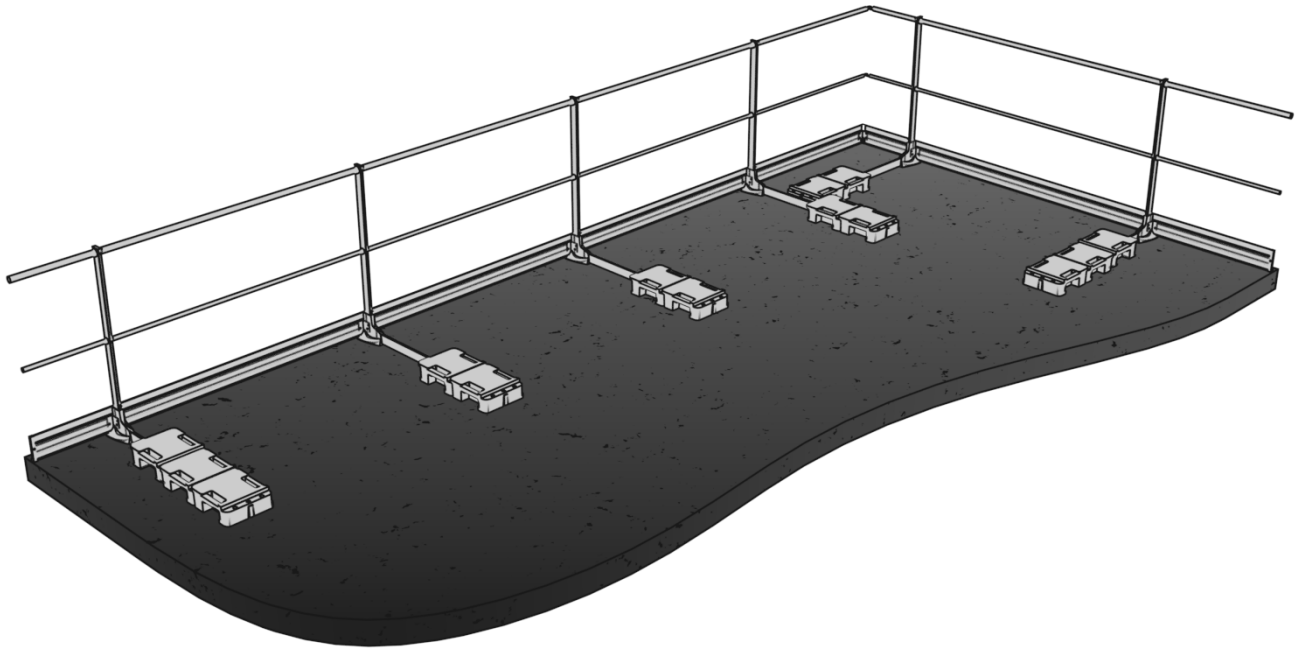
System description

GARDCO AL systems are non-penetrating, load-bearing railing systems for side protection on flat roofs that are not accessible to the public in accordance with DIN EN 13374 Class A.



Installation

Please read through the installation instructions before installing the railing.

Before installation, check the load-bearing capacity of the roof structure and thus the suitability for load-bearing collective protection. The maximum load on the roof surface for the GARDCO AL system is 70 kg in the cantilever area.

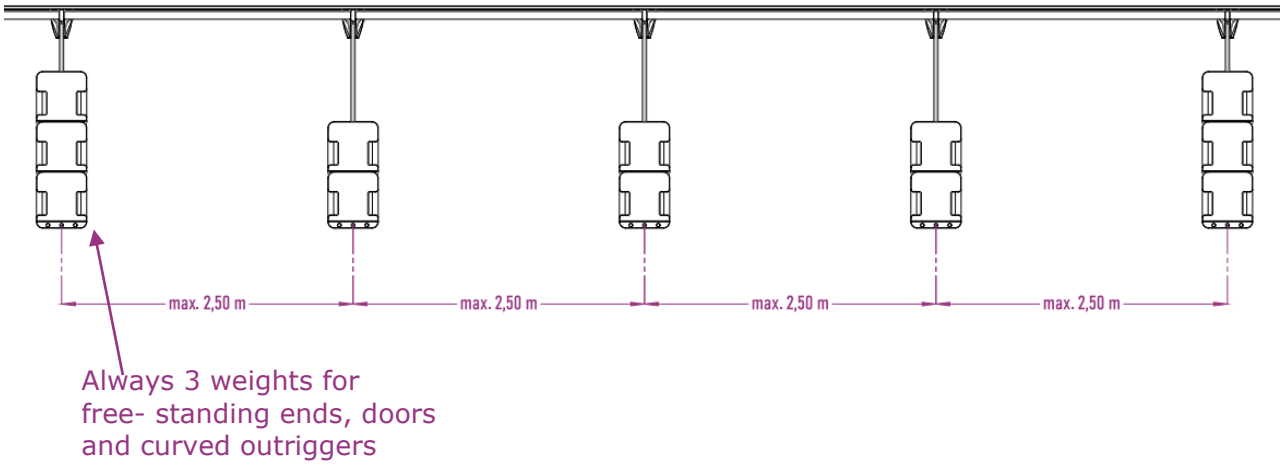
The railings are designed for a roof pitch of up to 10°. For roofs without a parapet, shear protection must be provided.

