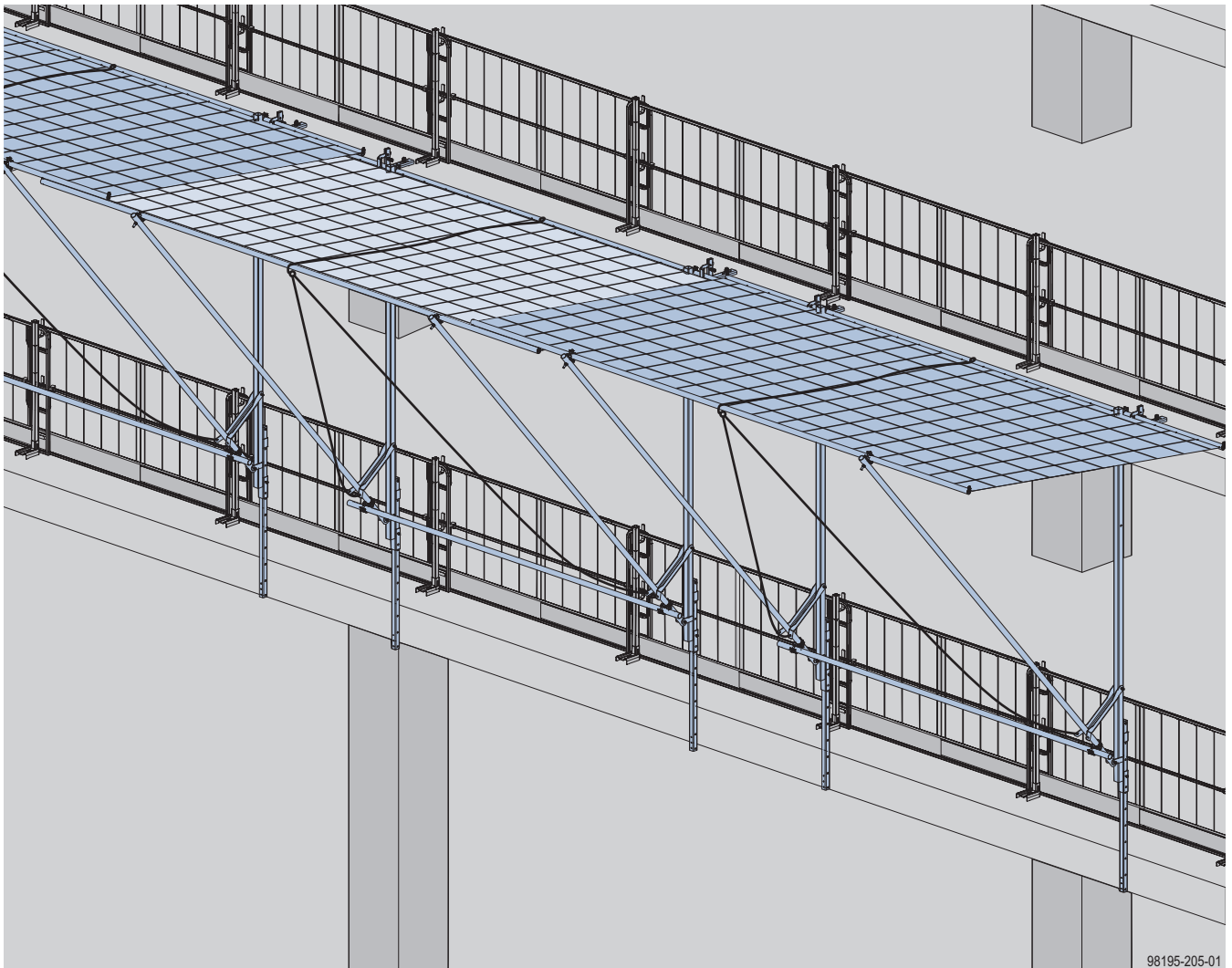


Xsafe catch fan

User Information

Instructions for assembly and use



98195-205-01

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Introduction

Basic safety warnings

User target groups

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

Hazard assessment

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

Remarks on this booklet

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

Planning

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

Regulations; occupational health & safety

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

Rules applying during all phases of the assignment:

- The customer shall ensure that this product is erected and dismantled, repositioned and generally used for its intended purpose in accordance with the applicable laws, standards and rules, under the direction and supervision of suitably skilled persons. These persons' mental and physical capacity shall not in any way be impaired by alcohol, medicines or drugs.
- Doka products are technical working appliances which are intended for industrial / commercial use only, always in accordance with the respective Doka User Information booklets or other technical documentation authored by Doka.
- The stability and load-bearing capacity of all components and units must be ensured during all phases of the construction work!
- Do not step on or apply strain to cantilevers, closures, etc. until suitable measures to ensure their stability have been correctly implemented (e.g. by tie-backs).
- The functional / technical instructions, safety warnings and loading data shall all be strictly observed and complied with. Non-compliance can cause accidents and severe injury (risk of fatality) and serious damage to property.
- Sources of fire in the vicinity of the formwork are prohibited. Heaters are permissible only when used correctly and situated a correspondingly safe distance from the formwork.
- Customer must give due consideration to any and all effects of the weather on the equipment and regards both its use and storage (e.g. slippery surfaces, risk of slipping, effects of the wind, etc.) and implement appropriate precautionary measures to secure the equipment and surrounding areas and to protect workers.
- All connections must be checked at regular intervals to ensure that they are secure and in full working order.
In particular threaded connections and wedged connections have to be checked and retightened as necessary in accordance with activity on the jobsite and especially after out-of-the-ordinary occurrences (e.g. after a storm).
- It is strictly prohibited to weld or heat Doka products, particularly parts for anchoring, suspension or connecting, and also cast parts, etc.
Welding radically changes the micro-structure of the materials of which these components are made. This leads to a drastic reduction in failure load, constituting a serious safety risk.
It is permissible to cut individual tie rods to length with metal cutting discs (introduction of heat at the end of the rod only), but it is important to ensure that flying sparks do not heat and thus damage other tie rods.
Welding work can be done only on the articles expressly mentioned in the Doka documents as being suitable for work of this nature.

Assembly

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

Erecting the formwork

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

Pouring

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

Stripping the formwork

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

Transporting, stacking and storing

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

Maintenance

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

Miscellaneous

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

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

Symbols

The following symbols are used in this document:



DANGER

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



WARNING

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



CAUTION

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



NOTE

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



Instruction

Indicates that actions have to be performed by the user.



Visual inspection

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



Tip

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



Reference

Cross-references other documents.

Services

Support in every phase of the project

- Project success assured by products and services from a single source.
- Competent support from planning through to assembly right on site.

Project assistance from start to finish

Every project is unique and calls for individualized solutions. When it comes to the forming operations, the Doka team can help you with its consulting, planning and ancillary services in the field, enabling you to carry out your project effectively, safely and reliably. Doka assists you with individual consulting services and customized training courses.

Efficient planning for a safe project sequence

Efficient formwork solutions can be developed economically only if there is an understanding of project requirements and construction processes. This understanding is the basis of Doka engineering services.

Optimize construction workflows with Doka

Doka offers special tools that help you design transparent processes. This is the way to speed up pouring processes, optimize inventories and create more efficient formwork planning processes.

Custom formwork and on-site assembly

Doka complements its system formwork with customized formwork units. Specially trained personnel assemble load-bearing towers and formwork on site.

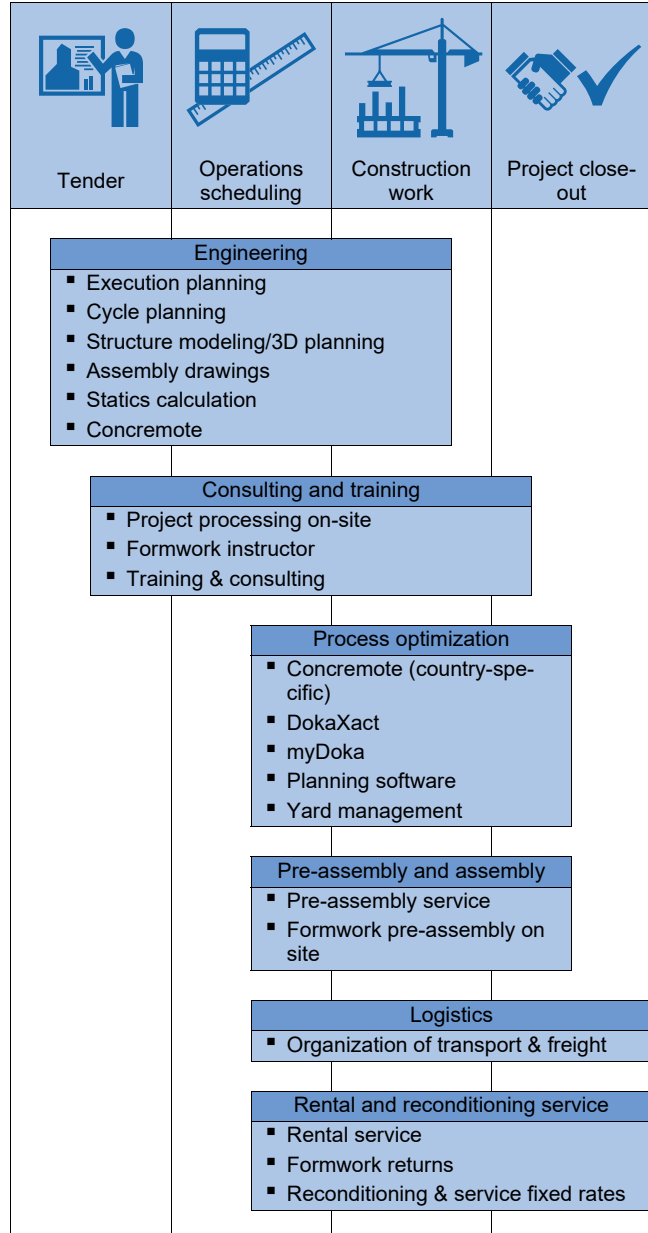
Just-in-time availability

Formwork availability is vital for on-time, on-budget realization of your project. The worldwide logistics network puts the necessary formwork quantities on site at the agreed time.

Rental and reconditioning service

The formwork material needed for any particular project can be rented from Doka's high-performing rental park. Doka Reconditioning cleans and overhauls client-owned equipment and Doka rental equipment.

High performance, in all stages of the project



Digital Services

for higher productivity in construction

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

System description

The Xsafe catch fan is Doka's innovative safety solution, offering complete protection against falling objects on construction sites.

With its triple-layer net the Xsafe catch fan can catch large objects and also debris and small pieces of rubble.

The system is to be used as a debris net as defined in ANSI 10.37 and not as a personnel net as defined in ANSI 10.11.



NOTICE

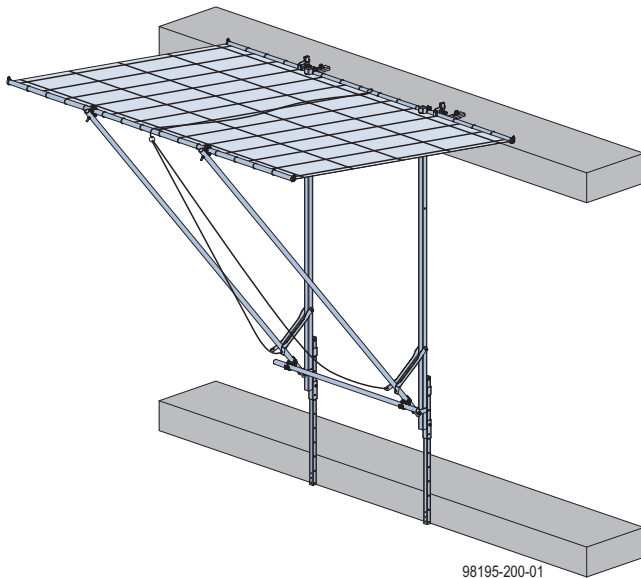
The Xsafe catch fan is not a substitute for edge protection!



WARNING

Not a personnel net!

► This net does not comply with the requirements of ANSI A10.11.



Rated capacity

The system is tested for a rated capacity of 2000 ft. lbs. with a safety factor of 2.5:1.

Easy-Lock system

- Reduced crane time thanks to pre-installation of the floor shoes
- Faster installation of the catch fan thanks to the Easy-Lock system and the point-by-point attachment of the net to the horizontal tube

Quick-folding mechanism

- Time is saved by the innovative 2-in-1 folding mechanism that automatically unlocks the wind bracings from above
- In adverse weather conditions, the Xsafe catch fan can be quickly and safely folded closed and secured

Triple-layer net

- The 2 1/4"x2 1/4" (60x60 mm) mesh net is the primary net for catching heavy objects
- The 3/4"x3/4" (20x20 mm) mesh net is the second layer and it protects against medium-sized objects such as gravel or stones
- The fine-mesh layer protects against small objects such as bolts and nuts

Universal vertical support

- The height-independent vertical extensions permit use up to a storey height of 13'-9" (4.20 m) without adaptations
- The support bracket can be adjusted in steps to suit slab thicknesses up to 1' 3-3/4" (40 cm)

Corner unit

- The folding version of the corner unit enables easy operation and repositioning.
- The Easy-Lock system enables easy attachment to the structure.

Xsafe catch fan units

The system is available in two sizes, 13'-1" (4.00m) and 19'-8" (6.00m), and two versions, standard and extra-wide, and as a corner unit:

- Xsafe catch fan 19'-8"x10'-2" (6.00x3.10m)
- Xsafe catch fan 13'-1"x10'-2" (4.00x3.10m)
- Xsafe catch fan 19'-8"x15'-9" (6.00x4.80m) extra-wide
- Xsafe catch fan 13'-1"x15'-9" (4.00x4.80m) extra-wide
- Corner catch net 15'-5"x15'-5" (4.70x4.70m)



NOTICE

- Extra-wide units can be used for additional protection at places where objects could fall beyond the standard unit. The extended catch area is not compliant as an ANSI 10.37 safety net.
- The Xsafe corner catch fan 4.70x4.70m has to be attached to the adjacent Xsafe catch fan units on both sides.

Reliable tests and handling

All steel components are hot-dip galvanised for increased durability.

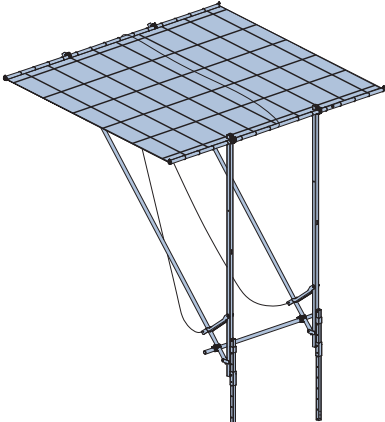
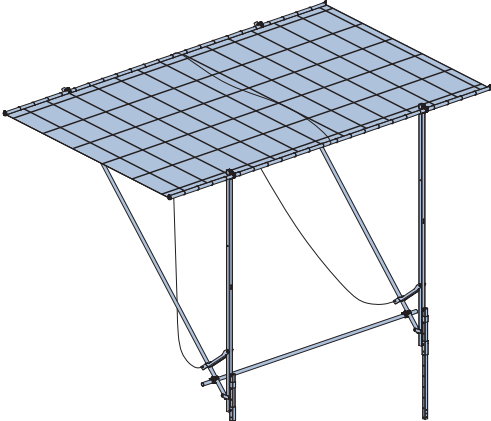
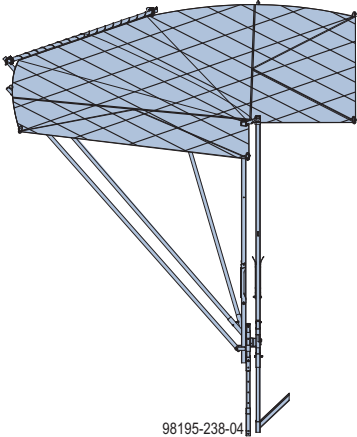


NOTICE

For more information and testing in the field, please contact Doka USA's Statics Department.

