

## Installation instructions SZ194

Customized dowel-anchored plate with base, with loose-and-fixed flange assembly and placement hinge for type SCHATTELLO, in accordance with DIN 18195. The method used here comprises an externally insulated roof system based on bonding a vapour barrier and sealing with roofing membranes (bitumen sheet insulation or synthetic waterproofing material).

The following instructions include all information necessary for the installation of this anchor plate. To avoid any misunderstanding, we advise you to read these instructions carefully and then keep them for later reference.



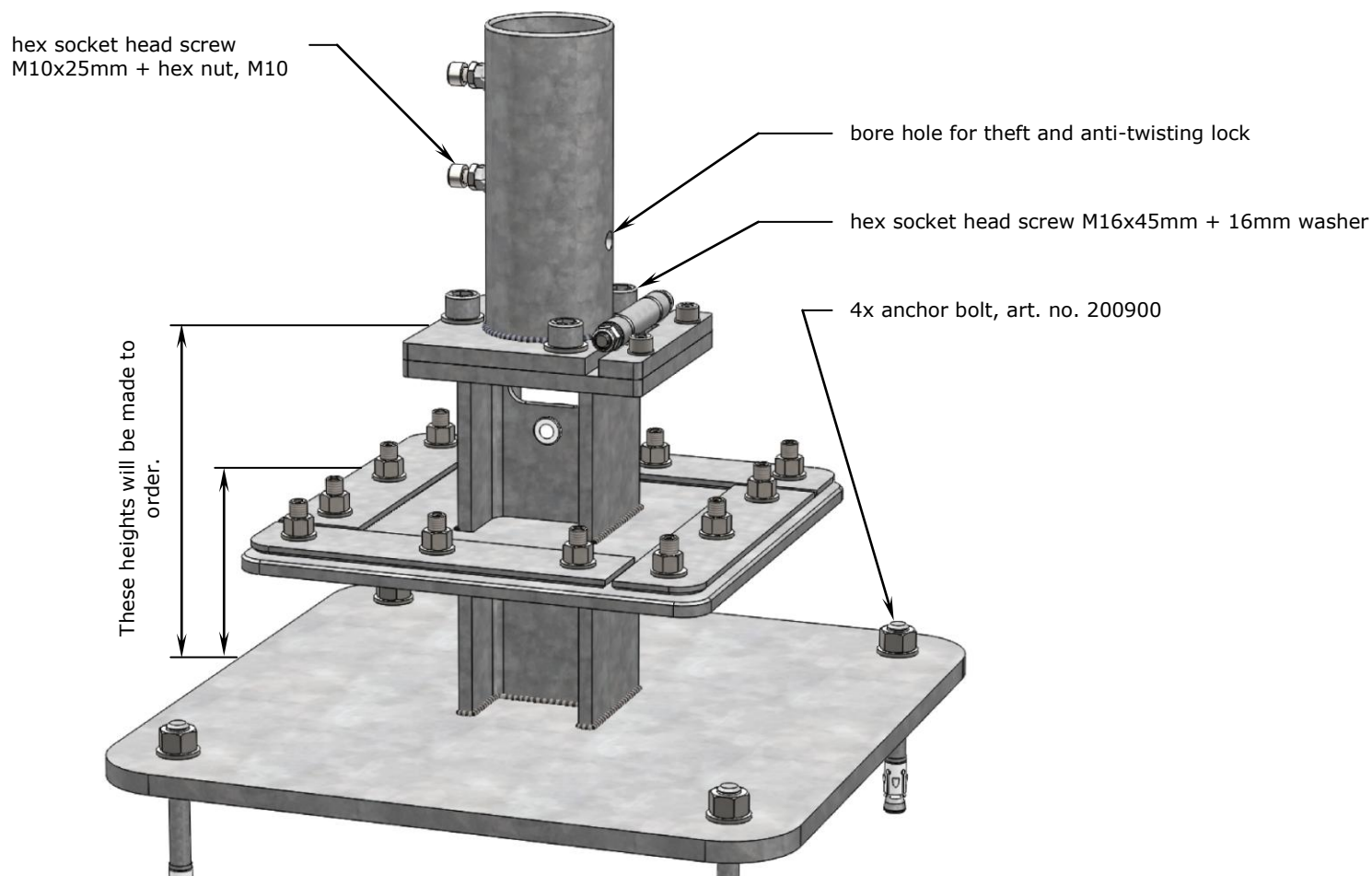
### Caution

**Non- observation of operating instructions can result in personal injuries or damage to property.**

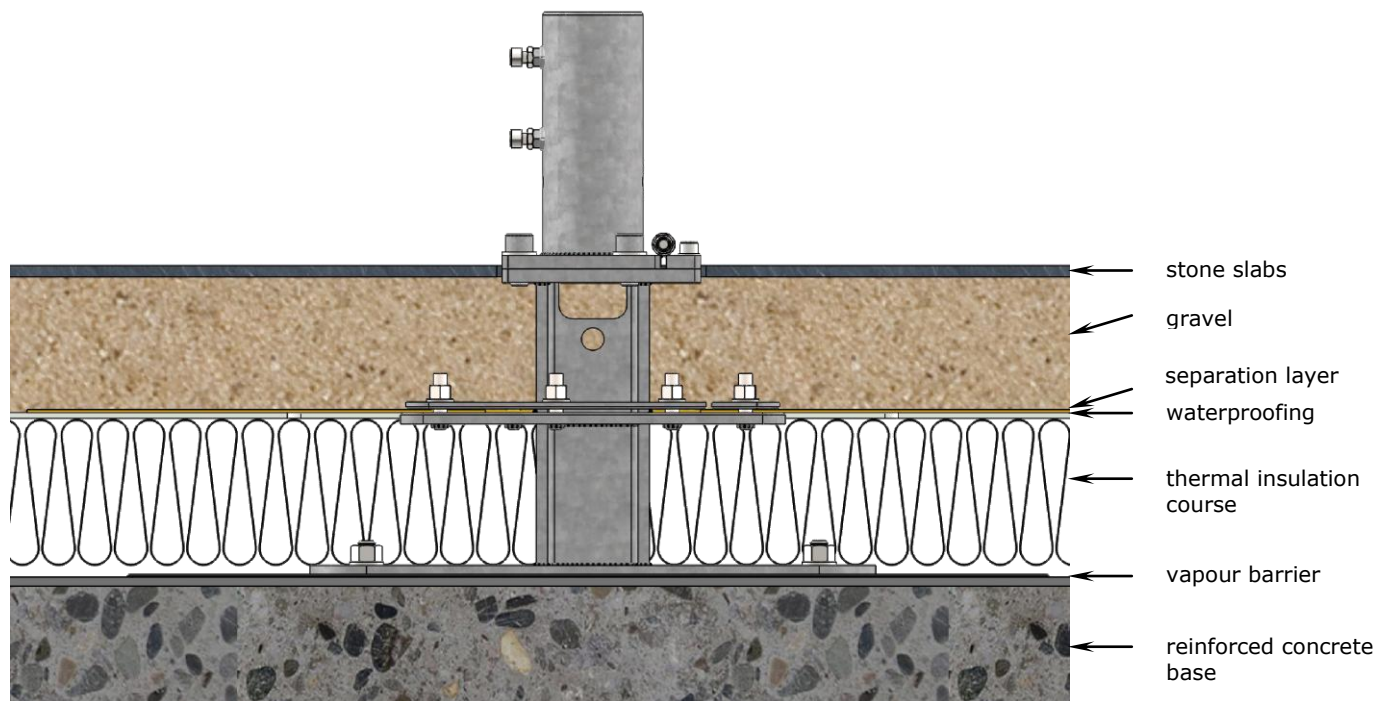
Please note that if these instructions are not observed, the manufacturer cannot assume any liability or guarantee.

- Always follow the safety regulations.