If there is no parapet on roofs or the distance between the parapet and the knee rail is less than 470 mm, a skirting board is mandatory. This may be mounted a maximum of 20 mm above the accessible level.

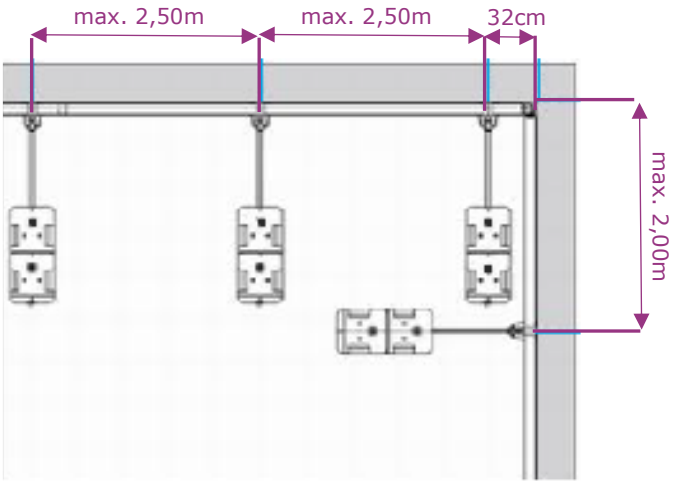
The guardrail must not be supplemented with attachments or panelling that increase the area exposed to wind or represent an additional load. In areas with aggressive environmental conditions, e.g. in chemical plants or near the coast, an additional coating or anodising of the railing parts may be necessary.

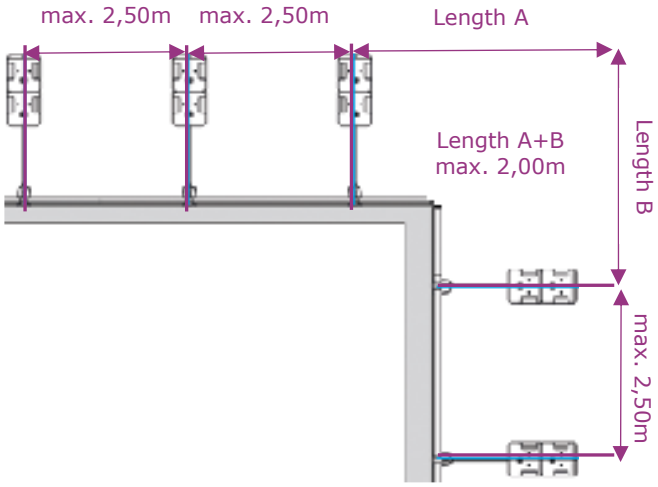
Assembly diagram for standard railings up to 1,18 m

Straight railing



Corners



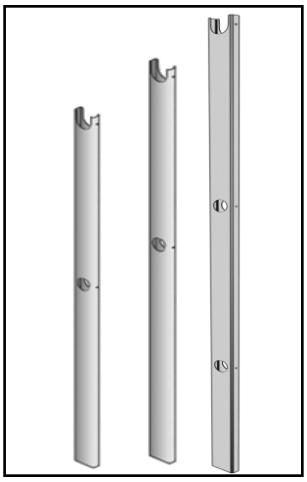


Distance and ballasting for spacial cases

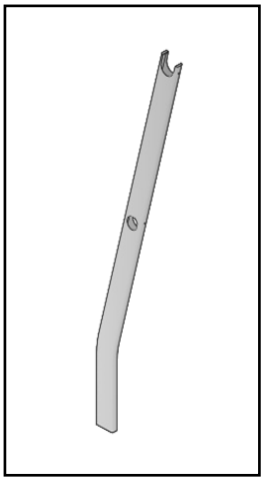
Railing height 1,20 – 1,40 m	
Maximum post distance	2,00 m
Ballasting	
Inside post	3 weights
Outside post	5 weights

