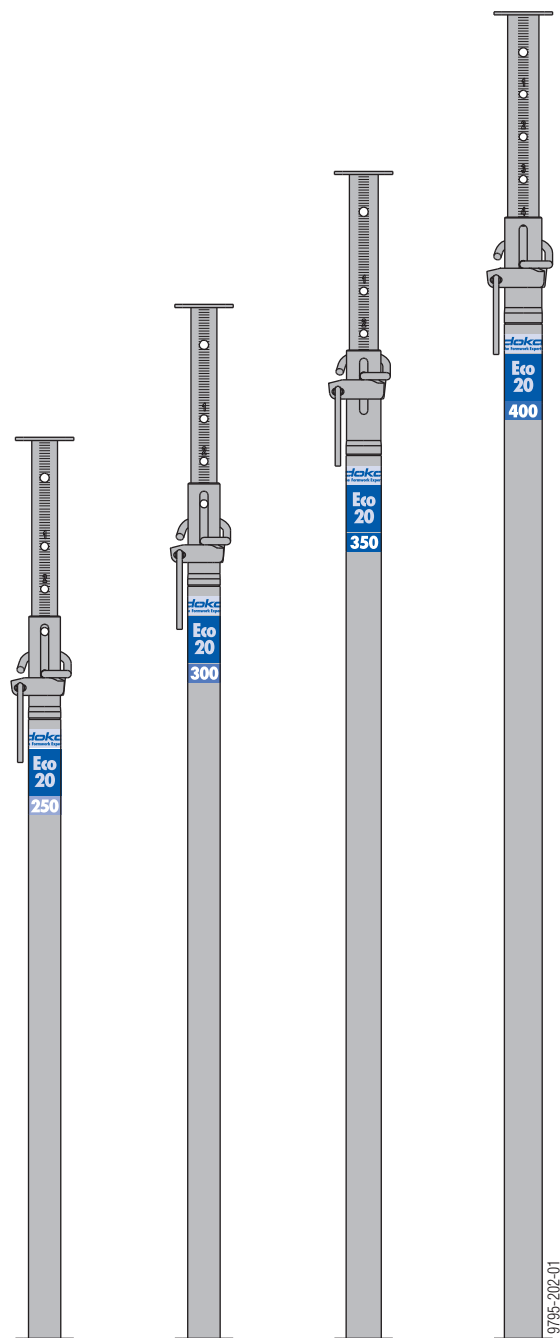


The Formwork Experts.

Floor props Eco 20

User Information

Instructions for assembly and use (Method statement)



Elementary safety warnings

User target groups

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

Hazard assessment

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

Remarks on this booklet

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

Planning

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

Regulations; industrial safety

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

Rules applying during all phases of the assignment

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

Assembly

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

Closing the formwork

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

Pouring

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

Stripping the formwork

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

Transporting, stacking and storing

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

Maintenance

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

Miscellaneous

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

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

Symbols used

The following symbols are used in this document:



DANGER

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



WARNING

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



CAUTION

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



NOTICE

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



Instruction

Indicates that actions have to be performed by the user.



Sight-check

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



Tip

Points out useful practical tips.

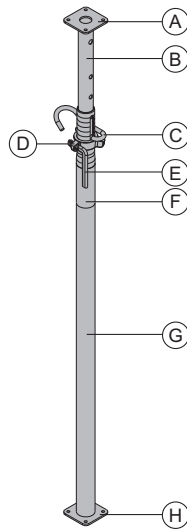


Reference

Cross-references other documents.

Product description

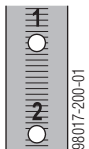
Doka floor props Eco are extendable floor props made of steel. They are designed for use as vertical props for temporary structures.



- A Head-plate
- B Inner tube
- C Fastening clamp
- D Adjusting nut
- E Toggle lever
- F Rating label
- G Outer tube
- H Baseplate

The main features:

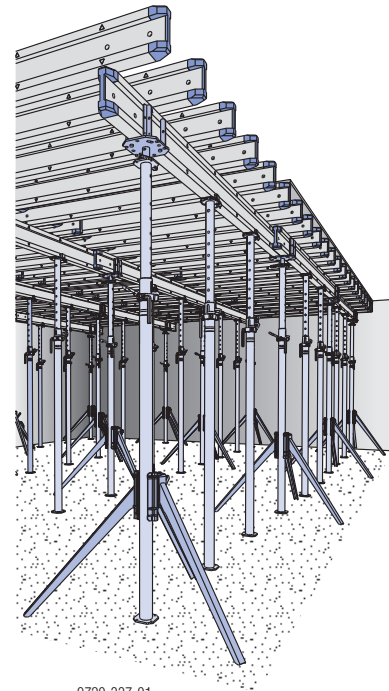
- high load-bearing capacity
 - see the section headed 'Permitted carrying capacity'
- numbered pegging holes, for easier height adjustment