- Should you not understand any part of these operating instructions, please contact your MAY dealer.

## Diagram showing installation materials and tools



## Roof structure: single-layer, unvented



## Positioning SZ194 and preparation of the vapour barrier

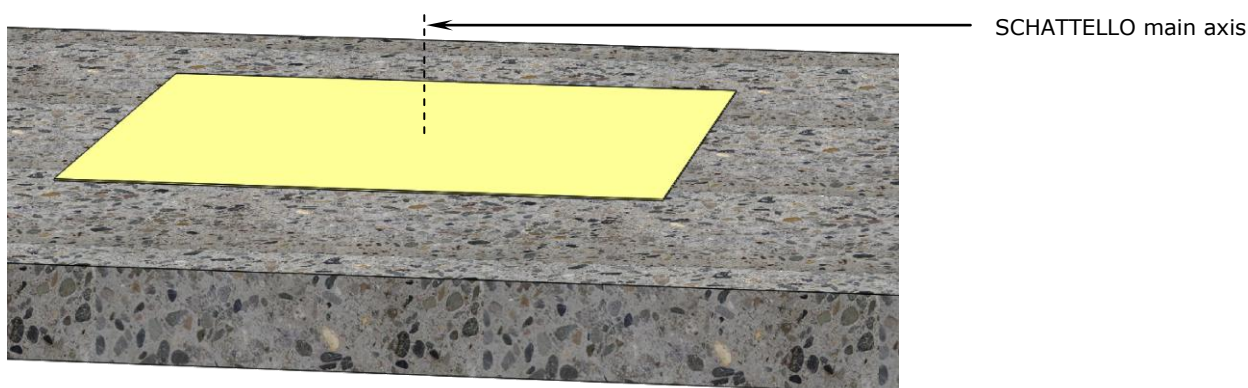
Start from the following initial state of the roof terrace: the bitumen sheets have not yet been placed, i.e. the reinforced concrete base is in substrate condition.



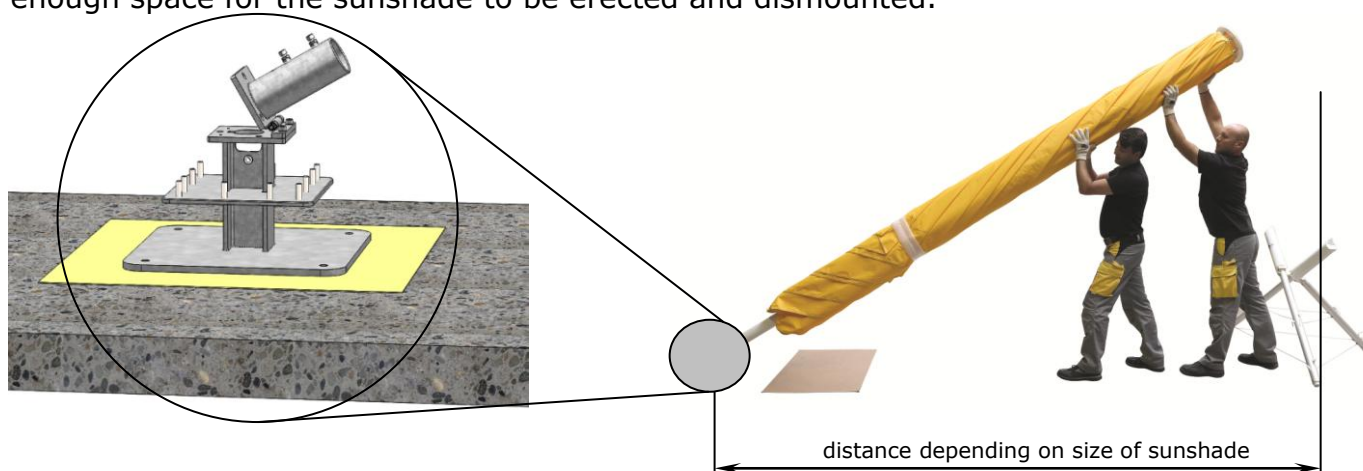
**This flat-roof installation should be carried out solely by a qualified roofing contractor. Non-observance may result in property damage.**

Please note that the applicable regulations for roof waterproofing and the most recent DIN norms valid for the entire craft must be observed. The manufacturer has included some additional technical hints to aid correct installation. Nevertheless, MAY cannot assume any liability or guarantee for incorrect installation.