Railing height 1,18 m with shortened outrigger 1,00 m	
Maximum post distance	2,50 m
Ballasting	
Inside post	3 weights
Outside post	5 weights

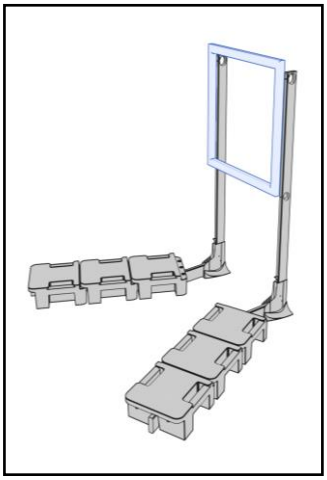
Components



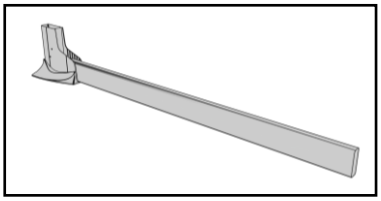
Pfost
H 110, 118 + 140 cm



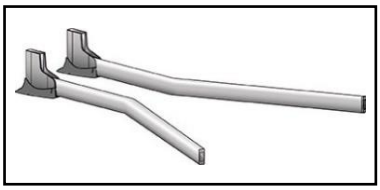
Pfost 15° inclined
H 115 cm



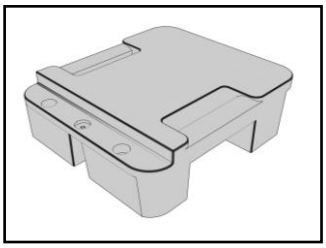
Door element



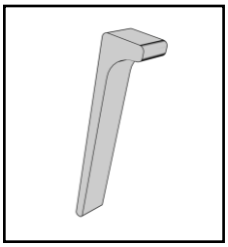
Outrigger with base plate welded



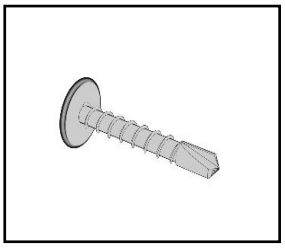
Curved outrigger 25°
for corners and doors