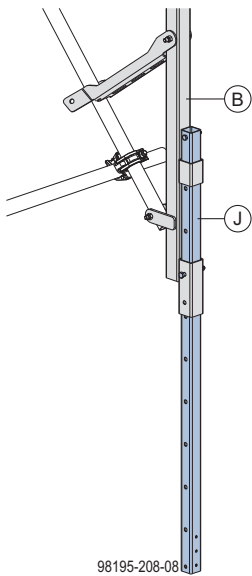
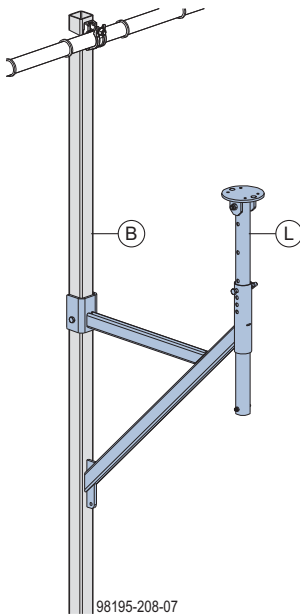
Types of Xsafe catch fans

Types of Catch nets XCF

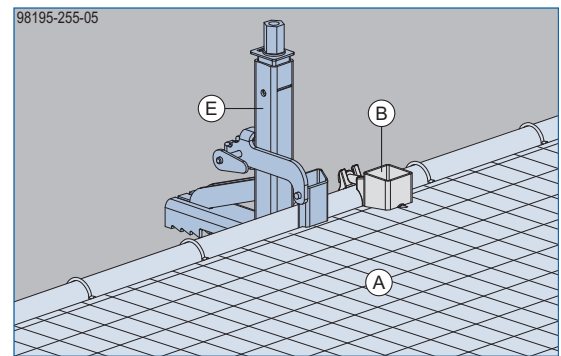
Xsafe catch fan 13'-1"x10'-2" (4.00x3.10m)  98195-200-04	Xsafe catch fan 19'-8"x10'-2" (6.00x3.10m)  98195-202-01
Xsafe catch fan 13'-1"x15'-9" (4.00x4.80m) extra-wide  98195-203-01	Xsafe catch fan 19'-8"x15'-9" (6.00x4.80m) extra-wide  98195-204-01
Corner catch net 15'-5"x15'-5" (4.70x4.70m)  98195-238-04	

Options of floor supports

There are two options available to connect Xsafe catch fans to the structure:

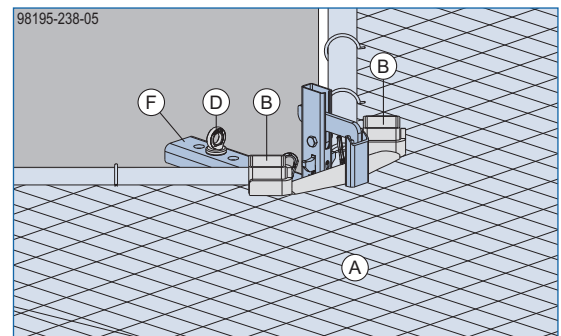
Vertical profile extension 1.55m XCF	Support bracket XCF
	
For storey heights ≤ 13'-9" (4.20 m)	For storey heights > 13'-9" (4.20 m) or stepped floor
B Vertical profile 3.50m XCF J Vertical profile extension 1.55 XCF L Support bracket XCF	

Slab grab XCF 2G



- A** Catch net XCF
- B** Vertical profile 3.50m XCF
- E** Slab grab XCF 2G

Corner floor shoe XCF

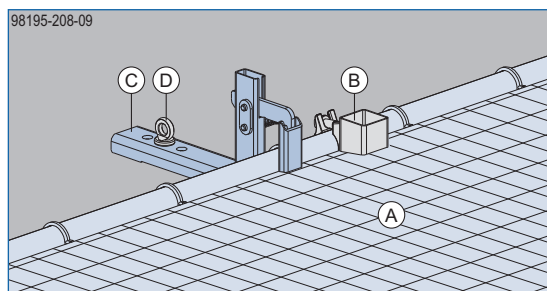


- A** Catch net XCF
- B** Vertical profile 3.50m XCF
- D** Doka express anchor 16x125mm
- F** Corner floor shoe XCF

Types of attachment to floor slab

There are two options for attaching Xsafe catch fans to the floor slab:

Floor shoe XCF



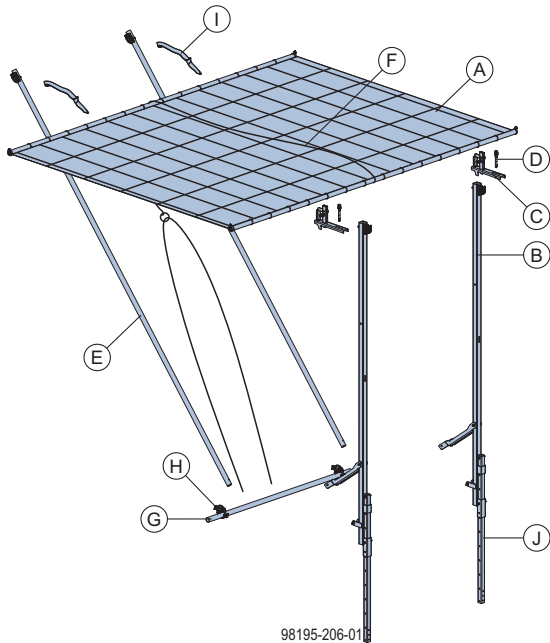
- A** Catch net XCF
- B** Vertical profile 3.50m XCF
- C** Floor shoe XCF
- D** Doka express anchor 16x125mm

Weights of the catch fan types

Xsafe catch fans	Floor supports	
	Vertical profile extension 1.55m XCF	Support bracket XCF
Weight in lbs (kg)		
Xsafe catch fan 13'-1"x10'-2" (4.00x3.10m)	305.78 (138.7)	329.59 (149.5)
Xsafe catch fan 19'-8"x10'-2" (6.00x3.10m)	359.13 (162.9)	382.95 (173.7)
Xsafe catch fan 13'-1"x15'-9" (4.00x4.80m) extra-wide	363.99 (165.1)	397.80 (175.9)
Xsafe catch fan 19'-8"x15'-9" (6.00x4.80m) extra-wide	437.18 (198.3)	460.99 (209.1)
Corner catch net 15'-5"x15'-5" (4.70x4.70m)	400.14 (181.5)	-

System overview

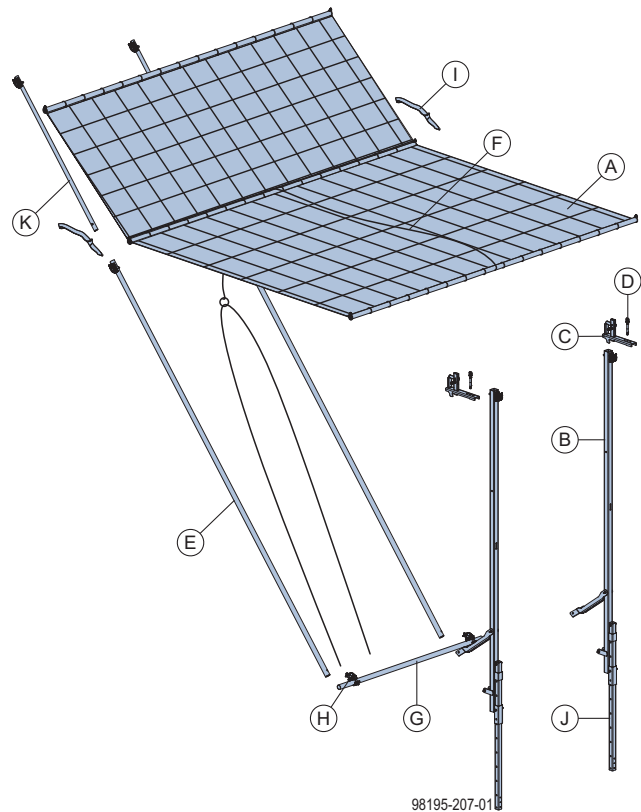
Catch fan 13'-1"x10'-2" (4.00x3.10m) or
19'-8"x10'-2" (6.00x3.10m)



Bill of materials for one catch fan

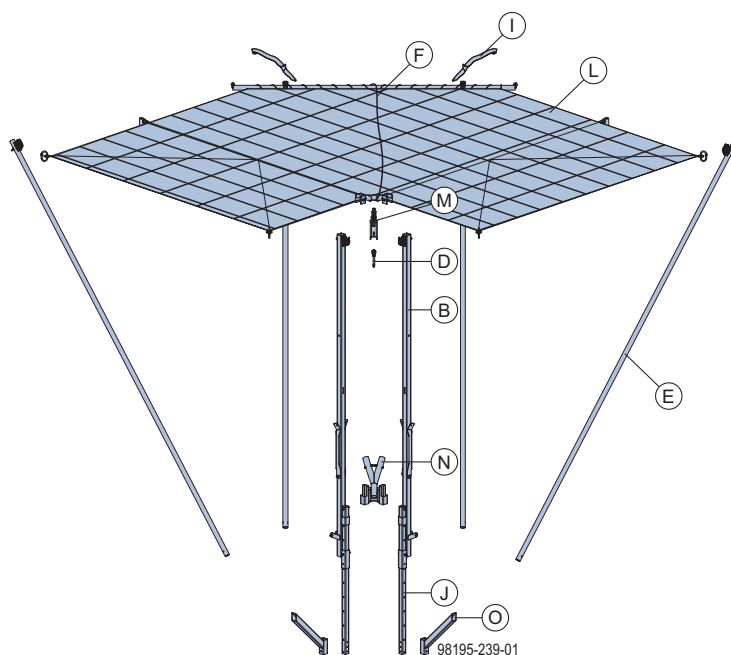
Pos.	Article name	Units
A	Catch net 4.00x3.10m or 6.00x3.10m XCF	1
B	Vertical profile 3.50m XCF	2
C	Floor shoe XCF or Slab grab XCF 2G	2
D	Doka express anchor 16x125mm	2
E	Diagonal tube 4.70m XCF	2
F	Folding rope XCF	1
G	Scaffold tube 1 1/2"x6'-0" (48.3mm 1.83m) or 1 1/2"x13'-0" (48.3mm 3.96m)	1
H	Normal coupler 48mm	2
I	Lifting sling 0.5t 1.00m	2
J	Vertical profile extension 1.55m XCF or Support bracket XCF (not shown)	2

Catch fan 13'-1"x15'-9" (4.00x4.80m) or
19'-8"x15'-9" (6.00x4.80m) extra wide



Bill of materials for one catch fan, extra-wide version

Pos.	Article name	Units
A	Catch net 4.00x4.80m or 6.00x4.80m XCF	1
B	Vertical profile 3.50m XCF	2
C	Floor shoe XCF or Slab grab XCF 2G	2
D	Doka express anchor 16x125mm	2
E	Diagonal tube 4.70m XCF	2
F	Folding rope XCF	1
G	Scaffold tube 1 1/2"x6'-0" (48.3mm 1.83m) or 1 1/2"x13'-0" (48.3mm 3.96m)	1
H	Normal coupler 48mm	2
I	Lifting sling 0.5t 1.00m	2
J	Vertical profile extension 1.55m XCF or Support bracket XCF (not shown)	2
K	Diagonal tube extension 1.74m XCF	2

Corner catch fan 15'-5" x 15'-5" (4.70x4.70m)**Bill of materials for one corner catch fan**

Pos.	Article name	Units
B	Vertical profile 3.50m XCF	2
D	Doka express anchor 16x125mm	1
E	Diagonal tube 4.70m XCF	4
F	Folding rope XCF	1
I	Lifting sling 0.5t 1.00m	2
J	Vertical profile extension 1.55m XCF	2
L	Corner catch net 4.70x4.70m XCF	1
M	Corner floor shoe XCF	1
N	Corner connector XCF	1
O	Corner positioning profile XCF	2

Note:

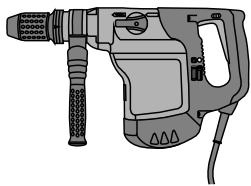
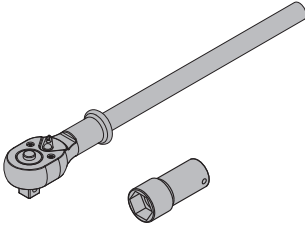
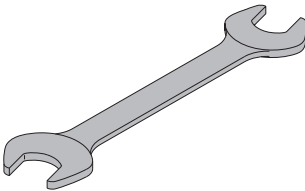
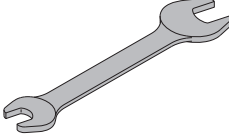
Material needed in addition for each of the two adjacent Xsafe catch fans:

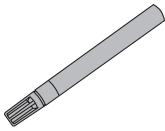
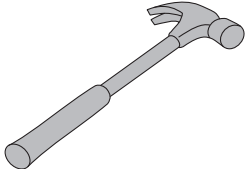
- 1 x Scaffold tube 1 1/2"x13'-0" (48.3mm 4.00m)
- 2 x Swivel coupler 48mm

Assembly instructions

- Everyone involved in the work must wear the personal fall-arrest system (PFAS) equipment necessary for the work activity and for the work environment and be trained and competent for the task.
- Before the work of assembling the catch fans on the jobsite commences, make sure that a level, clean area measuring 23'x32'-10" (7x10 m) is available for the activity, so that there is enough space for stacking the assembled catch fans.
- It is NOT permissible for the work of assembly to be undertaken below construction work in progress, where there is a risk of falling debris.
- The assembly team must ensure that a construction crane can access the assembly area.

List of tools needed for assembly

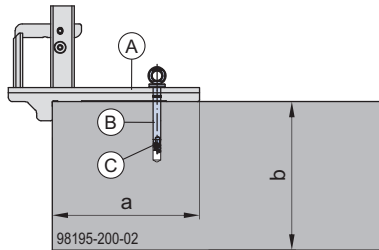
Hammer drill	
Drill bit 5/8" (16 mm) for express anchors	
Drill bit 1" (25 mm) for Floor clamp XCF	
Reversible ratchet with Box nut 7/8" (22 mm)	
Box nut 3/4" (19 mm)	
Box nut 1 1/8" (30 mm)	
Wrench 7/8" (22 mm)	
Wrench 3/4" (19 mm)	

Impact wrench	
Tape measure	
Marker	
Hammer	
Chalk line	

Anchoring on the structure

Floor shoe XCF

The standard method of anchoring the Floor shoe XCF to the structure is with the Doka express anchor 16x125mm.



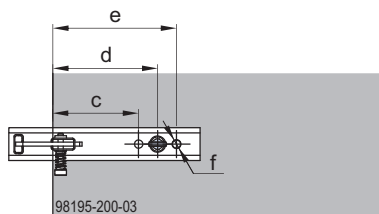
a ... 1' (31 cm)

b ... slab thickness min. 3 3/4" (9.5 cm)

A Floor shoe XCF

B Doka express anchor 16x125mm

C Doka coil 16mm



Distance from edge:

c ... 7" (18 cm)

d ... 9" (22 cm)

e ... 10" (26 cm)

f ... 7" (17.5 cm)



All 3 of the holes in the floor shoe can be used for anchoring the Doka express anchor 16x125mm.

Required minimum cylinder compressive strength for Doka express anchors 16x125mm:

When used with **Vertical profile extension 1.55m XCF**:

Required minimum cylinder compressive strength of the concrete ($f_{ck,cylinder,min}$): **min. 1180 psi (8 N/mm²)**

When used with **Support bracket XCF**:

Required minimum cylinder compressive strength of the concrete ($f_{ck,cylinder,min}$): **min. 3630 psi (25 N/mm²)**



Follow the 'Doka express anchor 16x125mm' User Information booklet or the fitting instructions for the alternative anchor-bolt!

Note:

Follow the manufacturers' applicable fitting instructions.



NOTICE

Together with the structural engineer, make sure that the structure on which the Xsafe catch fans are to be installed (floor slabs) can resist the applied loads.

Animation: <https://player.vimeo.com/video/281800669>

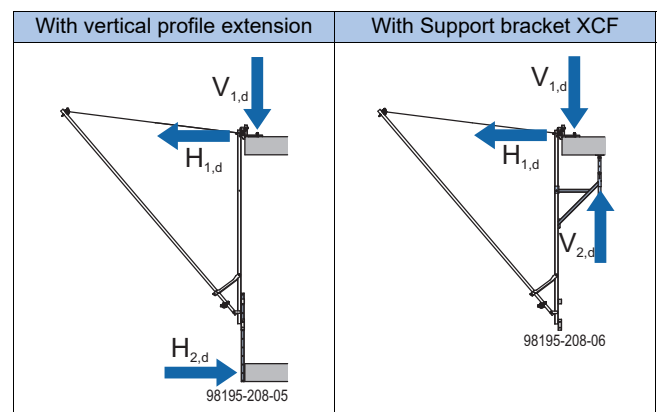
Actual forces at the support point in kip (kN)*

Forces occurring	Vertical force	Horizontal force	Compressive force		Resulting force R at the slab edge ($V_1 - V_2$)
	V_1	H_1	V_2	H_2	
With vertical profile extension	3.6 (16)	2.7 (12)	-	2.7 (12)	3.6 (16)
With Support bracket XCF	8.54 (38)	3.15 (14)	6.74 (30)	-	1.8 (8)

*)... The actual forces were measured in a test with a ball weighing 220 lbs (100 kg) dropped from a height of 23' (7 m).

These forces can be considered as ultimate values.

The required safety factor is allowed for in the rating of the net.



Required safe working load limit for third-party anchor-bolts:

When used with **Vertical profile extension 1.55m XCF**:

Tensile force: $N_{perm} = 1.6 \text{ kip (7.3 kN)}$

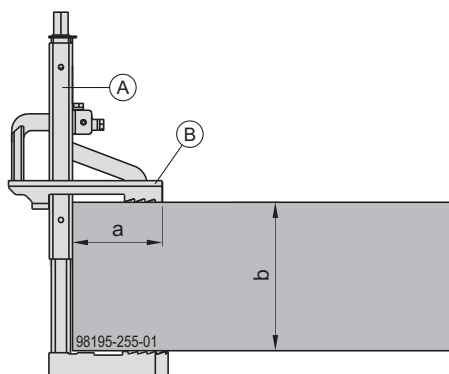
Shear force: $V_{perm} = 1.8 \text{ kip (8 kN)}$

When used with **Support bracket XCF**:

Tensile force: $N_{perm} = 3.6 \text{ kip (16 kN)}$

Shear force: $V_{perm} = 2.1 \text{ kip (9.3 kN)}$

Slab grab XCF 2G



a ... clamping depth 5" (12.5 cm)
b ... slab thickness 6" - 1'-4" (15 - 40 cm)

A Slab grab XCF 2G

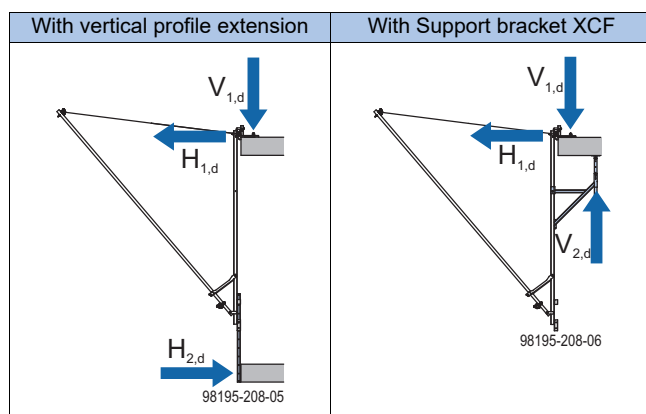
B Jaw of the Slab grab XCF 2G

Required minimum cylinder compressive strength of the concrete ($f_{ck, cylinder, min}$): **min. 3625 psi (25 N/mm²)**

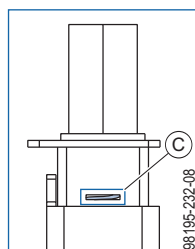
Forces acting on the structure in kip (kN)*

Forces occurring	Vertical force	Horizontal force	Compressive force		Resulting force R at the slab edge ($V_1 - V_2$)
	V₁	H₁	V₂	H₂	
With vertical profile extension	3.6 (16)	2.7 (12)	-	2.7 (12)	3.6 (16)
With Support bracket XCF	8.54 (38)	3.15 (14)	6.74 (30)	-	1.8 (8)

*)... These forces can be assumed as 'exceptional loads' because they were measured in EN 1263-1 tests (ball weighing 220 lbs (100 kg) dropped from a height of 23' (7 m))

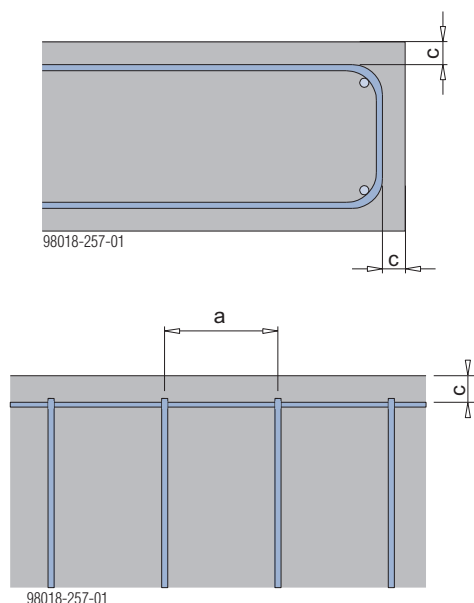


Check that the pressure spring is still intact (see mark). When the spring is in the 'not pulled tight' state, reference slot **(C)** must be visible.



