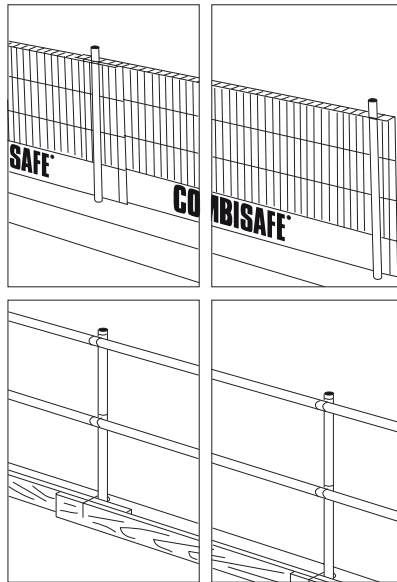


Honeywell

COMBISAFE®

TEMPORARY EDGE PROTECTION



SYSTEM DESCRIPTION

SMB System C

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Safety instructions

— WARNING! —

Always check products and equipment before use.
Never use damaged or rusty materials as this can affect safety.

— WARNING! —

Edge protection that is combined or interlinked with products other than Combisafe is not recommended.

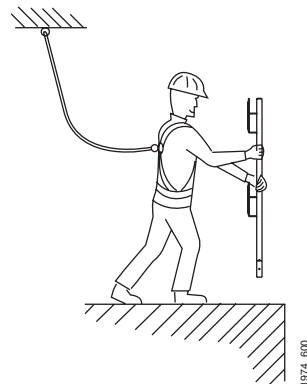
Combisafe product liability only applies to combinations of Combisafe products that have been assembled in accordance with the Combisafe TI-sheets and System Description.

— WARNING! —

If the edge protection is subject to a load that is too great, e.g. a fall, the guardrail must be inspected by a competent person before being taken into service again. Contact Combisafe in the event of uncertainty.

— WARNING! —

Always use personal fall arrest equipment where there is a risk of falling. This also applies to work from a hydraulic lift platform.



Important

Combisafe edge protection products must always be used together with the applicable system description and the TI-sheet for each product.

Always carry out an assessment and produce a method statement for the installation of the Combisafe system.

To ensure safety in the workplace, always consider:

- plan the fall protection at an early stage.
- many fall accidents occur from a low height.
- arrange suitable and safe access to the workplace.
- close off the area below and around the assembly site so that persons are not injured by falling tools or materials.
- keep order around the assembly site.
- only use safety products that have been inspected for safety.
- use tools intended for the work to be performed.
- tighten screws properly and check that hooks lock correctly.

General

Combisafe edge protection products conform to the requirements set out in the European standard EN 13374.

Application area

Combisafe edge protection products are intended for use as temporary fall protection.

The products must not be used to:

- protect the general public,
- absorb impact from vehicles,

or

- prevent the collapse of large quantities of, e.g., materials or snow.

Handling products

Combisafe edge protection products are designed for ease of use and individual products weigh less than 20 kg, however there are a few exceptions.

Refer to national directives concerning the handling of materials.

Traceability

Most Combisafe products are marked with a batch number for inspection and traceability.

The batch number consists of a letter and four digits and refers to the place and date, year and week, of manufacture for the product. 0345 signifies that the product was manufactured in 2003 week 45. The number is generally located close to the Cloxy hole on the Safety Posts and attachments.

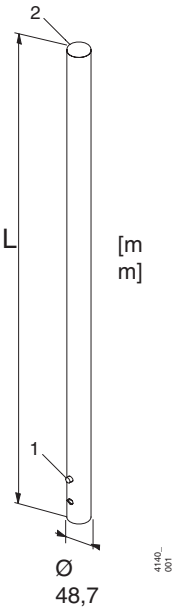
DATA

Safety Post
4140/4145/4150

System.....SMB System C
Weight.....1.8 kg/2.1 kg/2.8 kg
Surface finish.....Aluminium
Conforms to EN 13374 class A, B, C

Spare parts list

Item	Part no.	Information
1	1131	Cloxy
2	100536	Plastic Plug



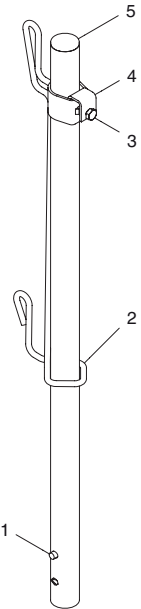
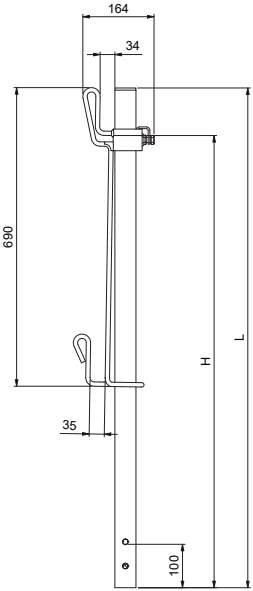
Flexi Safety Posts
4141/4146/4151

System.....SMB System C
Weight.....3.1 kg/3.4 kg/4.0 kg
Surface finish.....Aluminium
Conforms to EN 13374 class A, B, C

Safety Post no.	L	H
4141	1.15 m	1.05 m
4146	1.35 m	1.25 m
4151	1.8 m	1.35 m

Spare parts list

Item	Part no.	Information
1	1131	Cloxy
2	10518	SMB Holder Body
3	100175	M12 Hex Screw
4	10520	Clamp
5	100536	Plastic Plug, PE-HD



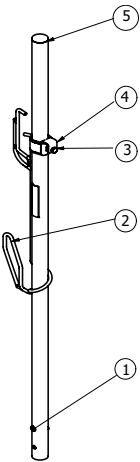
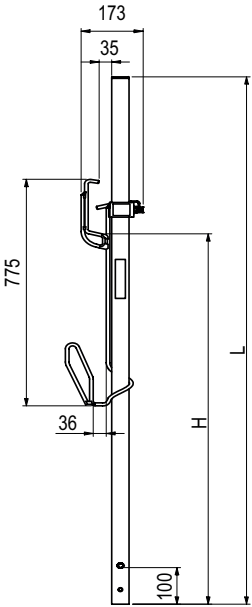
Flexi Safety Posts
4147/4152

System.....SMB System C
Weight.....3.7 kg/4.4 kg
Surface finish.....Aluminium
Conforms to EN 13374 class A, B

Safety Post no.	L	H
4147	1.35 m	1.25 m
4152	1.8 m	1.35 m

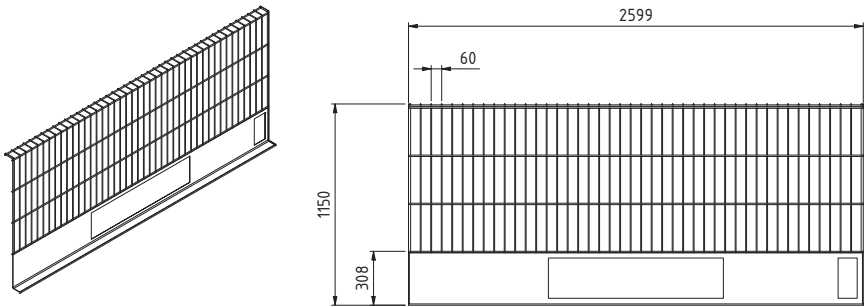
Spare parts list

Item	Part no.	Information
1	1131	Cloxy
2	11808	SMB Holder Body
3	100175	M12 Hex Screw
4	10520	Clamp
5	100536	Plastic Plug, PE-HD



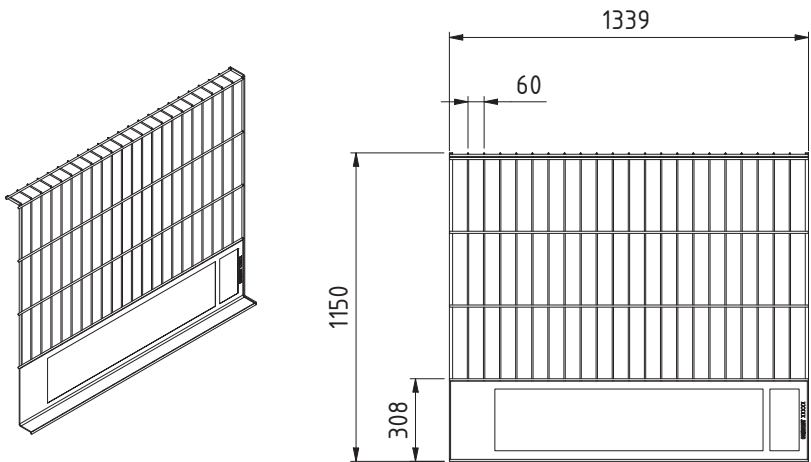
Steel Mesh Barrier Mk II 3203

Registered design
System..... SMB System
Weight.....19.4 kg
Surface finish.....Powder coated
Conforms to EN 13374 class A, B, C



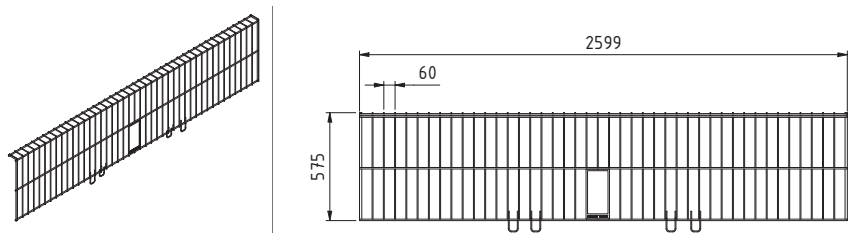
Steel Mesh Barrier 1.3 m Mk II 3204

System..... SMB System
Weight.....10.5 kg
Surface finish.....Powder coated
Conforms to EN 13374 class A, B, C



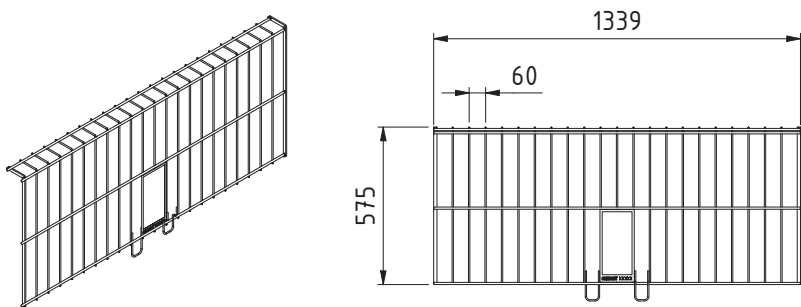
Steel Mesh Barrier Make-Up 2.6 m Mk II 3217