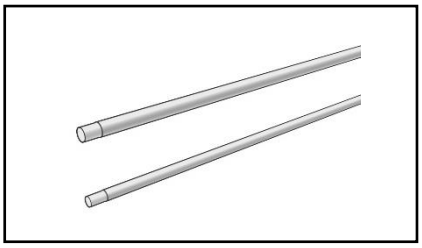
Weight 12,5 kg



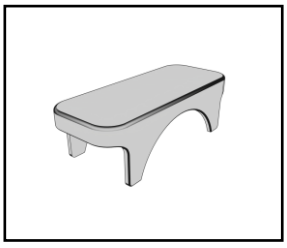
Blocking wedge



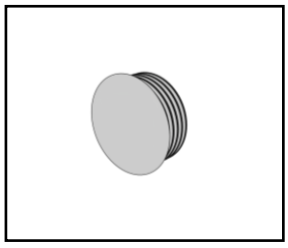
Drilling screws
4,8x16
4,8x25
4,8x50



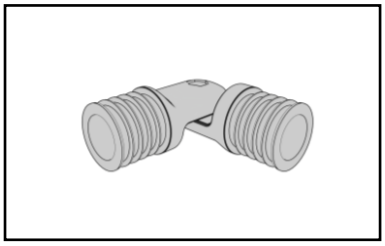
Hand rail Ø 45 mm
Knee rail Ø 35 mm



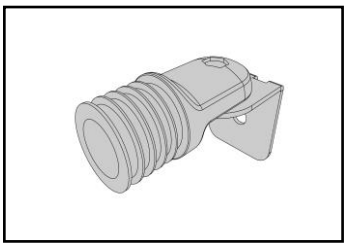
Cap for post



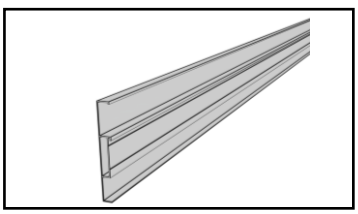
Cap for tube



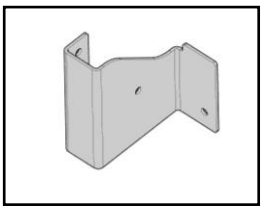
Corner connector



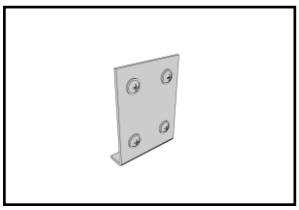
Wall connection



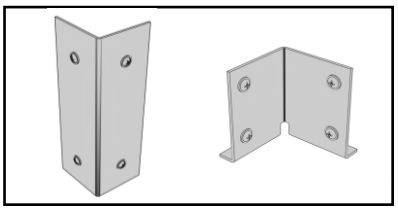
Baseboard 19x150x3000mm



Holder for baseboard



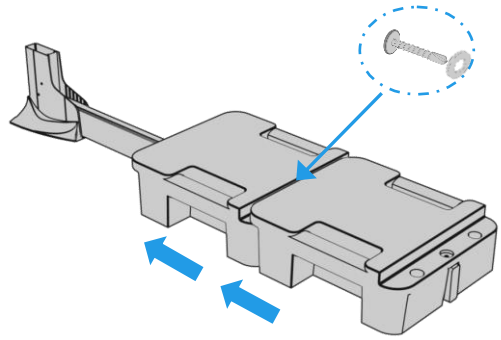
Connector for baseboard



Corner connector for baseboard

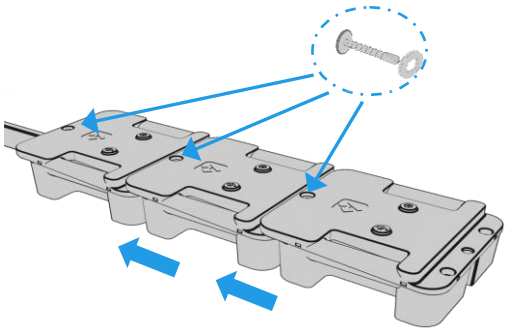
Montage

Drilling screw 4,8x50 and washer

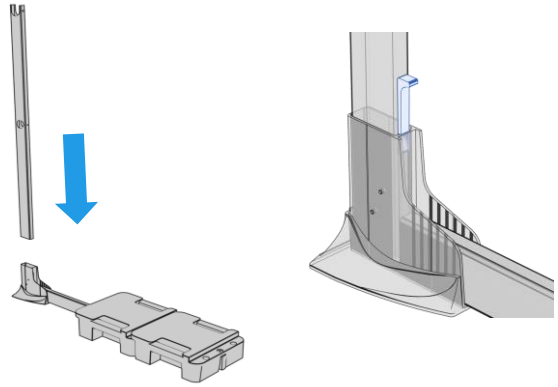


Place the outriggers on the floor according to the assembly plan. Slide 2 weights over the base so that they are flush with the end of the outrigger. Secure with drilling screws and washers.

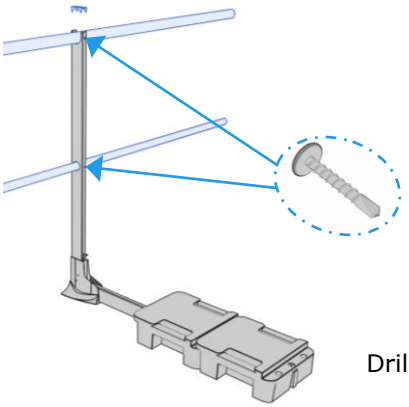
Drilling screw 4,8x50 and washer



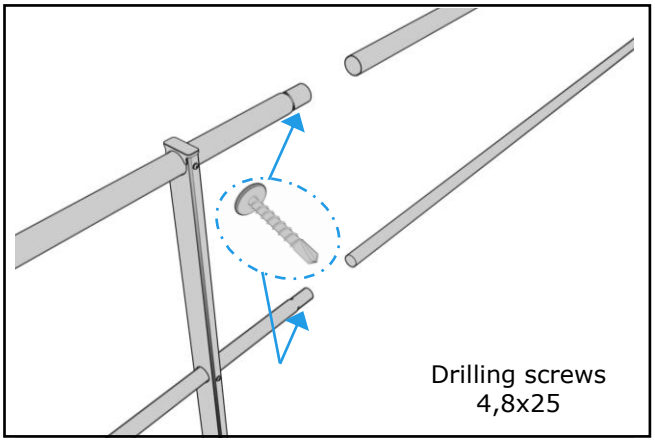
For freestanding end and doors:
Slide 3 weights over the base so that they are flush with the end of the outrigger.
Secure with drilling screws and washers.