NOTICE

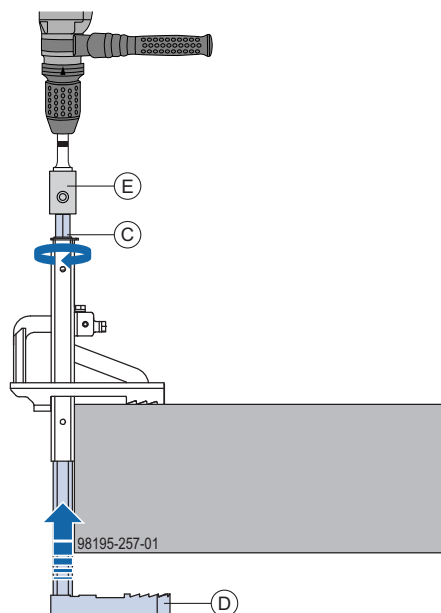
Tables apply only for slab edge reinforcement with a min. diameter of 6 mm and a spacing 'a' of 150 mm.



a ... 150 mm
c ... concrete cover = 30 mm

Assembly

- Tighten the hexagon with a Box nut 1 1/8" (30) and an impact screw driver, for example.



C Hexagon (width across flats 1 1/8" (30 mm)) of the Slab grab XCF 2G

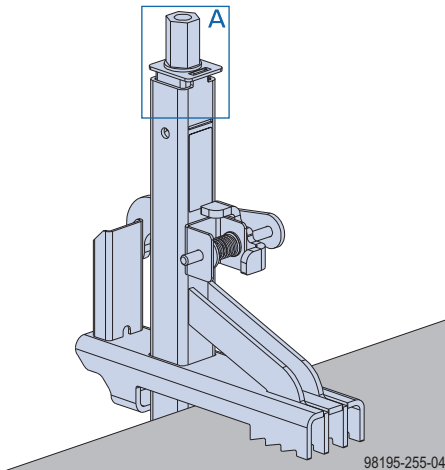
D Bottom clamping unit of the Slab grab XCF 2G

E Box nut 1 1/8" (30)

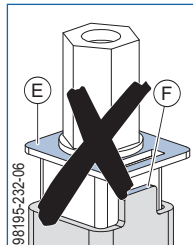
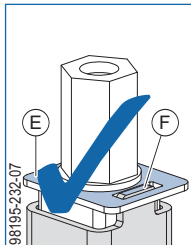
Required tightening torque: **37 lb-ft (50 Nm)**



Check that the hexagon is tightened such that the plate with slot **(E)** is flush with the tab **(F)**.



Close-up A

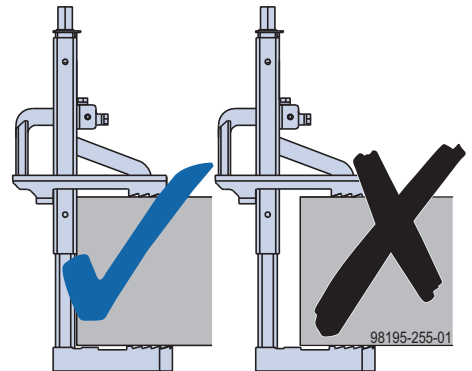


WARNING

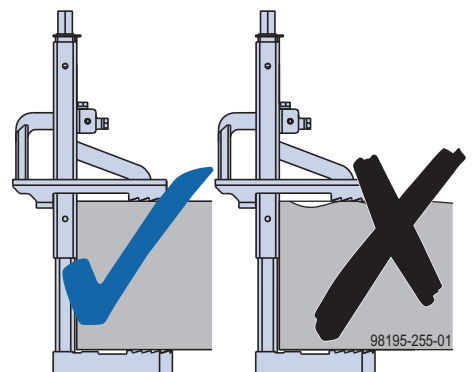
➤ Only clamp the Slab grab XCF 2G to components that can reliably transfer the forces involved!



- Check that the supporting face of each Slab grab XCF 2G is flat against the end face of the slab (maximum gap $\leq 3/8"$ (10 mm)).

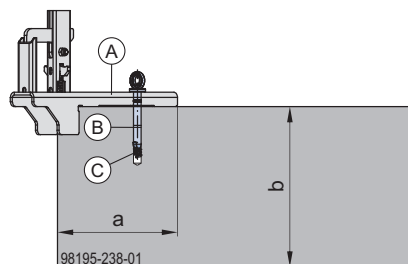


- Check that the supporting face of the U-section is flat against the top of the slab.



Corner floor shoe XCF

The standard method of anchoring the Corner floor shoe XCF to the structure is with the Doka express anchor 16x125mm.



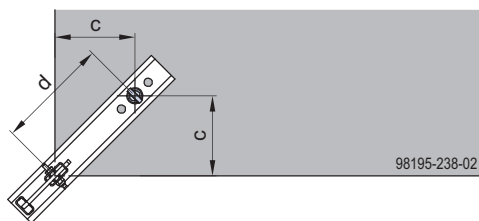
a ... 10" (25.4 cm)

b ... slab thickness min. 3 3/4" (9.5 cm)

A Corner floor shoe XCF

B Doka express anchor 16x125mm

C Doka coil 16mm



c ... 6 1/2" (16.9 cm)

d ... 9" (23.9 cm)

Required minimum cylinder compressive strength for Doka express anchors 16x125mm:

When used with **Vertical profile extension**

1.55m XCF: Required minimum cylinder compressive strength of the concrete ($f_{ck, cylinder, min}$): **min. 1180 psi (8 N/mm²)**



Follow the 'Doka express anchor 16x125mm' User Information booklet or the fitting instructions for the alternative anchor-bolt!

Required safe working load limit for third-party anchor-bolts:

When used with **Vertical profile extension 1.55m XCF:**

Tensile force: $N_{perm} = 3.6 \text{ kip (16 kN)}$

Shear force: $V_{perm} = 2.1 \text{ kip (9,3 kN)}$

Note:

Follow the manufacturers' applicable fitting instructions.



NOTICE

Together with the structural engineer, make sure that the structure on which the Xsafe catch fans are to be installed (floor slabs) can resist the applied loads.

Animation: <https://player.vimeo.com/video/281800669>

Actual forces at the support point in kip (kN)*

Forces occurring	Vertical force	Horizontal force	Compressive force		Resulting force R at the slab edge ($V_1 - V_2$)
	V_1	H_1	V_2	H_2	
With vertical profile extension	3.6 (16)	2.7 (12)	-	2.7 (12)	3.6 (16)

*)... The actual forces were measured in a test with a ball weighing 220 lbs (100 kg) dropped from a height of 23' (7 m).

These forces can be considered as ultimate values.

The required safety factor is allowed for in the rating of the net.

Structural design

Wind pressure

- 1) Determine the wind pressure as a function of the wind speed, the building environment and the structure height.
- 2) Use the corresponding catch nets from the tables below.

F_w/A_f	V_{Peak} velocity at deployment height	Standard 4.00m		Standard 6.00m	
		Vertical profile extension	Support bracket	Vertical profile extension	Support bracket
≤ 4.2 psf 0.2 kN/m ²	≤ 40 mph (64 km/h)	✓	✓	✓	✓
≤ 20.9 psf 1.0 kN/m ²	≤ 90 mph (144 km/h)	✓	✓	✓	✓
> 20.9 psf 1.0 kN/m ²	> 90 mph (144 km/h)	*)	*)	*)	*)

F_w/A_f	V_{Peak} velocity at deployment height	Extra wide 4.00m		Extra wide 6.00m	
		Vertical profile extension	Support bracket	Vertical profile extension	Support bracket
≤ 4.2 psf 0.2 kN/m ²	≤ 40 mph (64 km/h)	✓	✓	✓	✓
≤ 5.0 psf 0.25 kN/m ²	≤ 45 mph (72 km/h)	✓	✓	*)	*)
> 5.0 psf 0.25 kN/m ²	> 45 mph (72 km/h)	*)	*)	*)	*)

*) Following additional measures are necessary:

- Top bracing:
 - Loop lashing strap round outer horizontal tube (middle horizontal tube of extra-wide catch net), secure with express anchor
 - Brace diagonal profile with lashing strap
- Bottom bracing:
 - Loop lashing strap round vertical profile, secure with express anchor

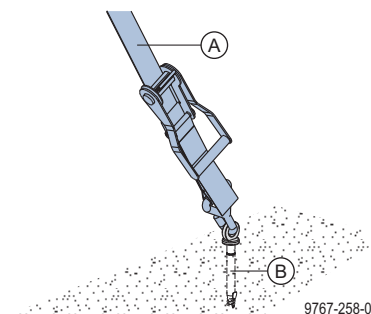
Measures

with Lashing strap 5.00m and Doka express anchor 16x125mm



WARNING

- Compliance with the specifications for tie-back angle and attachment point is essential in order for the wind loads to be transferred.
- Make an anchorage point in the floor with a Doka express anchor.
- Engage the lashing strap (always at the bottom first, to the catch fan) and tension the strap.



A Lashing strap 5.00m

B Doka express anchor 16x125mm

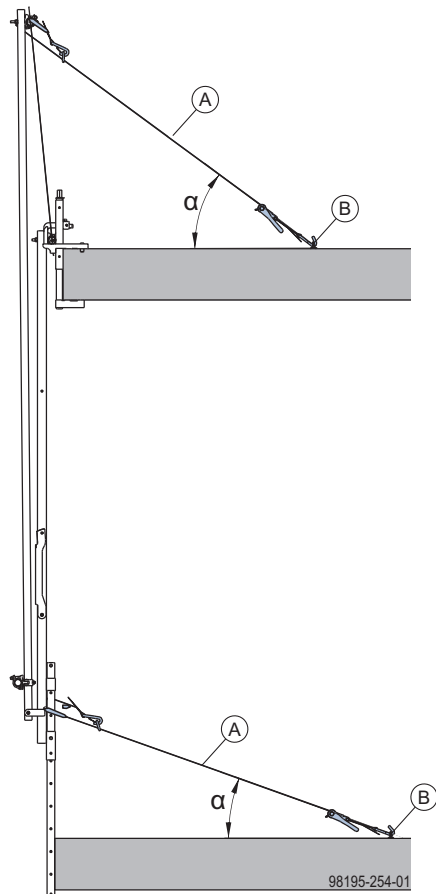
The **Doka express anchor** can be re-used many times over.



Follow the directions in the 'Doka express anchor 16x125mm' and 'Lashing strap 5.00m' User Information booklet.

Always perform a static check if third-party anchors are used to fabricate anchorages in the floor slab. Follow the manufacturers' applicable fitting instructions.

Practical example



α ... Bracing angle max .60°

A Lashing strap 5.00m

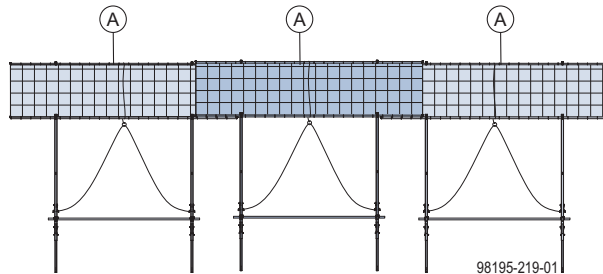
B Doka express anchor 16x125mm

Instructions for assembly and use

Easy execution planning

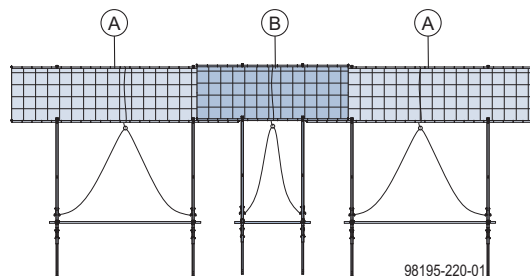
The catch fans 19'-8" (6 m) in breadth are used for the regular zone, the catch fans 13'-1" (4 m) in breadth are used primarily for closure zones.

Typical zone



A Xsafe catch fan 19'-8" (6.00m)

Closure zone

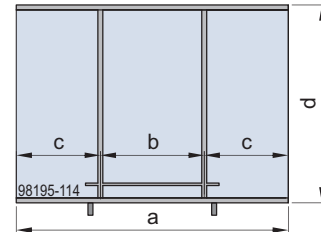


A Xsafe catch fan 19'-8" (6.00m)

B Xsafe catch fan 13'-1" (4.00m)

Structure of the Xsafe catch fans

Xsafe catch fan 13'-1" (4.0m)



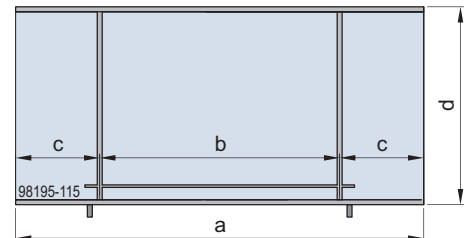
a ... 13'-1" (400 cm)

b ... 5'-3" (160 cm)

c ... 3'-11" (120 cm)

d ... Width of standard catch fan: 10'-2" (310 cm), extra-wide: 15'-9" (480 cm)

Xsafe catch fan 19'-8" (6.0m)



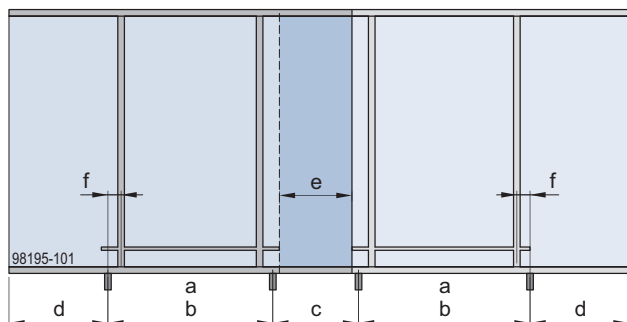
a ... 19'-8" (600 cm)

b ... 11'-10" (360 cm)

c ... 3'-11" (120 cm)

d ... Width of standard catch fan: 10'-2" (310 cm), extra-wide: 15'-9" (480 cm)

Arrangement of the Xsafe catch fans



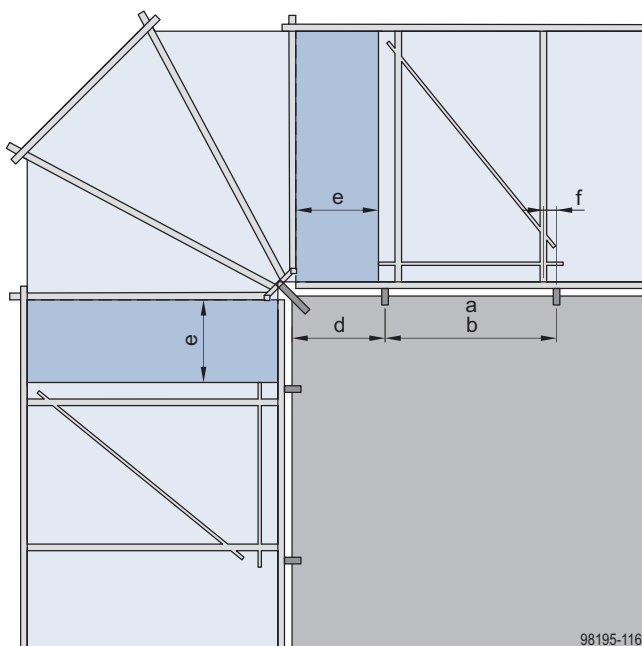
- a ... 6'-3" (190 cm) if the net is 13'-1" (4 m) broad
 b ... 12'-10" (390 cm) if the net is 19'-8" (6 m) broad
 c ... max. 3'-9" (115 cm)
 d ... 3'-5" (105 cm)
 e ... min. 2'-7" (80 cm) overlap of the nets
 f ... 6" (15 cm) space between floor shoes and vertical profiles

Note:

The positioning of the Floor shoes XCF has to be taken into consideration in the planning and arrangement of the catch fans.

The size of the overlap between catch fans is decisive as regards the effective length of a unit in planning.

Arrangement at the corner



- a ... 6'-3" (190 cm) if the net is 13'-1" (4 m) broad
 b ... 12'-10" (390 cm) if the net is 19'-8" (6 m) broad
 d ... 3'-5" (105 cm)
 e ... min. 2'-7" (80 cm) overlap of the nets
 f ... 6" (15 cm) space between floor shoes and vertical profiles

Overlap

Adjacent catch fans always have to overlap, in order to ensure that the gaps between the individual fans are fully closed.

An overlap of at least 2'-7" (80 cm) between adjacent catch fans is required for achievement of rated capacity.

Sequence for hooking the catch fans into position

Position 1 Position 2 Position 3 Position 4 Position 5



Note:

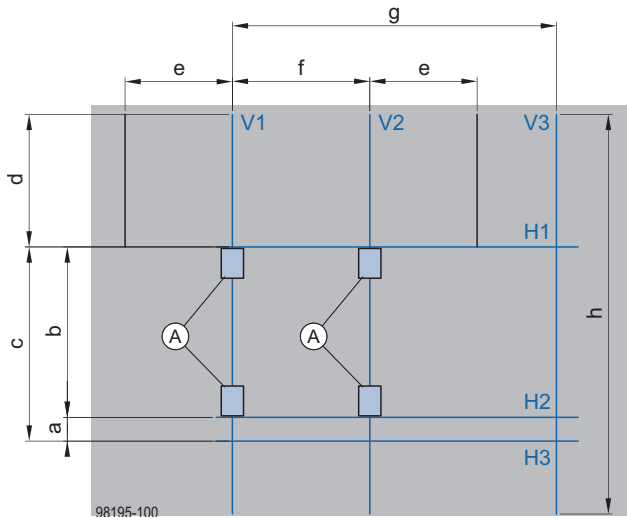
When hooking the catch fans into position, make sure that they overlap correctly!

In accordance with the sketch, install the overlapped units (at positions 1, 3 and 5) before installing the overlapping units (at positions 2 and 4). This method of overlapping permits straightforward opening and closing of the net units.

