparing the platform decking

- Place the deck-boards on trestles.
- Place platform profiles onto the deck-boards, spaced apart at the centre-distance of the brackets.

- Fasten the platform profiles to the deck-boards with M 10x70 square bolts.
- Fix planks to the ends of the platforms, and diagonally between the platform profiles. (2 nails per deckboard)



Turn over the pre-assembled decking and set it down on the ground.

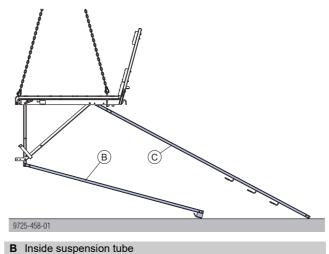


Note:

In corner zones, or where the corners are not rightangled, the platform planking must be trimmed accordingly.

Assembling the suspended platform

► Lift the Folding platform K by crane.

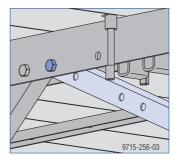


C Outside suspension tube

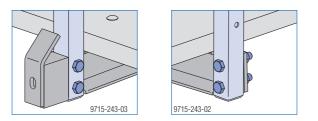
Bolt on the inside suspension tube with an M16x120 hexagon bolt.

9725-458-02

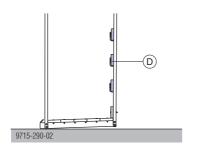
 Bolt on the outside suspension tube with an M16x90 hexagon bolt.



Mount the platform profiles of the pre-assembled platform decking to the suspension tubes with 4 hexagon bolts M16x90 for each profile.



- Use an M10x120 square bolt to attach a guardrail board (min. 15x3 cm) as a toeboard.
- Insert guardrail boards (min. 15x3 cm) into the railing shackles and fix them with 28x65 nails.



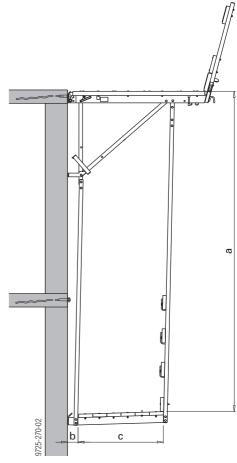
D Guardrail board min. 15/3 cm

Note:

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

Observe all national regulations applying to deck and guardrail boards.

Practical example





Dismantling

To dismantle, perform the above steps in reverse order.

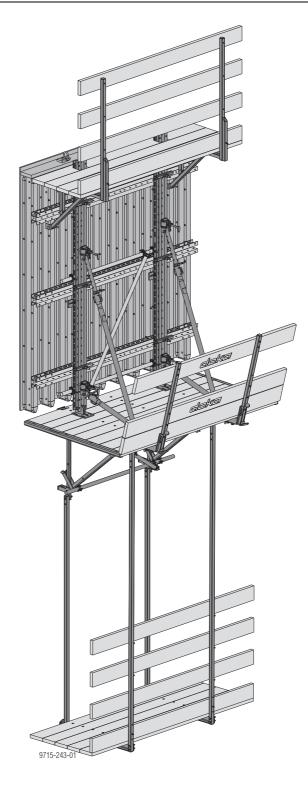
Climbing formwork K

Simply adding a few standard components to the Folding platform K transforms it into a fully-fledged, tiltable climbing formwork – the Climbing formwork K.

- It is used in situations where formwork has to be lifted in several casting steps and where retractable formwork is not required.
- The formwork-plus-platforms unit is repositioned in its entirety in a single crane cycle.
- The formwork is set up and struck with no need for a crane, meaning that the only crane times needed are those for the lifting operations.

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Follow the directions in the 'Climbing formwork K' User Information booklet!



Sideguards on exposed platform-ends

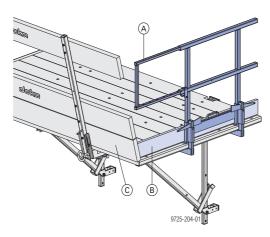
On platforms that do not completely encircle the structure, suitable sideguards must be placed across exposed end-of-platform zones.

Note:

The plank and board thicknesses given here comply with the C24 category of EN 338.

Observe all national regulations applying to deckboards and guard-rail boards.

