

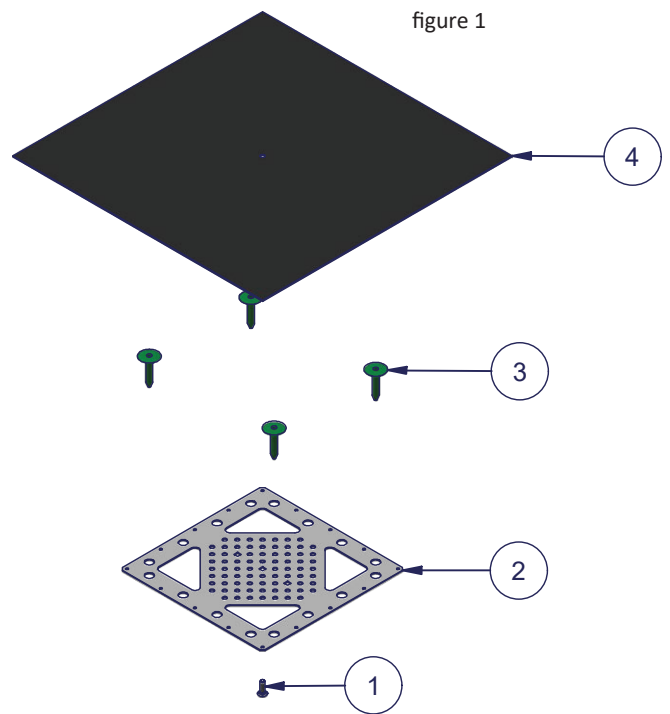
Pisko® Safeguard guardrail system installation on waterproofing membrane roof

Pisko Safeguard is a system that prevents access to hazardous areas and can also be used as an attachment point for safety ropes. When installing, follow the product-specific recommendations of the manufacturers of bitumen membranes and other suitable waterproofing membranes, as well as, for example, the recommendations for product installation in the Finnish Roofing Association's publication Toimivat Katot (Functional Roofs). The railing must always be secured with at least three fasteners/posts. The Safeguard guardrail system can be installed at a maximum slope of 6° perpendicular to the railing.

INSTALLATION

Install the mounting plates on the roof according to the separate installation instructions for Pisko mounting plate for waterproofing membrane roof. In railing installations, each mounting plate must be fastened to the substructure using suitable, corrosion-resistant fasteners.

Part	Description
1	Mounting Plate Bolt 10x30mm, A2 (662)
2	Mounting plate for waterproofing membrane roof (576)
3	Insulation fastener
4	Top membrane



Distance between the mounting plates for the handrail posts must not exceed 1500 mm.

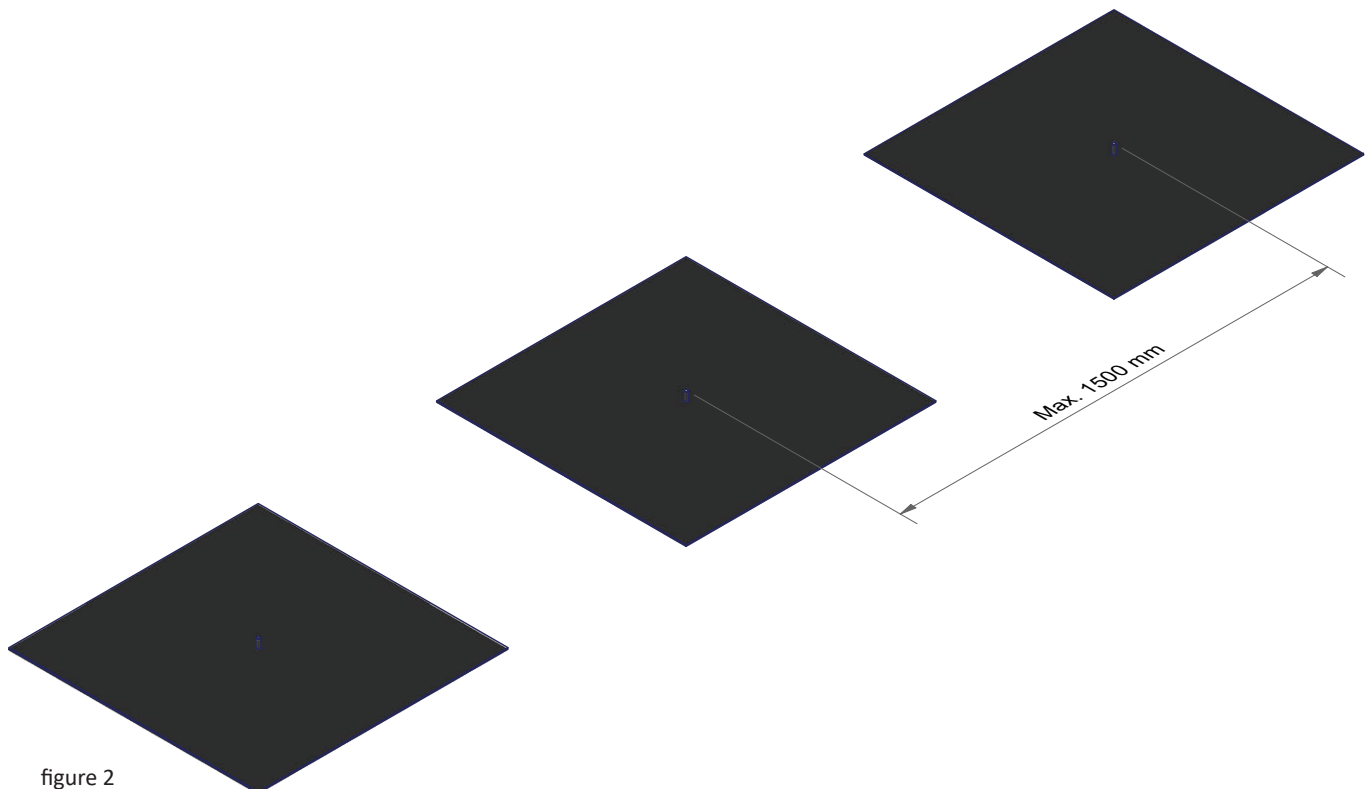


figure 2

Place seals on the bolts of the mounting plates.

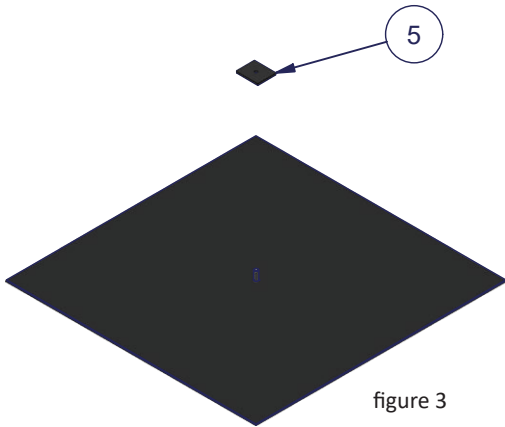


figure 3

Place the 2+1 seal in the holes at the front of the post bracket. Secure the post bracket with an M10 nut and tighten to a torque of 10 Nm.