1. Place a purpose-made vapour barrier membrane (1 x 1m) in the middle of the designated position for the SCHATTELLO parasol main axis. Ideally, the vapour barrier would be made of Wolfin GW SK bitumen- compatible synthetic membrane. This is produced on the base of PVC-P-BV in accordance with DIN 16937 and 16730. Technical data: thickness 2.3 mm, underside glass fibre mesh reinforcement, coated with a cold-bonding self- adhesive layer.



2. Choose the location for your SZ194. Put the placement hinge in a position that will allow enough space for the sunshade to be erected and dismantled.



3. When positioning the SZ186, be sure to measure exactly where the parasol axis should be. Allow sufficient space between sunshades or between the wall of the building and the sunshade.



**Caution**

### **Sunshades that are located too close together wear sooner.**

Sunshades may sway slightly. If there is not enough space between them, they may touch and abrade or scrape the canopy fabric at the spoke ends.

- Make sure that there is a clearance of approx. 15 - 20cm between the sunshades (or between sunshade and the wall of the building).

4. Align the SZ194 into vertical position.

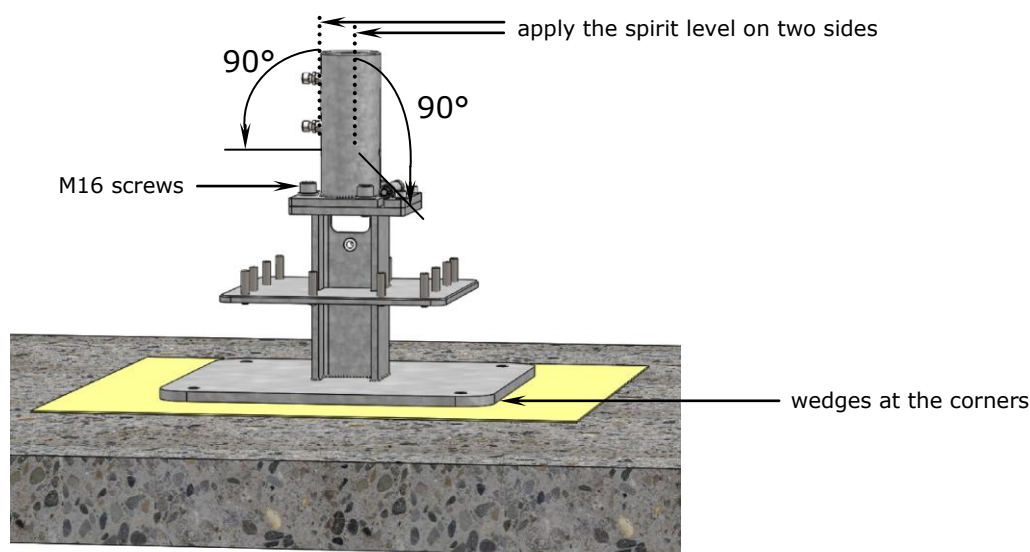


#### Attention

**In order to ensure that the parasol stands upright, the SZ194 must be screwed into vertical position.**

If the upper component of SZ194 is not in an absolute vertical position, the parasols will stand slanted. This would have a negative impact on the overall optical appearance of the parasols. Especially when there are several sunshades in a row, even an inexperienced passer-by would notice that they are not straight.

- Tighten the three M16 screws firmly.
- Use a spirit level to align the SZ194 (cf. Illustration).
- Use wedges under all four corners. The wedges should be as broad as possible so that the load is well distributed and will not damage the vapour barrier membrane.



#### Caution

**Screws that are not tightened correctly will work loose.**

If screws are not tightened firmly enough, there will not be sufficient tensile force to trigger self-locking. If the screws are tightened too firmly and over-stressed, the screw connection may slacken.

- Tighten the three M16 screws manually using the enclosed hex key and extension. Exert as much force as possible. With the enclosed tools there is virtually no risk of over-stressing.
- The correct torque for a torque wrench is 210 Nm.



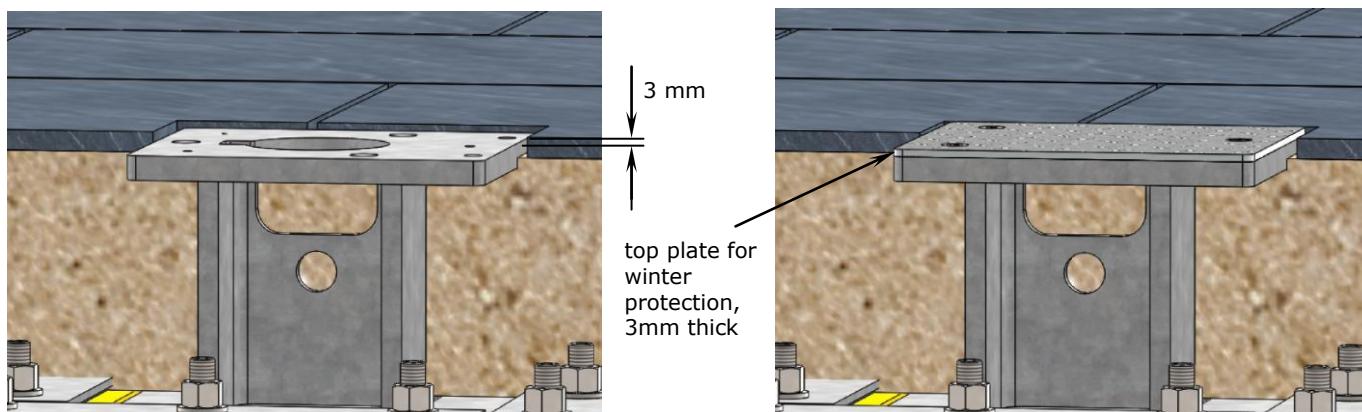
5. When setting the SZ194, make sure that the base plate of the bottom component is flush with the terrace floor surface.