Side handrail clamping unit T

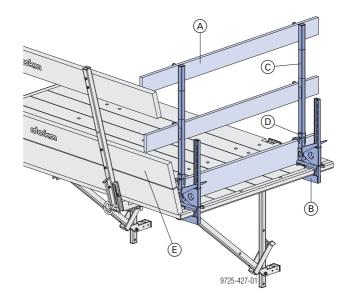


- A Side handrail clamping unit T with integral telescopic handrail
- B Guard-rail board min. 15x3 cm (site-provided)
- C Doka folding platform K

How to mount:

- Fasten the clamping part to the decking of the folding platform using the wedge (clamping range 4 to 6 cm).
- Slot in the railing.
- Extend the telescopic railing to the desired length and secure it.
- Insert toeboard (guard-rail board).

Edge protection system XP



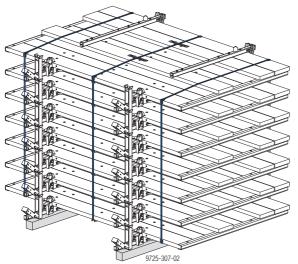
- A Guard-rail board min. 15x3 cm (site-provided)
- B Railing clamp XP 40cm
- C Handrail post XP 1.20m
- D Toeboard holder XP 1.20m
- E Doka folding platform K

How to mount:

- Fasten the clamping part of the railing clamp to the decking of the folding platform using the wedge.
- Working from below, push the Toeboard holder XP 1.20m onto the Handrail post XP 1.20m. The bracket of the toeboard holder must be pointing downward, facing the platform.
- Push on the Handrail post XP 1.20m until it locks ("Easy-Click" function).
- Place guard-rail boards on the handrail-post plates and secure them with nails (diam. 5 mm).

Transporting, stacking and storing

The Folding platforms K are pre-assembled and can be collapsed for easy shipping and storage – no risk of slippage.



This optimum packing density translates into low shipping volume and excellent utilisation of the loading area of the truck:

 84 linear metres of Doka folding platforms K per truck semi-trailer

This corresponds to:

General

- 28 Folding platforms K 3.00m

94.5 linear metres of Doka folding platforms K per truck trailer

This corresponds to:

NOTICE

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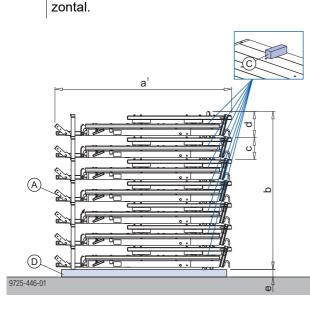
- 21 Folding platforms K 3.00m +
- 7 Folding platforms K 4.50m

Stack of 7 Folding platforms K or of 7 Folding platform K inside corners

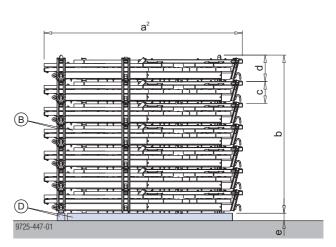
When stacking Folding platform K inside cor-

ners, a squared timber 10x10x30 cm must be

inserted to keep each stacked platform hori-



Stack of 7 Folding platform K outside corners



- a¹ ... 234.0 cm
- a² ... 262.0 cm
- b ... 210.0 cm c ... 29.0 cm
- d ... 35.0 cm
- e ... 10.0 cm
- A Doka folding platform K or
- Doka folding platform K inside corner B Doka folding platform K outside corner
- **C** Squared timber 10x10x30 cm
- **D** Sleeper, 10 cm high

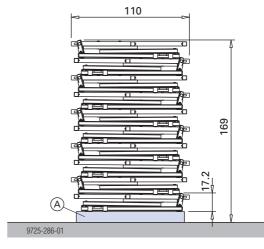
Stack of 10 Closure platforms 3.00m

When folded closed, the pre-assembled Closure platforms are easy to transport and store.

With their high packing density and ideal dimensions, they make highly efficient use of the available storage and shipping capacity.

Note:

Only set down stacks of platforms on flat, paved surfaces.

