

CC cantilever rack

**Assembly and operating
instructions**

EN

BAUHAUS edition
English



GENERAL INFORMATION

Dear customer,

With the CC cantilever rack, you have chosen a high-quality and flexible storage system, designed for simple and safe handling, especially of long goods, thanks to the removable shelves and also of other storage goods.



The CC cantilever rack may only be assembled and used in accordance with these assembly and operating instructions. Therefore, your fitters, forklift drivers and warehouse staff must be instructed according to these instructions. We accept no liability whatsoever for any damage or injury resulting from improper assembly or misuse.

The CC cantilever rack

- The CC cantilever rack is available as a single-sided version (CC3) and as a double-sided version (CC4). Differences: The steel plate of the stands is 3 mm thick on the CC3 version, and 4 mm on the CC4. On the CC3 version, the feet are welded on, whereas they are assembled on site on the CC4 version.
- The standard height of the shelf is 5 m. The width is at least 2 x 1.50 m (min. 2 shelf bays) and can be extended in 1.50 m-increments, in each case.
- The cantilever arms can be positioned within the 100 mm plug-in grid. Each cantilever arm is fitted at the end with a screw-on plate on which various accessories can be mounted, e.g. anti-roll locking devices, head protection, etc.
- Please note that the CC cantilever rack is designed for indoor installation. Outdoor use is not permitted.

Substrate requirements

- The warehouse operator must ensure that the floor in the installation location can safely support all loads applied (net weight + load). Concrete substrates must be at least of grade C20/25.
- For static reasons, the shelves must **always be anchored to the floor**. Therefore, installation is only permitted on concrete floors with a sufficient borehole depth; asphalt floors, composite stone paving, gravel floors and similar are **not suitable**. For more information about ground anchoring, see page 7.

Correct use

- Load the shelves where possible from bottom to top. Loads must not be displaced on the cantilevers or set down heavily on them. When loading, make sure that there is sufficient clearance.
- **The max. permissible bearing loads specified must not be exceeded** (page 10).
- **Stepping or climbing on the shelves and leaning on ladders is strictly forbidden!**

Regulations for shelving systems

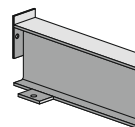
- DIN EN 15635 and DGUV (German Social Accident Insurance) regulation no. 108-007 (formerly BGR 234) regulate the mounting and handling of shelving units. This includes the requirement for carrying out an **annual shelf inspection** (see page 11).
- **Questions relating to fire protection** should be clarified with your local fire service or a specialist company for operational safety and fire protection (e.g. water-permeable removable shelves when using sprinkler systems).



After assembly, keep these instructions for later use

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Issued: 01.2023 – We reserve the right to make changes based on technical advances



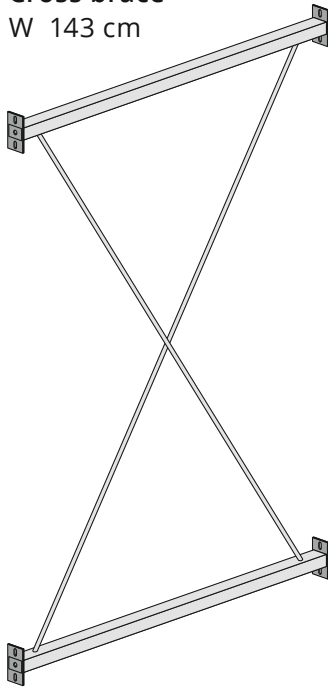
SHELF ASSEMBLY

Components

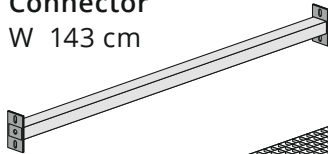
**Single-sided
cantilever arm stands**
H 500 cm, D 142 cm

**Double-sided
cantilever arm stands**
H 500 cm, T 261 cm

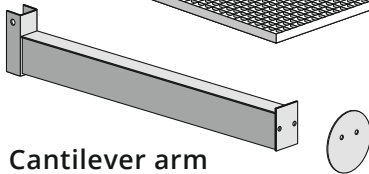
Cross brace
W 143 cm



Connector
W 143 cm



Cantilever arm
D 120 cm



Head protection
Ø 20 cm



Mounting accessories

- 6 fastening screws/nuts per side frame for bolting the cross braces and connectors (supplied)
- 4 ground anchors per stand:
Fixing anchor (ground anchor) Würth W-FAZ/S M12-50-70/145 (supplied)
- 1 securing pin/spring cotter pin per cantilever arm for inserting (supplied)
- Load capacity stickers (supplied)

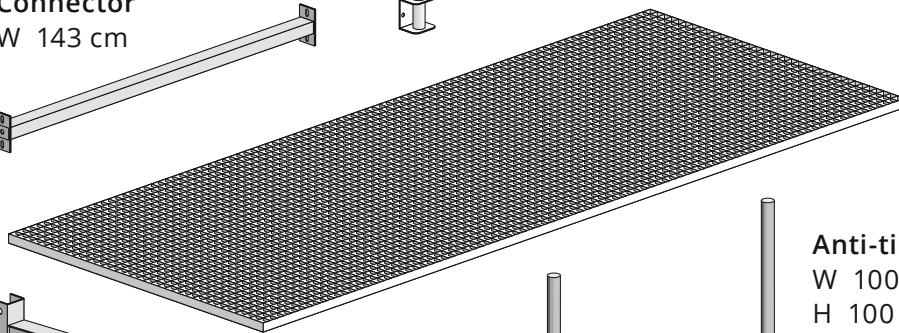
Tools

- Tape measure and spirit level for aligning the shelf components
- Wrench size 17; for CC4 version, also size 27
- Drill Ø 12 for attaching to the floor