System.....SMB System
Weight.....9.3 kg
Surface finish.....Powder coated
Conforms to EN 13374 class A, B



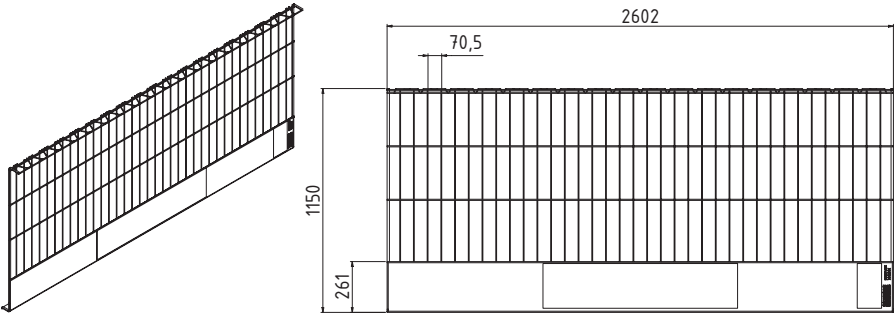
Steel Mesh Barrier Make-Up 1.3 m Mk II 3218

System.....SMB System
Weight.....5 kg
Surface finish.....Powder coated
Conforms to EN 13374 class A, B



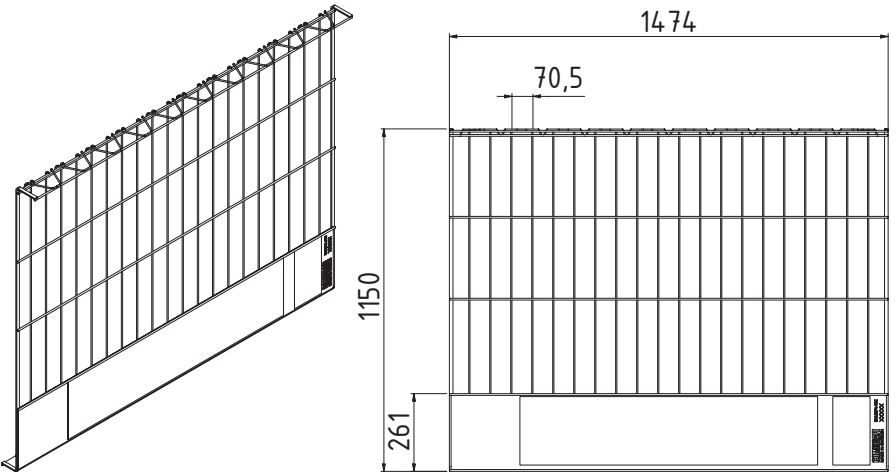
Steel Mesh Barrier Lightweight Class ABC 2.6m 3240

Registered design
System.....SMB System
Weight.....14.2 kg
Surface finish.....Powder coated
Conforms to EN 13374 class A, B, C



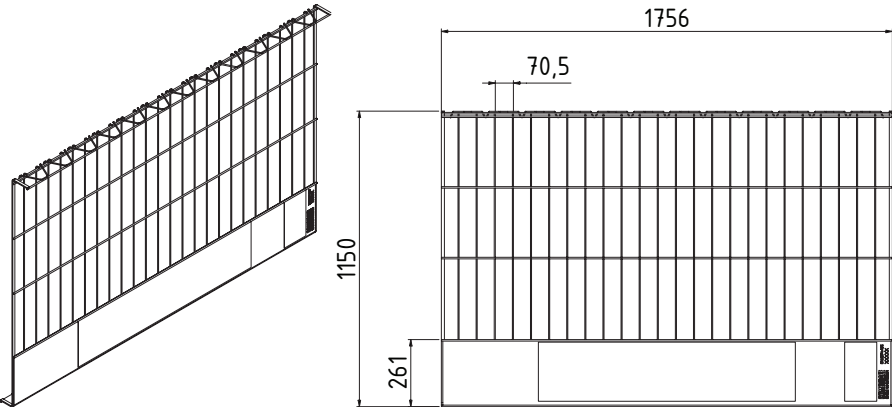
Steel Mesh Barrier Lightweight Class ABC 1.5 m 3241

Registered design
System.....SMB System
Weight.....8.7 kg
Surface finish.....Powder coated
Conforms to EN 13374 class A, B, C



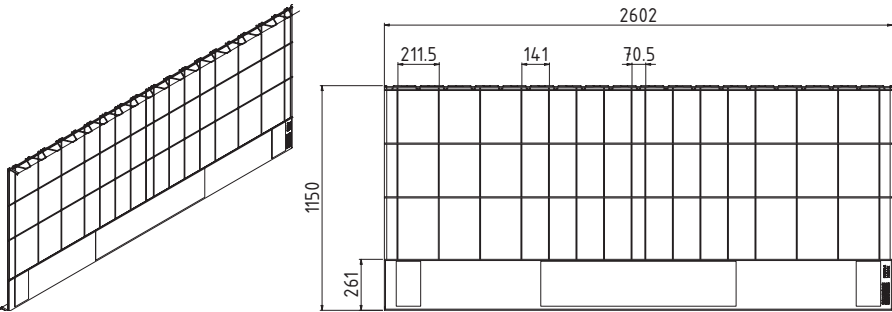
Steel Mesh Barrier Lightweight Class ABC 1.8 m 3242

Registered design
System.....SMB System
Weight.....10 kg
Surface finish.....Powder coated
Conforms to EN 13374 class A, B, C



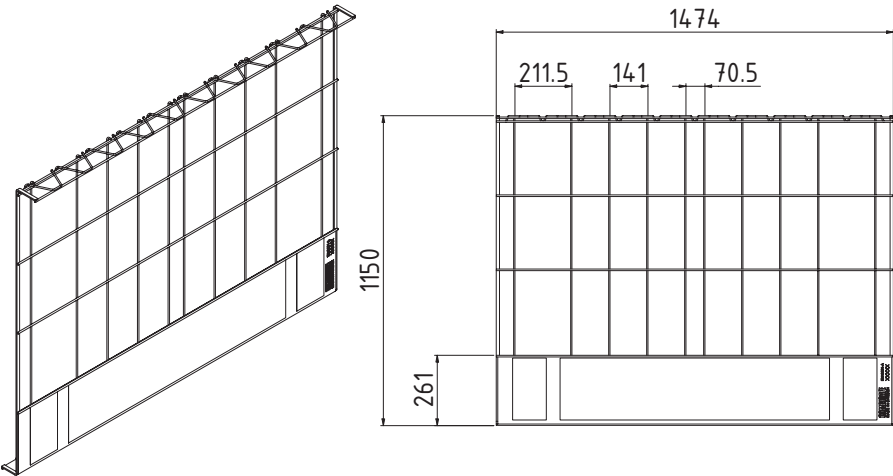
Steel Mesh Barrier Lightweight Class A 2.6 m 3245

Registered design
System.....SMB System
Weight.....12.2 kg
Surface finish.....Powder coated
Conforms to EN 13374 class A



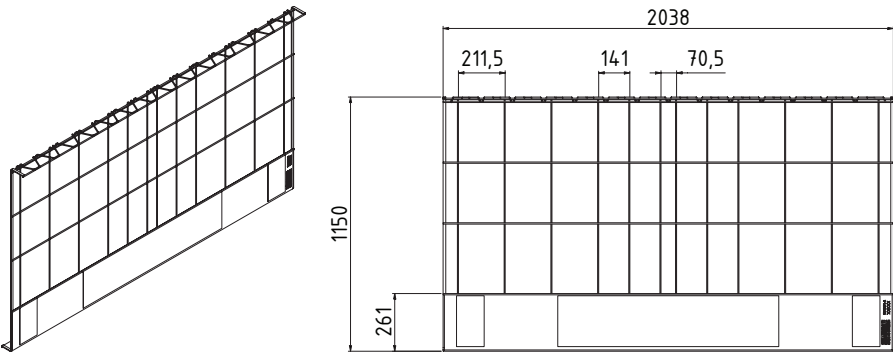
Steel Mesh Barrier Lightweight Class A 1.5 m 3246

Registered design
System.....SMB System
Weight.....7.8 kg
Surface finish.....Powder coated
Conforms to EN 13374 class A



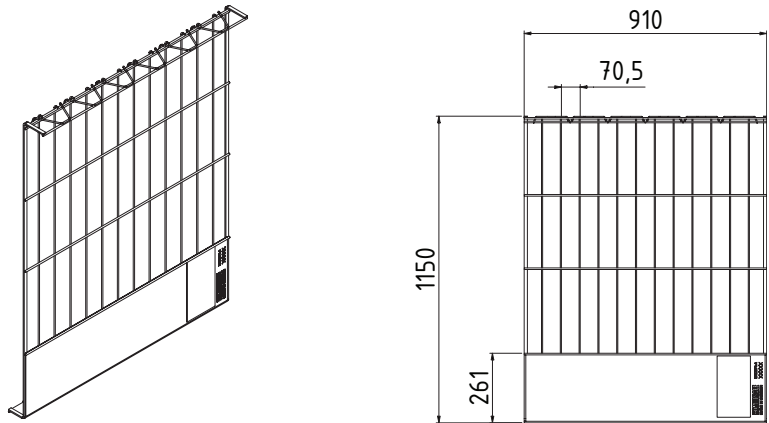
Steel Mesh Barrier Lightweight Class A 2.0 m 3247

Registered design
System.....SMB System
Weight.....10.1 kg
Surface finish.....Powder coated
Conforms to EN 13374 class A



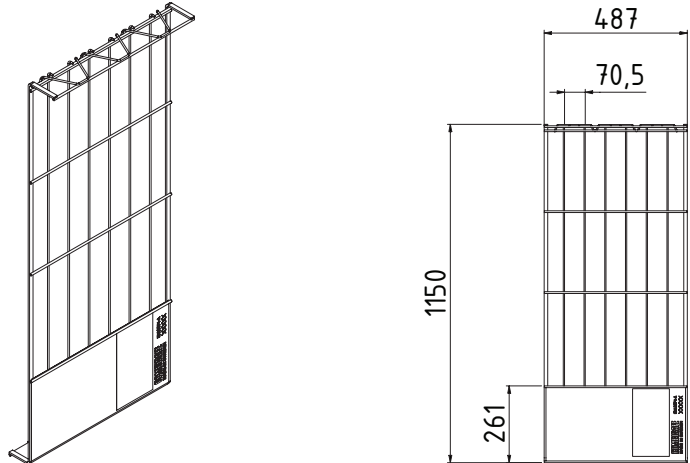
Steel Mesh Barrier Lightweight Class A 0.9 m 3248