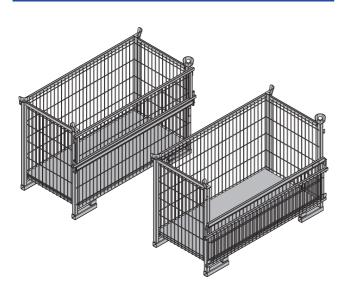


A Sleeper, 10 cm high

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

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

Doka skeleton transport box 1.70x0.80m



Storage and transport device for small items. 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)	Indoors
Floor gradients up to 3%	Floor gradients up to 1%
2	5
It is not allowed to stack empty pallets on top of one another!	

I NOTICE

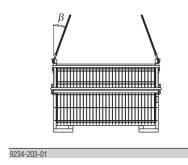
Stacked multi-trip boxes or pallets must have the heaviest boxes at the bottom and the lightest at the top.

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

Lifting by crane

NOTICE

- Multi-trip packaging items must be lifted individually.
- Only lift the boxes when their sidewalls are closed!
- Use suitable lifting chains:
 - e.g. Doka 4-part chain 3.20m
 - Do not exceed the permitted working
 - load limit of the lifting chains.
- Sling angle β max. 30°!



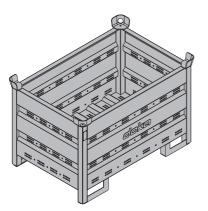
Repositioning by forklift truck or pallet stacking truck

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

Doka multi-trip transport box

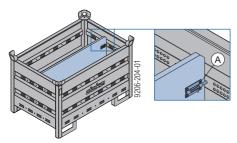
Storage and transport device for small items

Doka multi-trip transport box 1.20x0.80m



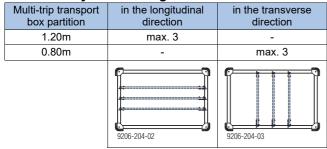
Permitted load-bearing capacity: 1500 kg (3300 lbs) Permitted imposed stacking load: 7850 kg (17300 lbs)

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

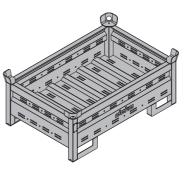


A Slide-bolt for fixing the partition

Possible ways of dividing the box



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	s (on the site)	Indoors					
Floor grad	lients up to 3%	Floor gradients up to 1%					
Doka multi-	trip transport box	Doka multi-trip transport box					
1.20x0.80m	1.20x0.80x0.41m	1.20x0.80m	1.20x0.80x0.41m				
3	3 5		10				
	ed to stack empty p of one another!						

NOTICE

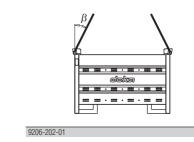
Stacked multi-trip boxes or pallets must have the heaviest boxes at the bottom and the lightest at the top.

Using Doka multi-trip transport boxes as transport devices

Lifting by crane

NOTICE

- Multi-trip packaging items must be lifted individually.
- Use suitable lifting chains:
 - e.g. Doka 4-part chain 3.20m
 - Do not exceed the permitted working load limit of the lifting chains.
- Sling angle β max. 30°!



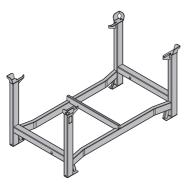
Repositioning by forklift truck or pallet stacking truck

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



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

Storage and transport device 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)	Indoors
Floor gradients up to 3%	Floor gradients up to 1%
2	6
It is not allowed to stack empty pallets on top of one another!	

NOTICE

1

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

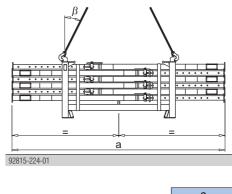
Using Doka stacking pallets as transport devices

Lifting by crane

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NOTICE

- Multi-trip packaging items must be lifted individually.
- 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 centrically.
- Fasten the load to the stacking pallet (e.g. with strapping tape or lashing strap) so that it cannot slide or tip out.
- Sling angle β max. 30°!



	а	1
Doka stacking pallet 1.55x0.85m	max. 4.5 m	1
Doka stacking pallet 1.20x0.80m	max. 3.0 m	1

Repositioning by forklift truck or pallet stacking truck

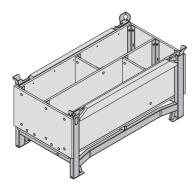
NOTICE

I

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

Doka accessory box

Storage and transport device for small items.