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### **Avoid tripping hazard.**

To ensure that the winter top plate (needed as a protective cover in winter when the upper anchor tube has been removed) is flush, the bottom component must be set 3mm below the terrace surface (cf. illustration). This difference of 3mm corresponds to the space needed for the 3mm-thick checker plate for winter protection.

- When ordering, make sure that you state the correct height measurements required for the bottom component so that the distance between the top of the reinforced concrete base and the top edge of the terrace surface can be bridged properly. Please use our special MAY order form for custom-made production.
  - In case of doubt, state a measurement that is slightly too short. The missing height can then be jacked up. Measurements that are too long cannot be adjusted.
  - To reach the correct height of the lower component, push wedges under all four corners. The wedges should be as broad as possible so that the load is well distributed and will not damage the vapour barrier membrane. Ideally, the wedges should only be used to jack up the plate. The hollow space beneath the base plate should then be stuffed with epoxy resin sealing mortar until the plate is completely stable and safe.
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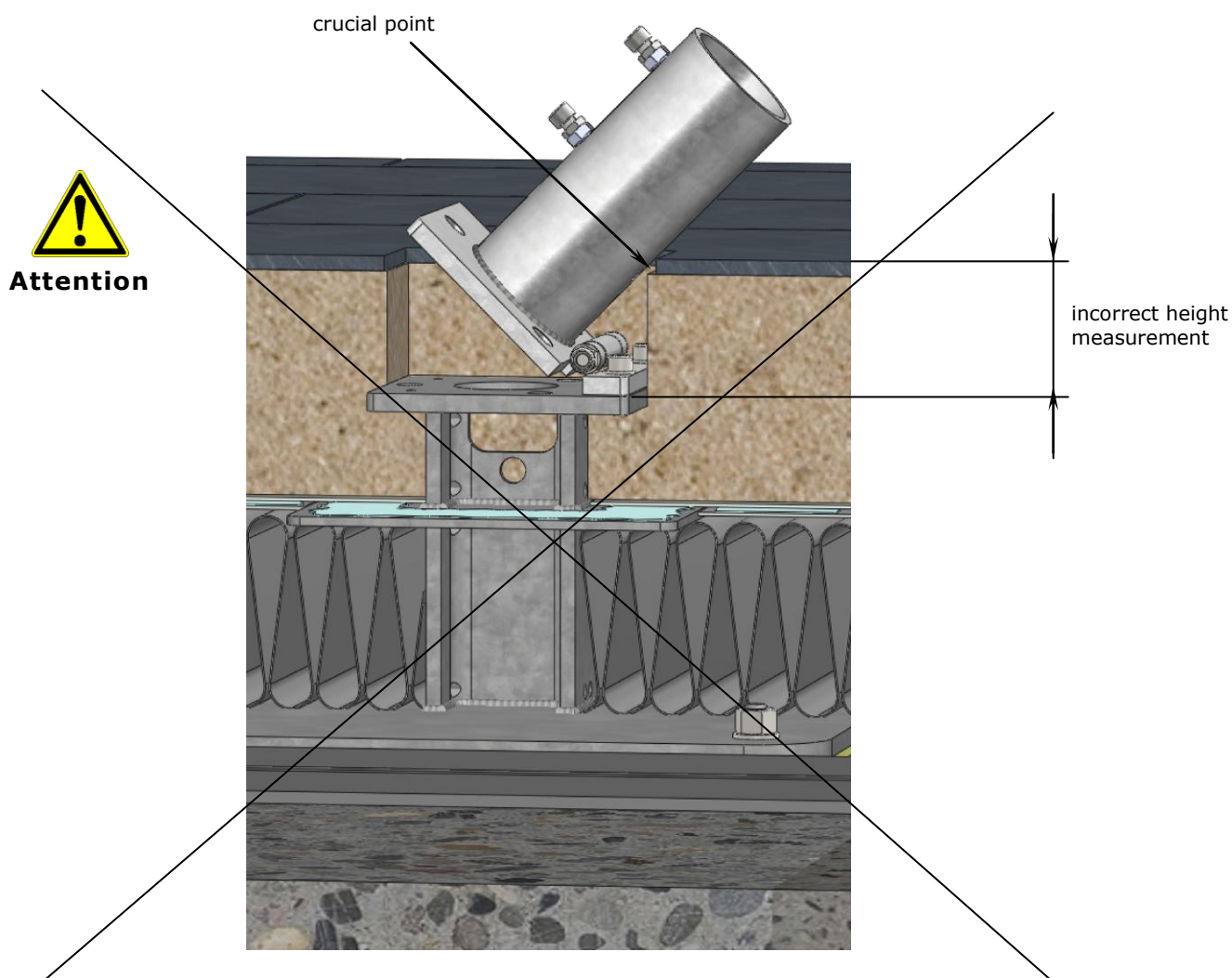



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### **Functioning of the placement hinge.**

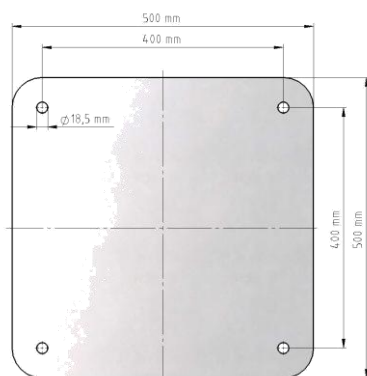
If your SZ194 has not been installed in the correct height, do at least make sure that the bottom component has not been set too far down. If there is too great a height difference, the placement hinge will not tilt into horizontal position and the parasol cannot be erected properly. Moreover, the electrician will have difficulties running the cables.