- Quick connection: Head adapters of various types can be attached in a crane-handling-safe manner with the spring-locked connecting pin
- Drop-out latch: For safety reasons, Doka props have latches to prevent the inner tube sliding out of the outer tube.
- special thread geometry, which makes the prop easier to release even when it is under high load
- holes in the adjusting nut to make it easier to operate
- When the prop is pushed in all the way, it still leaves a clear 10 cm gap so that the operator's hands are not trapped.
- Galvanised, long-life constructional design

Practical examples

Dokaflex 1-2-4

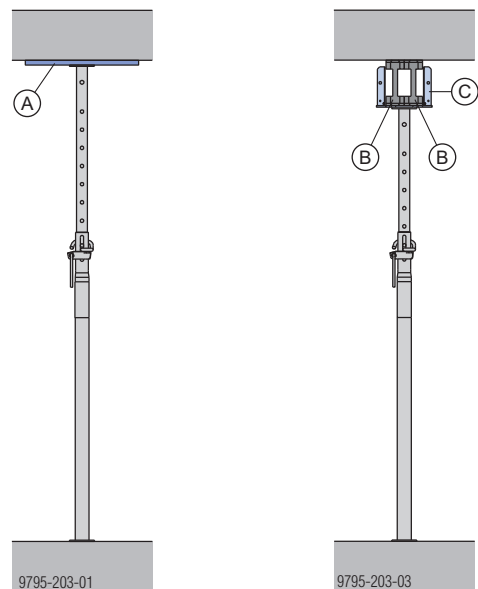


9720-337-01



Follow the directions in the 'Dokaflex 1-2-4' User Information booklet!

Temporary reshores



9795-203-01

9795-203-03

- A Formwork sheet
- B Doka beam H20
- C Lowering head H20 or 4-way head H20

Instructions for assembly and use (Method statement)

Setting up with tripod



CAUTION

Is not a substitute for bracing on supporting systems.

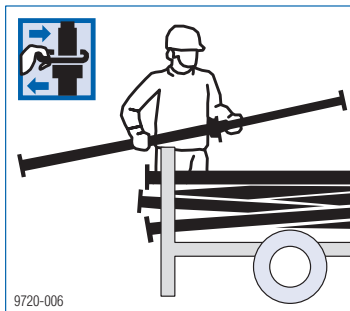
- Only use for holding floor props upright!

Possible clamping ranges of removable folding tripods:

Removable folding tripod	top	
	Outer tube	Inner tube
Doka floor prop		
Eco 20 250	✓	—
Eco 20 300	✓	—
Eco 20 350	✓	—
Eco 20 400	✓	—

This is for free-standing props. When using the props in a system, follow the directions in the applicable User Information booklet.

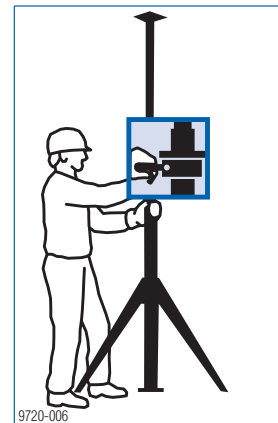
- Roughly adjust the height of the floor prop, using the fastening clamp.



- Set up each removable folding tripod.
- Put the floor prop into the tripod and fix it in place with the clamping lever. Before anybody steps onto the formwork, check again to make sure that the props have been correctly secured.



- Precision-adjust by turning the adjusting nut of the upright prop.



- When setting up the floor prop, make sure that the fastening clamp is pushed all the way into the floor prop.
- Turn the adjusting nut until it is in contact with the fastening clamp.



Setting up without tripod

- To prevent toppling, use retaining head H20 DF to secure intermediate props for floor formwork (see user information document for Dokaflex 1-2-4).
- When using props as temporary reshoring, press them sufficiently tightly to the underside of the floor slab so that they cannot topple.

Backing off and removing floor props

- Loosen the adjusting nut with a blow of the hammer and turn the floor prop to lower it.
- Bring the floor prop into a horizontal position.
- If necessary, open the fastening clamp and push the inner tube into the outer tube.
- Lay the floor prop on the stacking pallet.