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

Doka accessory boxes as storage units

Max. n° of units on top of one another



NOTICE

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

Doka accessory box as transport devices

Lifting by crane

NOTICE

- Multi-trip packaging items must be lifted individually.
- Use suitable lifting chains:
 - e.g. Doka 4-part chain 3.20m
 - Do not exceed the permitted working load limit of the lifting chains.
- When lifting units 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°!



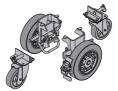
92816-206-01

Repositioning by forklift truck or pallet stacking truck

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

Bolt-on castor set B

The Bolt-on castor set B turns multi-trip packaging items into fast and manoeuvrable transport devices. Suitable for drive-through access openings > 90 cm.



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

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

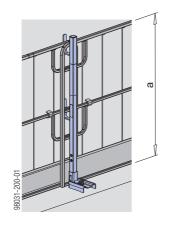


Follow the directions in the 'Bolt-on castor set B' User Information booklet!

Fall protection on the structure

Xsafe edge protection XP

- Attached with screw-on shoe, railing clamp, handrail-post shoe or Step bracket XP
- Protective grating XP, guardrail boards or scaffold tubes can be used as the safety barrier



a ... > 1.00 m

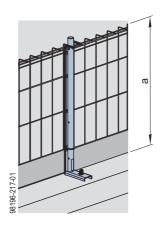


protection XP' User Information booklet.

Follow the directions in the 'Xsafe edge

Xsafe edge protection Z

- Attachment by integral screw-on shoe
- Protective barrier Z can be used as the safety barrier



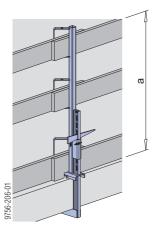
a ... > 1.17 m

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Follow the directions in the 'Xsafe edge protection Z' User Information booklet.

Handrail clamp S

- Attached with integral clamp
- Guard-rail boards or scaffold tubes can be used as the safety barrier



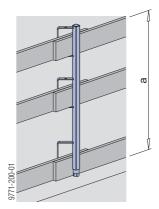
a ... > 1.00 m



Follow the directions in the "Handrail clamp S" User information!

Handrail post 1.10m

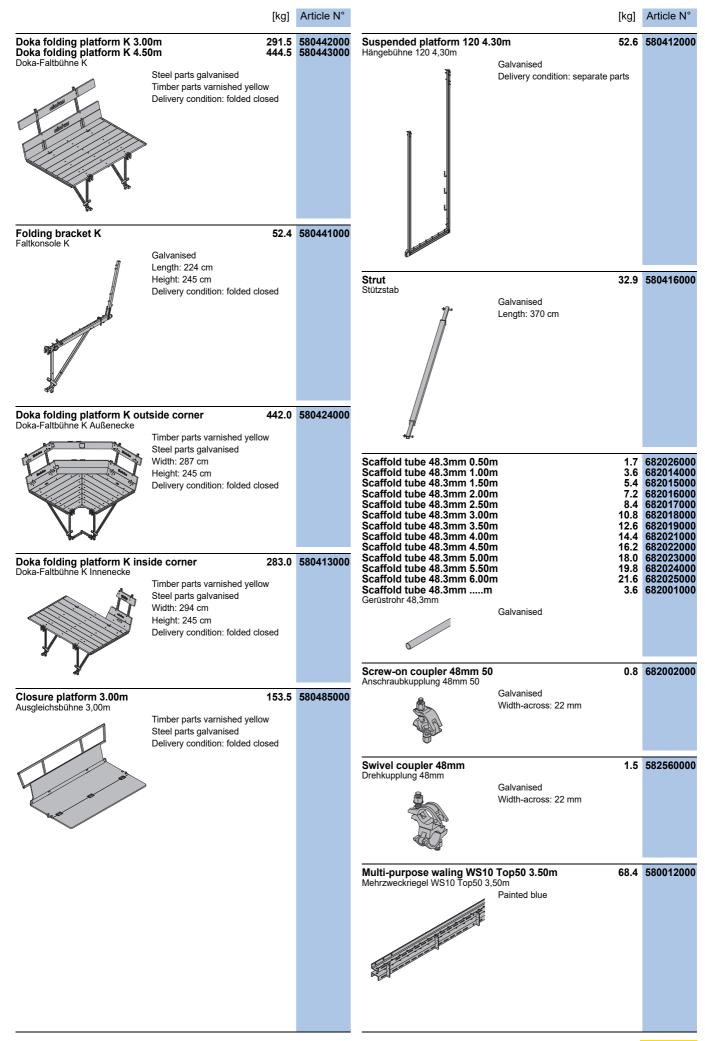
- Fixed in a Screw sleeve 20.0 or Attachable sleeve 24mm
- Guard-rail boards or scaffold tubes can be used as the safety barrier