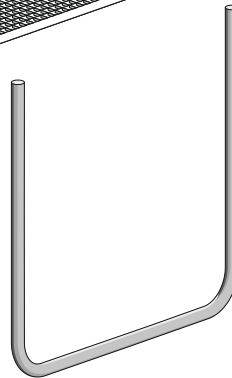
Anti-roll rod
L 230 cm



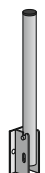
Grid shelves
W 300 cm
D 119 cm



Anti-tilt bracket
W 100 cm
H 100 cm



**Anti-roll
locking device**
L 50 cm

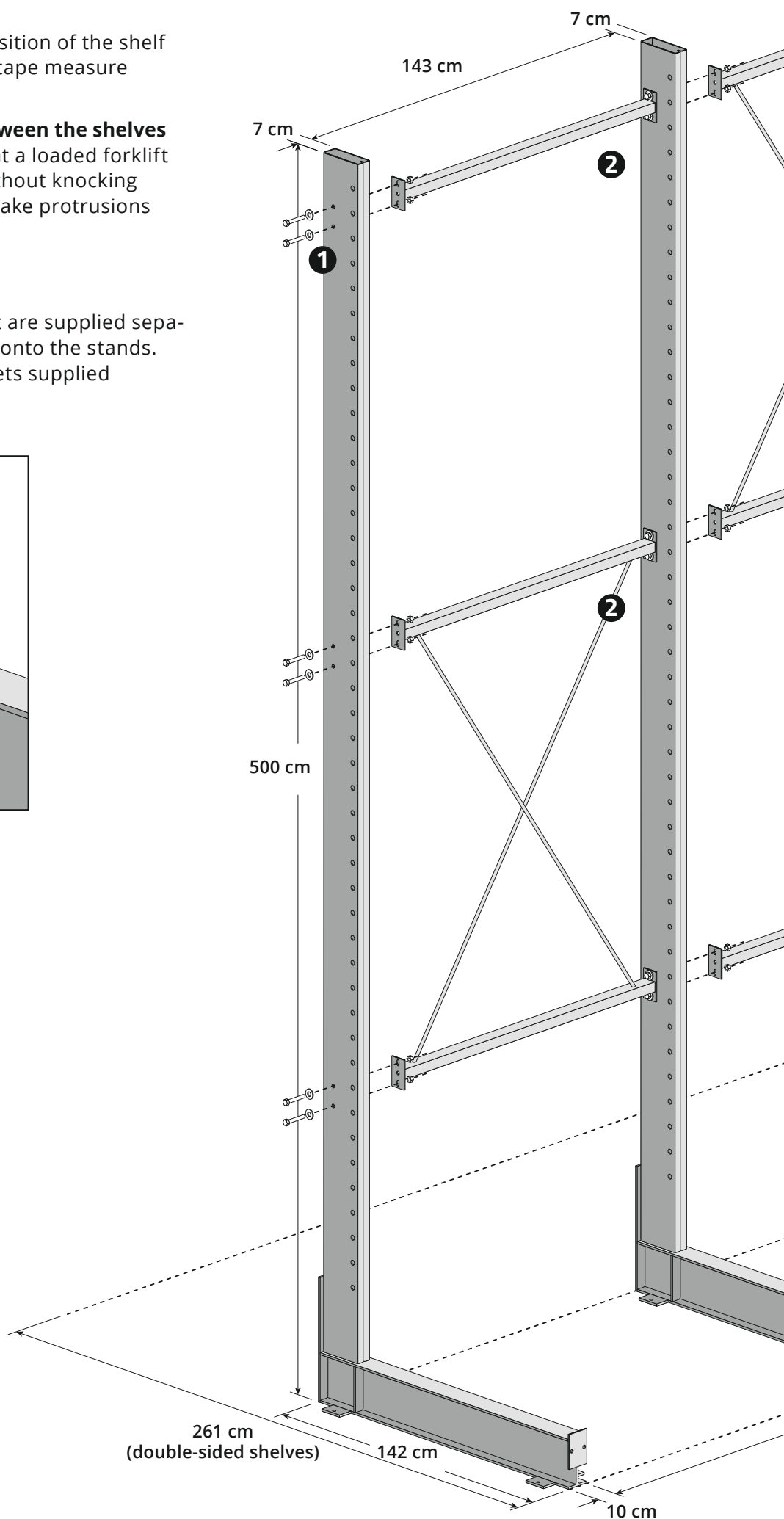
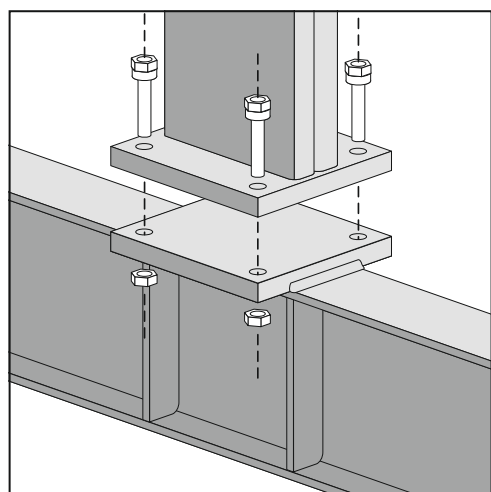