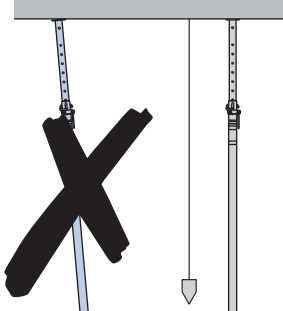
Possible incorrect usages



WARNING

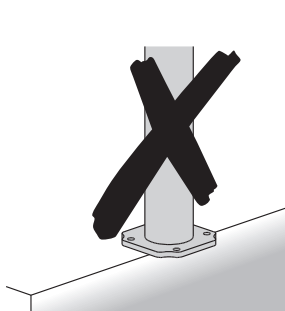
► The uses illustrated below are prohibited, as are other, similar uses!

Use only perfectly upright and plumb.



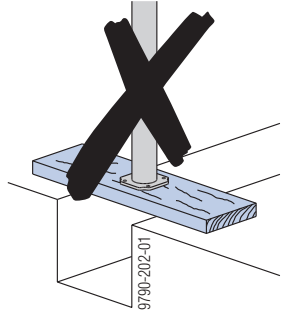
9790-205-01

Baseplate must make full-surface contact with the ground.

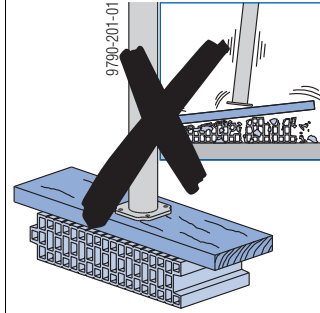


9790-207-01

Place only on ground of adequate load-bearing strength.

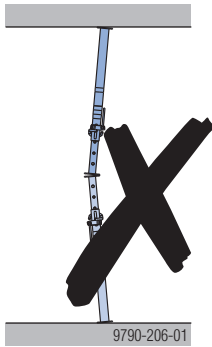


9790-202-01



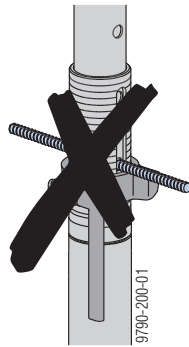
9790-201-01

Do not attempt to use floor props one on top of another.



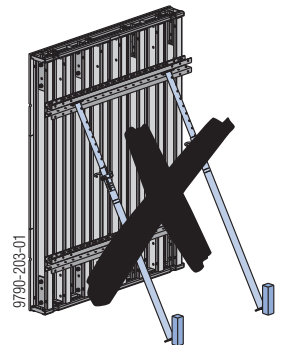
9790-206-01

Do not use anchor rods or lengths of rebar as substitutes for the pegs.



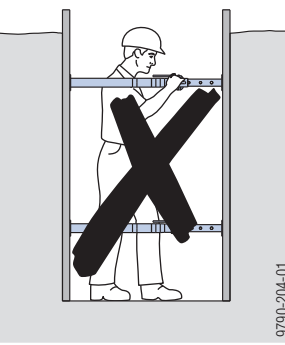
9790-200-01

Do not use to support formwork panels.



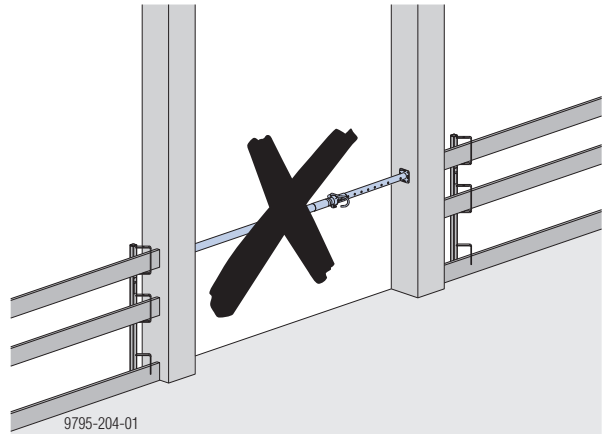
9790-203-01

Do not use as trenching braces.

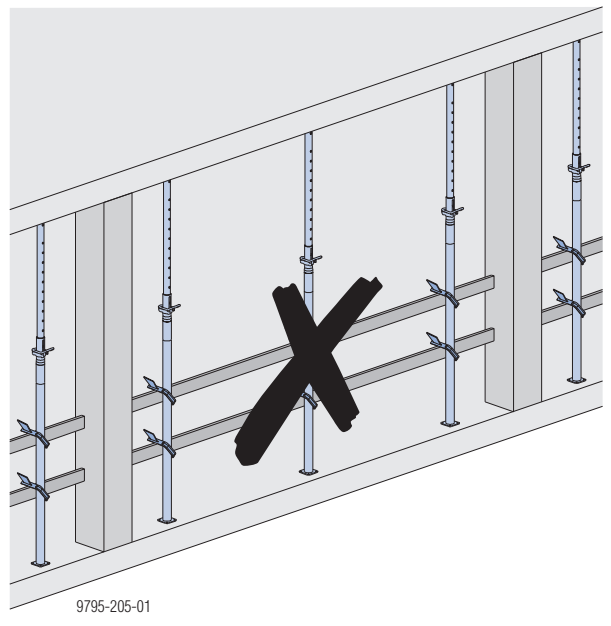


9790-204-01

Do not use as barrier to close off openings.