Assembly

Marking out lines on floor

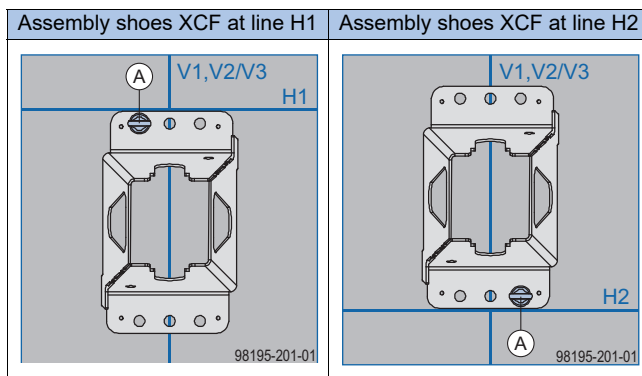
For orientation in the assembly process to ensure speedy assembly of the system, mark out the lines shown below on the floor. These lines make it easier to align and position the individual parts during assembly.



- a ... 10" (25 cm)
- b ... 7'-7" (230 cm)
- c ... 8'-4" (255 cm)
- d ... 6'-11" (210 cm)
- e ... 3'-11" (120 cm), edge of the net
- f ... 5'-3" (160 cm), for 13'-1" (4 m) broad nets
- g ... 11'-10" (360 cm), for 19'-8" (6 m) broad nets
- h ... min. 19' (580 cm)

A Assembly shoe XCF

- Secure the Assembly shoes XCF to the floor in accordance with the marking lines, using one Doka express anchor 16x125mm per assembly shoe.

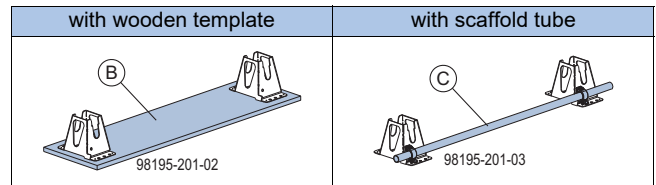


A Doka express anchor 16x125mm



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

- As alternatives to express anchors, a wooden template or a scaffold tube + screw-on couplers can be used for fixing the assembly shoes in position.



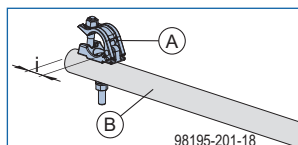
B Assembly shoes fixed to wooden template

- C Assembly shoes connected with scaffold tube and couplers
- Scaffold tube min. 6'-7" (2 m) long for catch fan breadth 13'-1" (4 m)
- Scaffold tube min. 13'-1" (4 m) long for catch fan breadth 19'-8" (6 m)

Installing diagonal tubes

- Install the Screw-on couplers 48mm 95 on the top side of the Diagonal tubes 4.70m XCF.

Close-up 1



i ... 3 1/4" (8 cm)

A Screw-on coupler 48mm 95

B Diagonal tube 4.70m XCF

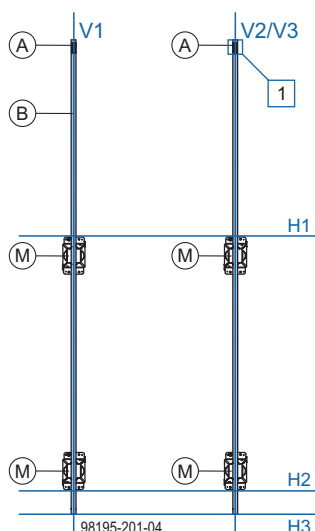
Note:

Use only DIN EN 74-2B half couplers!



When installing the screw-on coupler, use the correct hole in the diagonal tube (distance from end 3 1/4" (8 cm), diameter 6 1/2" (16,5 mm)).

- Insert the Diagonal tubes 4.70m XCF into the Assembly shoes XCF. The bottom end of each diagonal tube must be flush with line H3.



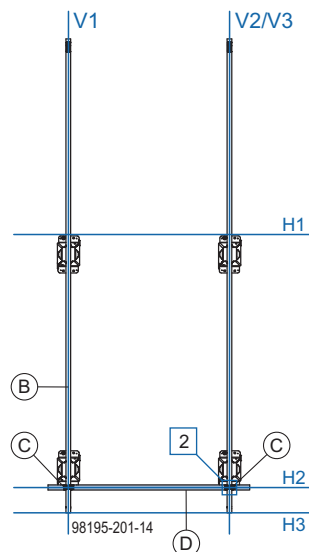
A Screw-on coupler 48mm 95

B Diagonal tube 4.70m XCF

M Assembly shoe XCF

Installing scaffold tubes

- Position Normal couplers 48mm over line H2 and connect them with a Scaffold tube 6'-7" (2 m) (for net 13'-1" (4 m) broad) or Scaffold tube 13'-1" (4 m) (for net 19'-8" (6 m) broad)).

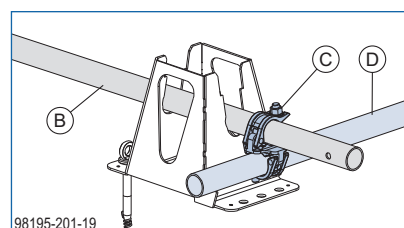


B Diagonal tube 4.70m XCF

C Normal coupler 48mm

D Scaffold tube 1 1/2"x6'-0" (48.3mm 2.00m) or 1 1/2"x13'-0" (48.3mm 4.00m)

Close-up 2



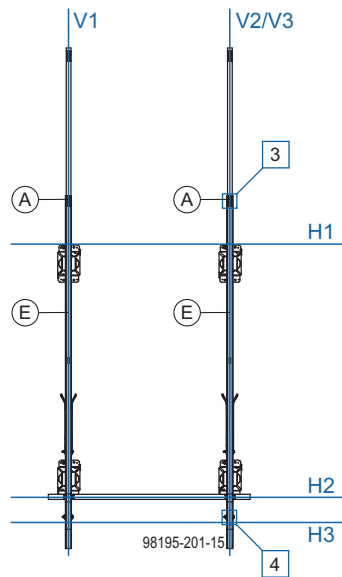
B Diagonal tube 4.70m XCF

C Normal coupler 48mm

D Scaffold tube 1 1/2"x6'-0" (48.3mm 2.00m) or 1 1/2"x13'-0" (48.3mm 4.00m)

Mounting the vertical profiles

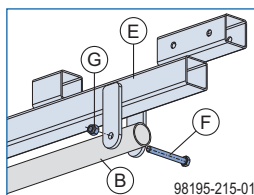
- Position the Vertical profiles 3.50m XCF over the Diagonal tubes 4.70m XCF and connect them with hexagon bolts and hexagon nuts.



A Screw-on coupler 48mm 95

E Vertical profile 3.50m XCF

Close-up 4



B Diagonal tube 4.70m XCF

E Vertical profile 3.50m XCF

F Hexagon bolt ISO 4014 M12x100

G Hexagon nut ISO 7040 M12 self-locking

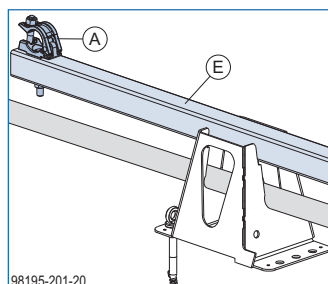
Note:

Use only DIN EN 74-2B half couplers!

- Secure the Screw-on couplers 48mm 95 to the Vertical profiles 3.50m XCF.

Tightening torque of couplers: **37 lb-ft (50 Nm)**
(to DIN EN 74-1)

Close-up 3

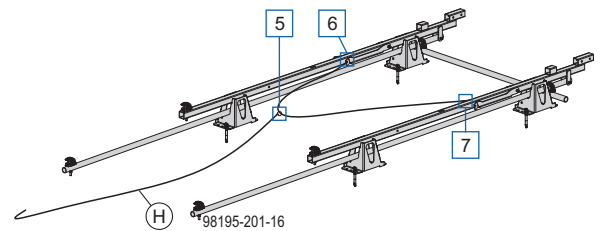


A Screw-on coupler 48mm 95

E Vertical profile 3.50m XCF

Securing ropes

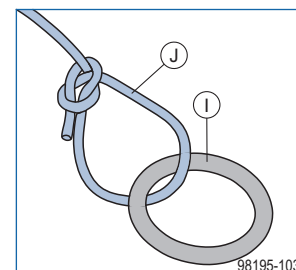
- Knot the Folding rope XCF at the 3 points shown in the illustration (2 ropes 19'-8" (6,00m) and 1 steel ring are included in the scope of supply).



H Folding rope XCF

- Knot one end of the first rope to the steel ring and lay the rope out between the Diagonal tubes 4.70m XCF.

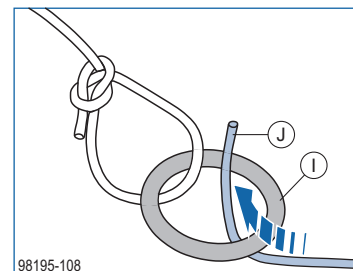
Close-up 5



I Steel ring

J Rope 19'-8" (6.00m)

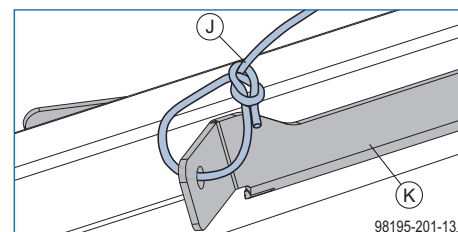
- Pass the second rope through the steel ring and knot each end to the wind bracing of a Vertical profile 3.50m XCF.



I Steel ring

J Rope 19'-8" (6.00m)

Close-ups 6 and 7



J Rope 19'-8" (6.00m)

K Wind bracing of the Vertical profile 3.50m XCF



A bowline knot is the most suitable type of knot for the purpose.

Installing catch net

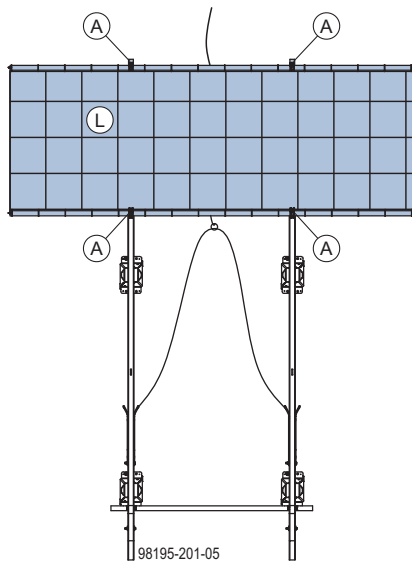
- Lay the Catch net XCF on the Diagonal tubes 4.70m XCF and Vertical profiles 3.50m XCF and secure it with the Screw-on couplers 48mm 95. The black 2 1/4"x2 1/4" (60x60 mm) mesh net must be on the underside.



When installing the net, make sure that it is not trapped between scaffold tube and screw-on couplers.

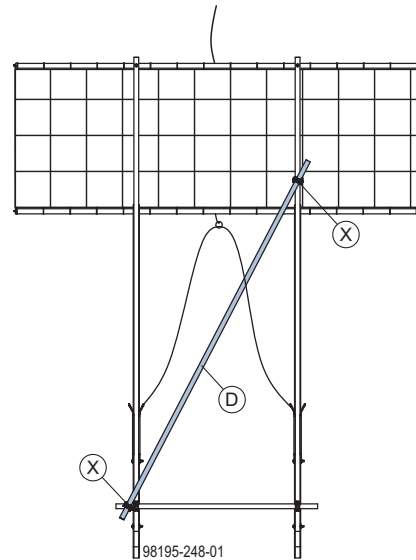
Otherwise problems can be encountered in unfolding.

Tightening torque: 37 lb-ft (50 Nm) to DIN EN 74-1



A Screw-on coupler 48mm 95

L Catch net XCF



D Scaffold tube 1 1/2"x13'-0" (48.3mm 4.00m)

X Swivel coupler 48mm

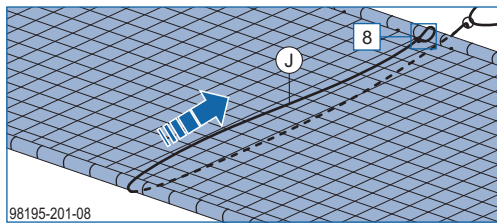


NOTICE

Each catch fan **adjacent to a corner catch fan** must be additionally braced with a **Scaffold tube 1 1/2"x13'-0" (48,3mm 4,00m)** and **2 Swivel couplers 48mm**.

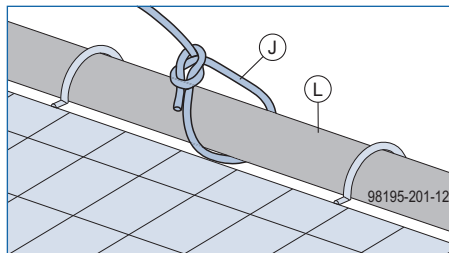
Knotting rope with catch net

- Pass the first rope over the catch net and knot the end of the rope to the horizontal tube.



J Rope 19'-8" (6.00m)

Close-up 8

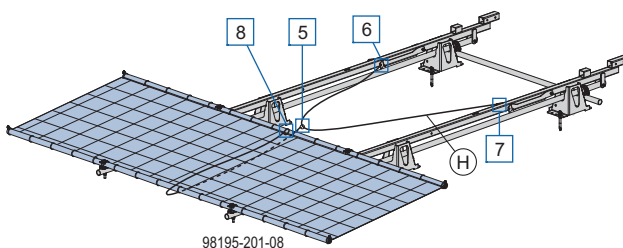


J Rope 19'-8" (6.00m)

L Catch net XCF



The Folding rope XCF is knotted at the following 4 points.



H Folding rope XCF

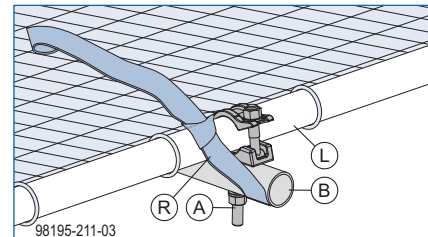
Installing lifting slings

- Loop Lifting sling 0.5t 1.00m round both tubes (Diagonal tube 4.70m XCF and outer scaffold tube of the catch net).
2 Lifting slings 0.5t 1.00m per catch fan are needed for repositioning.
The lifting slings remain attached to the catch fan.



NOTICE

Use only lifting slings to lift the catch fan (do not attempt to lift a catch fan by looping a chain round it).



A Screw-on coupler 48mm 95

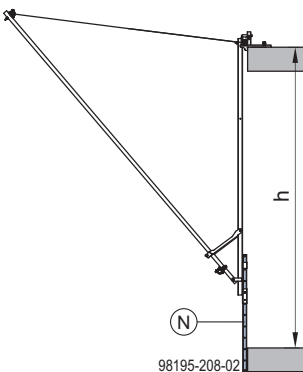
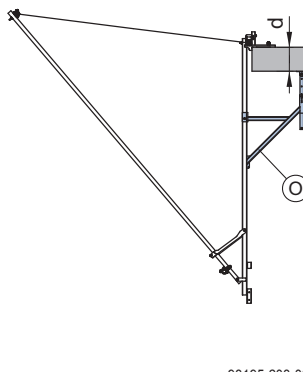
B Diagonal tube 4.70m XCF

L Catch net XCF

R Lifting sling 0.5t 1.00m

Installing vertical profile extension or support bracket

Where a Vertical profile extension 1.55m XCF cannot be used for the catch fan (e.g. storey height > 13'-9" (4,20 m) or stepped floor), a Support bracket XCF can be used instead.

Vertical profile extension 1.55m XCF	Support bracket XCF
 98195-208-02 h ... Storey height max. 13'-9" (4.20 m)	 98195-208-03 d ... Slab thickness 6" - 1'-4" (15 - 40 cm)
N Vertical profile extension 1.55m XCF O Support bracket XCF	

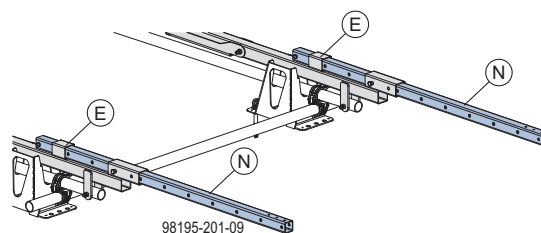


NOTICE

Use of the Support bracket XCF at downstand beams requires separate verification!

Installing vertical profile extension

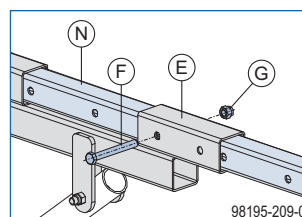
- Introduce a Vertical profile extension 1.55m XCF into the bottom end of each Vertical profile 3.50m XCF.



E Vertical profile 3.50m XCF

N Vertical profile extension 1.55m XCF

- Adjust the profile extensions to the correct length and secure with hexagon bolts and hexagon nuts.



E Vertical profile 3.50m XCF

F Hexagon bolt ISO 4014 M12x100

G Hexagon nut ISO 7040 M12 self-locking

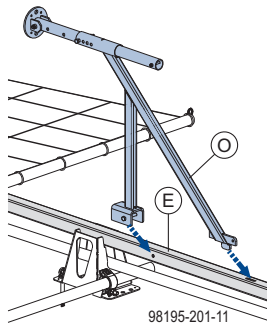
N Vertical profile extension 1.55m XCF

Note:

The Vertical profile extension 1.55m XCF must make contact over the entire height of the slab end face!

Installing support bracket

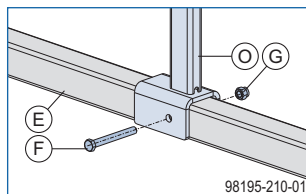
- Position the Support bracket XCF on the vertical profile such that the holes are aligned and the pin of the support bracket is seated in the channel of the vertical profile.



E Vertical profile 3.50m XCF

O Support bracket XCF

- Then secure the support bracket with hexagon bolt and hexagon nut.