Registered design
System.....SMB System
Weight.....5.7 kg
Surface finish.....Powder coated
Conforms to EN 13374 class A



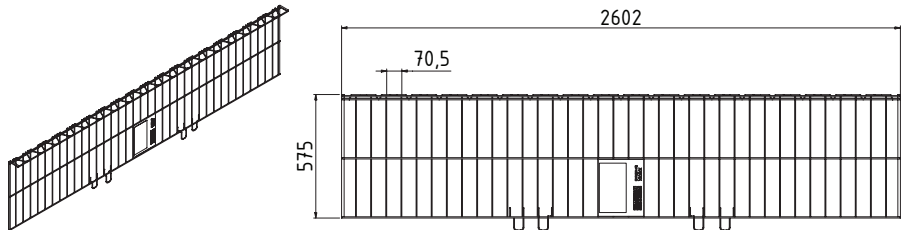
Steel Mesh Barrier Lightweight Class A 0.5 m 3249

Registered design
System.....SMB System
Weight.....3.6 kg
Surface finish.....Powder coated
Conforms to EN 13374 class A



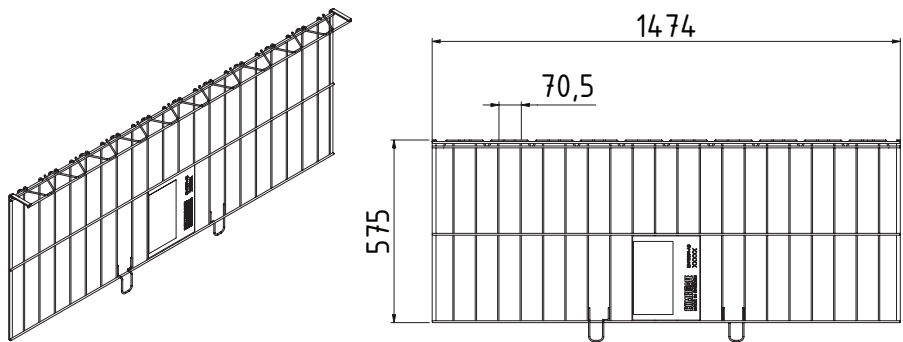
Steel Mesh Barrier Lightweight Make-Up 2.6 m 3260

Registered design
System..... SMB System
Weight.....7 kg
Surface finish.....Powder coated
Conforms to EN 13374 class A, B



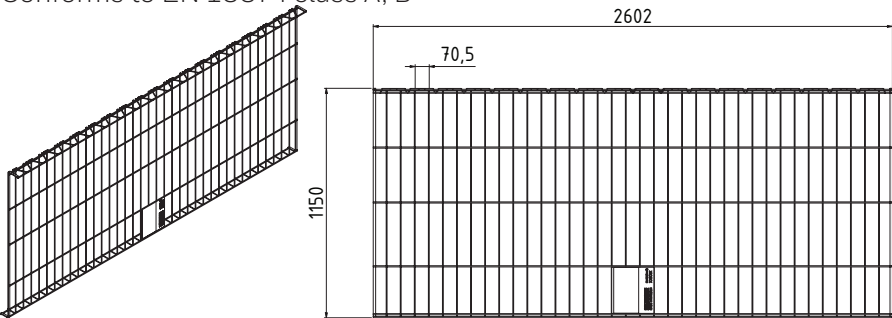
Steel Mesh Barrier Lightweight Make-Up 1.5 m 3261

Registered design
System..... SMB System
Weight.....4.4 kg
Surface finish.....Powder coated
Conforms to EN 13374 class A, B



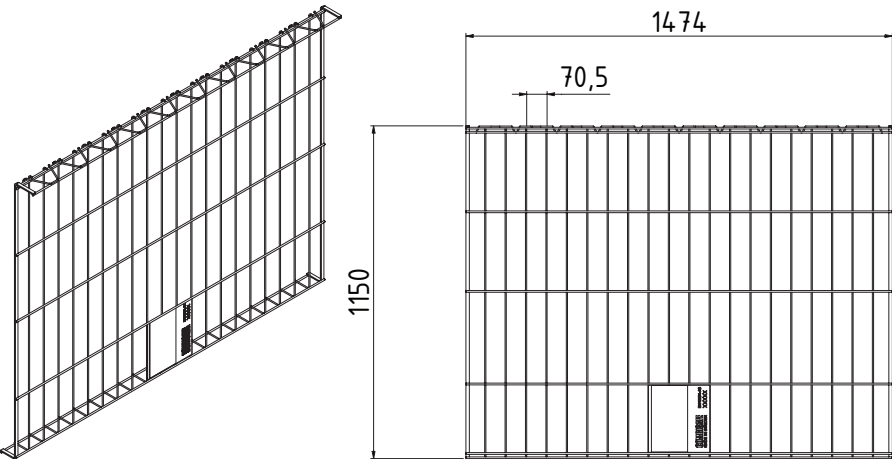
Steel Mesh Debris Barrier Lightweight 2.6 m 3266

Registered design
System..... SMB System
Weight..... 11.7 kg
Surface finish..... Powder coated
Conforms to EN 13374 class A, B



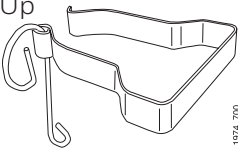
Steel Mesh Debris Barrier Lightweight 1.5 m 3267

Registered design
System..... SMB System
Weight..... 7.3 kg
Surface finish..... Powder coated
Conforms to EN 13374 class A, B



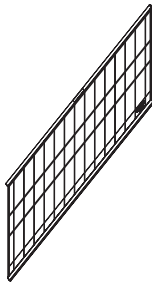
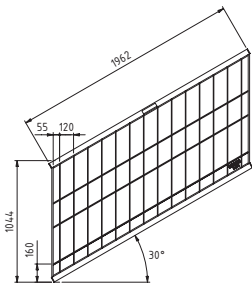
Barrier Clip 3220

For Steel Mesh Barrier and Steel Mesh Barrier Make-Up
System.....SMB System C
Weight.....0.1 kg
Surface finish.....Hot-dip galvanized



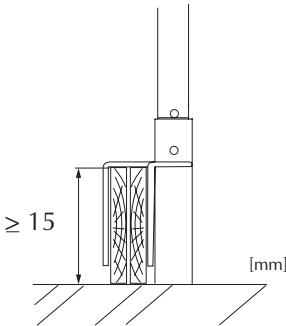
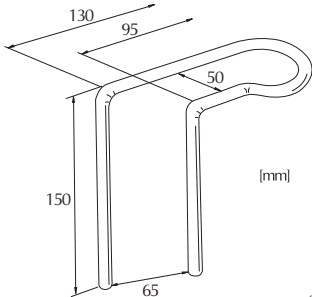
Steel Mesh Barrier Stair 3226

Registered design
System.....SMB System
Weight.....14.1 kg
Surface finish.....Powder coated
Designed for staircase slopes of 30° but also works within +/- 5°Conforms
to EN 13374 class A



Toeboard Holder 4110

System.....SMB System C
Weight.....0.5 kg
Surface finish.....Hot-dip galvanized
Conforms to EN 13374 class A

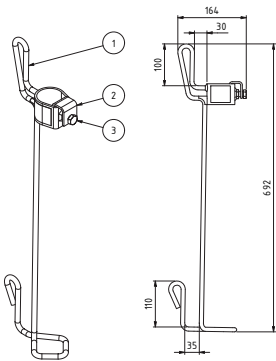


Steel Mesh Barrier Holder 3222

System.....SMB System C
Weight.....1.3 kg
Surface finish.....Powder coated

Spare parts list

Item	Part no.	Information
1	10518	SMB Holder Body
2	10520	Clamp
3	100175	M12 Hex Screw

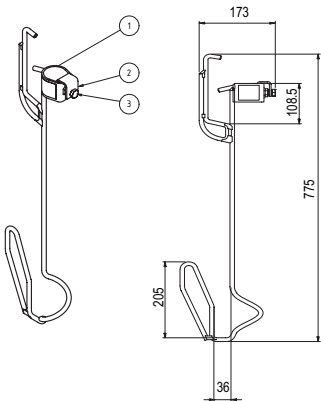


Steel Mesh Barrier Holder 3252

System.....SMB System C
Weight.....1.6 kg
Surface finish.....Powder coated

Spare parts list

Item	Part no.	Information
1	11808	SMB Holder Body
2	10520	Clamp
3	100175	M12 Hex Screw

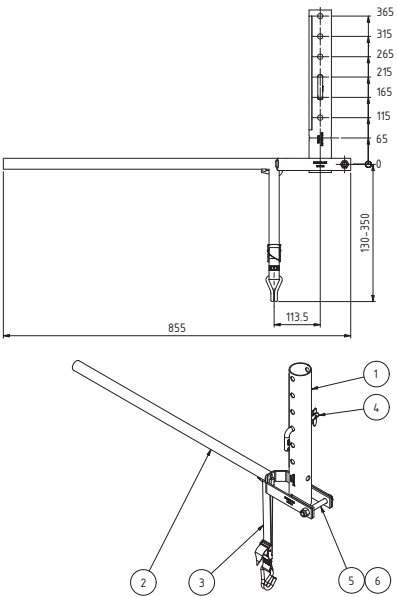


Steel Mesh Barrier Adjuster 3224

System..... SMB System
Weight..... 2.6 kg
Surface finish..... Hot-dip galvanized

Spare parts list

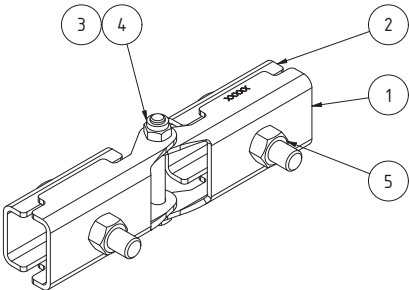
Item	Part no.	Information
1	10525	
2	10526	
3	10527	Fastening strap with hook
4	10528	
5	100200	
6	100025	