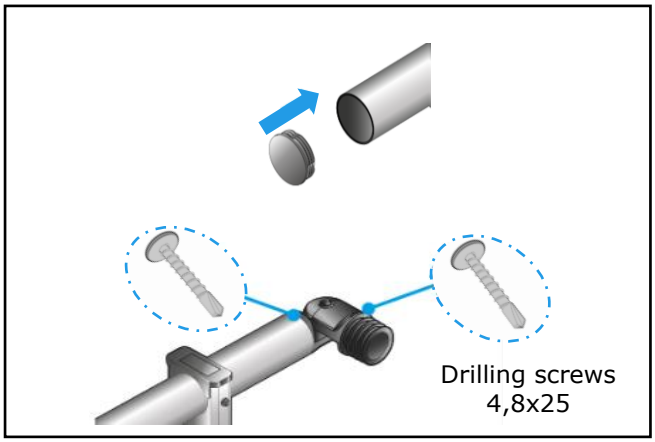
Insert the post into the post base.
Carefully hit in the blocking wedge with a rubber hammer to fix the post.



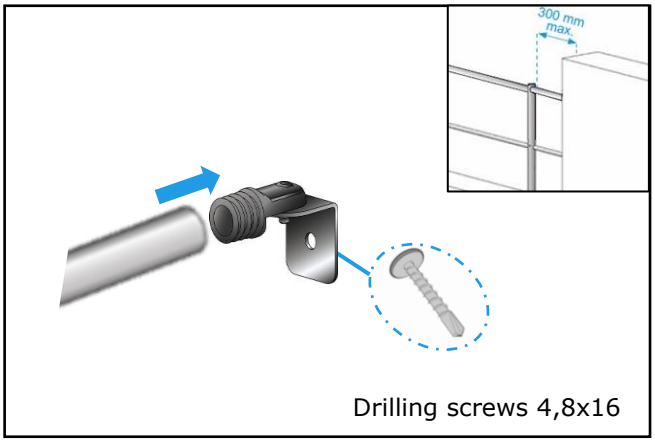
Thread the knee rail and insert the handrail.
Put on the cover cap. Fix the knee rail and the handrail with 2 drilling screws.



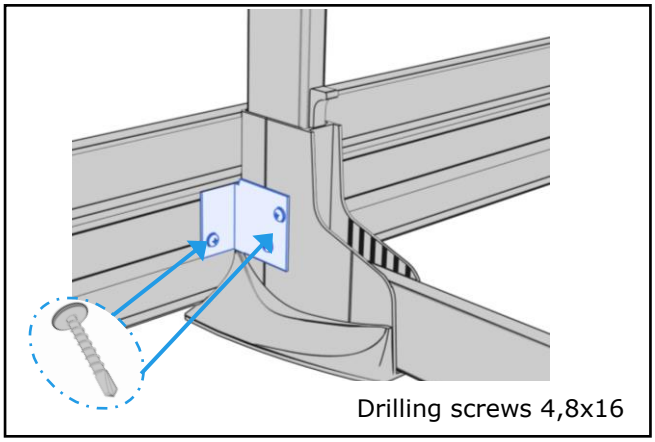
Insert the handrail and the knee rail into each other and fix each with a drilling screw placed diagonally from below.



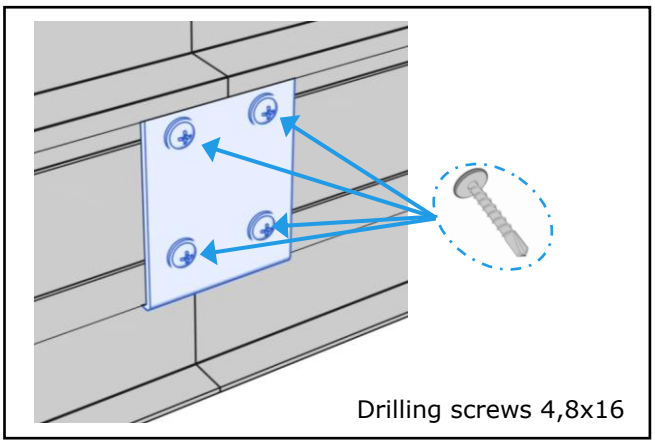
Put on the cover caps at the ends.
Insert the hand and knee rails into the flexible corner connectors and secure with drilling screws.