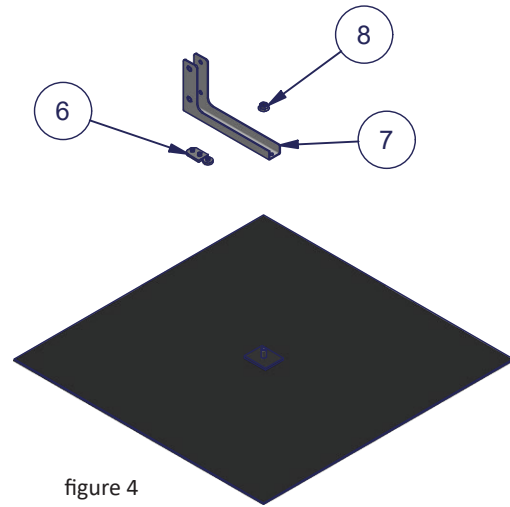


figure 4

Part	Description
5	Anchor point sealant, EPDM (675)
6	Pisko 2+1 seal (582)
7	Safeguard post bracket (772)
8	M10 Nut, A2 (662)
9	Safeguard post (770)
10	M8x40 Flange screw (733)
11	Safeguard handrail bracket (771)

Place the post in the post bracket and tighten the two M8x40 flange screws to a torque of 10 Nm.

The marking notch at the other end of the post should face downwards! This will ensure that the handrails are set at the correct height.

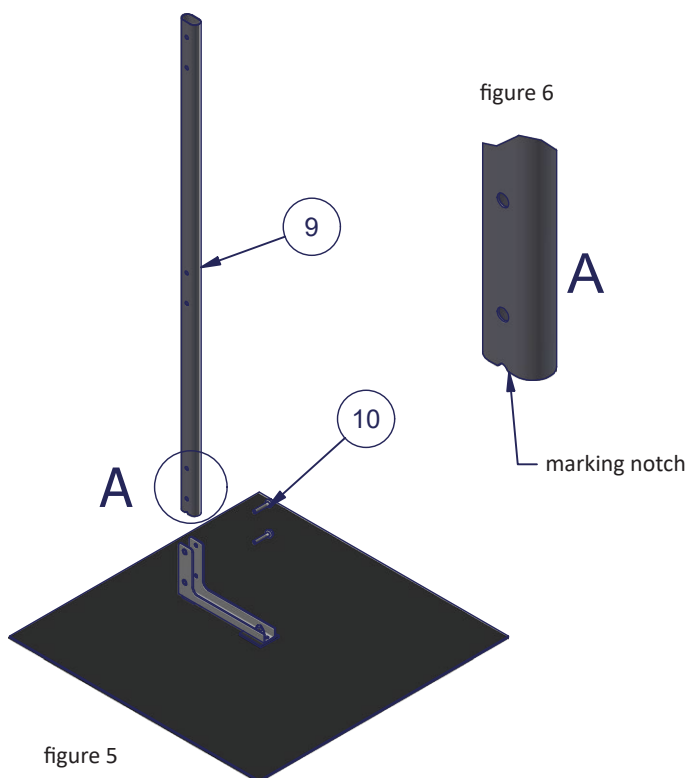


figure 5

Place the handrail brackets on the side of the post as shown in the figure 8, with threaded collars on the outside. Insert the M8x40 flange screws into the lower holes. Do not tighten the screws completely. Handrail bracket bottom will remain against the post (figure 9), making it easy to drop the handrails into place from above.

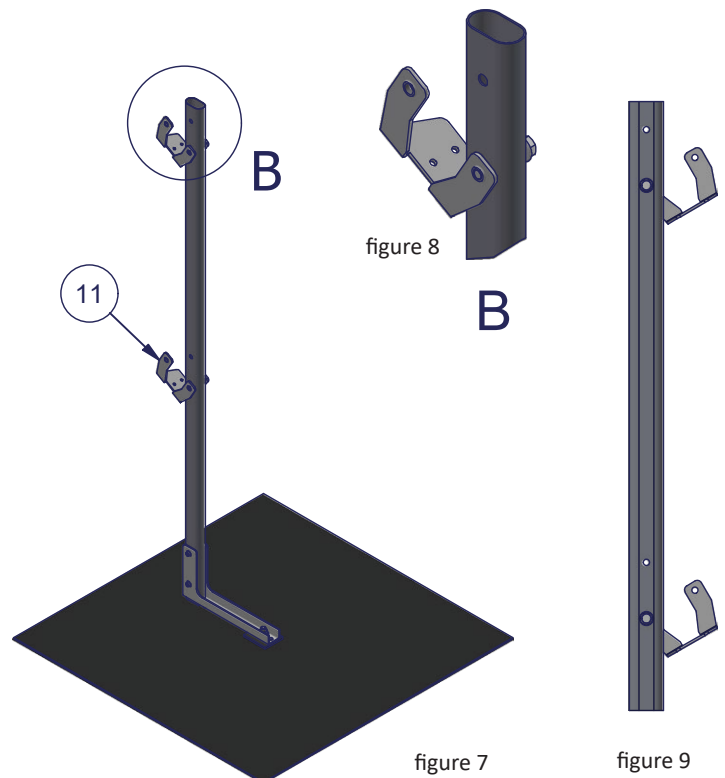


figure 7

figure 9

Brackets, posts and handrail brackets can be installed at this stage. The maximum distance between the posts is 1500 mm. Installation can be started from the corner, which avoids unnecessary cutting of handrails and material waste. Please note the distance restriction for posts at corners, as described in the section on installation of corner rod.

Install at least two posts with brackets at a time, this makes it easier to install the handrails.

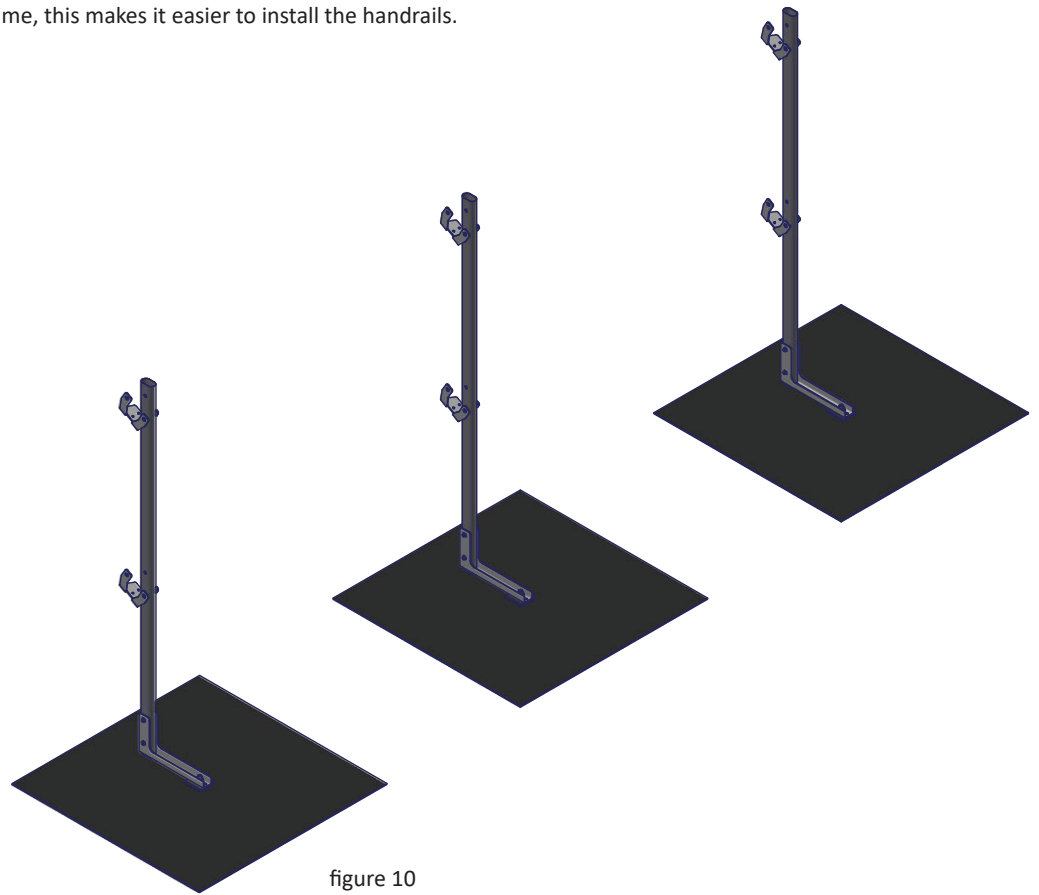


figure 10

Place the first handrails (Pisko snow guards) to handrail brackets as shown in figure 12.