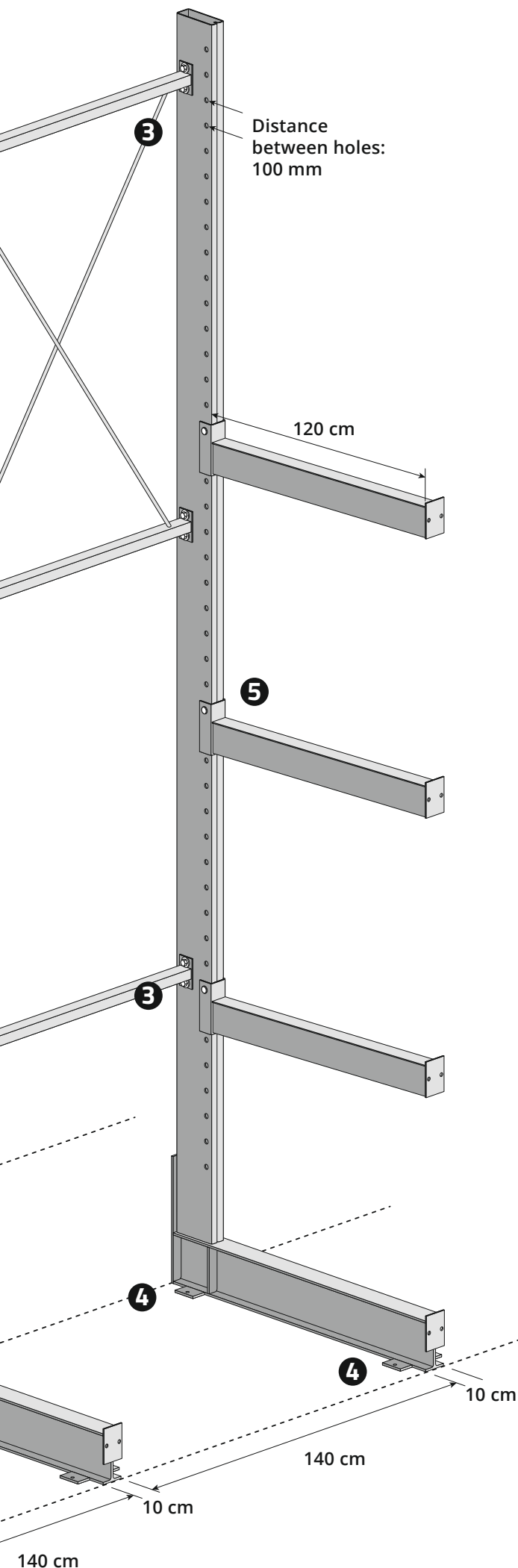
Preparations

- We recommend marking the position of the shelf on the floor in advance using a tape measure and chalk or pencil.



i The space in front of or between the shelves must be dimensioned so that a loaded forklift truck can drive and turn safely without knocking against the shelves or their load (take protrusions into account).

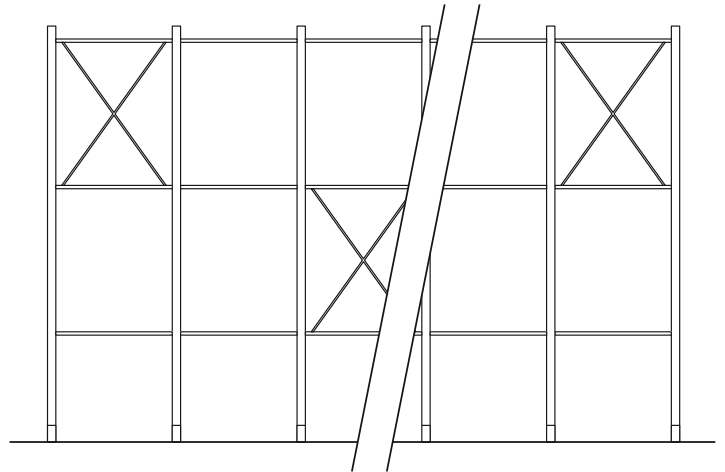
! For the CC4 version, the feet are supplied separately and must be screwed onto the stands. Only use the M16 x 70 HV screw sets supplied (screws, nuts and washers).





Setting up the shelf

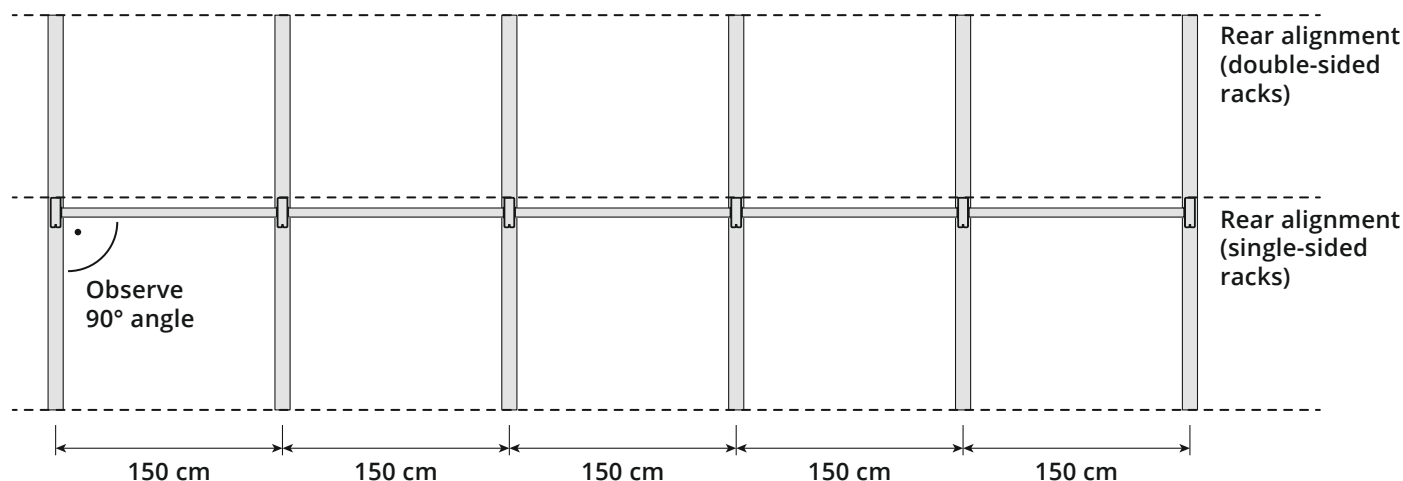
- 1 Erect the first stand and prevent it from falling over or support it properly.
 - 2 Fasten the second stand to the first stand with a cross brace and, in addition, secure it with a connector. **The supplied screws (M10 x 100, including washers and stop nuts) are initially only tightened by hand.**
-  The first stands should be assembled by 3 people.
- 3 Now set up the other stands too. Immediately attach the appropriate connectors to stabilise the shelf.
 -  Place the stands as precisely as possible in the required position; this will make it easier to align them afterwards.
 - 4 Once you have completed the basic construction, carry out the final alignment of the shelf and bolt to the floor (pages 6 and 7). Tighten the screw connections of the connectors tightly.
 - 5 The cantilever arms can now be hooked into the required position and secured.
 - Do not forget to attach the **load capacity stickers** to the finished shelf (page 10)



Arranging the cross braces

For static reasons, **at least 3 stands and 2 cross braces** must be used. With this minimum construction, the cross braces must be attached offset (see large diagram). **For longer shelving units**, one cross brace is installed in every second bay, alternately at the top and bottom (see small diagram).