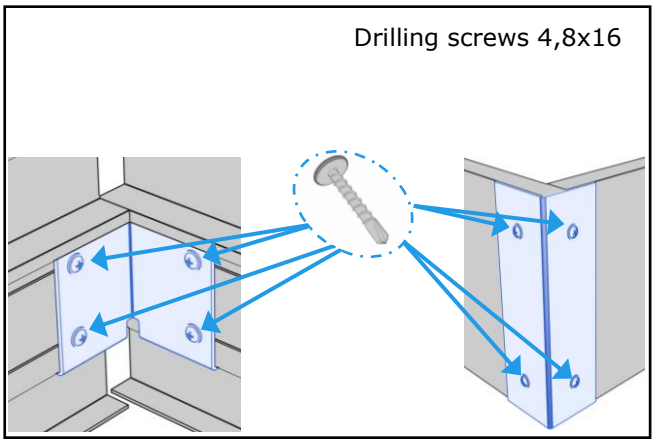
Anchor the wall connection to the wall at a maximum distance of 30 cm from the last post (provided by customer). Insert the hand and knee rails into the wall connection and secure with drilling screws.



Set the height of the baseboard to 100mm from the roof membrane. Fix corner connector to the right and left of the foot with 4 drilling screws to the post and the baseboard.



Join the baseboard at the joint. Insert the connector and fix in place with 4 drilling screws.



Place the corner connectors on the inside and outside of the corners and fix each with 4 drilling screws.

Storage

The railing elements are made of raw aluminium. On delivery, the parts are packed together under foil and stains may appear on the aluminium due to moisture from outside or condensation. This does not constitute a technical defect, but does affect the appearance. To avoid this, we recommend storing the pallets in a dry place until installation or removing the parts from the packaging and storing them without contact.

Maintenance

GARDCO AL must be inspected at intervals of max. 2 years. Particular attention should be paid to loose or deformed parts and the correct position. If there are any concerns regarding the functionality of the railing, it must be inspected and, if necessary, serviced before the next time the roof is accessed. If individual parts need to be replaced, only undamaged original components should be used.

General safety instructions

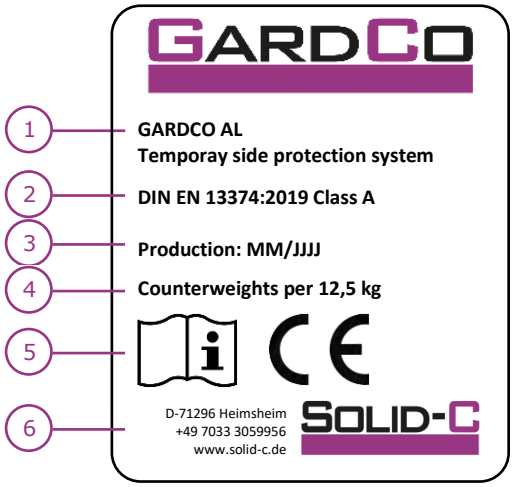
For the duration of the installation, a fall protection system must be set up, e.g. using appropriate scaffolding or anchorage devices. Care must be taken to ensure that assembly is only carried out by trained specialists in compliance with the specifications for carrying out work at the appropriate height.

Only undamaged original parts may be used for assembly and no changes may be made to them that could impair their function or safety. If it is necessary to dismantle the railing, this must be carried out in reverse order to the assembly instructions.

After a person has fallen or an object has fallen into the GARDCO railing or after incorrect installation, the railing may only be used again if it has been checked by a competent person and approved in writing for the intended use.

Openings between guardrail systems and other structures must be as small as possible and must not exceed 120 mm for guardrail uprights and 20 mm for the toe board. The guardrail system must not be used as an anchorage device.

Marking



1 Product and typ identification

2 Standard and classification

3 Year of manufacture nad serial number

4 Weight oft he counterweight

5 Note that instuctions for use must be observed

6 Manufacturer

Disclaimer

The load-bearing capacity of the substrate must be checked by the customer. Solid-C cannot make any statements about this. In addition to these installation instructions, the installing company has to observe the valid regulations and rules of technology. Solid-C GmbH is not liable for the dimensioning instructions contained in commercial offers, since it is generally not possible to agree on all technical framework conditions within the scope of tender submissions. The installation company is responsible for the mechanical durability of the mounted products to the building envelope, especially for their tightness. The components of Solid-C GmbH are designed for this purpose according to the expected loads and the valid state of the art. Solid-C GmbH does not assume any liability for damages caused by improper installation.