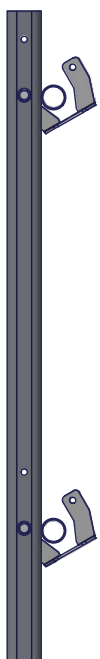


figure 11

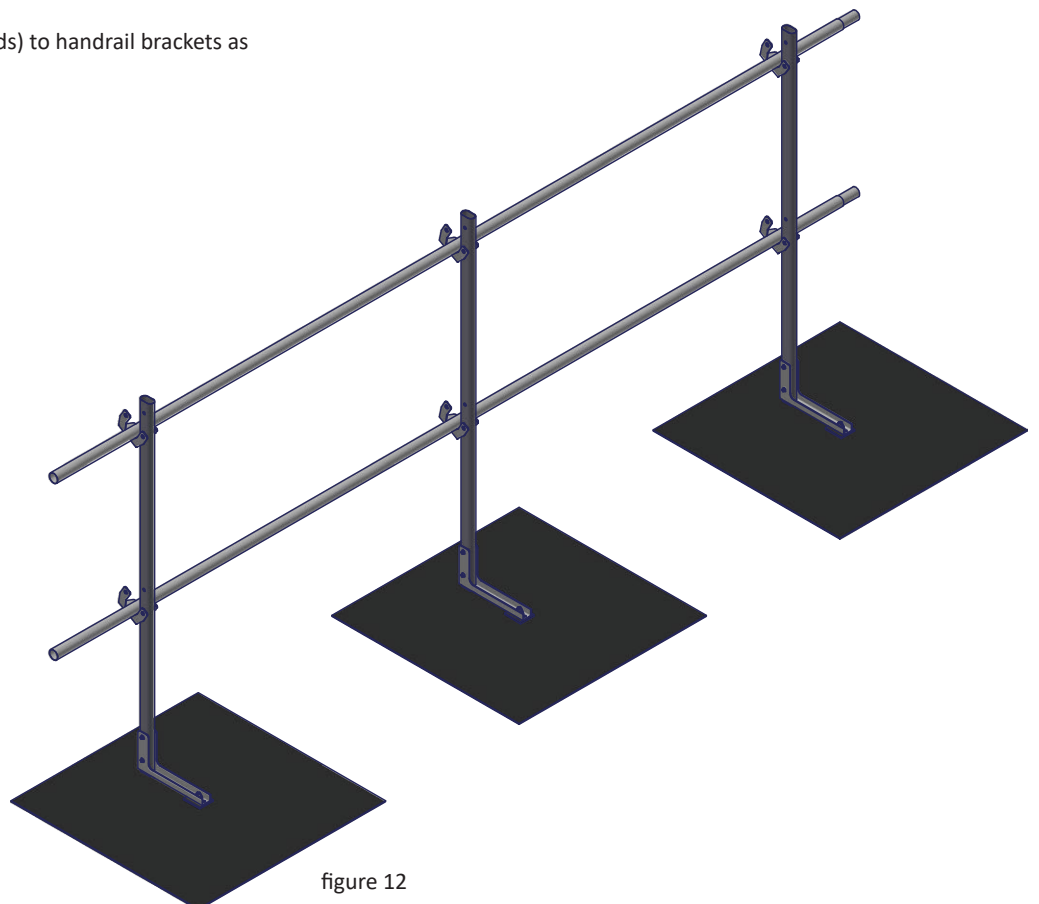


figure 12

Turn the handrail brackets upright (figure 14) and insert the M8x40 flange screws into the upper holes of the post. Tighten both upper and lower screws to a torque of 10 Nm.

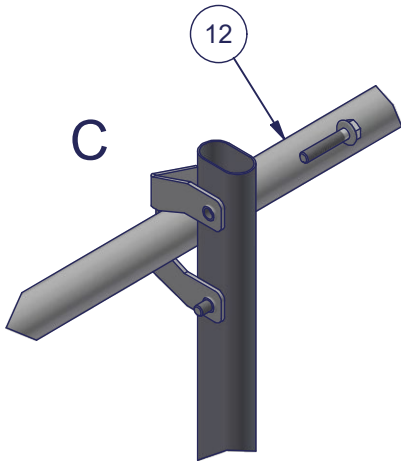


figure 14

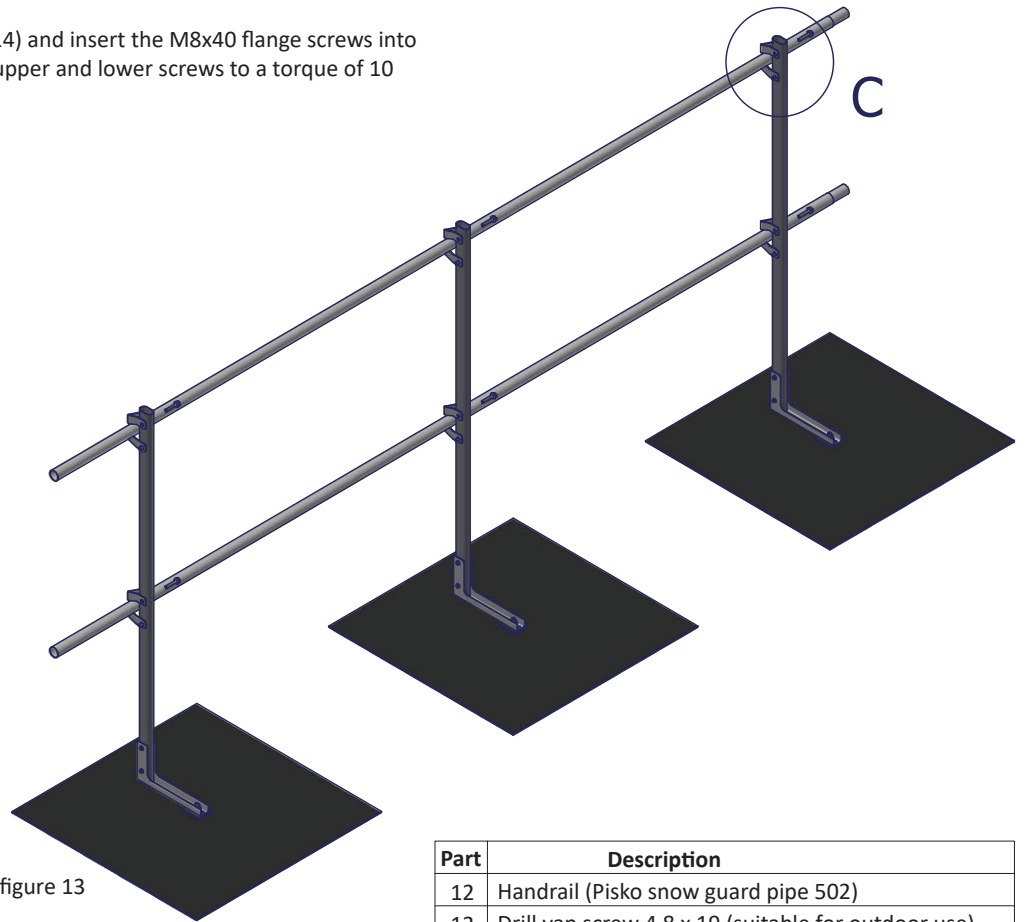


figure 13

Part	Description
12	Handrail (Pisko snow guard pipe 502)
13	Drill vap screw 4,8 x 19 (suitable for outdoor use)

Secure the handrails to the handrail brackets using 4,8 x 19 mm drill vap screws suitable for outdoor use.