When purchasing **rack packages** (basic shelves, add-on shelves), one cross brace is supplied for each shelf bay; installation is carried out alternately at the top and bottom.



Aligning and bolting

Check the shelf components again and make any necessary corrections:

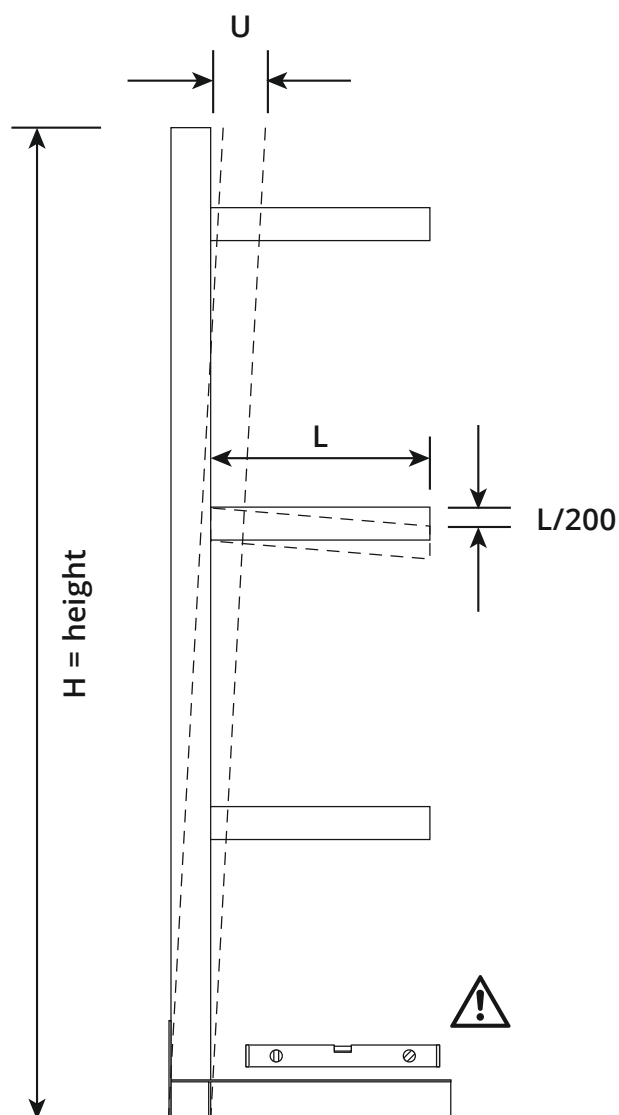
- The stands must be aligned and at the correct distance from the wall.
- The feet of the stands must be horizontal and at the same height. If necessary, place base plates under the feet.



From a difference of 10 mm onwards, the entire surface must be covered or filled (see page 2)

- The stands must not be allowed to incline beyond the tolerance values. **When checking, only place the spirit level on the foot** – the stand already has an inclination of approx 1° due to the preload.

Now tightly screw the connections of the cross braces and connectors.



Construction tolerances

To guarantee the stability and safety of your shelving, the following tolerance values must not be exceeded:

- **Cantilever arms:** max. permissible deformation at full load (max. 500 kg per arm):


$$L / 200 = 6 \text{ mm}^*$$
- **Shelf stands:** max. permissible deformation at full load:

$$U = H / (100 + H^2 / (2 \times 106)) = 45 \text{ mm}^*$$
 provided that the serviceability does not require less deformation

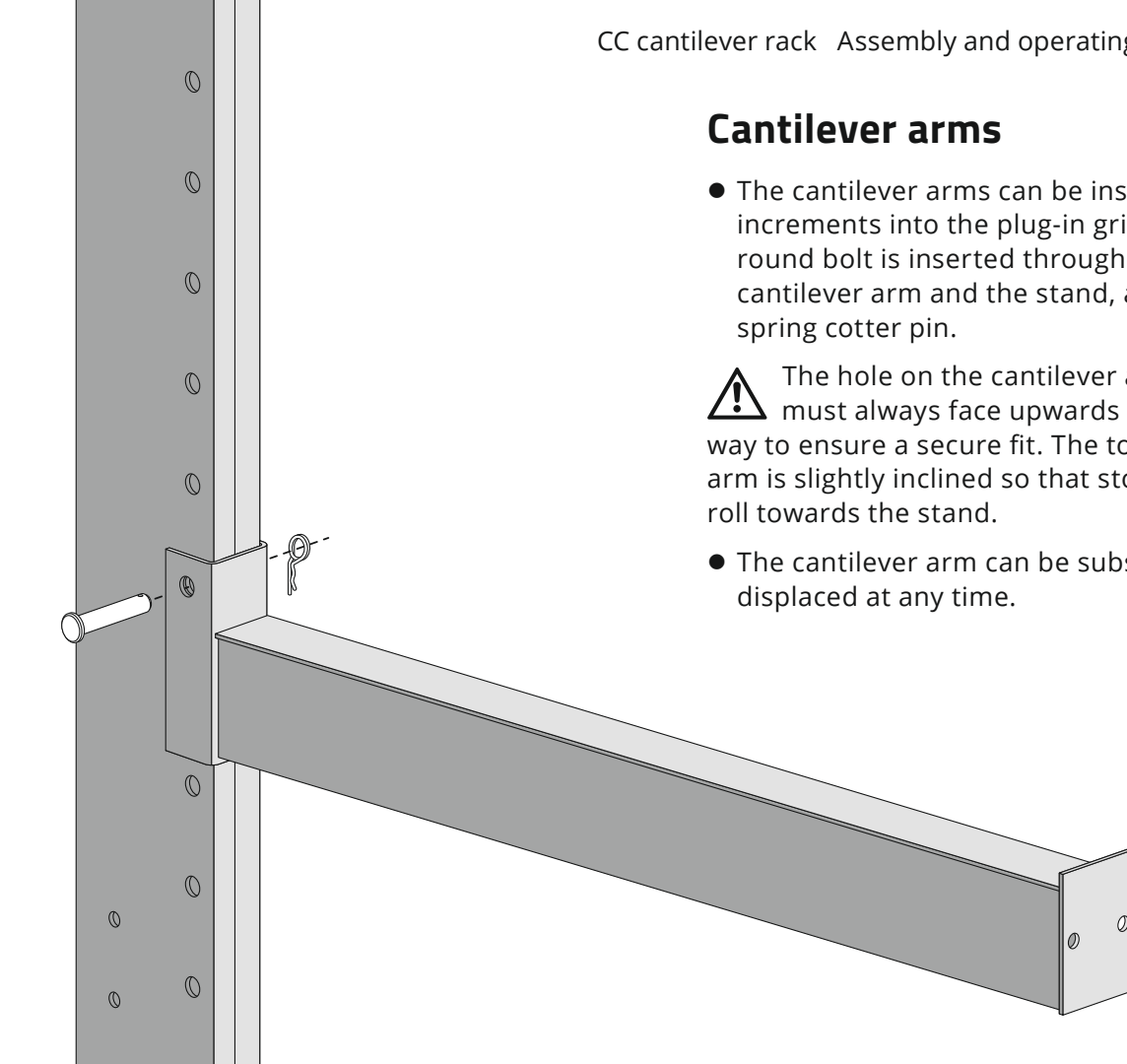
* taking the connection stiffness into account