Steel Mesh Barrier Hinge 3225

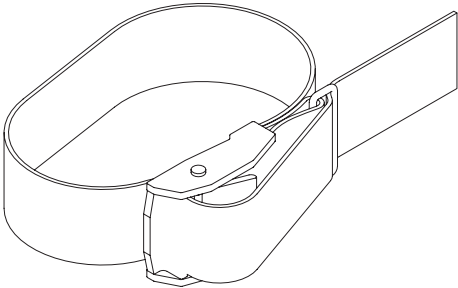
Registered design
System.....SMB System S
Weight.....0.7 kg
Surface finish.....Electro galvanized

Item	Part no.	Information
1	10534	
2	10536	
3	100206	
4	100126	
5	100090	



Combistrap 100335

System.....SMB System
Length.....400 mm



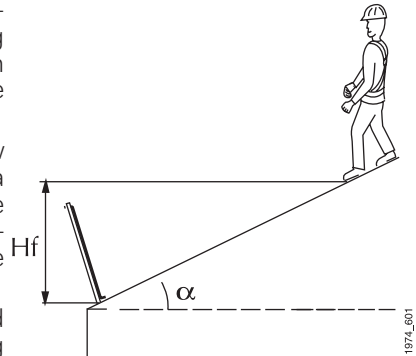
Handling

Selection and dimensioning

Classification

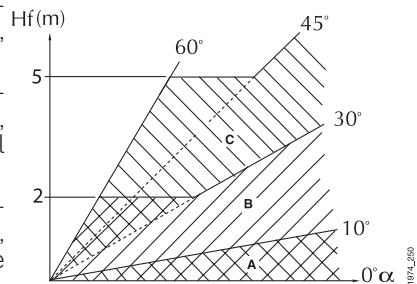
Temporary edge protection is specified in EN 13374 into three different classes, depending on the application and the likely load.

- Class A refers to a static load corresponding to a person leaning against/holding the edge protection or walking/stumbling against the protection.
- Class B refers to a static and low dynamic load corresponding to a person leaning against/holding the edge protection or walking/stumbling against it or falling against the protection down a sloping surface.
- Class C refers to a high dynamic load corresponding to a person falling down a steeply sloping surface



Each Class is recommended for use with a range of roof slopes and potential fall heights.

- Class A recommended for a working surface with a slope of α , that is 0 – 10°.
- Class B recommended for a working surface with a slope of α , that is 0 – 30°, or up to 60°, if the fall height, H_f , does not exceed 2.0 m.
- Class C recommended for a working surface with a slope of α , that is 30 – 45°, or up to 60°, if the fall height, H_f , does not exceed 5.0 m.



Select products taking the needs of the workplace into consideration. Some products can be used in several classes, but the conditions for their usage then vary.

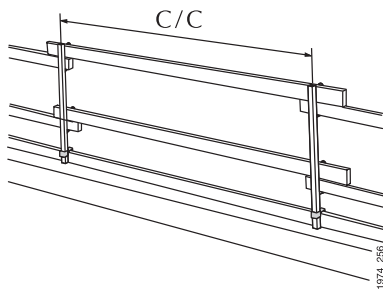
Distance between Safety Posts

Timber guardrails

- Timber guardrails may only be used on class A edge protection.
- The required Timber guardrails quality is at least C24.

Max. c/c spacing between Safety Posts is:

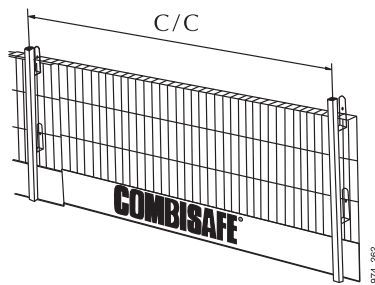
- 2.4 m for timber guardrails of 45x95 mm.
- 2.0 m for timber guardrails of 30x150 mm.



Steel Mesh Barrier

Max. c/c spacing between Safety Posts is:

- 2.4 m for Steel Mesh Barrier in class A and B.
- 1.2 m for Steel Mesh Barrier in class C.



Steel Mesh Barrier Stair

Max. c/c spacing between Safety Posts is:

- 1.9 m for Steel Mesh Barrier Stair.

Framed Rail Barrier

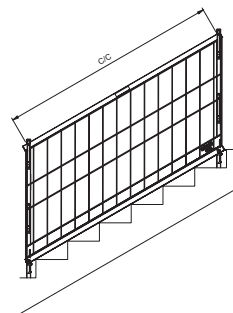
Max. c/c spacing between Safety Posts is:

- 2.4 m

Framed Mesh Barrier

Max. c/c spacing between Safety Posts is:

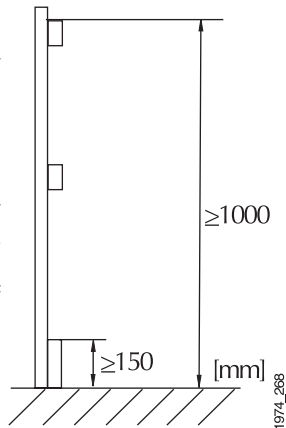
- 2.4 m



Design of temporary edge protection

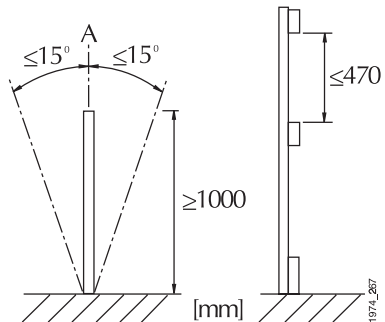
EN 13374 sets the following requirements for Classes A, B, and C, edge protection:

- Edge protection must be at least 1.0 m high, measured perpendicular to the working surface.
- Principal (top) and intermediate guardrails or other means of intermediate protection must be provided.
- A toeboard, if provided, must have a height of at least 150 mm with a maximum gap of 20 mm from the lowest part of the toeboard to the working surface.
- Safety nets used as edge protection must conform to EN 1263-1.



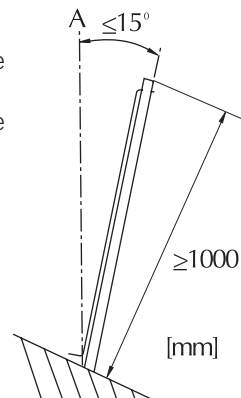
Class A design

- The edge protection may not deviate from the vertical line A by more than 15° .
- The edge protection openings may not be more than 470 mm in one direction, when intermediate guardrails are used.
- The edge protection openings may not be more than 250 mm in one direction, when there is no intermediate guardrail.



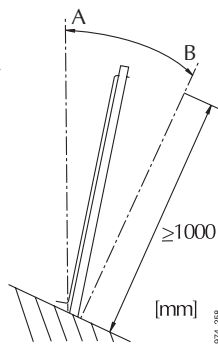
Class B design

- The edge protection may not deviate from the vertical by more than 15° outwards or inwards.
- The edge protection openings may not be more than 250 mm in one direction.



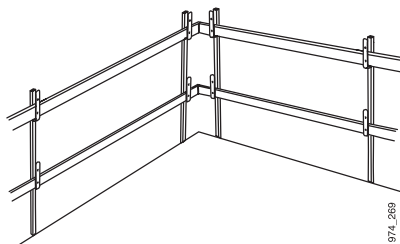
Class C design

- The edge protection must be between the vertical line A and perpendicular to the working surface B.
- The edge protection openings may not be more than 100 mm in one direction.



Corners

The attachments are designed to resist loads in one primary direction. For this reason, Combisafe always recommends the use of two Safety Posts in the corners, one in each direction.



Overhang

The maximum permitted overreach of the SMB or FRB is max. 200 mm. This presupposes that the guardrail or Steel Mesh Barrier or Framed Barrier is connected to the Safety Post. Barrier must be secured for uplift if used with overreach more than 150 mm. For product 4725 Class B and C, overreach of 200 mm is allowed if placed towards a solid structure, or two barriers against each other.

Wind load

Maximum wind load

The edge protection system can withstand a peak wind velocity pressure of 600 N/m². This is equivalent to a peak wind velocity of approximately 32 m/s.

— WARNING! —

Should the wind speed exceed this amount then the arrangement may need to be recalculated to determine its fitness for purpose. Adjustments may need to be made to the arrangement following calculations.

Maximum working wind conditions

The edge protection systems can withstand a peak wind velocity pressure of 200 N/m² under working conditions. This is equivalent to a peak wind velocity of approximately 18 m/s.

— WARNING! —

Should you increase the effective area of the edge protection, for example by using scaffold sheeting or plywood, the load at a given wind strength will increase. Never make changes without first checking that the permitted wind velocity pressure is not exceeded.

Ice and snow

The temporary edge protection system is not designed for exposure to static or dynamic loads resulting from ice and snow. Always keep edge protection free from ice and snow.

Assembly

Fastening

Methods to secure the attachments to the building structure, refer to relevant TI sheets. Loads in TI sheets are design loads, including the partial safety factor $\gamma_F = 1,5$.

Important

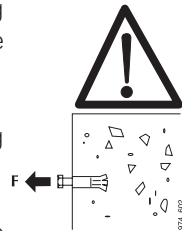
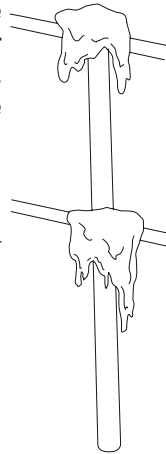
Evaluate all forces affecting the fixings and the building structure.

Fasteners

Always follow the manufacturer's instructions for the selection and installation of all fixings and anchors.

Note

It is important to take into consideration concrete or timber quality, and the distance to edges between fixings etc. aspects that might affect strength.

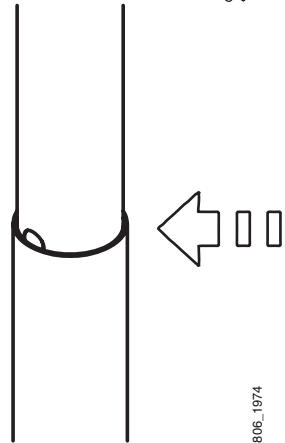
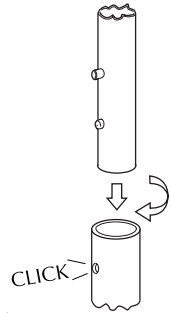


197A_002

Safety Posts

General

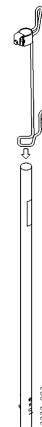
1. Insert the Safety Post in the attachment with the guardrail holders facing inwards.
2. Push the Safety Post down into the attachment, Cloxy automatically locks in the hole on the attachment.
 - The Safety Post can be set lower by removing of pin 100122 and removing Cloxy and pushing the post down.
 - The Safety Post can be set lower by pressing in the Cloxy-button and pushing the post down.
 - When using Cast-In Sleeves, the length of the Sleeve must be set so that the Safety Post or the Safety Post Extender is inserted at least 100 mm into the concrete.
 - The Plastic Plug in the bottom of the Cast-In Sleeve reduces the insertion depth and must be taken into consideration when calculating the sleeve length.
 - When inserted in Pre-Cast Attachments, check that the Safety Post or the Safety Post Extender is inserted at least 100 mm into the attachment metal sleeve, unless stated otherwise in product specific information.