Two drill vap screws per bracket are installed in the handrail brackets of the first and the last post (figure 17). One drill vap screw is installed in the upper handrail bracket of the posts between the first and the last post (figure 16).

Before locking the handrails, always ensure that the vertical posts are perpendicular to the roof surface/walkway.

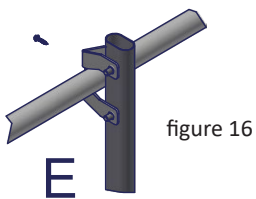


figure 16

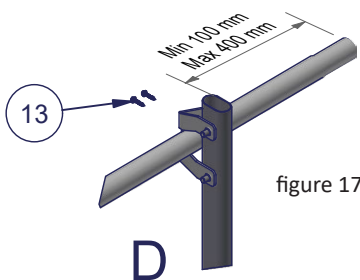


figure 17

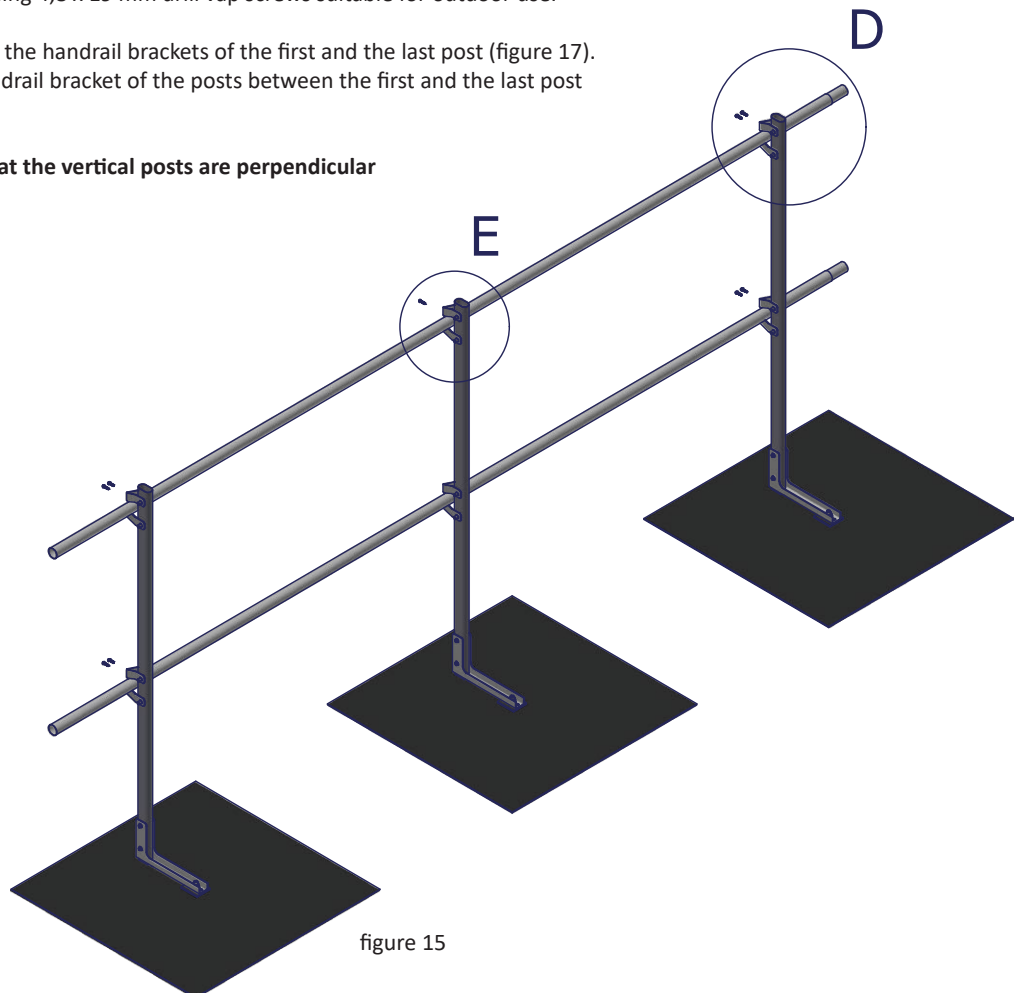


figure 15

Place the next handrails in the open handrail brackets. Lift the handrail brackets upright and tighten the M8x40 flange screws to a torque of 10 Nm.

Push the crimped end of the handrail pipe into the non-crimped pipe.

Lock each joint with two 4,8 x 19 mm drill vap screws.



figure 18

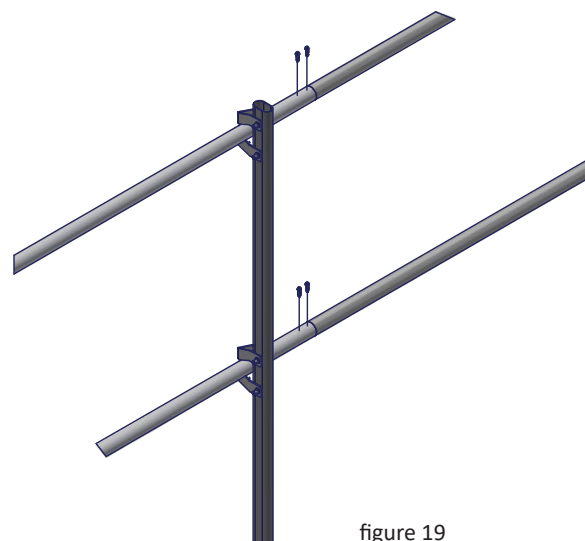


figure 19

Place the diagonal support brackets between the lower handrail and the outer posts as shown in figure 20 and 21.

Lock the diagonal support brackets with four 4,8 x 19 mm drill vap screws per bracket. The same diagonal support fits both ends of the railing. The position of the diagonal support differs by 180° between the start and end ends.