Cantilever arms

- The cantilever arms can be inserted in 100-mm increments into the plug-in grid. The supplied round bolt is inserted through the holes of the cantilever arm and the stand, and secured with a spring cotter pin.

 The hole on the cantilever arm suspension must always face upwards as this is the only way to ensure a secure fit. The top of the cantilever arm is slightly inclined so that stored rods can only roll towards the stand.


- The cantilever arm can be subsequently displaced at any time.

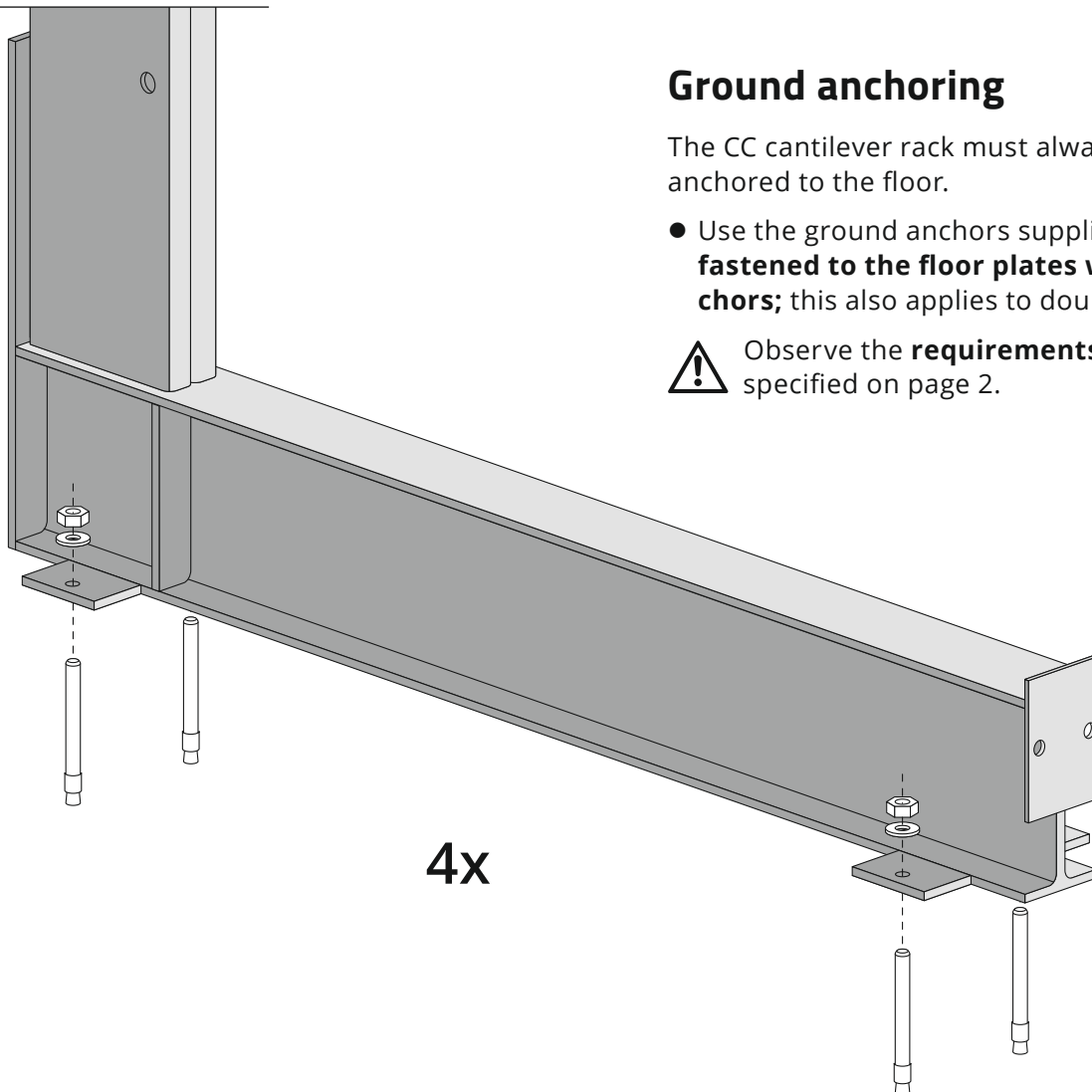


Ground anchoring

The CC cantilever rack must always be anchored to the floor.

- Use the ground anchors supplied. **Each foot is fastened to the floor plates with 4 ground anchors;** this also applies to double-sided shelves.


 Observe the **requirements for the floor** specified on page 2.