806_1974

Steel Mesh Barrier Holder 3222/3252

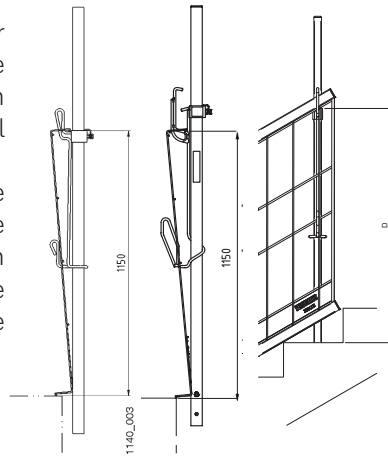
1. Thread the Steel Mesh Barrier Holder onto the top section of the Safety Post.



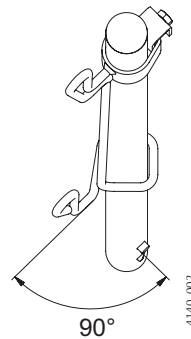
3222_003

2. Set the Steel Mesh Barrier Holder at a suitable height. The top edge of the sleeve should be 1150 mm above the lower edge of the Steel Mesh Barrier.

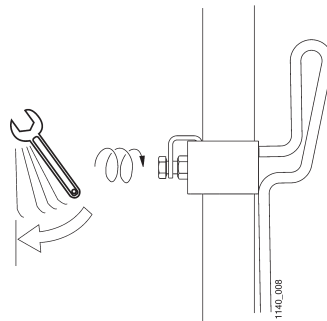
The distance (D) varies between the Sleeve and the lower section of the Steel Mesh Barrier or Steel Mesh Barrier Stair depending on the slope of the staircase and where on the step the Safety Post is positioned.



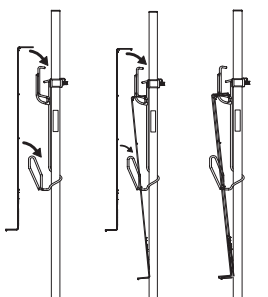
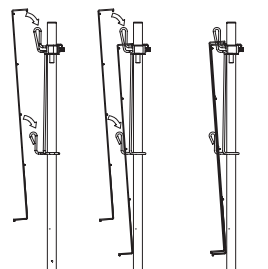
3. The hooks on the Steel Mesh Barrier Holder are to be at right angles to the Cloxy.



4. Tighten the Steel Mesh Barrier Holder's lock screw to minimum 50 Nm.

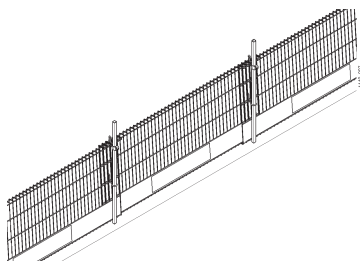
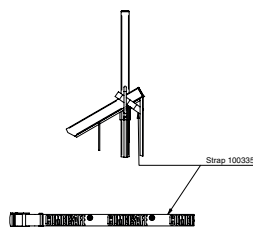


5. Engaging - Fit the Steel Mesh Barrier on the Steel Mesh Barrier Holder by hooking the mesh in the top hook on the Steel Mesh Barrier Holder and the middle horizontal rod on the Steel Mesh Barrier over the lower hook on the Steel Mesh Barrier Holder. On Steel Mesh Barrier Stair the handrail is placed above the upper bracket. The third wire is placed above the lower bracket. It is not always certain that the handrail or third wire rests against the bracket due to the slope of the staircase and the position of the Safety Posts, but it should always be behind it. A vertical wire, or a flat steel bar at the ends of the Steel Mesh Barrier Stair will act as a stop along the direction of the stairs. It may be useful to use the Combistrap, 100335, to minimise the play that can result between the upper bracket and handrail and between the lower bracket and the third wire.

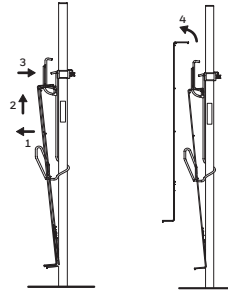


6. Plan the overlap. If one or more of the Steel Mesh Barriers will need to be removed, e.g. to permit delivery of materials, these barriers should be fitted last with the overlaps on top at both ends.

7. Join the Steel Mesh Barriers by overlapping them on the Steel Mesh Barrier Holder. Allow at least 100 mm overlap on each end of the Steel Mesh Barriers. The Steel Mesh Barriers can be overlapped more to give a shorter c/c distance. It may be useful to use the Combistrap, 100335, to minimise the play that can result between the upper hook on the Steel Mesh Barrier Holder and handrail and between the lower hook on the Steel Mesh Barrier Holder and the third wire.

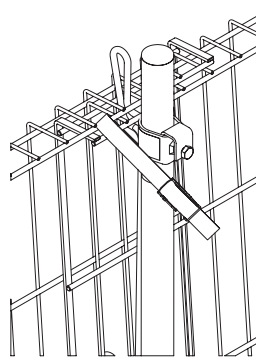


9. Disengaging - 1.pull the barrier,
2.lift the barrier, 3. push the barrier 4.
release the barrier

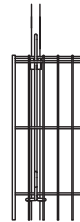


Important

Steel Mesh Barriers must be secured to the Steel Mesh Barrier Holders when installing for Class B requirements. This is achieved using the Combistrap, 100335.



For class C minimum overreach/overlap needs to be two meshes for SMB and one mesh for SMB Lightweight.



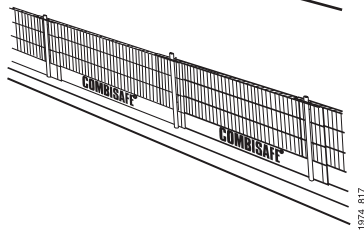
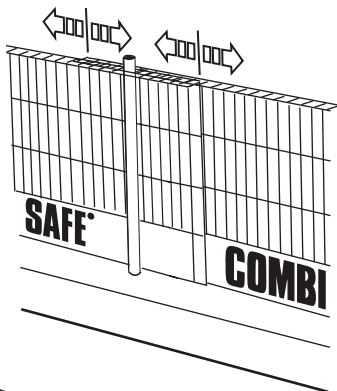
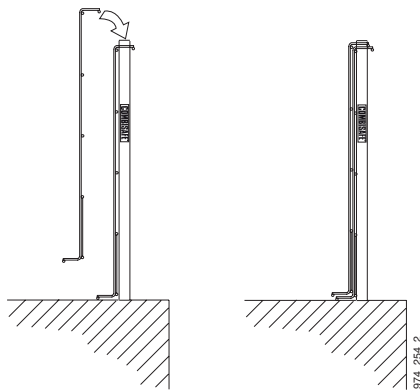
Safety post without holder

1. Set the Steel Mesh Barrier on to the Safety Post by positioning the cranked top section of the Steel Mesh Barrier over the top of the Safety Post.

2. Plan the overlap. If one or more of the Steel Mesh Barriers will need to be removed, for example to permit delivery of materials, these barriers should be fitted last with the overlaps on top at both ends.

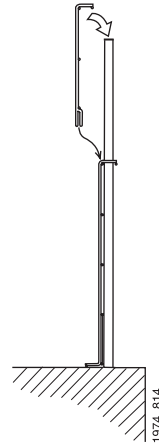
3. Join the Steel Mesh Barriers by overlapping them on the Safety Posts. Also, adjust the length of the Steel Mesh Barrier in the same way. Join the Steel Mesh Barrier Stairs by overlapping them, next to each other, in the bracket.

4. For increased stability use barrier clip reff. Barrier Clip 3220

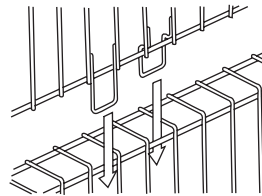


Steel Mesh Barrier Make-Up 3217 & 3218 & 3260 & 3261

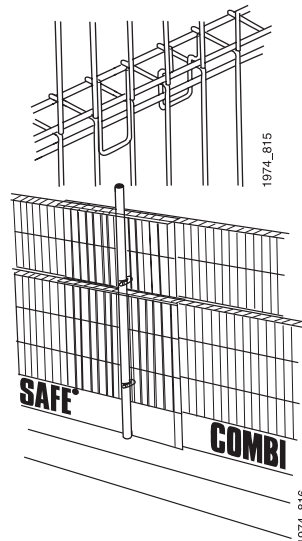
1. Set the Steel Mesh Barrier Make-Up over the Safety Post by hooking the cranked top section of the Steel Mesh Barrier over the top of the Safety Post.



2. Using the guide lugs, press the Steel Mesh Barrier Make-Up down onto the top wire to grip inside and outside the lower Steel Mesh Barrier.

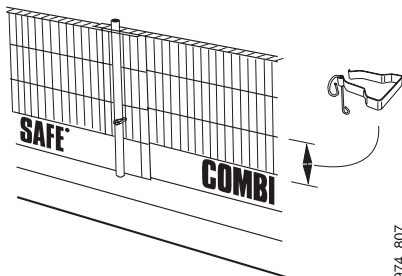


3. Joining and overlapping is carried out as indicated earlier for Steel Mesh Barrier.

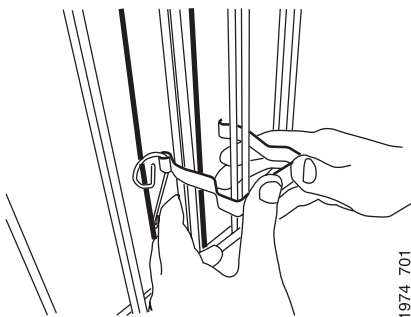


Barrier Clip 3220 & Combistrap 100335

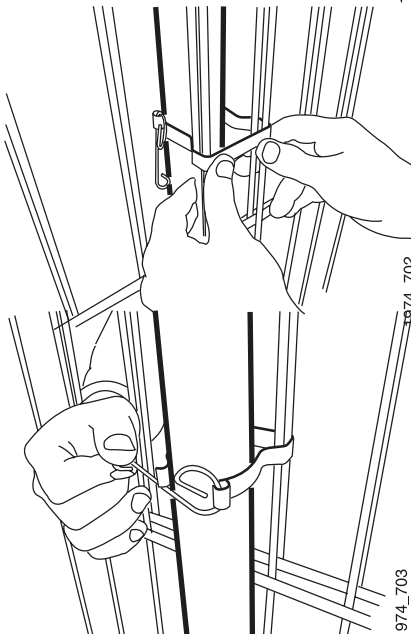
- For extra stability the Barrier Clip 3220 or Combistrap 100335 is available and can be used together with Steel Mesh Barrier and the Steel Mesh Barrier Make-Up. This is normally an advantage when strong winds can occur.
- The Barrier Clip fits all Safety Posts. It is positioned in the lower mesh section, both on the Steel Mesh Barrier and Steel Mesh Barrier Make-Up.