- Match the height of the gravel bed to that of the stone slabs.
  - If there is a height difference of over 50 mm, functioning of the placement hinge will be seriously restricted.
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## Fixing the anchor plate

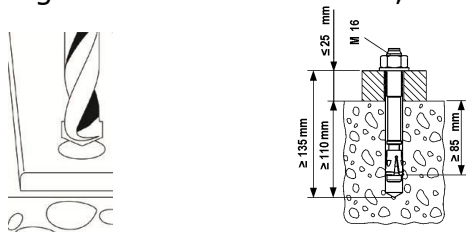
1. Use a hammer drill to drive the 4 bore holes for dowels into the reinforced concrete surface. The drill pattern for the anchor plate is as shown auf:



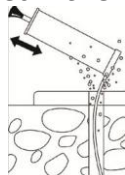
2. Screw the anchor plate onto the reinforced concrete surface. If you use anchor bolts provided by other manufacturers, please observe their instructions. Anchor bolts supplied by MAY should be mounted as follows:

Art. no. 200900, threaded bolt with nut, stainless steel A4:

- a. Using a 16 mm hammer drill, drill a min.110 mm-deep hole into the concrete.



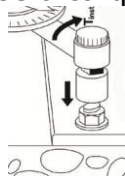
- b. Clean the bore hole with compressed air.



- c. Drive the anchor bolt into the hole. Before doing so, be sure to position the hex nut correctly. (The drive-in pin of the threaded bolt should jut out of the hex nut approx. 2 - 3 mm.).



- d. Use a torque wrench to tighten the nut with 110 Nm.



**Danger**

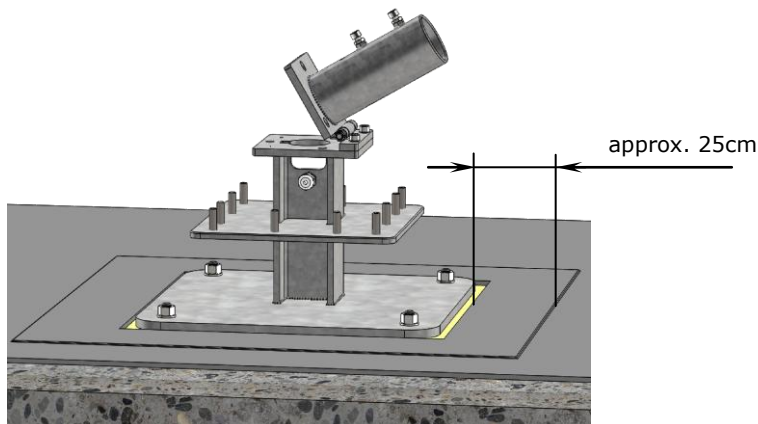
### **A falling sunshade can cause serious or even fatal injury.**

If the dimensions of the anchor bolts do not match the size of the umbrella, the sunshade may fall and cause injuries.

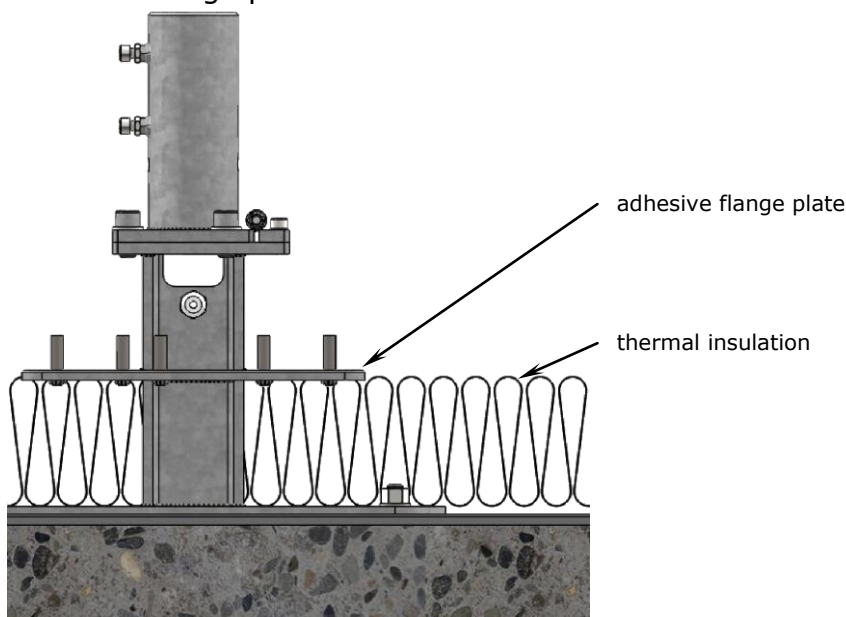
- Always determine the appropriate bolt size with the help of a specialist.
- Anchor bolts of May company are approved for cracked and non-cracked concrete B25 till B55 and C20/25 to C50/60. Also suitable for concrete C12/15 and natural stone with dense structure.

## Bonding vapour barrier membranes

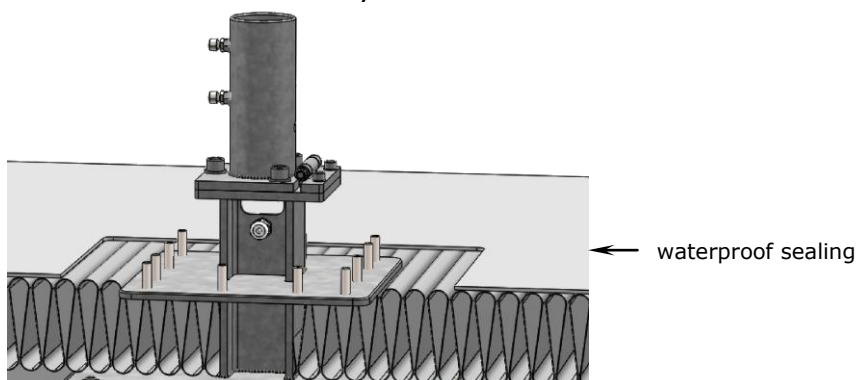
1. Under the anchor plate there is a vapour barrier membrane with a 25cm connecting. Use this to bond vapour barrier membranes made of bitumen sheeting or similar materials.