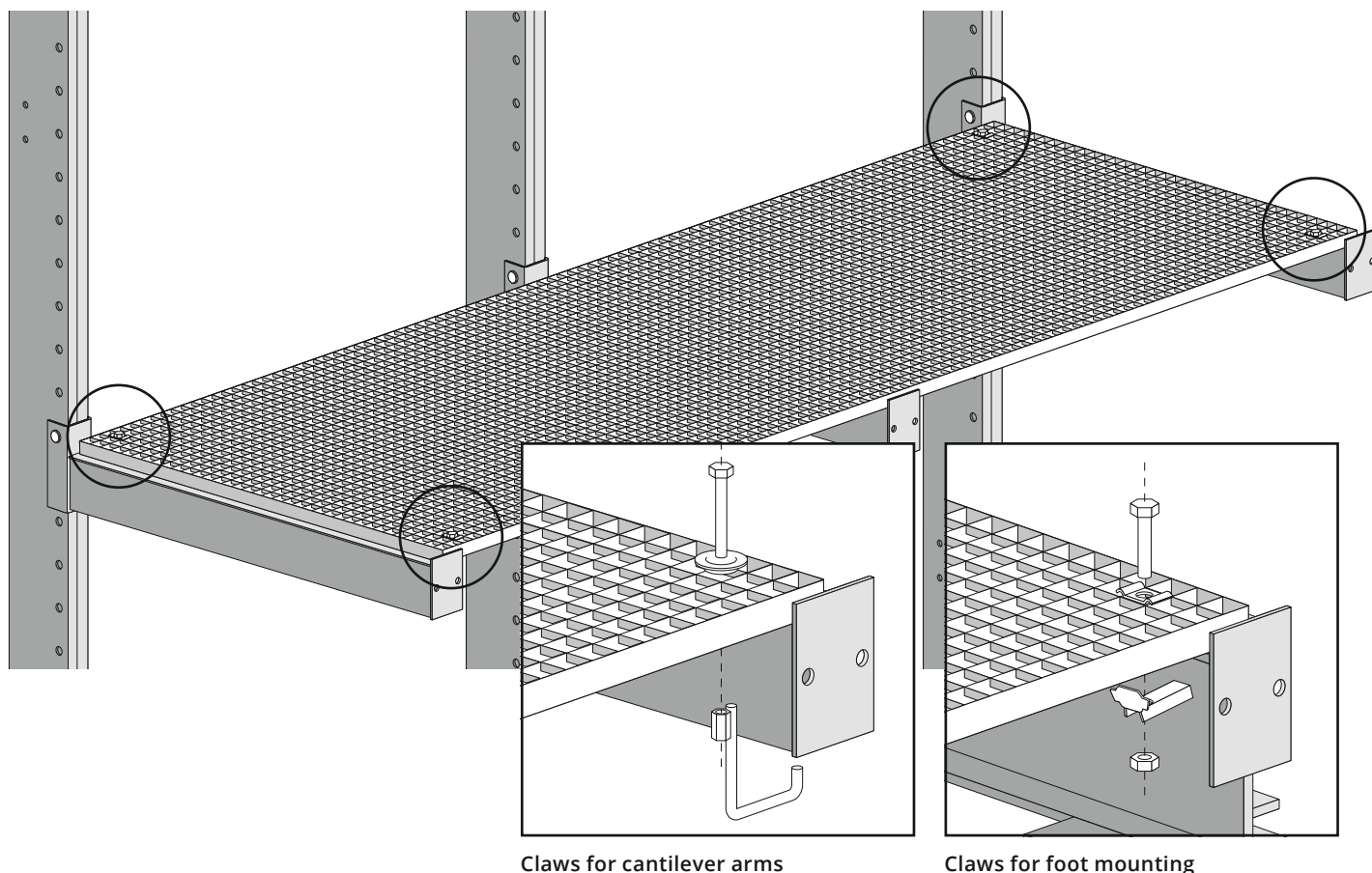
Shelves with steel grating

Galvanised sheet steel gratings are used for the load-bearing shelf panels. They span 2 shelf bays (shorter shelf panels available on request).

- Fix the shelf panels to the cantilever arms using the assembly claws supplied.


 The maximum permissible load is 400 kg/m²

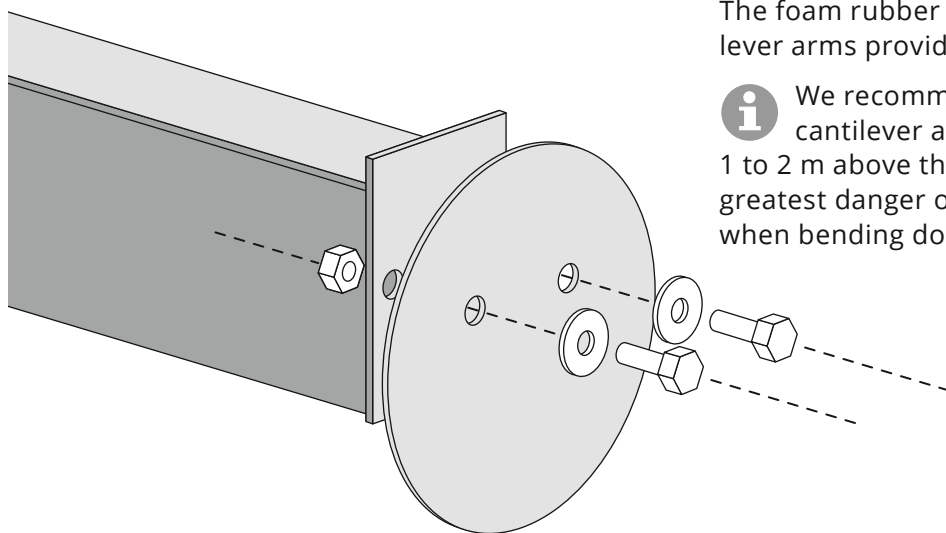
 Observe the loading instructions on page 10.