Part	Description
14	Safeguard diagonal support bracket (777)

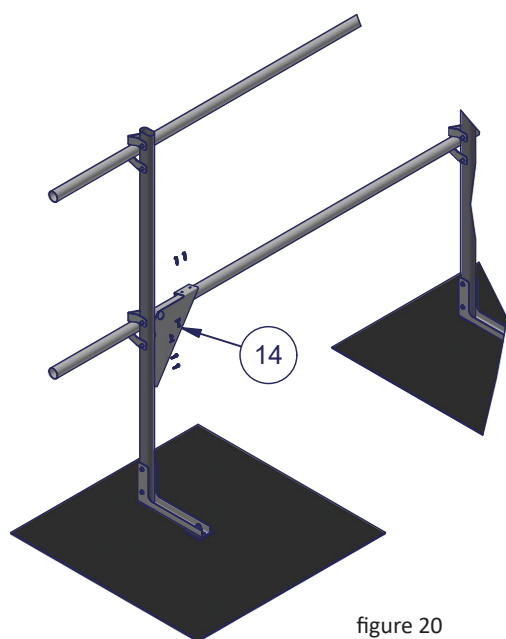


figure 20

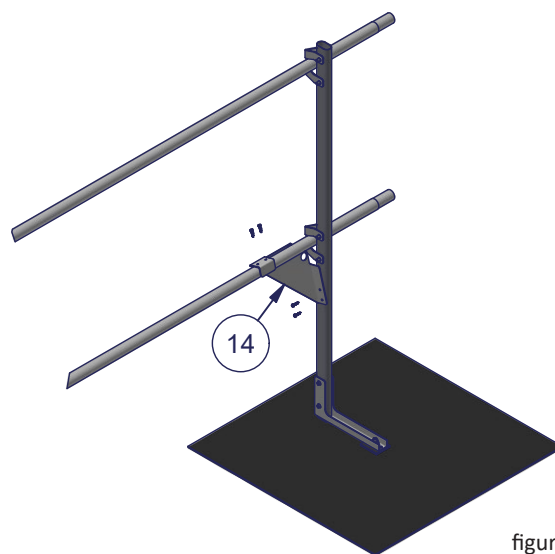


figure 21

Finish the installation by placing plastic seals (15) on the ends of the posts. Tap the seals lightly into place, e.g., with a hammer.

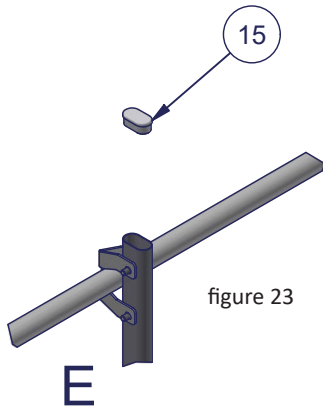


figure 23

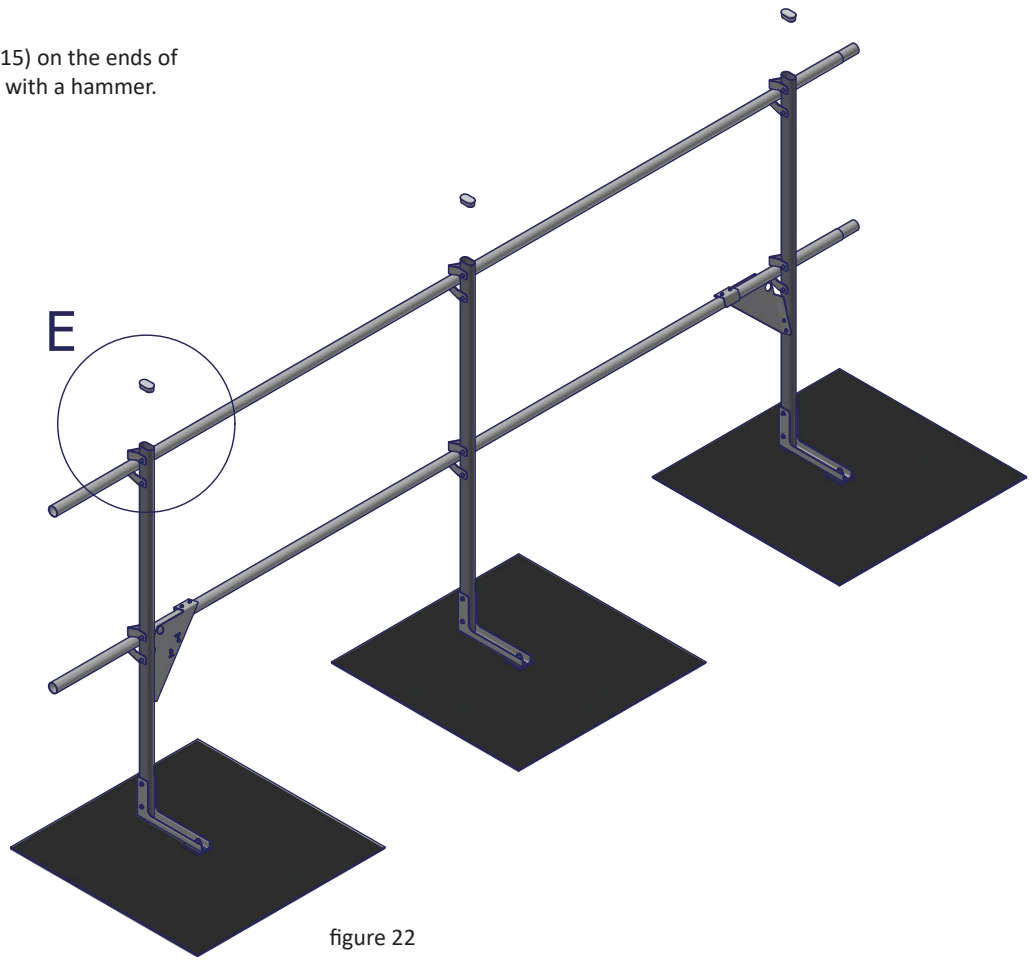
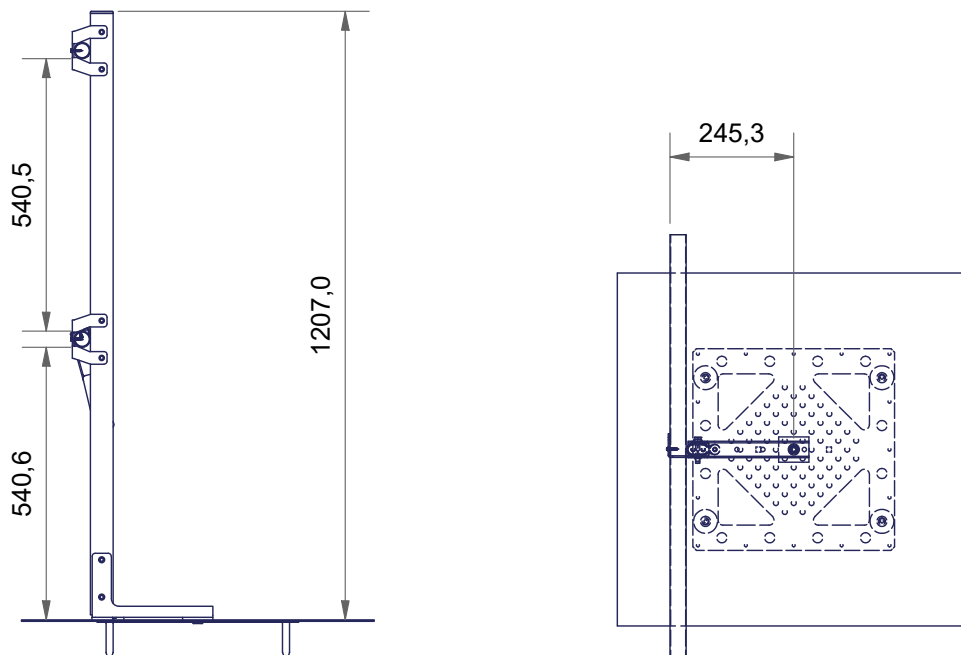


figure 22

Part	Description
15	Plastic seal (584)

Main dimensions



INSTALLATION OF ENDSTOP

Take two end-stop clips. Install the endstop on the inside of the last railing post, not at the end of the handrail.