2. Fill up the thermal insulation course with insulating material as far as the bottom of the adhesive flange plate.

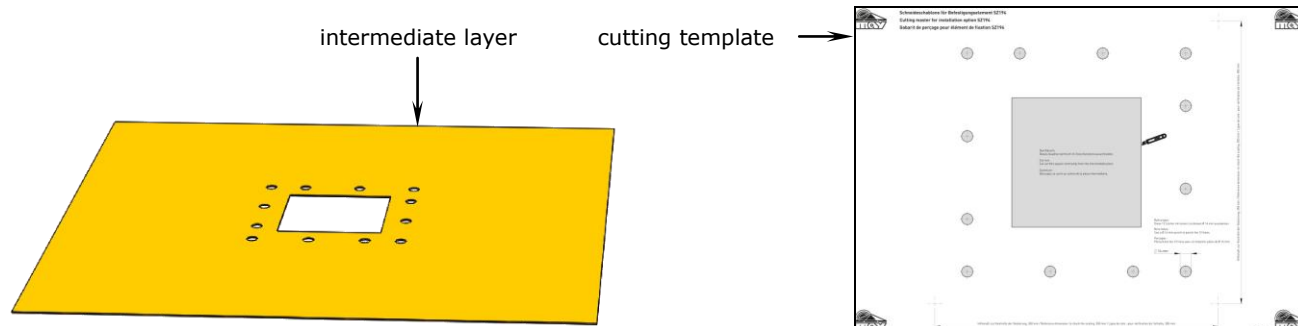


3. Spread out the waterproofing sealing membrane on the insulation layer. When doing so, cut out a hole in the membrane so that it will fit exactly round the adhesive flange and thus a butt joint. Depending on the waterproofing membrane used, it may be necessary to reinforce with further layers.

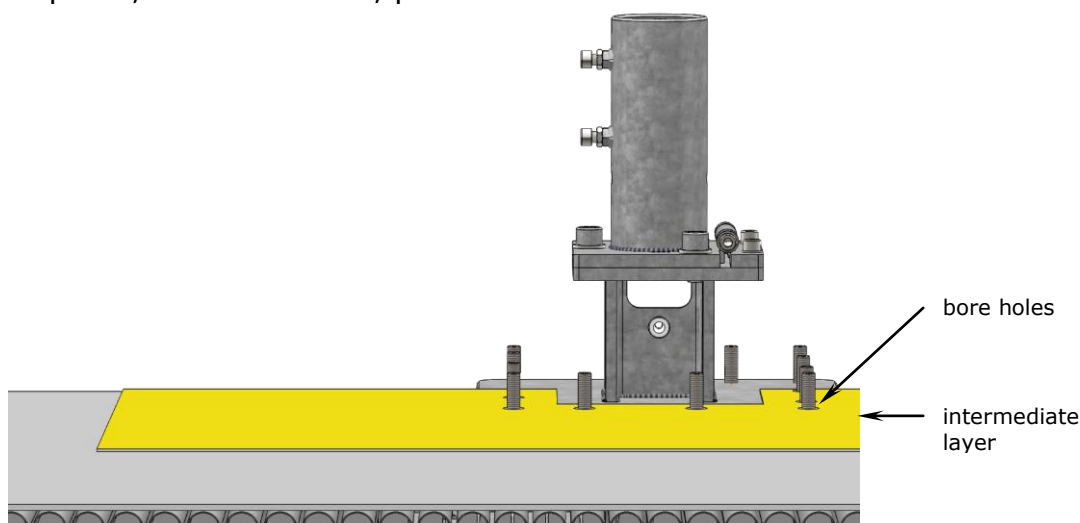




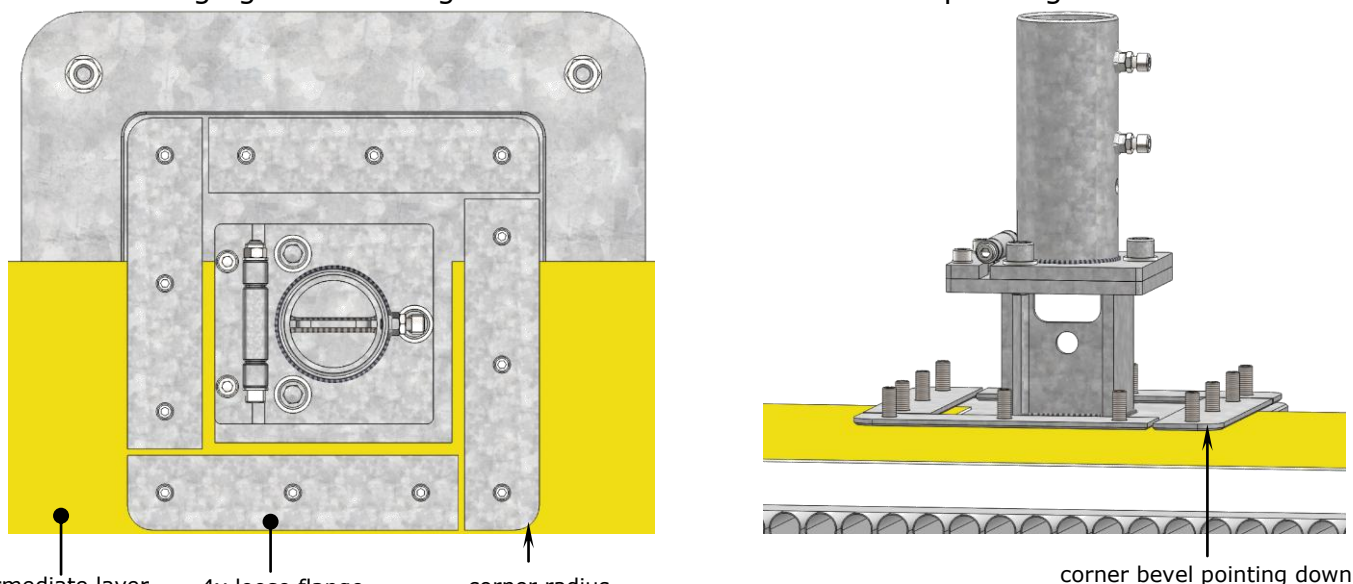
4. Prepare the intermediate layer. Cut out a 1x1m piece of the waterproofing material. Use the provided cutting template (DIN-A3) to prepare the squared cut out and the 12 bore holes. Tools: knife and punch Ø14 mm.