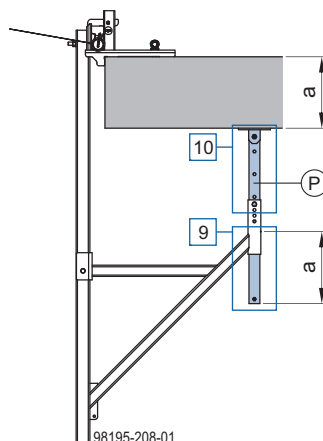
E Vertical profile 3.50m XCF

F Hexagon bolt ISO 4014 M12x100

G Hexagon nut ISO 7040 M12 self-locking

O Support bracket XCF

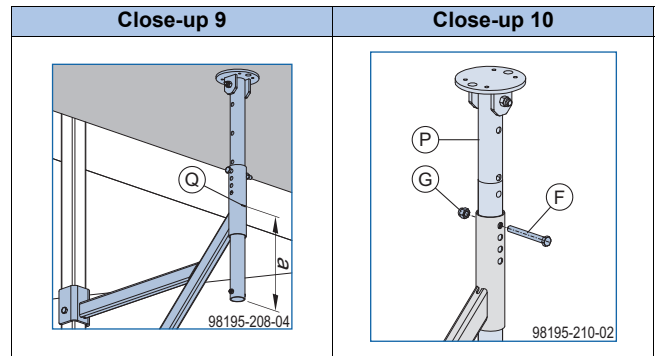
- Before lifting the unit, adjust the support bracket to the desired slab thickness and fix it in position with hexagon bolt and hexagon nut. A mark on the support bracket acts as a guide for correct adjustment.



a ... Slab thickness 6" - 1'-4" (15 - 40 cm)

P Inner tube with support head of the Support bracket XCF

- Fix the support bracket with a hexagon bolt and hexagon nut.



a ... Slab thickness 6" - 1'-4" (15 - 40 cm)

F Hexagon bolt ISO 4014 M12x100

G Hexagon nut ISO 7040 M12 self-locking

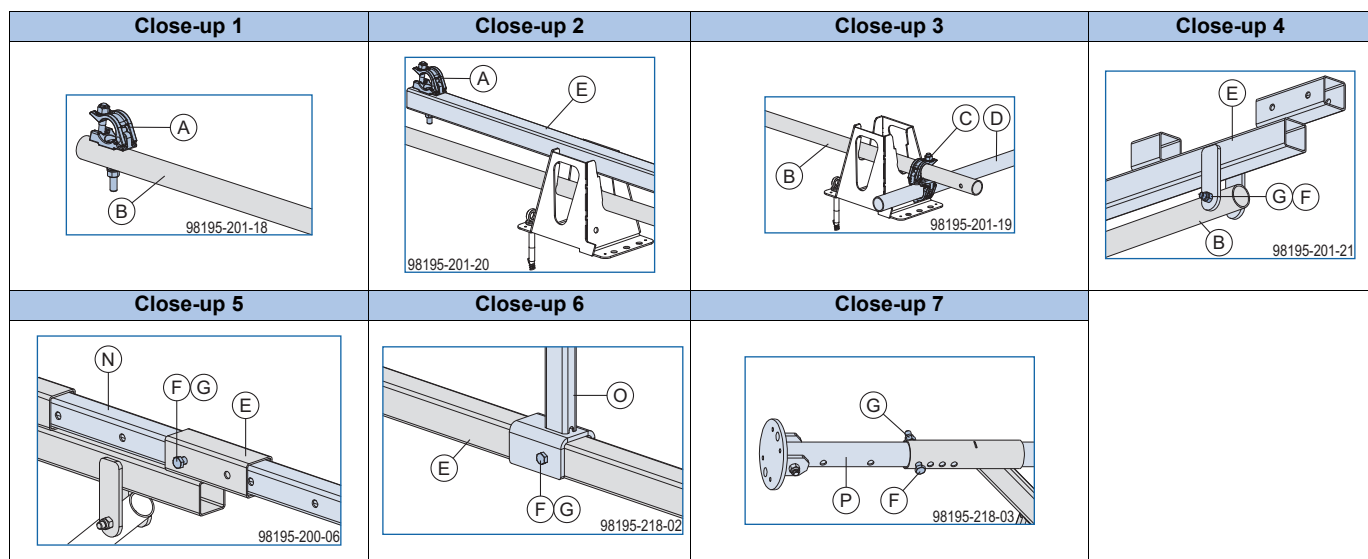
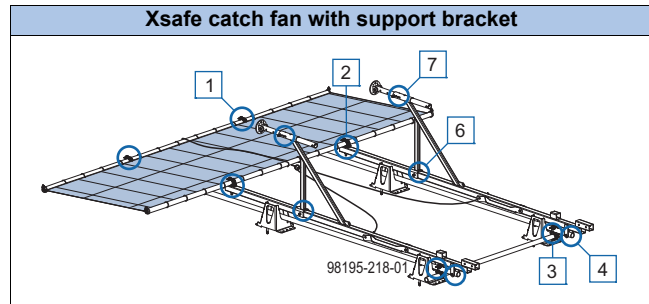
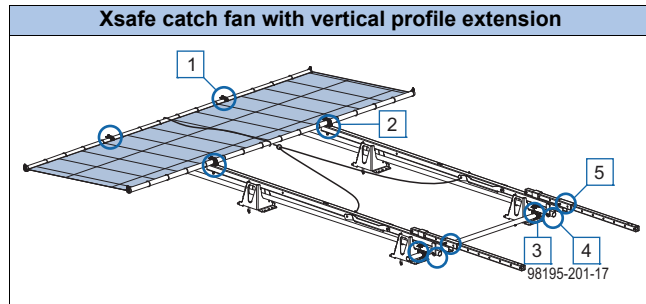
P Inner tube with support head of the Support bracket XCF

Q Mark for adjustment to slab thickness

Checking bolted joints

- Check the security of every bolted joint.
- Tighten every coupler.

Tightening torque of couplers: **37 lb-ft (50 Nm)**
(to DIN EN 74-1)



- A** Screw-on coupler 48mm 95
- B** Diagonal tube 4.70m XCF
- C** Normal coupler 48mm
- D** Scaffold tube 1 1/2"x6'-0" (48.3mm 2.00m) or
1 1/2"x13'-0" (48.3mm 4.00m)
- E** Vertical profile 3.50m XCF
- F** Hexagon bolt ISO 4014 M12x100
- G** Hexagon nut ISO 7040 M12 self-locking
- N** Vertical profile extension 1.55m XCF
- O** Support bracket XCF
- P** Inner tube with support head of the Support bracket XCF

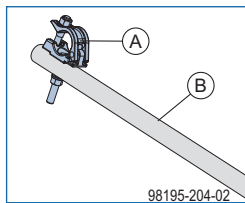
Assembly with extra-wide catch net

Assembly of the Xsafe catch fan **extra wide** differs from the procedure for the standard version in the following points:

- Installing additional diagonal tube extension
- Installing catch net with additional couplers
- Installing lifting slings
- Checking additional bolted joints

Installing diagonal tube extension

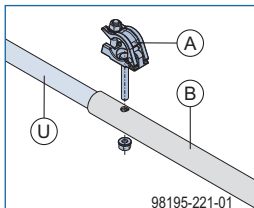
- Remove the Screw-on coupler 48mm 95 from the Diagonal tube 4.70m XCF.



A Screw-on coupler 48mm 95

B Diagonal tube 4.70m XCF

- Push Diagonal tube extension 1.74m XCF on to Diagonal tube 4.70m XCF and connect with Screw-on coupler 48mm 95.



A Screw-on coupler 48mm 95

B Diagonal tube 4.70m XCF

U Diagonal tube extension 1.74m XCF

Note:

Use only DIN EN 74-2B half couplers!

Installing catch net

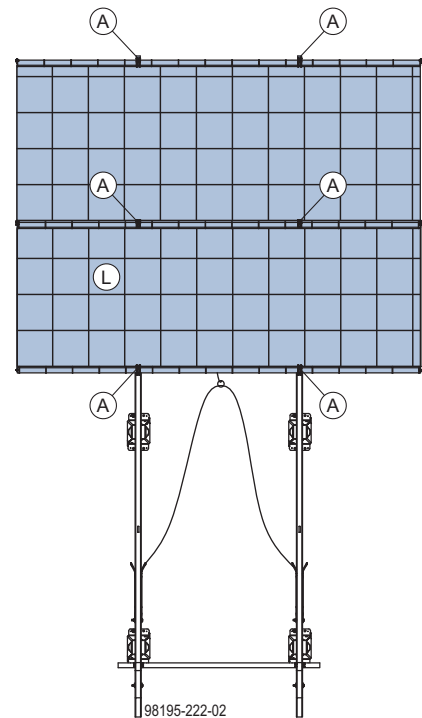
- Lay the Catch net XCF extra-wide on the Diagonal tubes 4.70m XCF, Diagonal tube extensions 1.74m XCF and Vertical profiles 3.50m XCF and secure it with the Screw-on couplers 48mm 95. The black 2 1/4"x2 1/4" (60x60 mm) mesh net must be on the underside.



When installing the net, make sure that it is not trapped between scaffold tube and screw-on couplers.

Otherwise problems can be encountered in unfolding the net.

Tightening torque: **37 lb-ft (50 Nm)** to DIN EN 74-1



A Screw-on coupler 48mm 95

L Catch net XCF extra wide

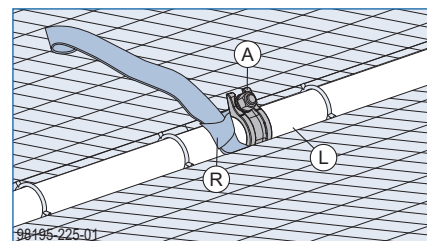
Installing lifting slings

- Loop Lifting sling 0.5t 1.00m round both tubes (Diagonal tube 4.70m XCF and middle scaffold tube of the catch net).
2 Lifting slings 0.5t 1.00m per catch fan are needed for repositioning.
The lifting slings remain attached to the catch fan.



NOTICE

Use only lifting slings to lift the catch fan (do not attempt to lift a catch fan by looping a chain round it).



A Screw-on coupler 48mm 95

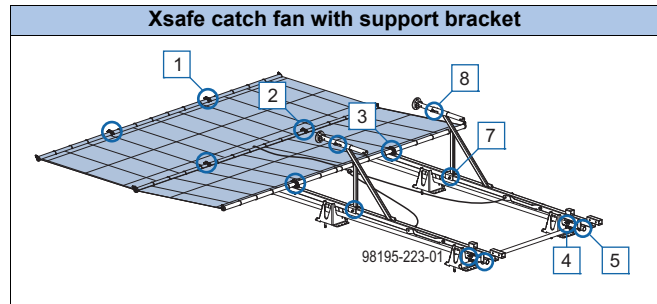
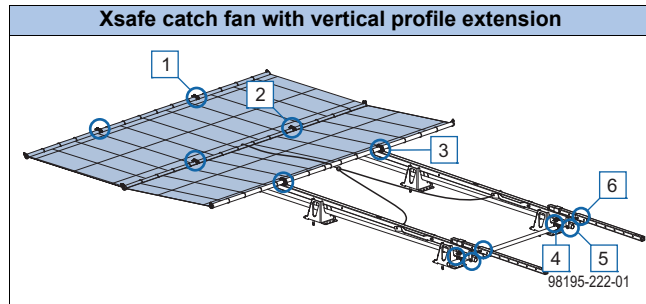
L Catch net XCF extra wide

R Lifting sling 0.5t 1.00m

Checking bolted joints

- Check the security of every bolted joint.
- Tighten every coupler.

Tightening torque of couplers: **37 lb-ft (50 Nm)**
(to DIN EN 74-1)



Close-up 1	Close-up 2	Close-up 3	Close-up 4
Close-up 5	Close-up 6	Close-up 7	Close-up 8

A Screw-on coupler 48mm 95

B Diagonal tube 4.70m XCF

C Normal coupler 48mm

D Scaffold tube 1 1/2"x6'-0" (48.3mm 2.00m) or
1 1/2"x13'-0" (48.3mm 4.00m)

E Vertical profile 3.50m XCF

F Hexagon bolt ISO 4014 M12x100

G Hexagon nut ISO 7040 M12 self-locking

N Vertical profile extension 1.55m XCF

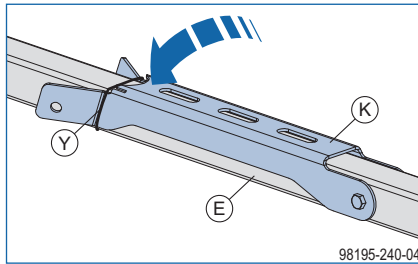
O Support bracket XCF

P Inner tube with support head of the Support bracket XCF

U Diagonal tube extension 1.74m XCF

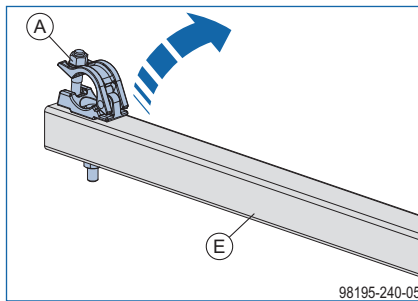
Installation of corner catch fan

- Secure the wind bracings of the Vertical profiles 3.50m XCF with cable ties.



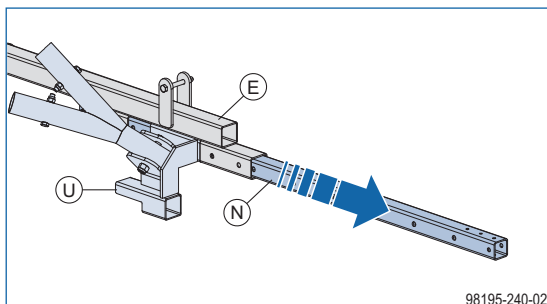
- E** Vertical profile 3.50m XCF
- K** Wind bracing of the Vertical profile 3.50m XCF
- Y** Cable tie

- Remove the screw-on coupler from the top end of each Vertical profile 3.50m XCF.



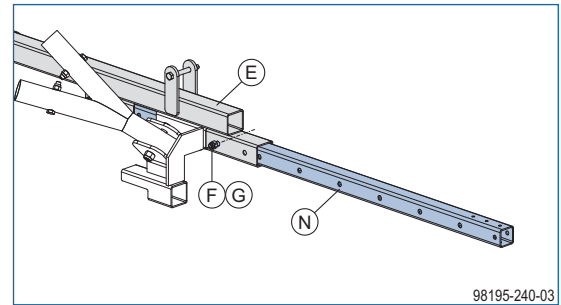
- A** Screw-on coupler 48mm 95
- E** Vertical profile 3.50m XCF

- Position the Vertical profile 3.50m XCF on the floor. Push Vertical profile extension 1.55m XCF into the Vertical profile 3.50m XCF and Corner connector XCF.



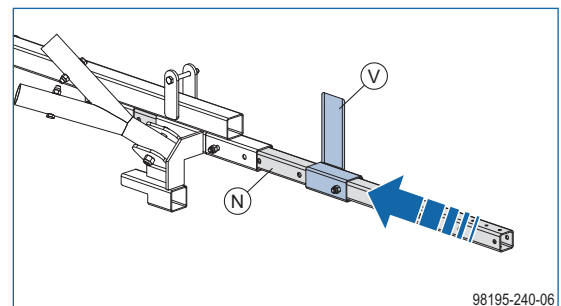
- E** Vertical profile 3.50m XCF
- N** Vertical profile extension 1.55m XCF
- U** Corner connector XCF

- Attach Corner connector XCF and Vertical profile extension 1.55m XCF to Vertical profile 3.50m XCF with hexagon bolts and hexagon nuts.



- E** Vertical profile 3.50m XCF
- F** Hexagon bolt ISO 4014 M12x100
- G** Hexagon nut ISO 7040 M12 self-locking
- N** Vertical profile extension 1.55m XCF

- Push Corner positioning profile XCF on to the Vertical profile extension 1.55m XCF and attach with hexagon bolt and hexagon nut.

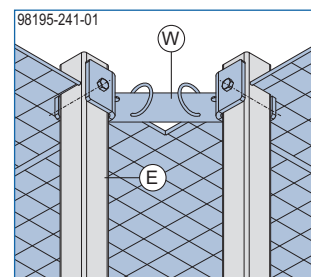


- N** Vertical profile extension 1.55m XCF
- V** Corner positioning profile XCF



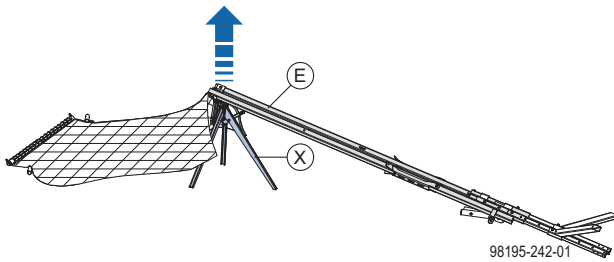
Note the actual ceiling height of the slab and install the Corner positioning profiles XCF correctly on the Vertical profile extensions 1.55m XCF.

- Repeat the procedure with the existing Corner connectors XCF.
- Install Corner catch net 4.70x4.70m XCF at the bottom ends of the Vertical profiles 3.50m XCF.



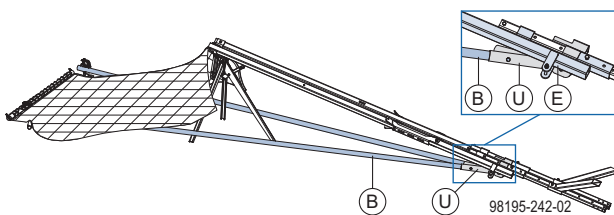
- E** Vertical profile 3.50m XCF
- W** Corner catch net 4.70x4.70m

- Raise the Vertical profiles 3.50m XCF and support them in the raised position (e.g. on Removable folding tripods).



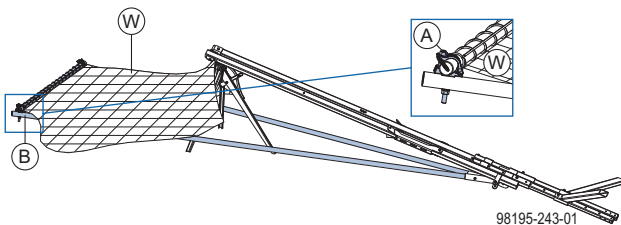
E Vertical profile 3.50m XCF
X Removable folding tripod

- Attach two Diagonal tubes 4.70m XCF to the Corner connector XCF with hexagon bolts and hexagon nuts.



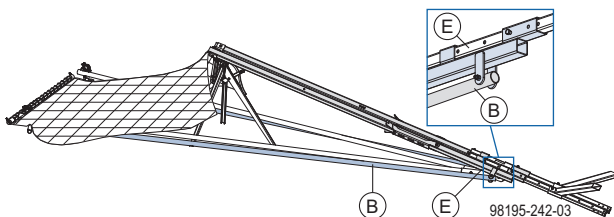
B Diagonal tube 4.70m XCF
E Vertical profile 3.50m XCF
U Corner connector XCF

- Use the screw-on couplers to attach the other ends of the Diagonal tubes 4.70m XCF attached to the Corner connector XCF to the horizontal tube of the Corner catch net 4.70x4.70m XCF.