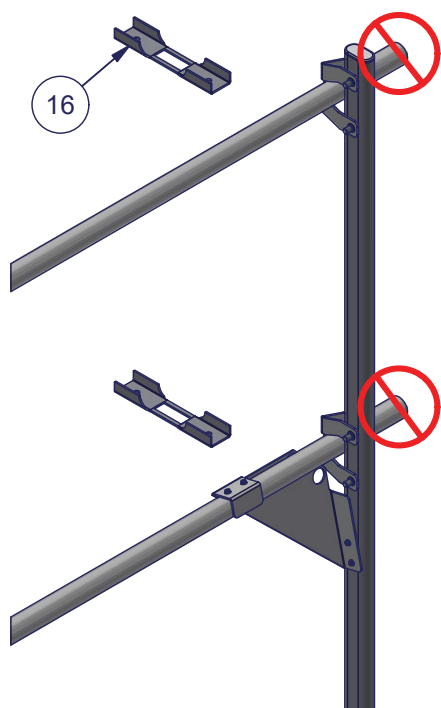


figure 1

Bend the clips around the upper and lower handrail.

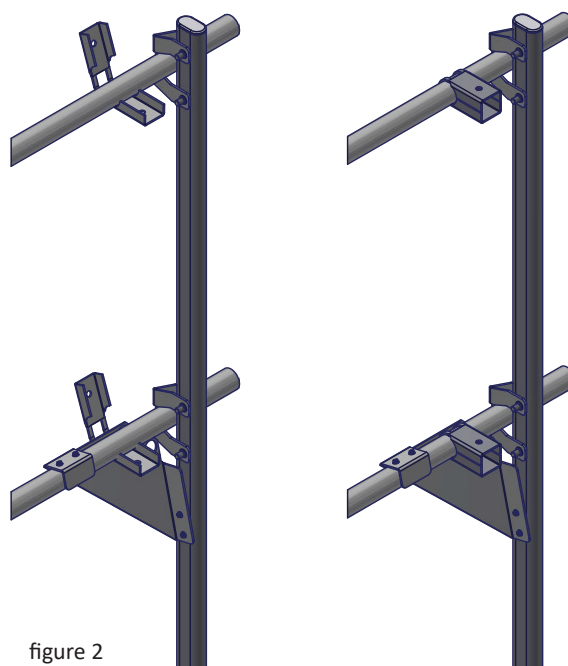


figure 2

Part	Description
16	End-stop clip (624)
17	Endstop (778)
18	Bolt 8 x 60 mm (598)
19	M8 flange nut (729)

Place the endstop inside the clips.

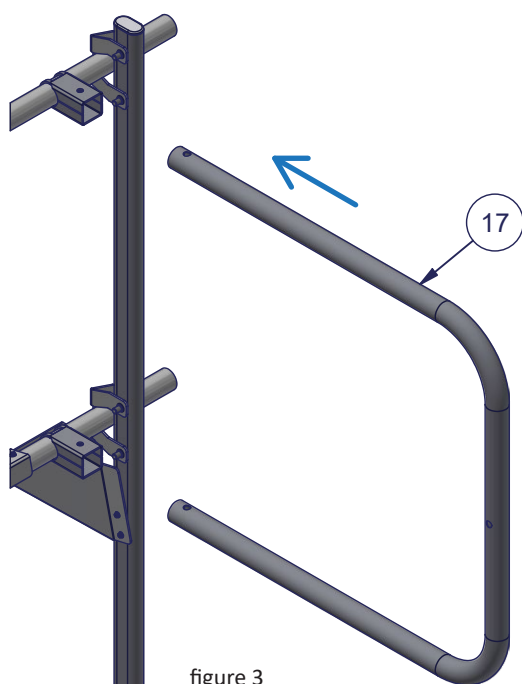


figure 3

Insert two M8x60 bolts through the holes in the clips and the endstop. Tighten the bolts and nuts to a torque of 12 Nm.

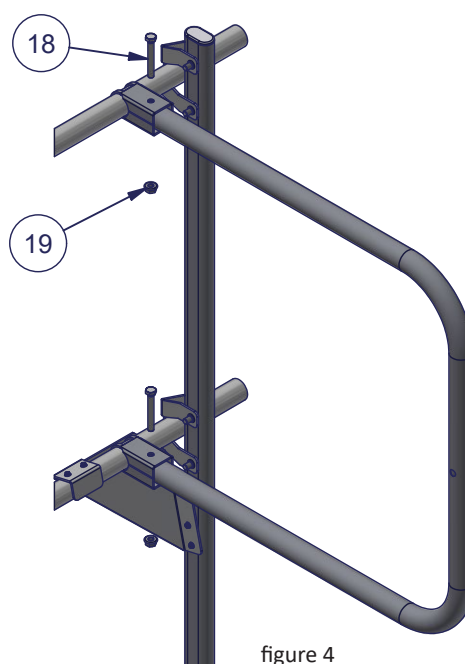


figure 4

Place the diagonal support bracket on top of the upper handrail and endstop as shown in the figure 5. Secure the diagonal support bracket with four 4,8 x 19 mm drill vap screws.

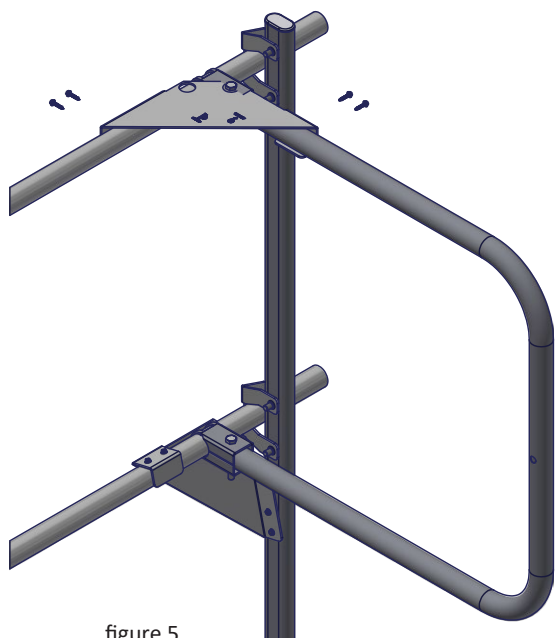


figure 5

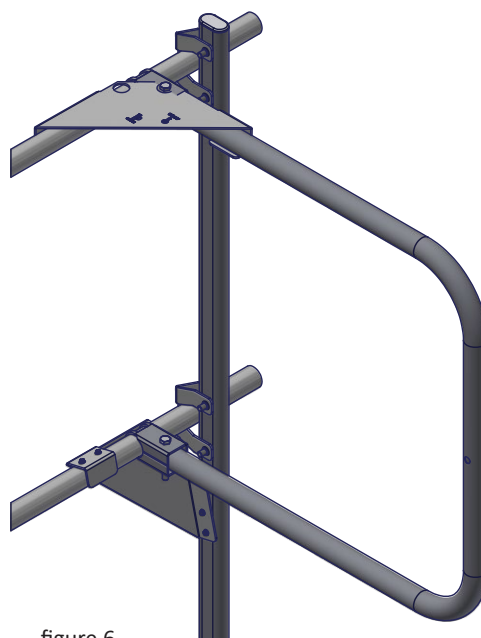


figure 6

INSTALLATION OF CORNER ROD

Leave the handrails in the corner long or do not lock them with drill screws at this stage.