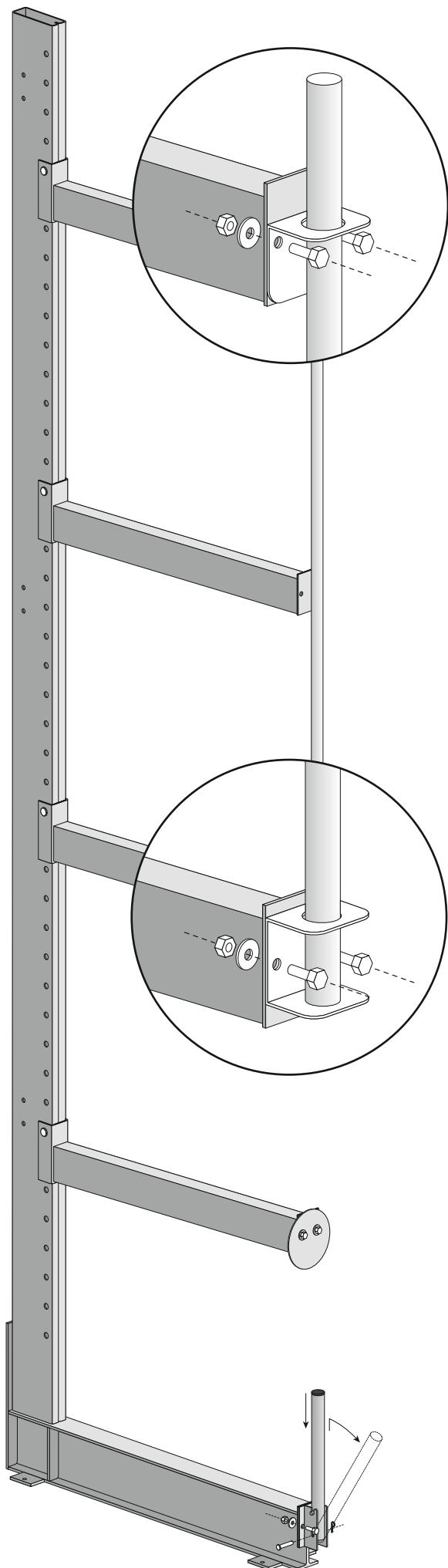


Head protection

The foam rubber cushions on the ends of the cantilever arms provide protection against head injuries.

 We recommend installing head protection on cantilever arms which end at a height of 1 to 2 m above the floor – this is where there is the greatest danger of bumping your head when bending down and standing back up.





Anti-roll rods

The vertical anti-roll rods secure several shelves over a height of 2.30 m.

- The suspensions are mounted on the ends of the cantilever arms.
- The rods are guided through the top suspension and then set down in the bottom suspension. They can be removed again in the same way in no time at all.



Make sure that the stored goods do not fall out when removing the rods.

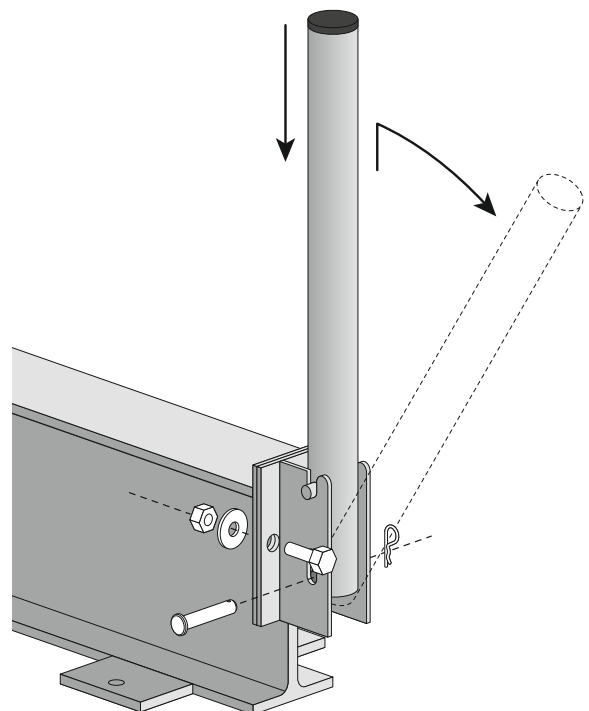
Anti-roll locking device

Anti-roll locking devices prevent individual rods or pipes from rolling off the shelves.

- Mount the anti-roll locking devices as required on the feet of the stands or on the cantilever arms.
- To load the shelf, the suspended rods can also be folded or even completely removed (remove the spring cotter pins and bolts)




Make sure that the stored goods do not fall out when folding or removing the anti-roll locking device.



LOADING THE SHELVES


Loading procedure

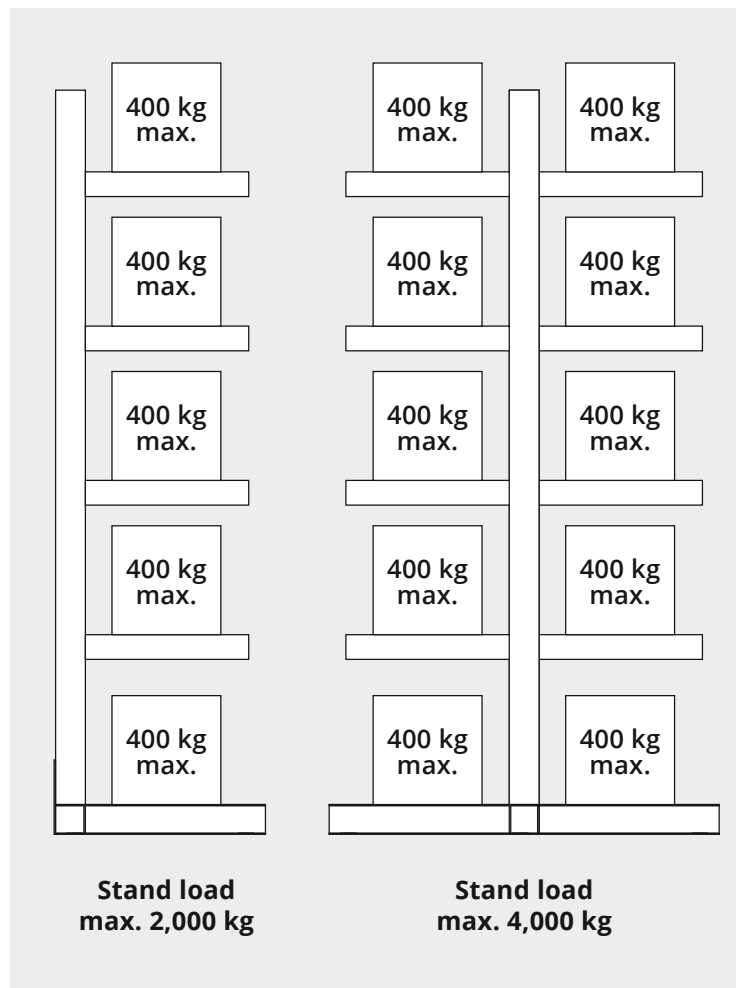
- Load the shelves as evenly as possible, from bottom to top. Store heavy loads as far down as possible.
- **Set down loads and/or lift them again very carefully.** If you wish to correct the position of the loaded goods at a later stage, lift them up beforehand. Do not try to displace the loaded goods when positioned on the cantilever arms!