9795-204-01



9795-205-01

Technical condition

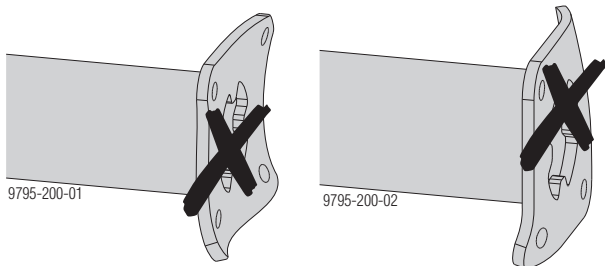
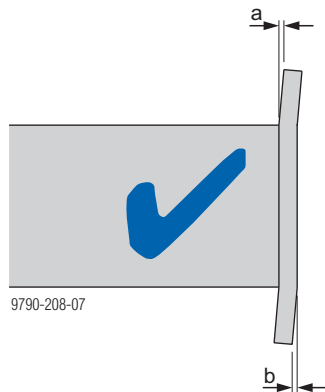
The following quality criteria define the statically permitted degree of damage or weakening.

Use is prohibited if the damage is more extensive.

Outer tube - inner tube

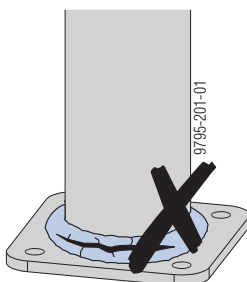
Head plate or baseplate bent out of shape

- **a max. 1 mm** outward and
- **b max. 3 mm** inward is permissible



Cracks in welds

- Not permissible.



Threads

- must be greased over entire length and action must be smooth.

Inner tube

- When the inner tube is rotated inside the outer tube so that the U-bolt fixing-holes of both tubes are lined up, it must be possible to fully extend and retract the inner tube.

Widening

- of the pegging holes in the inner tube is permissible up to 2 mm.

Permitted carrying capacity

Used as free (non-system-dependent) construction props

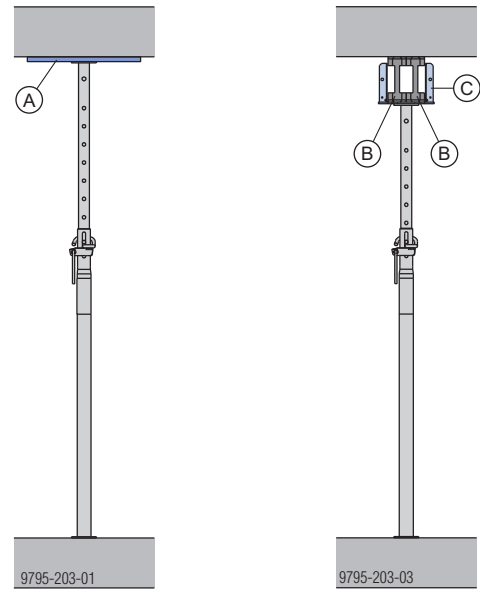
Permitted capacities [kN] as a function of the extension length of the outer tube (to ÖNORM B4009)

Prop length [m]	Eco 20			
	250 (260)	300	350	400 (410)
4.1				(20.5)
4.0				21.6
3.9				22.8
3.8				23.9
3.7				25
3.6				
3.5			20.1	
3.4			21	
3.3			21.9	
3.2			22.8	
3.1			23.7	
3.0		21.3	24.7	
2.9		22.6	25	
2.8		24		
2.7		25		
2.6	(25)			
2.5	25			
2.4				
2.3				
2.2				
2.1				
2.0				25
1.9				
1.8				
1.7				
1.6				
1.5				

Floor props Eco 20, moreover, are also compliant with European standard EN 1065, class A.