The maximum distance between the posts is 1200 mm when the horizontal handrails are extended with corner rods.

Bend the corner rod to suitable angle.



figure 1

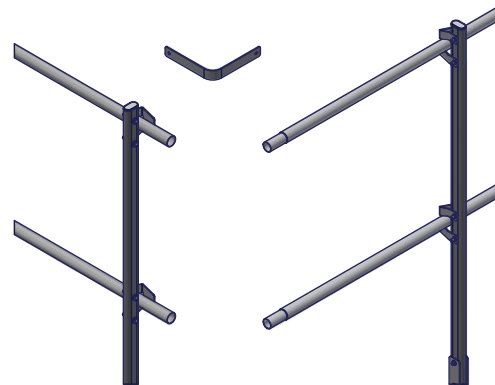


figure 2

Part	Description
19	M8 flange nut (729)
20	Safeguard corner rod (776)
21	M8x16 Flange screw (731)
22	Safeguard corner rod fixing bracket (775)

Attach the corner rod fixing brackets to both ends of the corner rod with M8X16 flange screws and M8 flange nuts. Do not tighten the connections completely at this stage.

Fit the corner rod into place. Cut the handrails to appropriate length and lock them in place with drill vap screws.

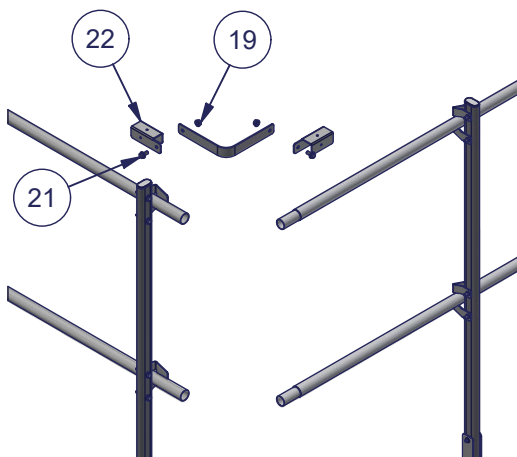


figure 3

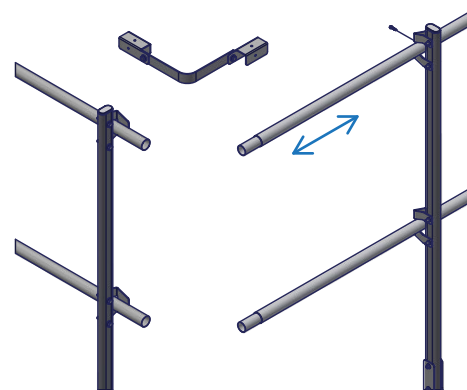


figure 4

Attach the corner rod brackets to the handrails with two drill vap screws at both ends (figure 5). Tighten the bolts and nuts of the corner rod brackets to a torque of 12 Nm.

Repeat steps 1-5 for the second handrail.

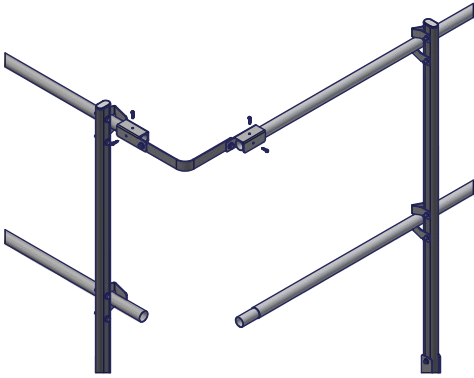


figure 5

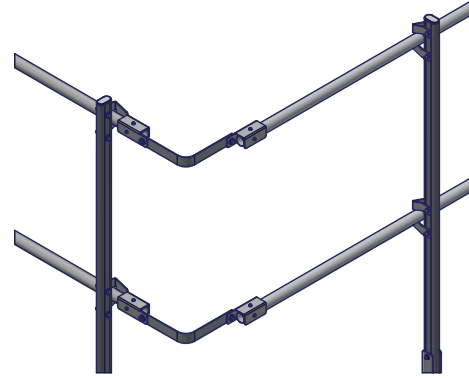


figure 6

Corner joints can also be made for very slight changes in pitch, for example over the ridges of flat roofs.

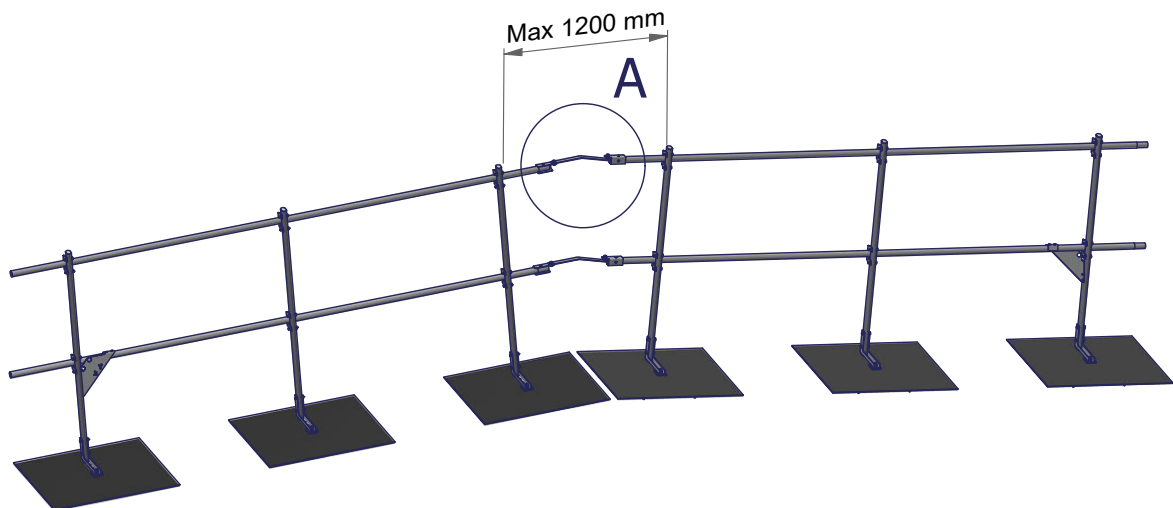


figure 7



figure 8

INSTALLATION OF KICKPLATE

The Safeguard railing can be equipped with a kickplate that prevents objects from rolling and falling under the railing. The gap between the kick plate and the roof surface is approximately 10 mm.

Install the kickplate brackets using the same M8x40 flange screws used to install the post to the post brackets.

Attach the kickplate to the brackets using M8x16 flange screws and M8 flange nuts on each bracket. Tighten to a torque of 12 Nm.