 The shelf must be manoeuvred with a forklift truck and a suitable lifting device operated by trained warehouse personnel!

max. load capacity

The max. arm load is 400 kg. However, a maximum of 2,000 kg may be stored on each side of the stand (stand load).

 All information applies to evenly distributed loads.

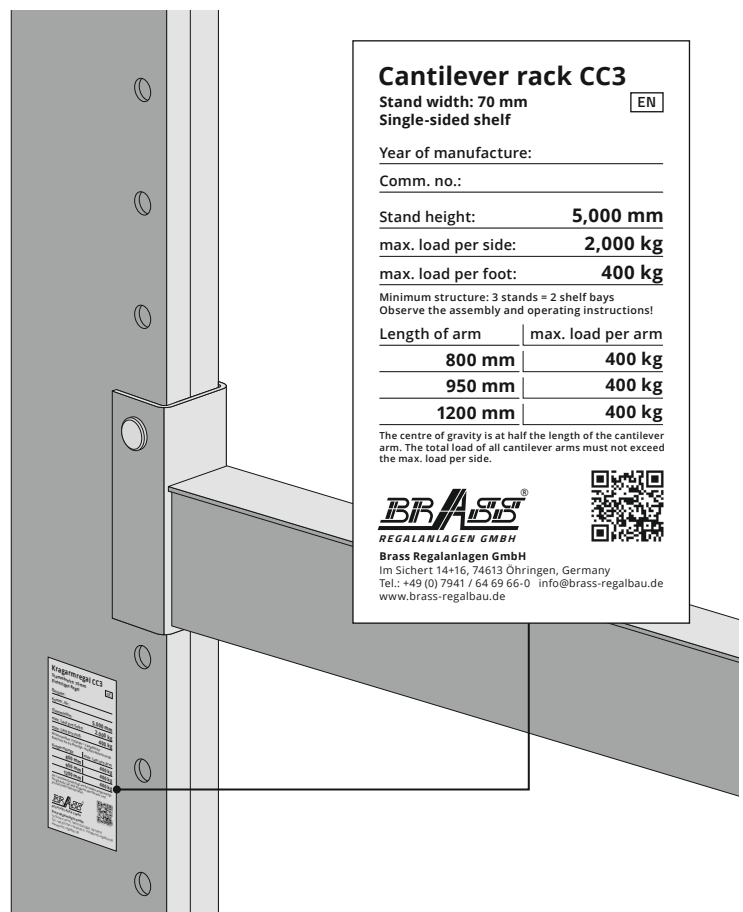


Load capacity stickers

Pursuant to DGUV (German Social Accident Insurance) regulation no. 108-007 (formerly BGR 234), load capacity stickers must be attached to the CC cantilever rack. These capacity load stickers should have been supplied with your shelf delivery. Please let us know if they are missing or if more stickers are needed.

- The load values specified refer to the standard version shown above. **The load capacity stickers must be modified accordingly for storage levels of more or less than 5.**
- Please **specify the commission number** so that all information is available in the event of queries or repeat orders.
- We recommend affixing **one sticker per row of shelves** – preferably at eye level.

 **Instruct your warehouse staff not to exceed the load specifications stated on the load capacity stickers when using the shelving!**



MAINTENANCE

Timely detection of damage can prevent many serious accidents and keep repair costs to a minimum. A detailed analysis of the damage often reveals the causes so that preventive measures can then be taken.

Regular visual inspections

The operator (management) must ensure that the shelving systems are regularly inspected. A formal written report should be kept. The inspections must be carried out by the safety officer or another person entrusted with this task.

Annual shelf inspection

An inspection must be carried out by a competent person at intervals of not more than 12 months. Brass Regalanlagen GmbH offers you this shelf inspection done by certified shelf inspectors.

Legal bases

The European standard DIN EN 15635 and the German Ordinance on Industrial Safety and Health (BetrSichV) require warehouse operators to have their shelving systems regularly inspected by a certified shelf inspector. The BetrSichV applies to the provision of shelves by the employer and to the use of shelves by employees. Paragraph 10 of BetrSichV requires regular inspections of storage facilities. In accordance with §3, the type, scope and time limits for the necessary inspections must be determined for shelving. The scope and procedure for storage facility inspections are regulated in European standard DIN EN 15635.

What is inspected?

- General condition of the shelves
- Stability of the shelves (resistance to tilting)
- Vertical position of the shelves
- Correct assembly
- All shelf components and protective devices are checked for completeness and damage
- Assessment of loading equipment and load for suitability/arrangement
- Correct labelling of the shelves

Test report

After the inspection, the manager or person responsible for the shelving system is handed a written report with observations and suggestions for the necessary actions to be taken.

In the event of accidents

Safe use of your shelving system is only guaranteed within the specified tolerances. If parts of the shelving become deformed in an accident or for another reason, the damage must be assessed and further action must be taken if necessary (see following pages).



Instruct your warehouse staff to immediately notify your manager or the person responsible for the shelving systems of any visible damage to the shelving!