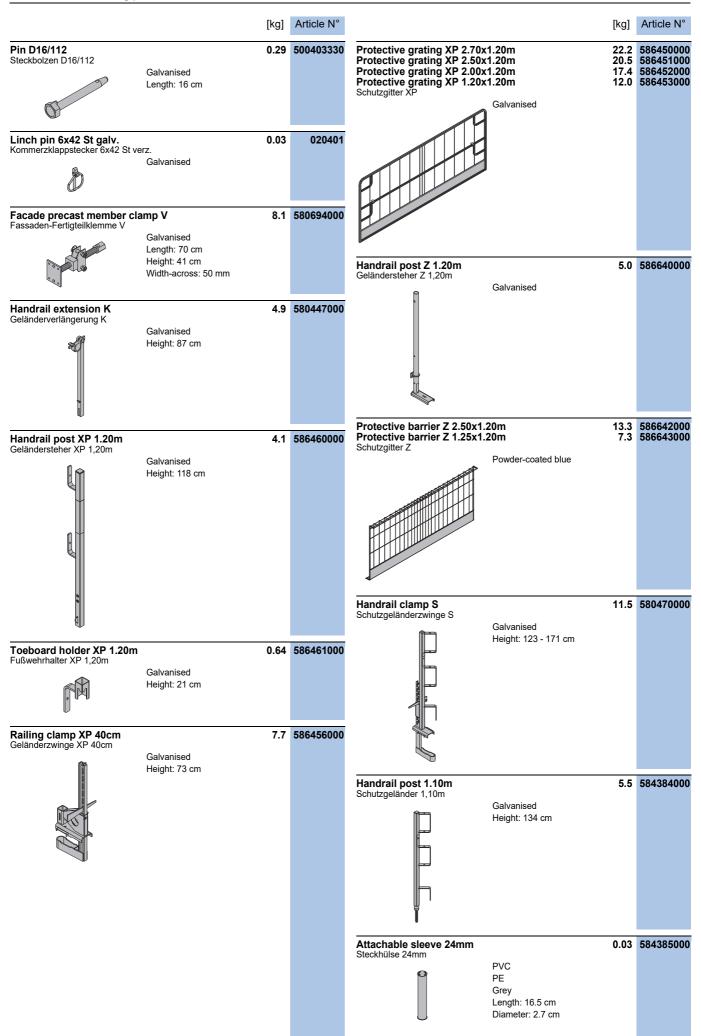
a ... > 1.00 m



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

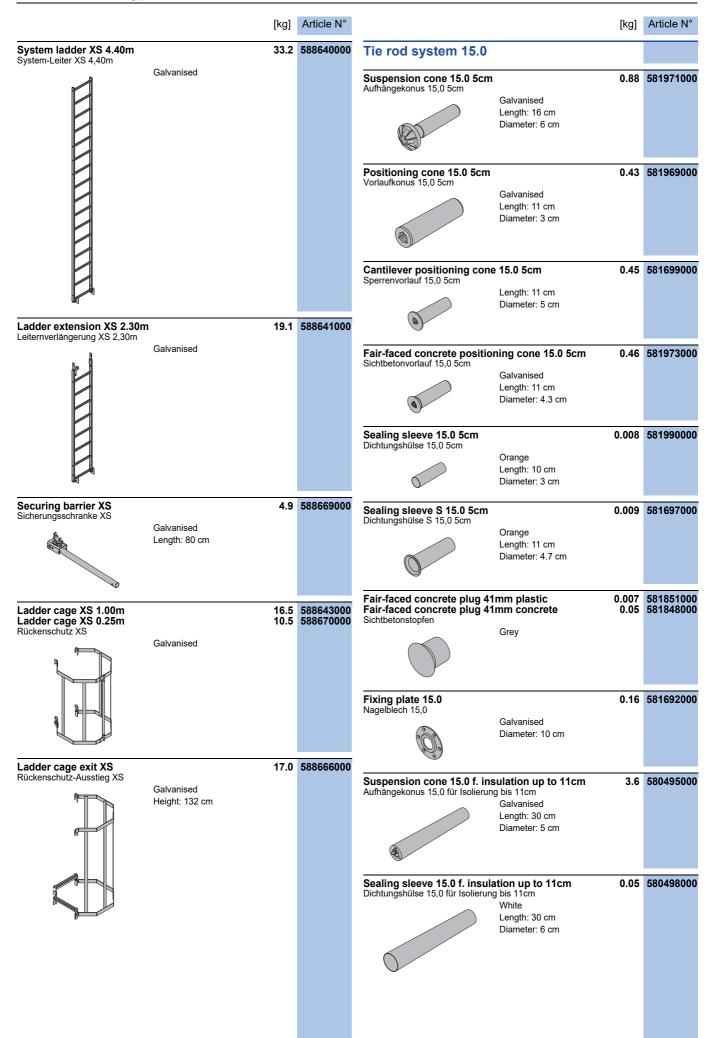


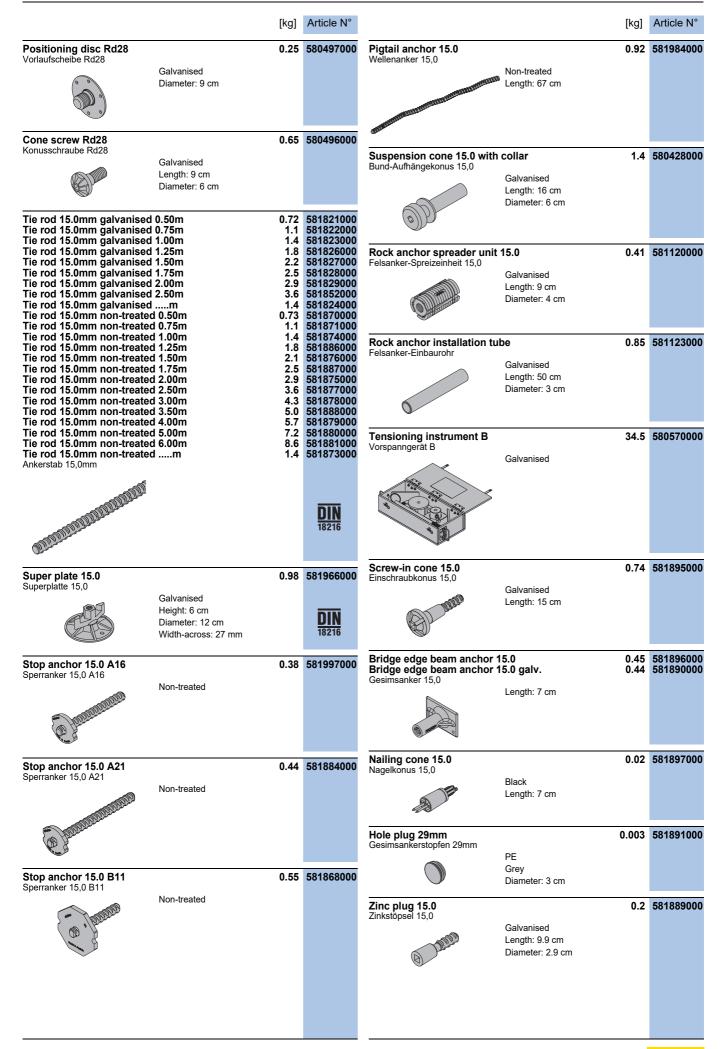




	[kg]	Article N°	[kg]	Article N°
Screw sleeve 20.0 Schraubhülse 20,0	0.03 PP Yellow Length: 20 cm Diameter: 3.1 cm	584386000	Quick-locking strap 55cm 0.07 Gurtschnellverschluss 55cm Yellow	580787000
Side handrail clamping unit Seitenschutzgeländer T	Galvanised Length: 115 - 175 cm Height: 112 cm 3.0 Galvanised Height: 20 cm	580488000	Universal-Werkzeugbox 15,0 included in scope of supply: (A) Reversible ratchet 1/2" 0.73 Galvanised (B) Square nut 22 0.31 (C) Positioning cone spanner 15.0 DK 0.3 Galvanised Length: 8 cm Width-across: 30 mm (D) Universal joint coupling 1/2" 0.16 (E) Ring spanner 16/18 0.23 (F) Ring spanner 16/18 0.23 (F) Ring spanner 17/19 0.27 (G) Fork wrench 13/17 0.08 (H) Fork wrench 30/32 0.8 (J) Fork wrench 36/41 1.0 (K) Extension 22cm 1/2" 0.31 (L) Extension 11cm 1/2" 0.2 (M) Box spanner 41 0.99	58057900 58058300 58064400 58059000 58058700 58058700 58058700 58058200 58058200 58058200 58058200