1. Place the Barrier Clip over the wires in the middle of the Safety Post.



2. Press onto the Safety Post until the Barrier Clip snaps in place over the threads and around the Safety Post.

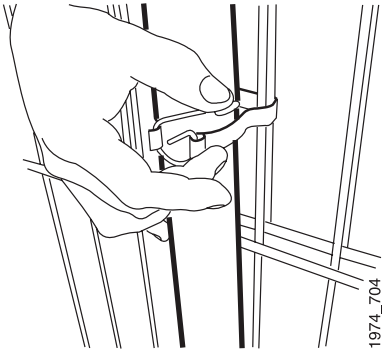


3. Grip the locking spring and turn it around the securing plate.



4. Check that the Barrier Clip is locked.
5. Check that all Barrier Clips are correctly located.

Combistrap 100335 can be used the same way as Barrier Clip.



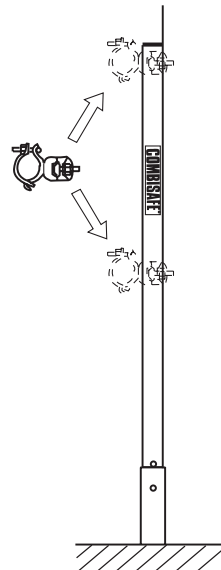
1974_704

Scaffold tubes

— WARNING! —

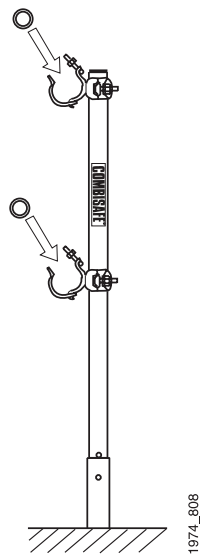
Scaffold tubes may only be installed by a competent person.

1. Check that the distance between the Safety Posts is correct. See Distances between Safety Posts
2. Secure the fittings on the Safety Posts at the correct centers. Check that the opening dimension is correct. See Design of temporary edge protection



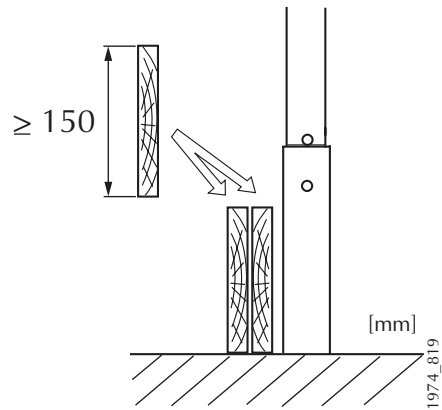
1974_809

3. Place the scaffold tubes in the fittings.



ToeBoard Holder 4110

1. Place the toeboard against the attachment or Safety Post on the inside of the edge protection.



— NOTE —

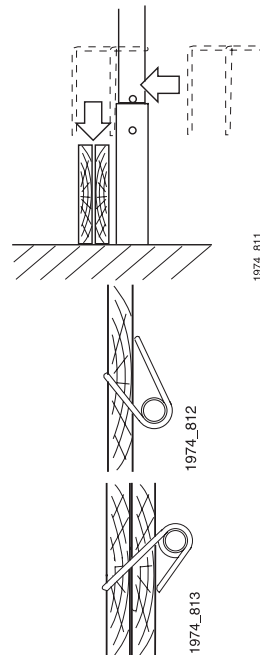
Remember that the toeboard must be at least 150 mm high.

2. Thread the Toeboard Holder onto the Safety Post and down over the toeboard ensuring the Toeboard Holder locks the toeboard onto the attachment or Safety Post.

The Toeboard Holder can be used in two different positions to secure a single toeboard or both toeboards at an overlap.

I. Turn the Toeboard Holder using the short side inwards when there is one toeboard, e. g. an end.

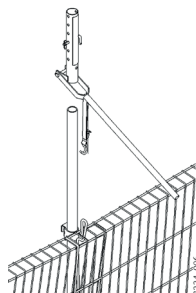
II. Turn the Toeboard Holder using the long side inwards when there are two toeboards, e. g. a joint.



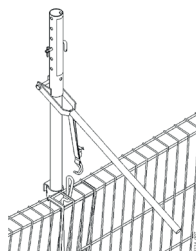
Steel Mesh Barrier Adjuster 3224

Lifting

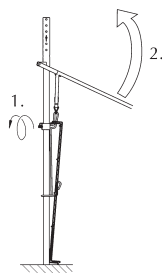
1. Position the Steel Mesh Barrier Adjuster on the Safety Post. Insert the locking pin in an appropriate hole to give a good ergonomical working height for the lever.



2. Hook the hook into the eye on the Steel Mesh Barrier Holder and tighten the strap so that the lever points downwards in a suitable position to lift from.



3. Hold the lever on the Steel Mesh Barrier Adjuster with one hand and loosen the screw to the Steel Mesh Barrier Holder with your other hand. Only loosen the screw approximately 1 turn so that the Steel Mesh Barrier just becomes loose. Lift the lever so that the Steel Mesh Barrier is raised to the required position.



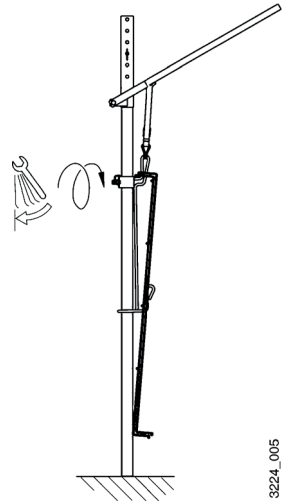
Note

The maximum lift height is approximately 20 cm for each lift. Make an additional lift if the Steel Mesh Barrier needs to be raised further.

— WARNING! —

Always hold the lever when the Steel Mesh Barrier Holder screw is loosened.

4. When the Steel Mesh Barrier is raised, tighten the screw on the Steel Mesh Barrier Holder again, still with one hand on the lever. Tighten the screw to minimum 50 Nm.
5. Continue to lift the Steel Mesh Barriers in sequence, starting at one end and moving on to the next section.

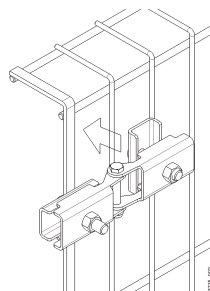


Lowering

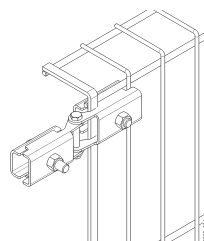
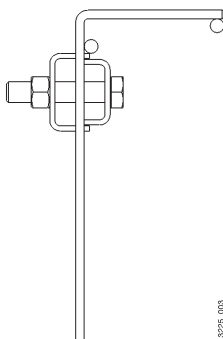
Lower the Steel Mesh Barrier using the same method, starting with the lever in the raised position and then lowering the Steel Mesh Barrier.

Steel Mesh Barrier Hinge 3225

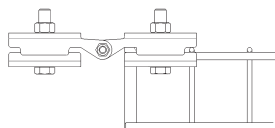
1. Fit the Steel Mesh Barrier Hinge at the top of a Steel Mesh Barrier, as high as possible. Loosen the bolt and turn the clasp 90 degrees and push it through the opening in the mesh.



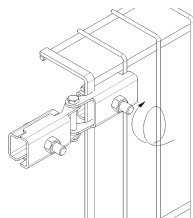
2. Turn the clasp back and tighten it in, checking that the U-section on the clasp aligns of the flanges on the Steel Mesh Barrier Hinge base's U-section.



3. Check that the raised surface on the Steel Mesh Barrier Hinge is positioned in between the vertical rods.



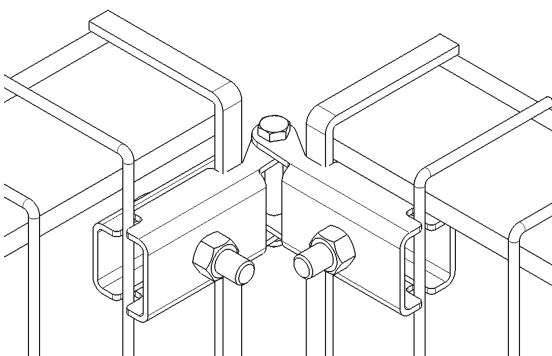
4. Tighten the nut.



5. Join the Steel Mesh Barriers by fitting the other clamp on the Steel Mesh Barrier Hinge in the same way on to the end of the other Steel Mesh Barrier.

Note that the return on the bottom of the second Steel Mesh Barrier will need to sit on top of the return on the first.

6. Fit the other Steel Mesh Barrier Hinge between the mesh just above the toeboard.



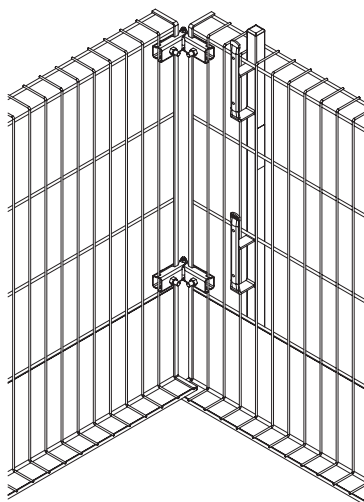
— WARNING! —

The Steel Mesh Barrier Hinge can be placed in the middle of a Steel Mesh Barrier, not just at the end.

For Steel Mesh Barrier Lightweight Hinge can be used only at its ends.

The Steel Mesh Barrier Hinge can also be used to link together the Steel Mesh Barrier Stair at its ends.