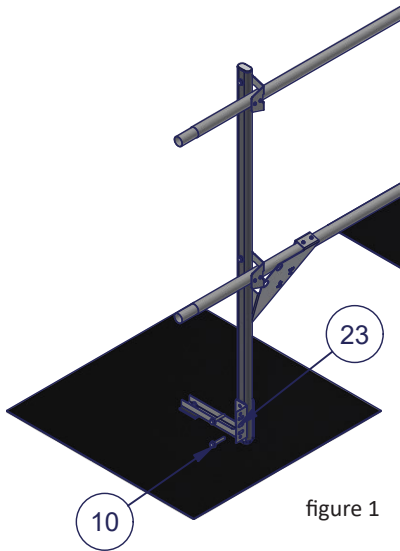


figure 1

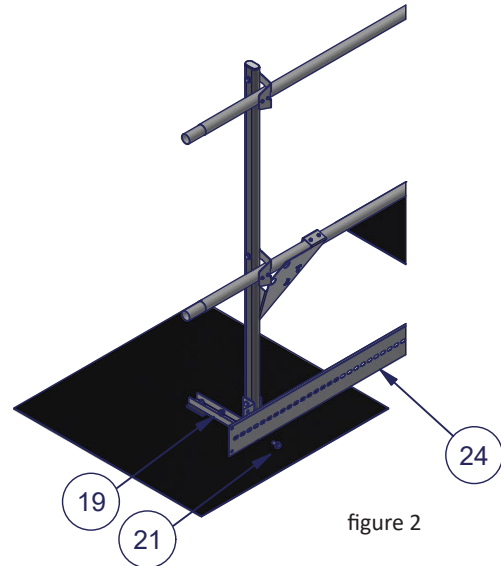


figure 2

Part	Description
10	M8x40 Flange screw (733)
19	M8 flange nut (729)
21	M8x16 Flange screw (731)
23	Kickplate bracket (780)
24	Kickplate (799)

Attach the kickplates to each other at the joints using M8x16 flange screws and flange nuts. Tighten to a torque of 12 Nm. The last kickplate can be overlapped on top of the previous one.

At the corners, the kickplates are connected to each other with a kick late fastener and two M8x16 flange screws and flange nuts.

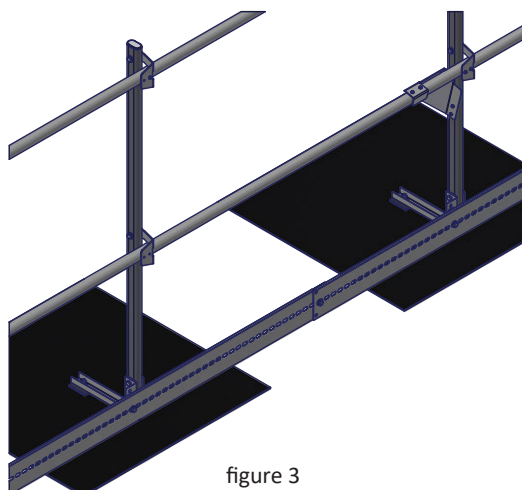


figure 3

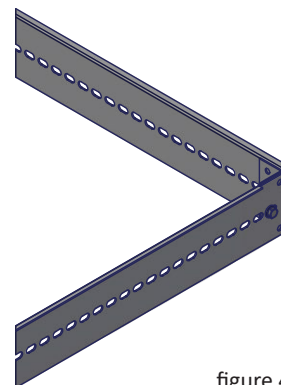


figure 4

INSTALLATION OF A THIRD HANDRAIL

Safeguard railing can be equipped with a third handrail. This reduces the gap between the walkway and the lower horizontal rail.

Install the handrail brackets with same M8x40 flange screws that are used to attach the posts to the post brackets.

Slip the handrail through the brackets.

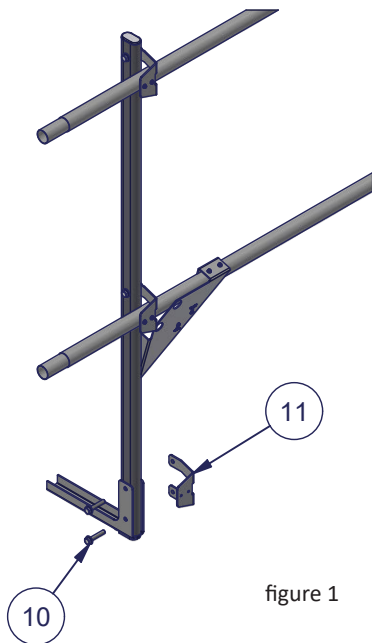


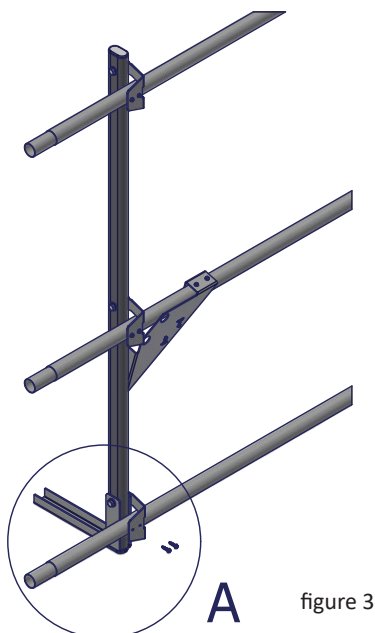
figure 1



figure 2

Part	Description
10	M8x40 Flange screw (733)
11	Safeguard handrail bracket (771)
12	Handrail (Pisko snow guard pipe 502)
13	Drill vap screw 4,8 x 19 mm (594)

Lock the bottom handrail at the first and last handrail brackets with two drill vap screws. Lock the handrail extensions in the same way as the other handrail extensions.



A figure 3

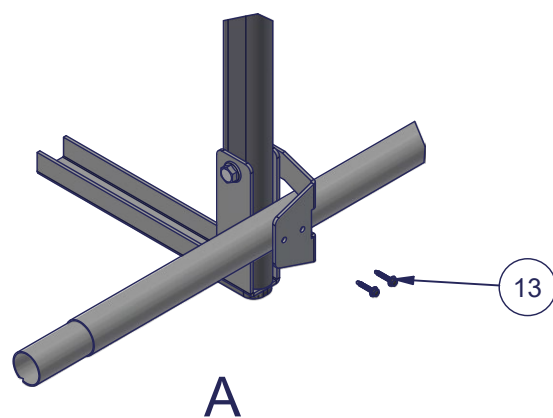


figure 4

USE

- Ensure the official commissioning inspection has been completed by the installer.
- Instructions for using the access ways can be found in the separate product-specific instructions for the access ways. Please read them before using the system.
- Pisko Safeguard acts as an attachment point for a safety rope. If the user must leave the railing and enter a hazardous area, the post bracket is the recommended place to attach the safety rope. Do not attach the safety rope to handrails or diagonal supports! Attached users must be at least 3 meters apart.
- The user must ensure that appropriate and compliant personal protective equipment (such as a harness) is used. Harnesses must be used in accordance with the manufacturer's instructions.
- Use only proper safety ropes intended to be used as a Personal Protective Equipment. The maximum user weight is determined by the value indicated on the safety rope.
- Pisko Safeguard is a system designed to prevent entry into hazardous areas. It is not intended for use as a load carrier.
- The system must not be used if it is found to be damaged.
- The access way on which Pisko Safeguard can be installed must be a Class 2 access way intended for use as a safety rope attachment point in order for the Pisko Safeguard system to be used as a safety rope attachment point.
- The Pisko Safeguard guardrail system is not intended for use in construction, sports, or recreational activities.

MAINTENANCE

To ensure the reliability and safety of the Safeguard system, the property owner must carry out yearly inspection and maintenance procedures, by a professional authorized by the manufacturer. Yearly Maintenance inspection checklist for Pisko Safeguard guardrail system:

- Ensure that the information and documentation of the company that carried out the installation can be found on site. Review the original commissioning report.
- Check the tightness of joints, connections and attachments.
- Check the condition of all system components for damage.
- If the system is attached to a roof walkway or roof ladder, the condition of the walkways is also inspected in accordance with the product-specific inspection program.
- Damaged parts must be replaced immediately.
- Damaged parts may only be replaced with original parts or parts supplied by Piristeel Oy that are equivalent to the original parts.
- Further information on inspections can be found in a separate inspection report.