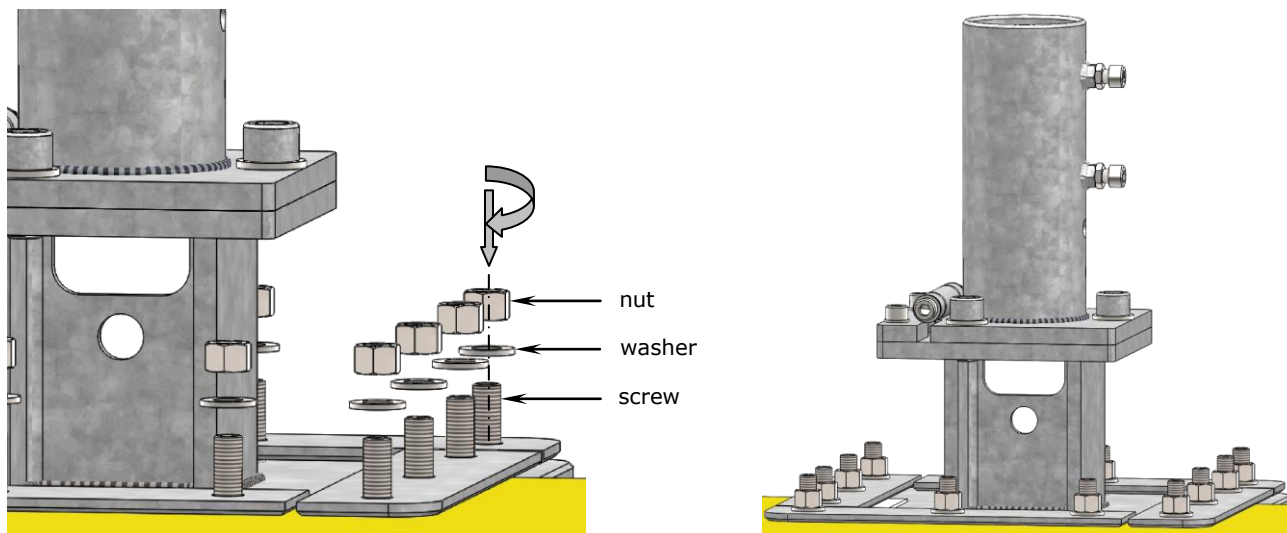
5. Put the intermediate layer over the upper tube and place the screws into the bore holes. Depending on the waterproofing material there is an additional layer or a reinforcement required, see DIN 18195, part 9.



6. Use the loos flanges to fix the intermediate layer. Make sure to position the loose flanges with the flanging radius facing outwards and the corner bevels pointing down.



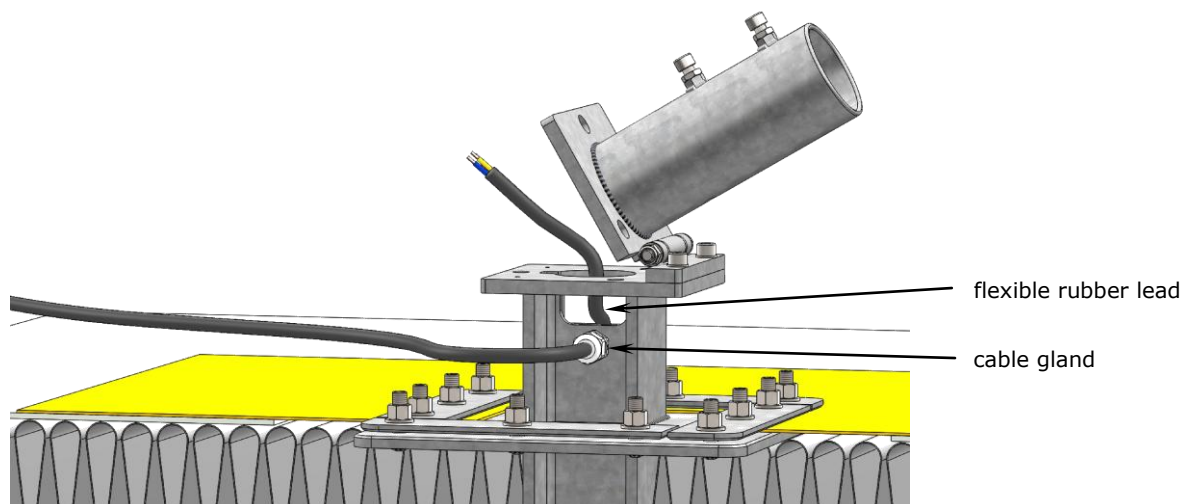
7. Tighten the four loose flanges. Put a washer on each of the 12 screws and screw on the nuts accordingly. The nut torque depends on the selected waterproofing material, according to DIN 18195, part 9, table 2.



8. Due to the manufacturing process, the screws are not galvanised and thus are not protected from corrosion. Therefore all 12 screws must now be coated with liquid zinc. This is required to make sure the threads will not rust and remain functional.

## Power supply (optional)

1. Press the flexible connecting rubber lead (certified approval for outdoor use necessary) through the cable gland and tighten the nut so that the rubber is narrowed and tension relief is provided.



2. The connection of the flexible rubber lead and power supply for the parasol must be absolutely waterproof. The ground cable (for heavy current: min. 5-pole, min. 4mm<sup>2</sup>, cable cross section) must be laid to suit the electric load and the length of the lead wire by a qualified electrician.