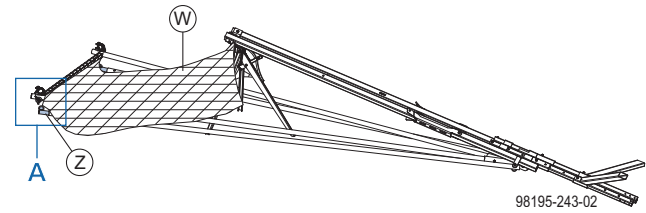
A Screw-on coupler 48mm 95
B Diagonal tube 4.70m XCF
W Corner catch net 4.70x4.70m

- Attach one Diagonal tube 4.70m XCF to each of the two Vertical profiles 3.50m XCF with hexagon bolts and hexagon nuts.



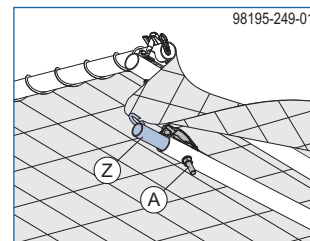
B Diagonal tube 4.70m XCF
E Vertical profile 3.50m XCF

- Remove the Screw-on couplers 48mm 95 from the two Diagonal tubes 4.70m XCF. Attach the two Diagonal tubes 4.70m XCF that are attached to the Vertical profiles 3.50m XCF to the inner tubes of the Corner catch net 4.70x4.70m XCF and re-install the screw-on couplers.



W Corner catch net 4.70x4.70m
Z Inner tube of the Corner catch net 4.70x4.70m XCF

Close-up A



A Screw-on coupler 48mm 95
Z Inner tube of the Corner catch net 4.70x4.70m XCF



When installing the net, make sure that it is not trapped.

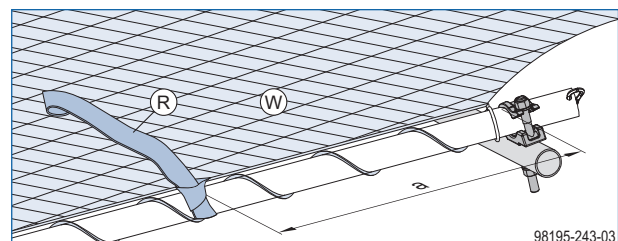
Otherwise problems can be encountered in unfolding the net.

- Loop two Lifting slings 0.5t 1.00m round the horizontal tube of the Corner catch net 4.70x4.70m, positioning each lifting sling 1'-8" (0.5 m) inward from the coupler. 2 Lifting slings 0.5t 1.00m per catch fan are needed for repositioning. The lifting slings remain attached to the catch fan.



NOTICE

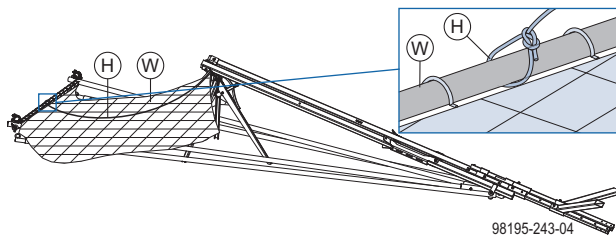
Use only lifting slings to lift the catch fan (do not attempt to lift a catch fan by looping a chain round it).



a ... 1'-8" (0.5 m)

R Lifting sling 0.5t 1.00m
W Corner catch net 4.70x4.70m XCF

- Secure Folding rope XCF to the middle of the horizontal tube of the Corner catch net 4.70x4.70m XCF and at the front secure it to the corner suspension point.



H Folding rope XCF

W Corner catch net 4.70x4.70m XCF

**WARNING**

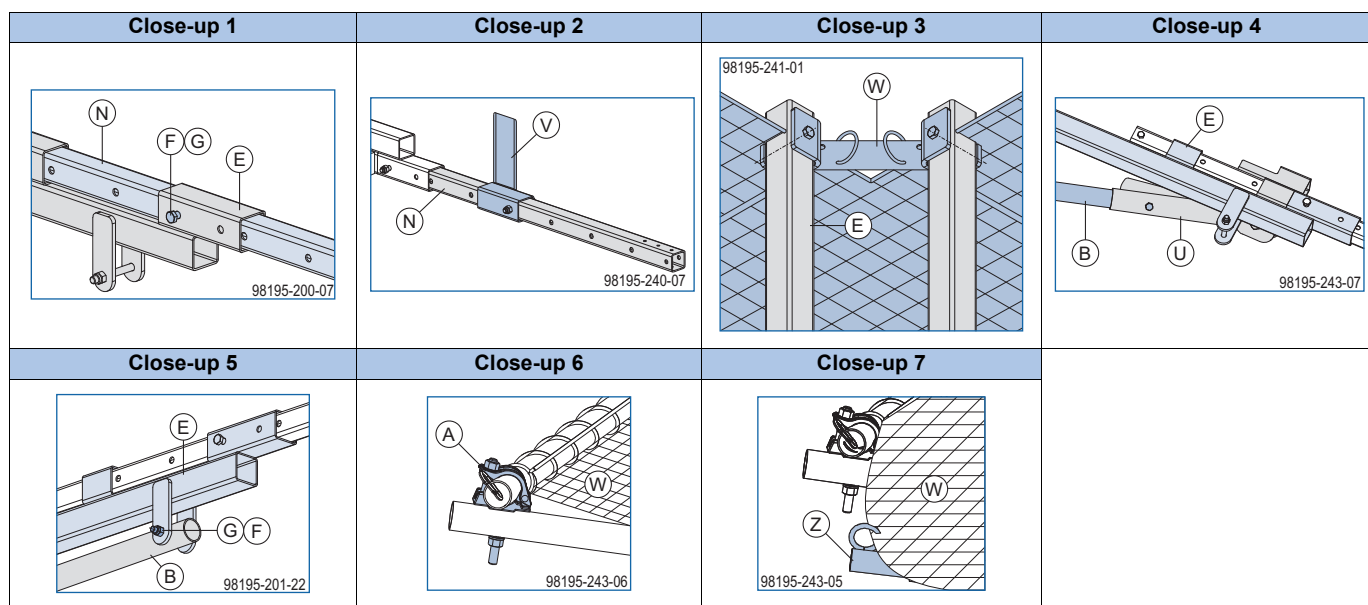
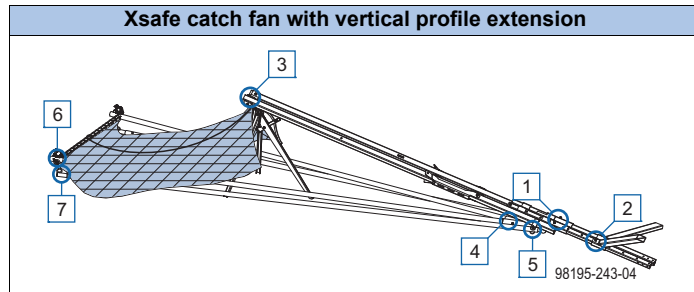
The catch fan opens when it is lifted off the floor.

- Clear the danger zone before the catch fan is lifted.

Checking bolted joints

- Check the security of every bolted joint.
- Tighten every coupler.

Tightening torque of couplers: **37 ft-lb (50 Nm)**
(to DIN EN 74-1)



- A** Screw-on coupler 48mm 95
- B** Diagonal tube 4.70m XCF
- D** Scaffold tube 1 1/2"x6'-0" (48.3mm 2.00m) or 1 1/2"x13'-0" (48.3mm 4.00m)
- E** Vertical profile 3.50m XCF
- F** Hexagon bolt ISO 4014 M12x100
- G** Hexagon nut ISO 7040 M12 self-locking
- N** Vertical profile extension 1.55m XCF
- U** Corner connector XCF
- V** Corner positioning profile XCF
- W** Corner catch net 4.70x4.70m XCF
- Z** Inner tube of the Corner catch net 4.70x4.70m XCF

Repositioning

Notes on safe repositioning

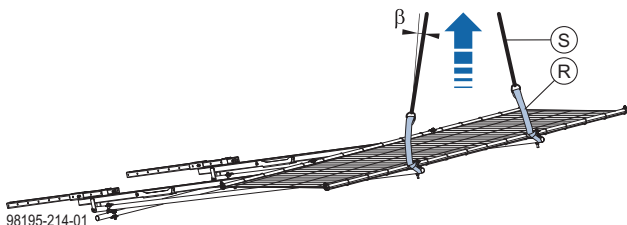


WARNING

- Strong wind can lift the catch fan out of the floor shoes if they are not closed and secured.
- Use appropriate personal fall-arrest system equipment when working at the slab edge!
- Detach the 4-part chain from the lifting slings only when the floor shoes are closed.
- If the edge protection is removed to facilitate installation or removal of the catch fan, appropriate personal fall-arrest system equipment must be worn (e.g. safety harness).

Lifting catch fan

- Lift the catch fan.



R Lifting sling 0.5t 1.00m

S Multi-part chain



NOTICE

Angle β of slinging means max. 30°.



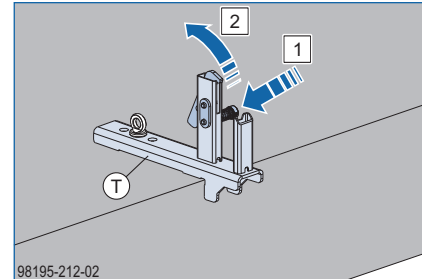
WARNING

- The catch fan opens when it is lifted off the floor.
- Clear the danger zone before the catch fan is lifted.

Hooking catch fan into position

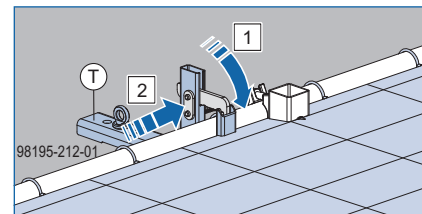
Hooking catch fan into Floor shoes XCF

- Open the safety bows of both Floor shoes XCF.



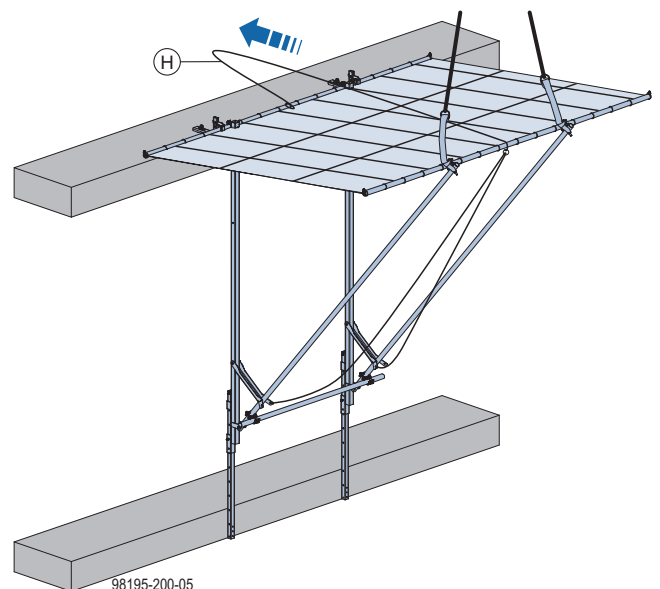
T Floor shoe XCF

- Lower the Xsafe catch fan into the two securely positioned Floor shoes XCF.
- Close the safety bows of both Floor shoes XCF.



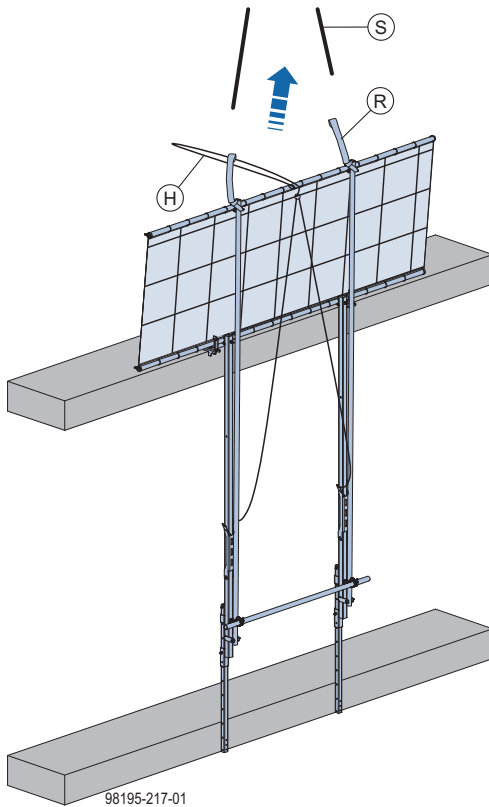
T Floor shoe XCF

- Use the Folding rope XCF to fold in the Xsafe catch fan.



H Folding rope XCF

- Detach the 4-part chain from the Lifting slings 0.5t 1.00m.

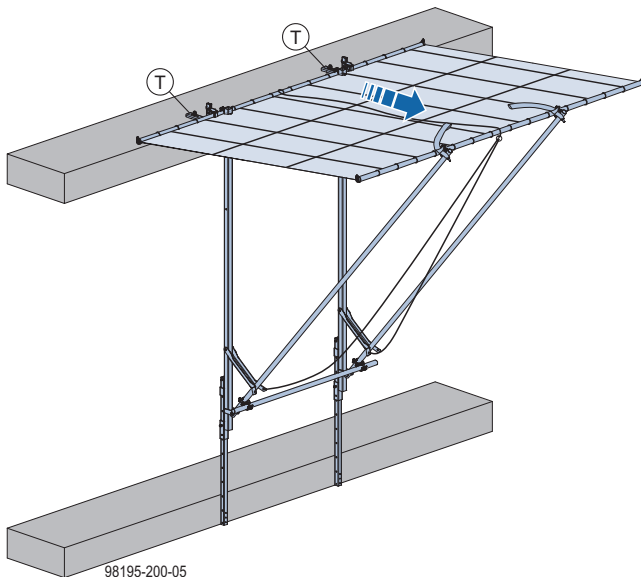


H Folding rope XCF

R Lifting sling 0.5t 1.00m

S 4-part chain

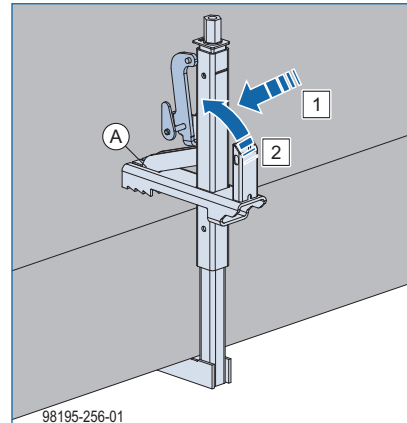
- Unfold the catch fan.



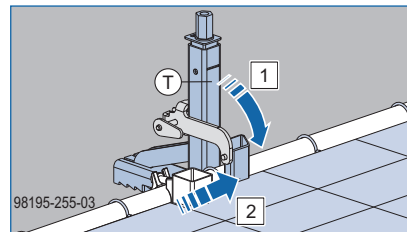
T Floor shoe XCF

Hooking catch fan into Slab grabs XCF 2G

- Open the safety bows of both Slab grabs XCF 2G.



- Lower the Xsafe catch fan into the two securely positioned Slab grabs XCF 2G.
- Close the safety bows of both Slab grabs XCF 2G.

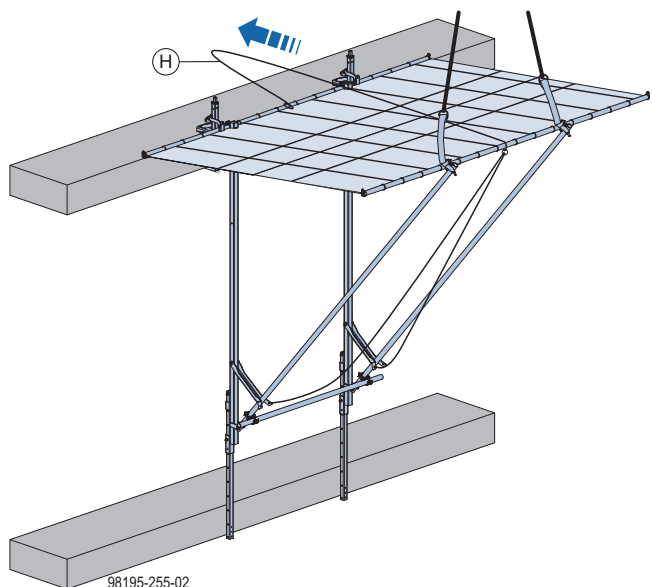


T Slab grab XCF 2G



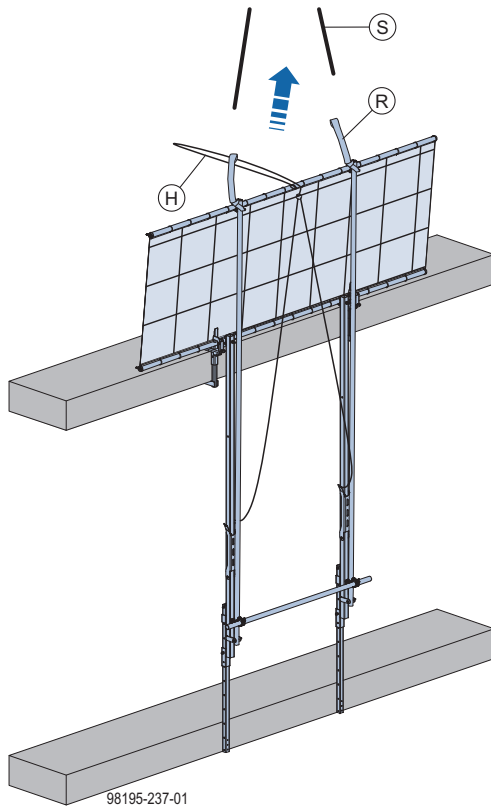
Check that the pin of the safety bow is engaged in the Slab grab XCF 2G.

- Use the Folding rope XCF to fold in the Xsafe catch fan.



H Folding rope XCF

- Detach the 4-part chain from the Lifting slings 0.5t 1.00m.