The connection of the mesh in a corner can in some situations replace a Safety Post so that only one Safety Post is needed in the corner, check with Combisafe under which circumstances this is allowed.



Checking

The installer should continuously check the edge protection during assembly.

A final inspection must be made once assembly is finished, prior to hand over, as follows:

Edge protection checklist

Check that the edge protection system complies with the requirements of EN 13374 by checking the following:

- the selection of the edge protection corresponds with the required class.
- timber guardrails are made using timber in the right quality class and dimensions.
- scaffold tubes are in the right quality class and dimensions.
- maximum c/c spacing is not exceeded.
- the height of the edge protection is at least 1.0 m.
- principal and intermediate guardrails/intermediate protection are used when a Steel Mesh Barrier or Framed Barrier is not used.
- toeboards with a height of at least 150 mm are used.
- guardrails and toeboards are secured using nails or screws.
- openings in the edge protection do not exceed the requirements.
- attachments are correctly anchored to the building structure.
- Safety Posts are anchored securely into the attachments.
- the edge protection is not subjected to excessive wind loads.

Inspection

Damage report

Edge protection, for example through damage or missing sections, must be reported at once to the site manager for immediate action.

Regular inspection

The edge protection must be inspected regularly while in use. Ideally inspections can be made during normal safety rounds.

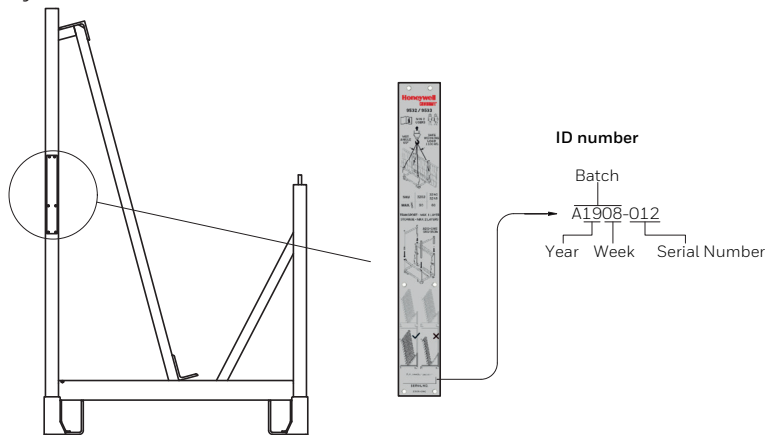
Dismantling

The installation procedure should be performed in the reverse order when dismantling.

1. Remove the guardrails or the Steel Mesh Barrier or Framed Barrier. Pack the Steel Mesh Barrier or Framed Barrier according to next pages.
2. Remove the Safety Post from the attachments by pressing in the button on the Cloxy.
3. Remove the attachments from the building structure.

Packing Steel Mesh Barrier

The Barrier Boxes 9530, 9532 and 9533 are suitable to pack the Steel Mesh Barrier and Steel Mesh Barrier Lightweight. Always read the User Instruction before use. Combisafe accepts no liability for items that have been altered.



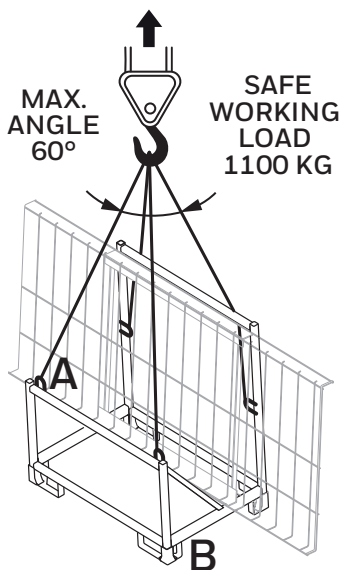
Use

- Use the Barrier box for its intended purpose only, don't stack or load anything other than Combisafe Steel Mesh Barriers or Combisafe Steel Mesh Barrier Lightweight.
- For maximum number of barriers per box refer to the table below. Never load barriers higher than described in the chapter "Stacking barriers in the box".
- Load box with maximum 50 Make-Ups and only in the ways presented in the chapter "Stacking barrier Make-Ups in the box".
- Secure barriers or Make-Ups in box from sliding or overturning.
- Don't move or lift the box by hand.
- Use at least two straps around box and barriers with minimal static load performance of 500 kg during any transportation of the box.

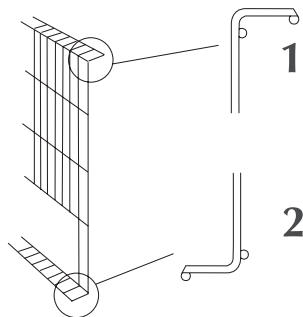
Steel Mesh Barrier	Steel Mesh Barrier Lightweight
Max 50 pcs	Max 60 pcs

Lifting by crane

- Use a suitable 4-legged lifting chain or lifting slings with permissible load (SWL) min. 1100 kg.
- Safe working load for 9530 is 1020kg, for 9532 is 1100kg
- The maximum lift angle between diagonally opposite parts is 60°.
- Fasten the chain hooks into the lift loops (A) in the corners of the box.
- When lifting with a sling, attach the sling around the box through the feet (B) so that the sling does not slide together.
- Avoid sudden stops or accelerations when lifting or lowering a loaded box.

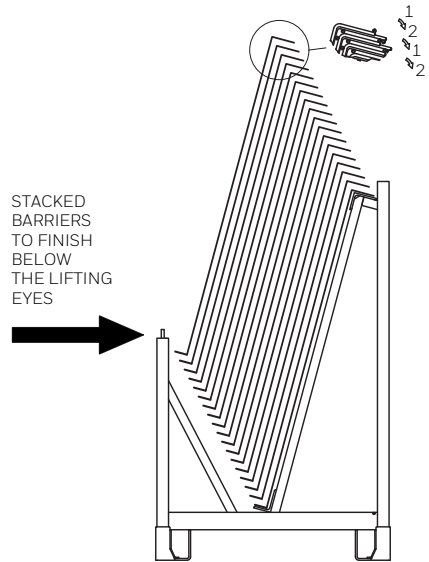
**Lifting with forks**

- The box can be lifted from all sides with forks.
- When lifted from long side, preferably insert forklift forks inside the feet (2) windows to gain more stability during transportation, make sure that forks are pushed in enough, so the box supports on both sides.
- When lifting from short side, make sure that the barriers are not in the way. Place forks centered on box and make sure that forks are pushed in enough, so the box supports on both sides.



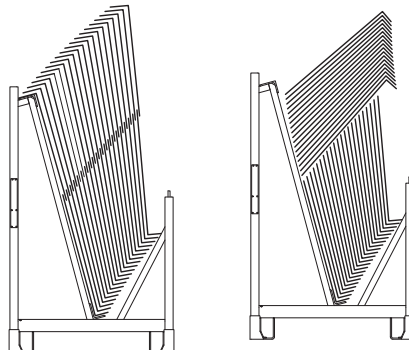
Stacking barriers in the box

- It is important to stack the barriers correctly in the box. Otherwise the barrier stack will become too high and unstable.
- Place every second barrier in opposite direction, i.e. every second barrier with the toeboard upwards.
- Make sure that the barriers are centered in the box to avoid overturning.
- It is recommended for frequent loading and unloading of barriers into the boxes to be carried out by two persons or to use lifting equipment.
- Stacked barriers must finish below the lifting eyes.
- Refer to current Health and Safety regulations applicable to country of use to ensure compliance.



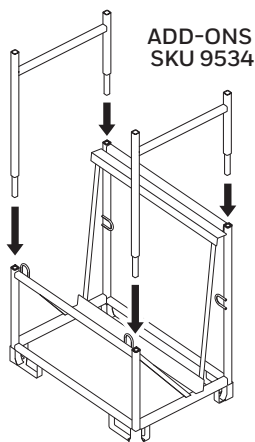
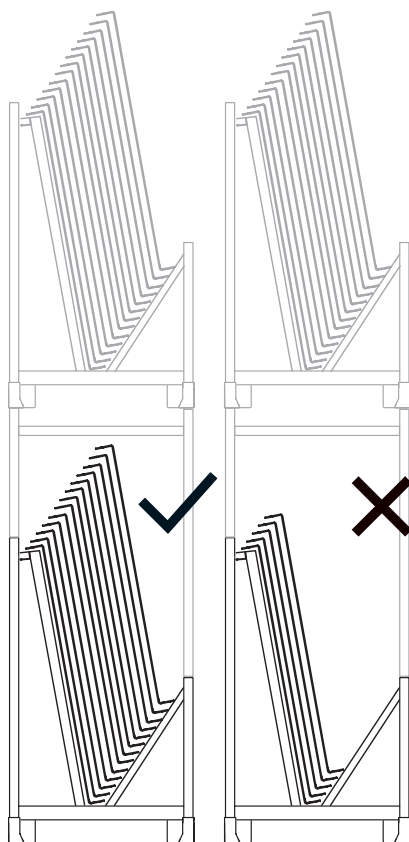
Stacking barrier Make-Ups in the box