Doka 4-part chain 3.20m Doka-Vierstrangkette 3,20m	Follow the directions in the "Opera- ting Instructions"!	588620000 C €	(O) Box nut 24 1/2" 0.12 (P) Box nut 19 1/2" L 0.16 (Q) Box nut 18 1/2" L 0.15	58057500 58058400 58059800 58064200 58057600
Transport fork K/M plus Umsetzgabel K/M plus	226.0 Galvanised Length: 305 cm Width: 204 cm	583025000		
Star screw Sternschraube	0.75 Galvanised Length: 17 cm Width-across: 24 mm	580425000	Ladder system XS Connector XS wall formwork Anschluss XS Wandschalung Galvanised Width: 89 cm Height: 63 cm	58866200
Suspension plate AK Aufhängeblech AK	8.3 Galvanised Length: 65 cm	580494000		58867200
Suspension profile AK Aufhängeprofil AK	14.8 Galvanised Length: 109 cm	580595000	Anschluss XS DM/SL-1 Galvanised Length: 100 cm	







User mormation Folding pr					AILICIE IIS
		[kg]	Article N°	[kg]	Article N°
Protective cap 15.0/20.0 Schutzkappe 15,0/20,0	Yellow Length: 6 cm Diameter: 6.7 cm	0.03	581858000	Doka multi-trip transport box 1.20x0.80x0.41m Doka-Mehrwegcontainer 1,20x0,80x0,41m Galvanised	583009000
Tie-rod wrench 15.0/20.0 Ankerstabschlüssel 15,0/20,0	Galvanised	1.8	580594000	Doka stacking pallet 1.55x0.85m 41.0	586151000
				Doka-Stapelpalette 1,55x0,85m Galvanised Height: 77 cm	
Positioning cone spanner 1 Vorlaufschlüssel 15,0 DK	5.0 DK Galvanised Length: 8 cm Width-across: 30 mm	0.3	580579000		