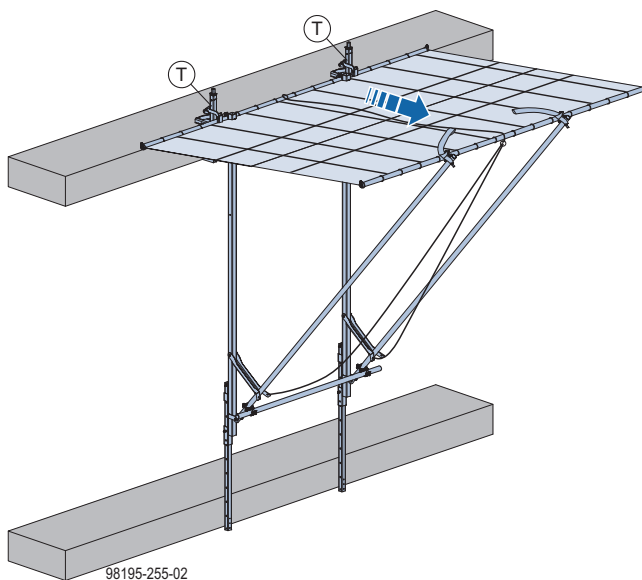


H Folding rope XCF

R Lifting sling 0.5t 1.00m

S 4-part chain

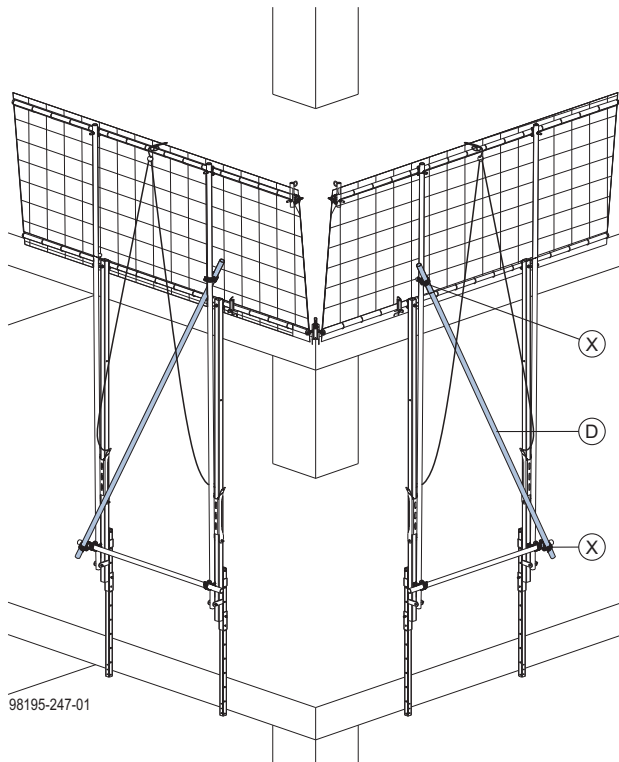
- Unfold the catch fan.



T Slab grab XCF 2G

Hooking corner catch fan into Corner floor shoe XCF

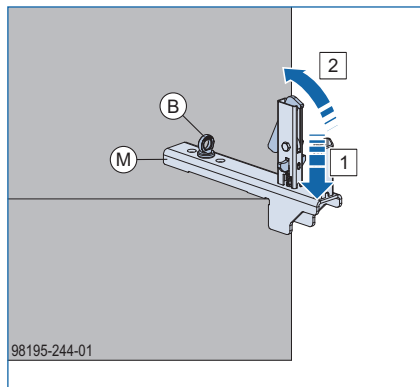
- ▶ Before lifting, stiffen each adjacent catch fan with a Scaffold tube 4.00m 48.3mm and Swivel couplers 48mm.



D Scaffold tube 1 1/2"x13'-0" (48.3mm 4.00m)

X Swivel coupler 48mm

- ▶ Open the safety bow of the Corner floor shoe XCF.



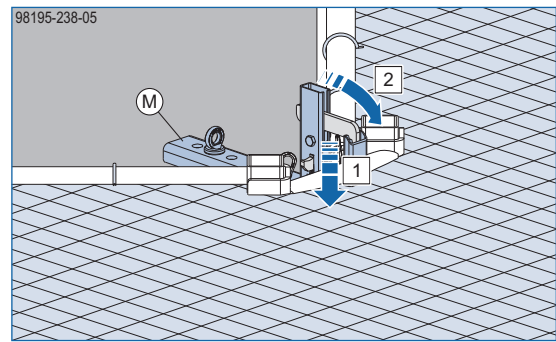
B Doka express anchor 16x125mm

M Corner floor shoe XCF



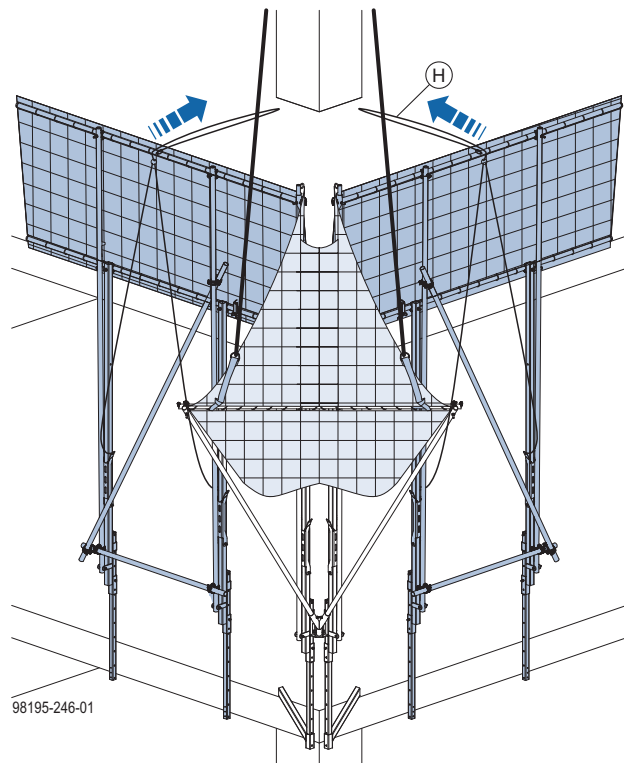
Hook the catch fan into position as described in the section headed 'Hooking catch fan into Floor shoes XCF'.

- ▶ Close the Corner floor shoe XCF.



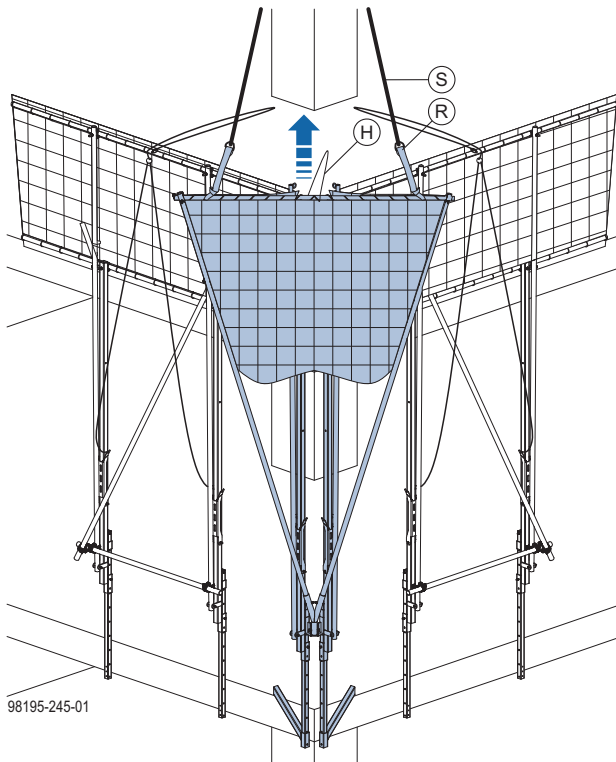
M Corner floor shoe XCF

- ▶ Use the Folding ropes XCF to fold in the adjacent catch fans.



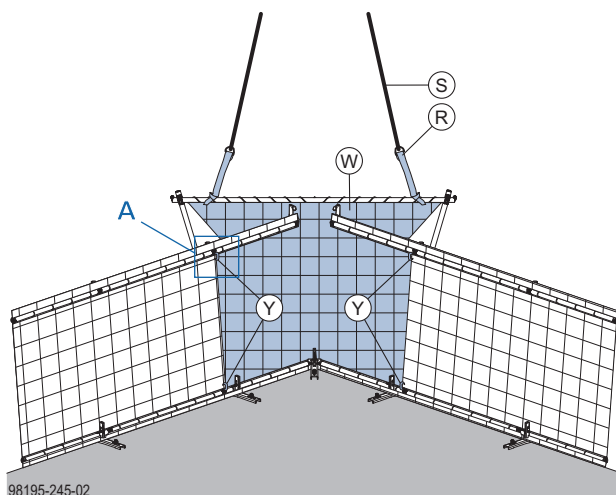
H Folding rope XCF

- Use the Folding rope XCF to fold in the corner catch fan.



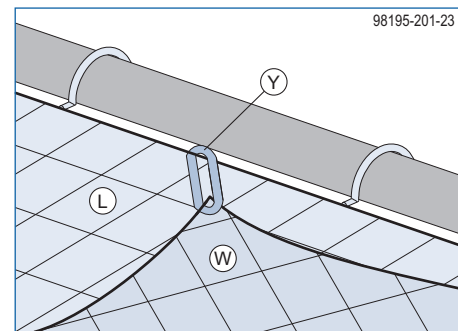
- H** Folding rope XCF
- R** Lifting sling 0.5t 1.00m
- S** 4-part chain

- Attach the corner catch net to each of the two adjacent catch fans with 2 screw-lock carabiners per side, clipped on the inside to the reinforced black edge ropes. Pull the corner catch net taut in this process.



- R** Lifting sling 0.5t 1.00m
- S** 4-part chain
- W** Corner catch net 4.70x4.70m XCF
- Y** Screw-lock carabiner

Close-up A

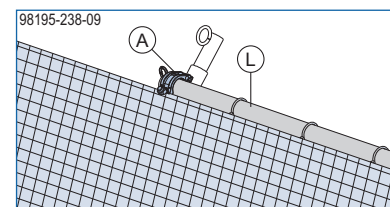


- L** Catch net XCF
- W** Corner catch net 4.70x4.70m XCF
- Y** Screw-lock carabiner



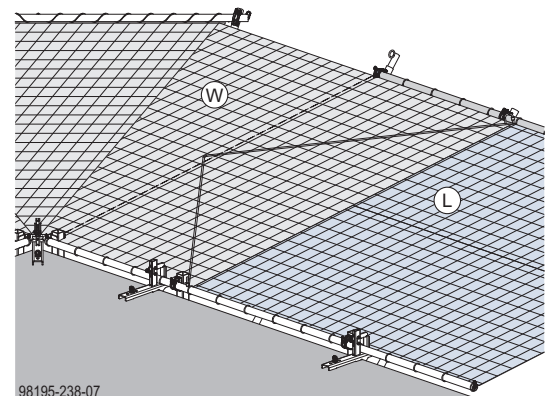
Note the overlap of the catch nets with the corner catch net. See the section headed 'Arrangement at the corner'.

- Detach the 4-part chain from the Lifting slings 0.5t 1.00m.
- Connect the adjacent catch fans to the screw-on couplers of the outer diagonal tubes.



- A** Screw-on coupler 48mm 95 of the corner catch fan
- L** Catch net XCF

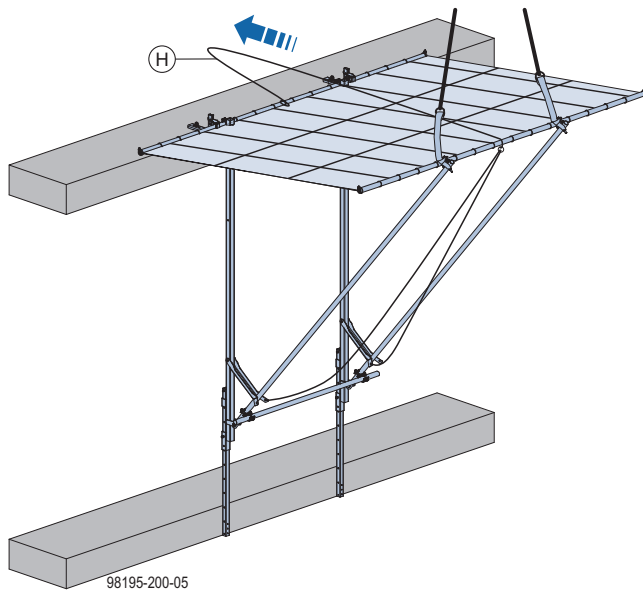
- Fold the corner catch fan out again, together with the adjacent catch fans.



- L** Catch net XCF
- W** Corner catch net 4.70x4.70m XCF

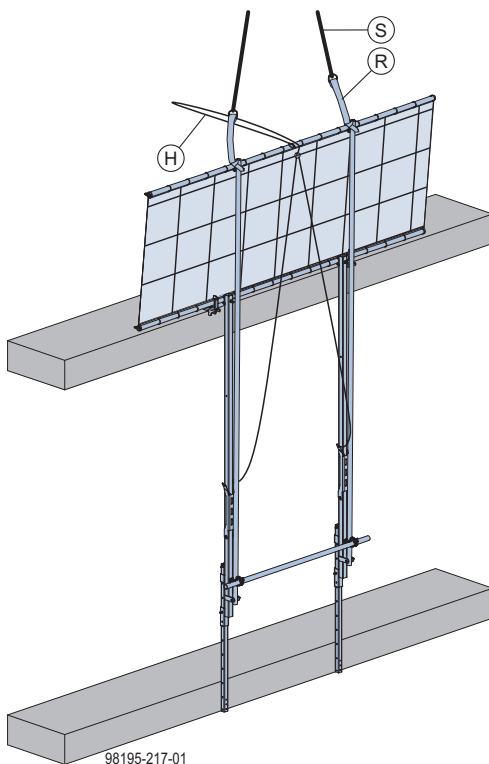
Lifting catch fan off structure

- Use the Folding rope XCF to pull the catch fan up to the structure.



H Folding rope XCF

- Secure the 4-part chain to the lifting slings.

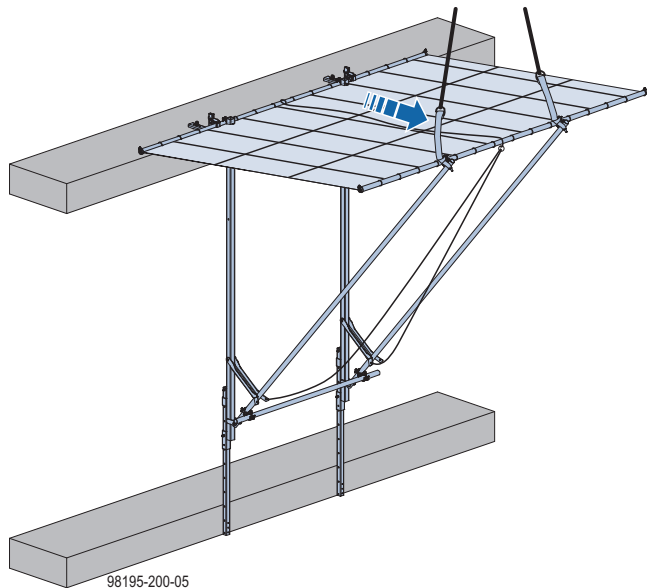


H Folding rope XCF

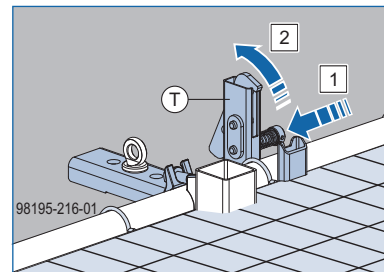
R Lifting sling 0.5t 1.00m

S 4-part chain

- Unfold the catch fan to the fully open position.



- Open the safety bows of both Floor shoes XCF.



T Floor shoe XCF

- Lift the catch fan clear with the crane and lower it to a suitable disassembly area.

Dismantling

- Disassembly of the catch fan is the reverse of the assembly procedure.

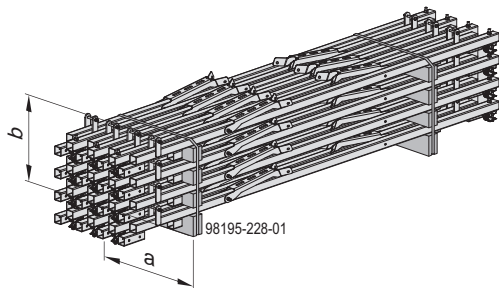
Note:

- If a support bracket is installed on the catch fan it has to be removed before the catch fan is laid down on the ground.
- The wind bracings have to be folded in before the catch fan is laid down on the ground.