Using as temporary reshores (props restrained)

With enhanced load-bearing capacity



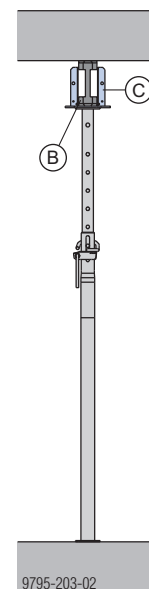
When the Doka floor props Eco 20 are used as temporary reshores, the permitted carrying capacities increase to **25 kN**.



NOTICE

This increase in capacity only applies if the head- and baseplates are placed directly against the floor-slabs (a formwork-sheeting packing strip or 2 Doka beams are permissible).

Without enhanced load-bearing

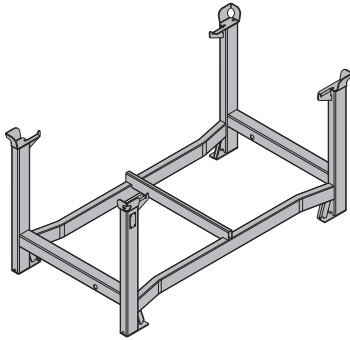


- A** Formwork sheet
- B** Doka beam H20
- C** Lowering head H20 or Four-way head H20

Transporting, stacking and storing

Doka stacking pallet 1.55x0.85m

Storage and transport devices for long items.



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

Using Doka stacking pallets as storage units

Max. n° of units on top of one another

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



NOTICE

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

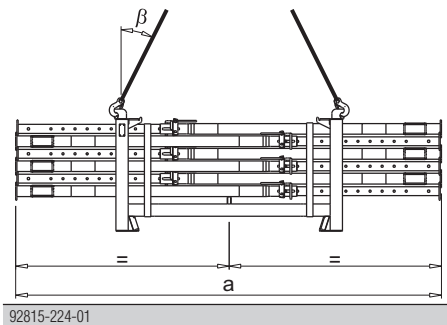
Using Doka stacking pallets as transport devices

Lifting by crane



NOTICE

- Multi-trip packaging items may only be lifted one at a time.
- Use a suitable crane suspension tackle (e.g. Doka 4-part chain 3.20m). Do not exceed the permitted load-bearing capacity.
- Load the items centrally.
- Fasten the load to the stacking pallet so that it cannot slide or tip out.
- When lifting stacking pallets to which Bolt-on castor sets B have been attached, you must also follow the directions in these Operating Instructions!
- Spread angle β max. 30°!



a ... max. 4.5 m

Repositioning by forklift truck or pallet stacking truck



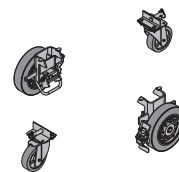
NOTICE

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

Bolt-on castor set B

The Bolt-on castor set B turns the stacking pallet into a fast and manoeuvrable transport device.

Suitable for drive-through access openings > 90 cm.

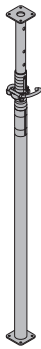


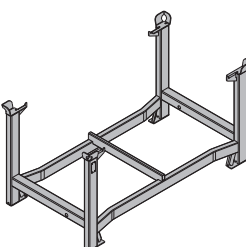
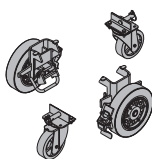


The Bolt-on castor set B can be mounted to the following multi-trip packaging items:

- Doka accessory box
- Doka stacking pallets



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

	[kg]	Article N°	[kg]	Article N°
Doka floor prop Eco 20 250 Length: 152 - 250 cm	11.7	586134000		
Doka floor prop Eco 20 300 Length: 172 - 300 cm	13.0	586135000		
Doka floor prop Eco 20 350 Length: 197 - 350 cm	15.3	586136000		
Doka floor prop Eco 20 400 Length: 227 - 400 cm Doka-Deckenstütze Eco 20	19.1	586137000		
 Galvanised				
Removable folding tripod top Stützbein top	12.0	586155500		
 Galvanised Height: 80 cm Delivery condition: folded closed				
Removable folding tripod Stützbein	15.6	586155000		
 Galvanised Height: 80 cm Delivery condition: folded closed				
Doka stacking pallet 1.55x0.85m Doka-Stapelpalette 1,55x0,85m	41.0	586151000		
 Galvanised Height: 77 cm				
Bolt-on castor set B Anklemm-Radsatz B	33.6	586168000		
 Painted blue				

Near to you, worldwide

Doka is one of the world leaders in developing, manufacturing and distributing formwork technology for use in all fields of the construction sector.

With more than 160 sales and logistics facilities in over 70 countries, the Doka Group has a highly efficient distribution network which ensures that equipment and

technical support are provided swiftly and professionally.

An enterprise forming part of the Umdasch Group, the Doka Group employs a worldwide workforce of more than 6000.