Universal cone spanner 15.0 Universal-Konusschlüssel 15,0/20)/20.0 ,0	0.9	581448000		
included in scope of supply: (A) Safety Ruler SK Length: 18 cm	Galvanised	0.02	581439000	Doka stacking pallet 1.20x0.80m 38.0 Doka-Stapelpalette 1,20x0,80m 38.0	583016000
A A	Width-across: 50 mm			Galvanised Height: 77 cm	
Multi-trip packaging					
Doka skeleton transport box Doka-Gitterbox 1,70x0,80m	x 1.70x0.80m Galvanised	87.0	583012000		
Doka multi-trip transport bo		70.0	583011000	Doka accessory box Doka-Kleinteilebox Timber parts varnished yellow Steel parts galvanised Length: 154 cm Width: 83 cm Height: 77 cm	58301000
Doka-Mehrwegcontainer 1,20x0,8	um Galvanised Height: 78 cm			Universal castor wheel for transport pallet 6.0 Universal-Lenkrolle Transportgebinde	58404300
				Galvanised Height: 28.8 cm	
a a a a a a a a a a a a a a a a a a a				Bolt-on castor set B 33.6 Anklemm-Radsatz B Painted blue	58616800
Multi-trip transport box part Multi-trip transport box part Mehrwegcontainer Unterteilung	ition 0.80m ition 1.20m Steel parts galvanised Timber parts varnished yellow	5.5	583018000 583017000		



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