General remarks

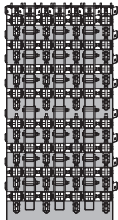
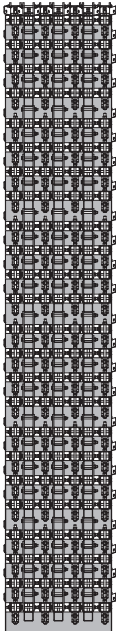
Transporting, stacking and storing

Vertical profile 3.50m XCF

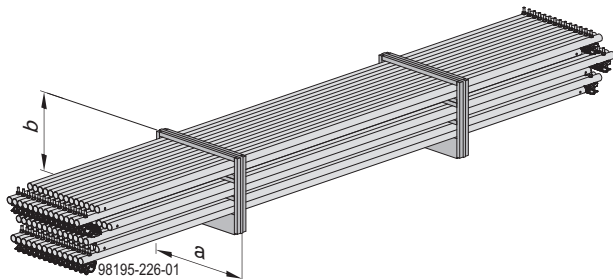


	one unit
Maximum number of vertical profiles 3.50m XCF per stack	28
Minimum number of timber supports (min. 5 1/2"x3 1/4"x2'-4" (14x8x70 cm))	2
Minimum number of timber supports (min. 4"x3 1/4"x2'-4" (10x8x70 cm))	6
Dimension a	2'-4" (70 cm)
Dimension b	2'-6" (76.5 cm)

Max. number of units on top of one another

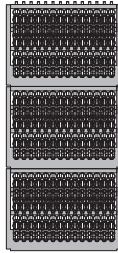
Number of Vertical profiles 3.50m XCF in one unit	Outdoors (on the site) floor gradients of up to 3%	Stacked in the ware-house floor gradients of up to 1%
28	2	6
 98195-231-01  98195-231-02		

Diagonal tube 4.70m XCF

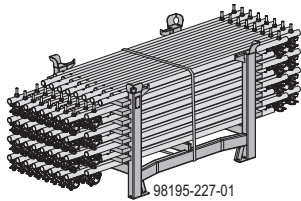


	one unit
Max. number of Diagonal tubes 4.70m XCF per stack	84
Minimum number of sleepers (min. 5 1/2"x3 1/4"x2'-4" (14x8x70 cm))	2
Minimum number of timber supports (min. 1 1/8"x3 1/4"x2'-4" (2.8x8x70 cm))	8
Dimension a	2'-6" (75.6 cm)
Dimension b	1'-9" (54.2 cm)

Max. number of units on top of one another

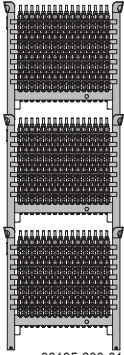
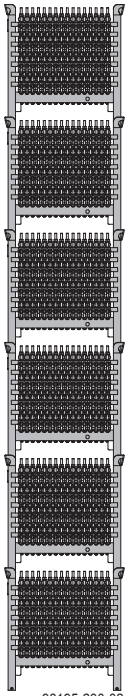
Number of Diagonal tubes 4.70m XCF in one unit	Outdoors (on the site) floor gradients of up to 3%	Stacked in the ware-house floor gradients of up to 1%
84	3	6
 98195-229-01  98195-229-02		

Diagonal tube extension 1.74m XCF



	one unit
Maximum number of Diagonal tube extensions 1.74m XCF per stack	128
Minimum number of timber supports (min. 1 1/8"x3 1/4"x2'-4" (2.8x8x70 cm))	14

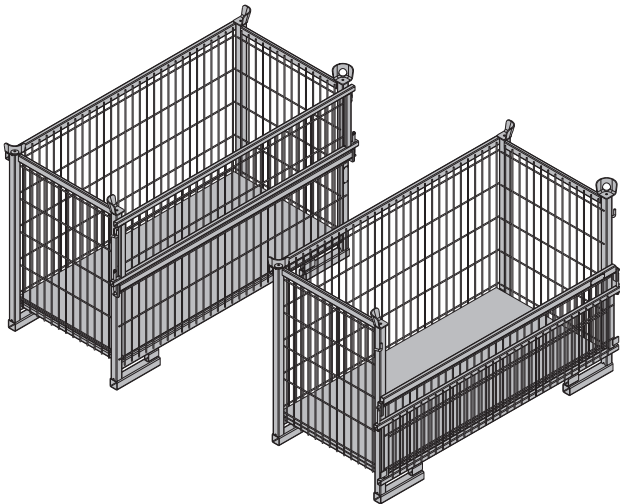
Max. number of units on top of one another

Number of Diagonal tube extensions 1.74m XCF in one unit	Outdoors (on the site) floor gradients of up to 3%	Stacked in the ware- house floor gradients of up to 1%
128	3	6
		

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

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

Doka skeleton transport box 1.70x0.80m



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

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

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

Max. n° of units on top of one another

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



NOTICE

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

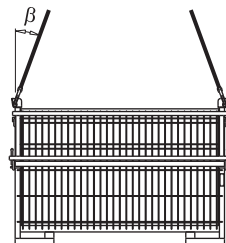
Using Doka skeleton transport boxes 1.70x0.80m as transport devices

Lifting by crane



NOTICE

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



9234-203-01

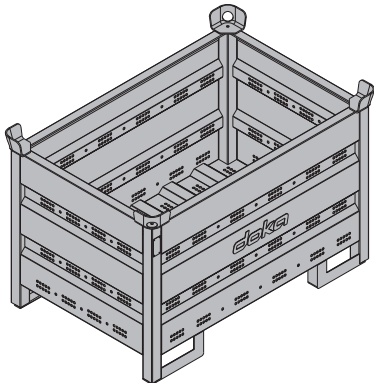
Shifting boxes with the forklift or pallet stacking truck

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

Doka multi-trip transport box

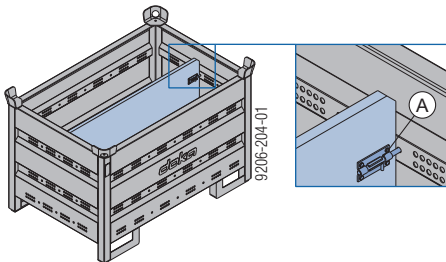
Storage and transport device for small items.

Doka multi-trip transport box 1.20x0.80m



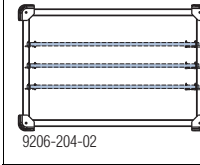
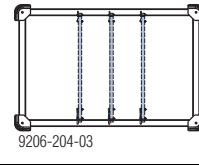
Max. load: 3300 lbs (1500 kg)
Permitted imposed stacking load: 17300 lbs (7850 kg)

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

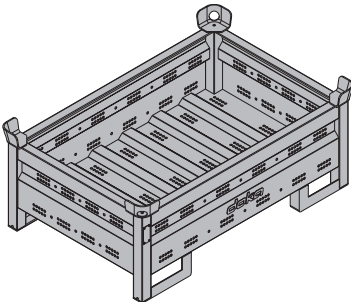


A Slide-bolt for fixing the partition

Possible ways of dividing the box

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

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



Max. load: 1650 lbs (750 kg)
Permitted imposed stacking load: 15870 lbs (7200 kg)

Using Doka multi-trip transport boxes as storage units

Max. n° of units on top of one another

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



NOTICE

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

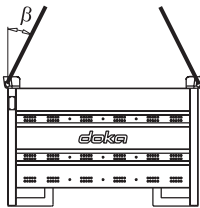
Using Doka multi-trip transport boxes as transport devices

Lifting by crane



NOTICE

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



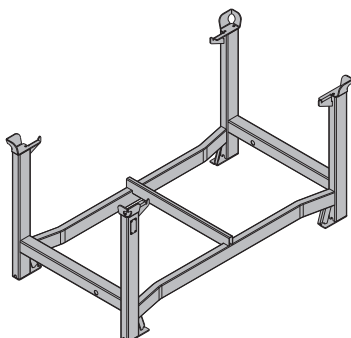
9206-202-01

Shifting boxes with the forklift or pallet stacking truck

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

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

Storage and transport devices for long items:



Max. load: 2420 lbs (1100 kg)

Permitted imposed stacking load: 13000 lbs (5900 kg)

Using Doka stacking pallets as storage units

Max. n° of units on top of one another

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



NOTICE

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

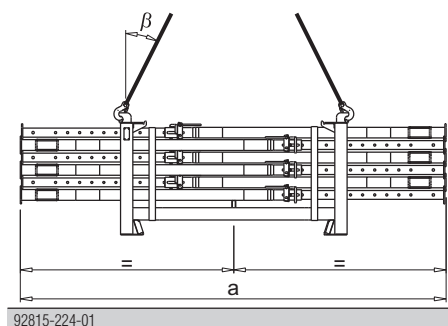
Using Doka stacking pallets as transport devices

Lifting by crane



NOTICE

- Multi-trip packaging items may only be lifted one at a time.
- Use a suitable lifting chain (e.g. Doka 4-part chain 3.20m). Do not exceed the permitted working load limit.
- 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 caster sets B have been attached, you must also follow the directions in these Operating Instructions!
- Sling angle β max. 30°!



	a
Doka stacking pallet 1.55x0.85m	max. 14'-9" (4.5 m)
Doka stacking pallet 1.20x0.80m	max. 9'-10" (3.0 m)

Shifting boxes with the forklift or pallet stacking truck



NOTICE

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

Cleaning

Clear debris, snow and ice from the Catch nets XCF at regular intervals. Remove larger objects immediately.

- Check and clean the catch nets at regular intervals.
- Perform risk assessment for the jobsite as necessary.

Additional inspections shall be performed after alterations, repairs and shock loading events and whenever welding or cutting work is performed above the nets. Nets exhibiting mold, abrasion, damage or signs of wear and tear detrimental to strength shall immediately be removed from use and fully tested and then either repaired or disposed of.

Preparations

- Before cleaning starts, cordon off the area below the catch net so that no-one can be in this area.
- Everyone involved in cleaning must wear appropriate personal fall-arrest system equipment and must have received training in the use of this equipment and in working at height.
- If the edge protection has to be removed for cleaning work, the workers must all wear appropriate personal fall-arrest system equipment. Cordon off areas where the edge protection is opened, to prevent unauthorised access.

Cleaning

- Fold in the catch net with the Folding rope XCF provided for the purpose, proceeding in such a way that the debris remains in the catch net. Make sure that there is nothing at the edge of the catch net that could fall out as the catch net is being folded in.
- After folding in the catch net, remove everything that the net has caught. Remove heavy and large objects first. When subsequently removing debris and small objects, make sure that they cannot fall between the slab and the catch net.



NOTICE

If fresh concrete makes its way on to a catch net during pouring, the net has to be thoroughly cleaned immediately with water so that no residues remain. If a catch net cannot be cleaned before the concrete sets, the net has to be replaced.

Inspection

- After cleaning, inspect the catch net for damage. If the black net (2 1/4"x2 1/4" (60x60 mm) mesh)) is damaged, the entire net has to be replaced.
- If the net is intact, check all the individual connections and the anchorage to the structure after the catch net has been unfolded.
- When cleaning and inspection have been completed, barriers erected beforehand to cordon off the area can be removed.

Debris nets, including the mesh ropes, edge ropes, fittings, connecting elements and suspensions, shall be inspected in their entirety by a competent person after every installation and thereafter at least once a week.

Annual test of the Catch nets XCF

Every safety net must be subjected to annual testing.
The test must be carried out every twelve months from the time when a net is first deployed.
The test procedure is as follows:

Removal of test samples

Every Catch net XCF has three test strips. Every 12 months from when a net is first deployed, one test strip is removed from each net. The strips can be removed by cutting open the fastenings.

The test strips are marked with the serial number of the net. These numbers have to be recorded and compared with the serial number on the label affixed to the net.

A net from which all the test strips have been removed can no longer be deployed for use.



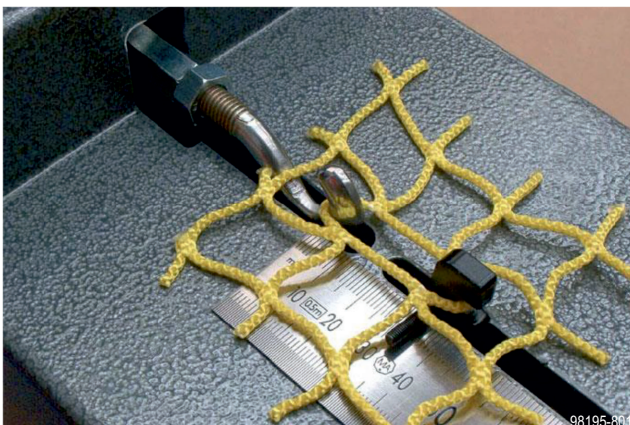
Test rig

The test machine must have the following capabilities:

- Measurement of elongation to breakage of the mesh
- Measurement of the corresponding tensile force
- Recording of the force/deformation curve

Test procedure

Perform the test as described above. The middle mesh of a test strip is tensioned in the machine by a pin (diameter 3/4" (20 mm)). Test speed is 8"/min (200 mm/min), regardless of test duration.



Result

After performance of the test, as described above, the energy absorbed by the tested mesh is calculated.
Record the result of each test strip, complete with serial number.

If the energy absorption of a tested mesh is $\geq 42.58 \text{ J}$ (minimum energy of the mesh) or 687 lbf (3054 N) (minimum failure load of the mesh), the corresponding test strip has passed the test.

Measures

The following measures derive from the test results:

- If a test strip has passed the test, the corresponding net can be deployed for use for another twelve months.
- If the result of a test strip is less than **5 %** below the specified **42.58 J** (minimum energy of the mesh) or 687 lbf (3054 N) (minimum failure load of the mesh), it is permissible for the test to be repeated with another test strip from the same net.
- If the result of a test strip is more than **5 %** below the specified **42.58 J** (minimum energy of the mesh) or 687 lbf (3054 N) (minimum failure load of the mesh), the corresponding net can no longer be deployed for use.

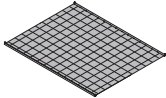
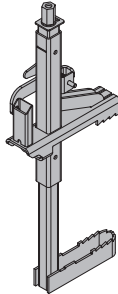
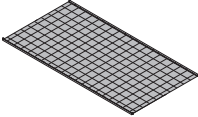
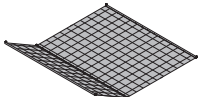
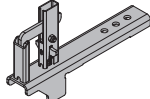
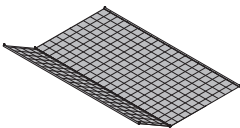
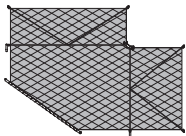
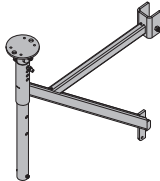
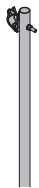
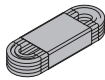
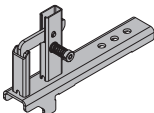
Record all tests with date of test, serial number of the net, result of the test and date when the next test is due.



NOTICE

The annual test of the test meshes is an indicative test and is not a substitute for regular inspections of the nets for damage or ageing due to use or storage.

If such deterioration is ascertained in a regular inspection, the net in question can no longer be deployed for use.

	[lbs]	Article #		[lbs]	Article #
Catch net 4.00x3.10m XCF Fangnetz 4,00x3,10m XCF  Yellow Width: 23' (700 cm) Diameter: 7" (17,5 cm)	77.2	584801000	Slab grab XCF 2G Deckenzwinde XCF 2G  Galvanized Length: 1'-1" (32,5 cm) Width: 3 1/4" (8 cm)	24.9	584819000
Catch net 6.00x3.10m XCF Fangnetz 6,00x3,10m XCF  Yellow	115.0	584800000			
Catch net 4.00x4.80m extra wide XCF Fangnetz 4,00x4,80m extrabreit XCF  Yellow	115.0	584803000	Corner floor shoe XCF Eckdeckenschuh XCF  Galvanized Length: 1'-5" (43 cm) Width: 2 3/4" (7 cm) Height: 10" (26,3 cm)	7.7	584818000
Catch net 6.00x4.80m extra wide XCF Fangnetz 6,00x4,80m extrabreit XCF  Yellow	172.0	584802000	Vertical profile extension 1.55m XCF Vertikalprofilverlängerung 1,55m XCF  Galvanized	15.0	584810000
Corner catch net 4.70x4.70m XCF Eckfangnetz 4,70x4,70m XCF  Yellow	63.3	584815000	Support bracket XCF Stützkonsolle XCF  Galvanized Length: 2'-10" (85,4 cm) Width: 5 1/2" (14 cm) Height: 3'-5" (105,1 cm)	26.9	584811000
Vertical profile 3.50m XCF Vertikalprofil 3,50m XCF  Galvanized	52.9	584804000	Diagonal tube extension 1.74m XCF Diagonalrohrverlängerung 1,74m XCF  Galvanized	10.4	584807000
Diagonal tube 4.70m XCF Diagonalrohr 4,70m XCF  Galvanized	35.3	584805000	Folding rope XCF Klappseil XCF 	0.57	584809000
Floor shoe XCF Deckenschuh XCF  Galvanized Length: 1'-4" (40,5 cm) Width: 2 3/4" (7 cm) Height: 10" (24,3 cm)	7.3	584806000	Lifting sling 0.5t 1.00m Hebeband 0,5t 1,00m  Follow the directions in the "Operating Instructions"! CE	0.29	584808000



	[lbs]	Article #		[lbs]	Article #
Tool box SK Werkzeugbox SK included in scope of supply: (A) Combination wrench 13 (B) Combination wrench 16 (C) Combination wrench 17 (D) Combination wrench 18 (E) Combination wrench 19 (F) Combination wrench 22 (G) Combination wrench 24 (H) Combination wrench 27 (I) Combination wrench 30 (J) Combination wrench 32 (K) Combination wrench 34 (L) Combination wrench 36 (M) Combination wrench 41 (N) Fork wrench 50 (O) Reversible ratchet 3/4" Galvanized (P) Reversible ratchet 1/2" Galvanized (Q) Extension 20cm 3/4" (R) Extension 22cm 1/2" (S) Extension 11cm 1/2" (T) Ratchet-ring wrench 16/18 (U) Ratchet-ring wrench 17/19 (V) Ratchet-ring wrench 22/24 (W) Universal pry bar 400/23 (X) Tie-rod wrench 15.0/20.0 Galvanized (Y) Angular arbor SL-1 (Z) Torx bit-set 25/30 (AA) Universal cone spanner M36 Galvanized (AB) Safety Ruler SK Length: 7" (18 cm) (AC) Universal cone spanner 15.0/20.0 Galvanized Width-across: 50 mm (AD) Center bit DF 30 (AE) Transition piece A 1/2"x3/4" (AF) Box nut 32 3/4" L (AG) Box nut 30 3/4" L (AH) Box nut 30 1/2" L (AI) Box nut 24 3/4" L (AJ) Box nut 24 1/2" L (AK) Box nut 22 1/2" L (AL) Box nut 19 1/2" L (AM) Box nut 18 1/2" L (AN) Box nut 17 1/2" L (AO) Box nut 16 1/2" L (AP) Box nut 50 3/4" (AQ) Box nut 36 3/4" L (AR) Box nut 41 3/4" (AS) Box nut 24 3/4" (AT) Box nut 13 1/2" (AU) Hexagon bit socket 14mm 1/2"	61.9 0.13 0.4 0.35 0.37 0.31 0.44 0.55 0.73 0.95 1.7 1.5 1.7 3.3 2.2 3.3 1.6 1.5 0.68 0.44 0.66 1.0 1.3 1.3 4.0 3.1 0.55 2.0 0.044 2.0 0.22 0.4 1.3 1.1 1.1 0.55 0.66 0.55 0.35 0.33 0.53 0.26 1.8 1.5 1.7 0.46 0.13 0.29	581539000 586341000 580645000 586340000 580646000 582837000 582838000 582839000 581548000 582840000 582859000 582936000 582860000 582841000 581549000 580894000 580580000 580683000 580582000 580581000 580666000 581546000 581547000 581550000 580594000 582867000 581540000 583274000 581439000 581448000 586081000 580684000 581544000 582846000 581545000 582845000 586364000 581543000 580598000 580642000 581542000 580641000 581449000 580895000 581541000 500679030 580576000 581583000	Doka multi-trip transport box 1.20x0.80m Doka-Mehrwegcontainer 1,20x0,80m Galvanized Height: 2'-7" (78 cm) <		



Formwork & Scaffolding.
We make it work.



www.doka.com/xsafe-catch-fan