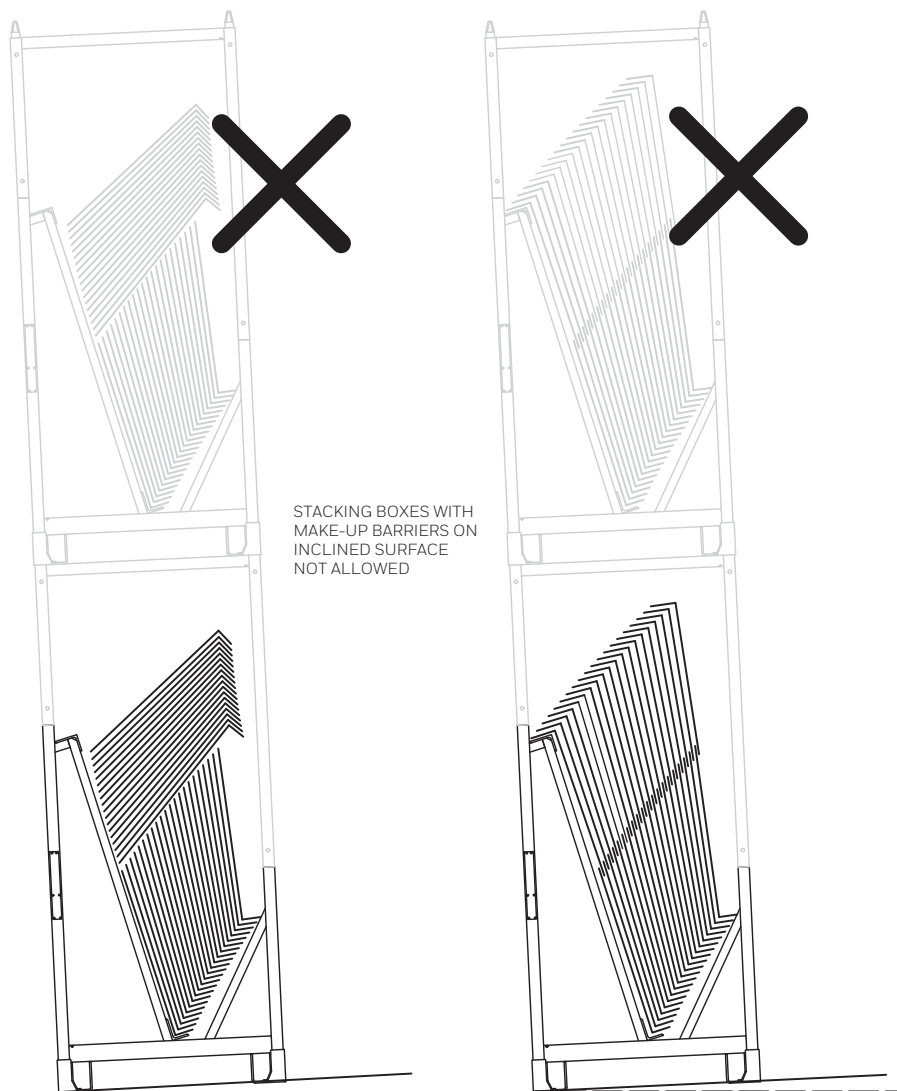
- It is important to stack the Make-Ups correctly in the box. Otherwise the stack will become too high and unstable.
- For stacking barrier Make-Ups, use one of two recommended configurations, see figure below.
- Make sure that the Make-Ups are centered in the box to avoid overturning.

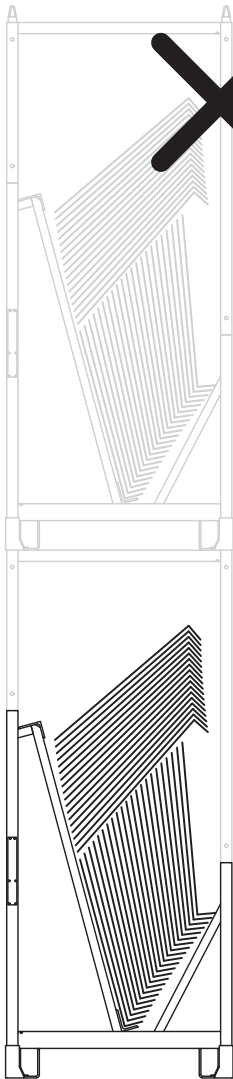


Stacking barrier boxes

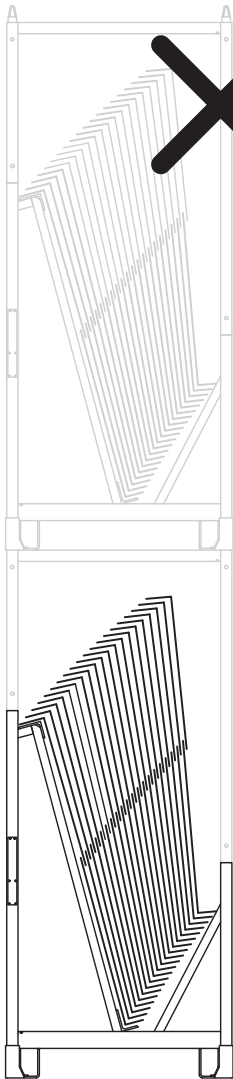
- Stacking is allowed only for storage, not for transportation and only for 9532/9533.
- Install Add-ons 9534 to stack the barrier boxes.
- Stack maximum of two boxes on top of each other. Bottom barrier box must be always full of barriers.
- Stacking of two empty barrier boxes is allowed.
- Ensure that the boxes are sitting on an even, horizontal and stable surface; make sure there are no obstacles under the feet of the box.
- Ensure that the feet and upper part of add-ons are not bent or damaged and that they fasten correctly, so that the boxes do not slide.
- The box is not intended to withstand impact from any object.
- Wind speed and inclination limitation for barrier box stacking:
 - For inclination of the surface 0%-2% max wind speed 15 m/s
 - For inclination of the surface 2%-5% max wind speed 13 m/s
 - Stacking of the boxes on a surface with inclination greater than 5% and under wind speed higher than 15m/s is not allowed







STACKING BOXES WITH
MAKE-UP BARRIERS
ONLY ALLOWED
INDOORS



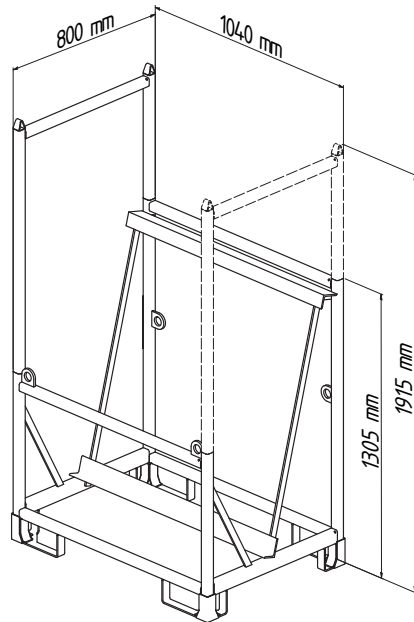
Safety precaution

Before every use

- Always check the Barrier Boxes for any signs of damage or visible deformation.
- Don't use boxes that don't pass checks according to the following checklist:

Checklist

- ☐ Crack free and notch-free welds
- ☐ No deformation
- ☐ No visible corrosion
- ☐ No noticeable damage
- ☐ Visible Combisafe marking and ID number
- ☐ No deformed or damaged lifting eyes
- ☐ No sharp edges



Annual inspection

It is recommended that the box is inspected at least once a year by a trained competent person unless stated otherwise in country of use.

Storage

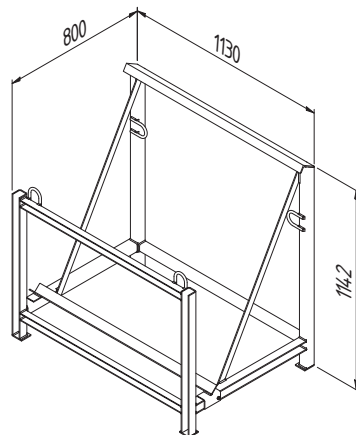
Store the Barrier Box in a dry and well-ventilated place, protected from the weather and from all corrosive substances.

Repairs

May only be carried out by the manufacturer.

Scrapping

When the Barrier Boxes have failed their safety inspection, they may be used as scrap steel and can be recycled as raw material.

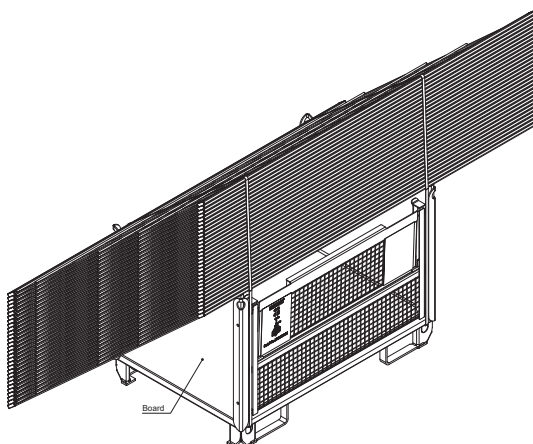
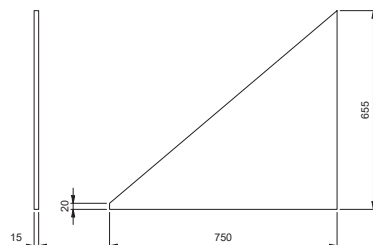
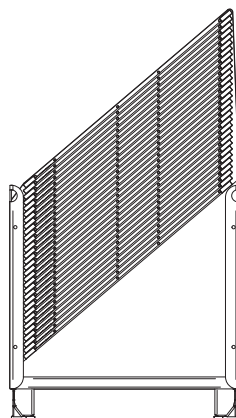


Packing Steel Mesh Barrier Stair

The Multibox, 9540, with two sawn wooden boards is suitable to pack the Steel Mesh Barrier Stair. Maximum number of Steel Mesh Barrier Stair that can be packed in the Multibox is 30 barriers.

The wooden boards are in the shape of a triangle. Choose 15 mm boards. See the image for suitable sawing dimensions.

Remove the ends of the Multibox and place the wooden boards against the angled end posts. Now pack the Steel Mesh Barrier Stair so that the lower edge of the Steel Mesh Barrier Stair is supported by both end posts along one side of the Multibox. Preferably choose the side without the side hatch, you can then store material in the space under the Steel Mesh Barrier Stair after packing. See the images. Secure the package with two steel bands.



Maintenance

Safety checks

A safety check should be made on all products before being used again. The check is ideally made after use, before the products are placed in the stores. The safety check must be carried out by qualified personnel. Combisafe recommends that the safety check is only to be carried out by persons trained by Combisafe.

Check that:

- no parts are cut or joined.
- no parts are bent to excess or in any other way deformed.
- no new drill holes have been made.
- no corrosion has occurred that can affect strength.
- no visible cracks have occurred in welds or the material.
- parts fit together. Use a gauge.

Reconditioning

Products rejected during safety checks can be reconditioned. Reconditioning must be carried out by qualified personnel. Combisafe recommends that reconditioning is only to be carried out by persons trained by Combisafe.

Recondition according to the following guidelines:

- deformed aluminum parts shall not be mended
- for steel parts, only cold processing is permitted.
- clean the parts.
- replace damaged parts that cannot be reconditioned.
- scrap parts that after straightening show signs of fracture or that do not reach a satisfactory condition after reconditioning.

Scrapping

Products identified during the safety checks and which have not been possible to recondition should be discarded and destroyed so that they cannot be used.

Most Combisafe products are manufactured of steel and can be scrapped as steel in their entirety. There are some exceptions. Check with Combisafe in the event of uncertainty.

Storage

Store Combisafe products in a dry, ventilated area protected from environmental effects, e. g. weather and corrosive substances.

Honeywell

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