**Danger**

**Electric installation work should be carried out solely by a certified electrician. Disregarding this warning may result in serious personal injuries.**



**Danger**

**To avoid personal injury in case of faults.**

Water in the plug connector can lead to a short circuit. Protect the connector against any water.

- Secure umbrella with a 30mA RCBO protective switch.
- According to law, the functioning of protective switches must be checked at least every six months.



**Caution**

**Danger of short circuit.**

Water in the plug connector can lead to a short circuit. Protect the connector against any water.

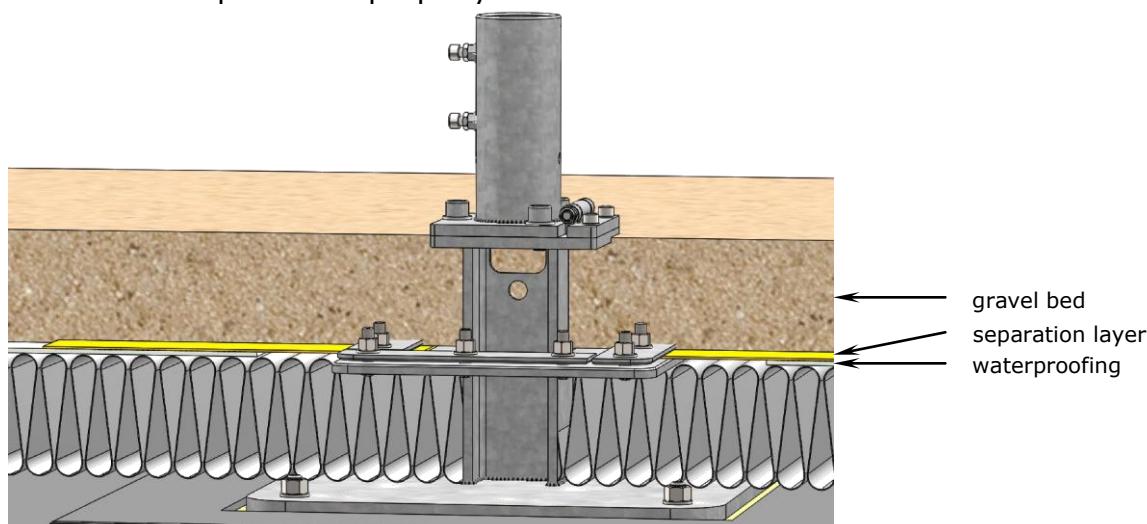
- Make sure that the plug connector remains above the ground.
- Seal the connector with silicon to make it 100% waterproof.

### 3. Wire colours (Number dependent on consumers installed):

green-yellow	= protection
blue	= neutral
brown	= light (if used)
black, white	= heating (if used)
black	= heating (if used)

## Gravel bed and stone slabs

1. Lay the gravel bed in the usual manner. Make sure that the connecting rubber lead has been run and protected properly.



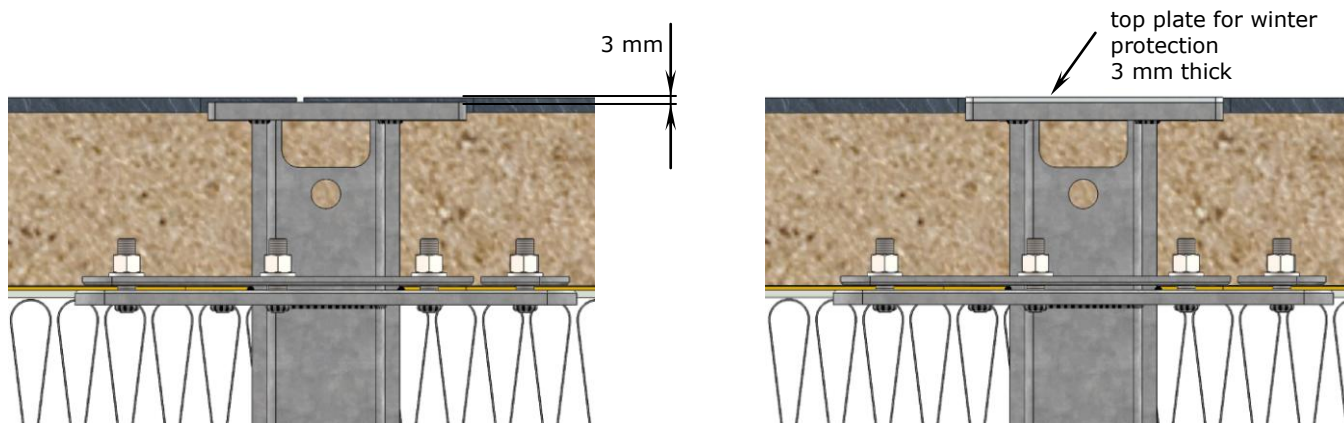


### Attention

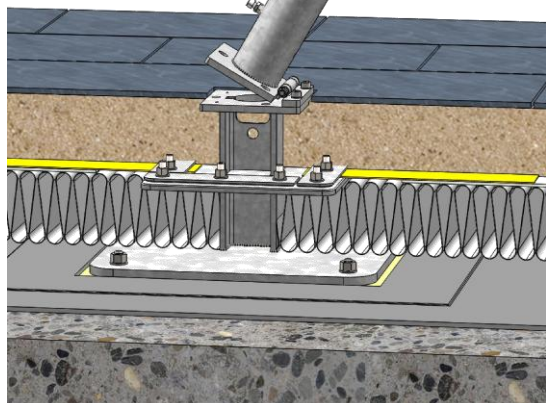
#### Avoid tripping hazard.

To ensure that the winter top plate (needed as a protective cover in winter when the upper anchor tube has been removed) is flush, the bottom component must be set 3mm below the terrace surface (cf. illustration). This difference of 3mm corresponds to the space needed for the 3mm-thick checker plate for winter protection.

- Match the height of the gravel bed to that of the stone slabs.



2. Lay the stone slabs and saw away the corners of those that are to fit round the SZ194. Make sure that the SZ194 sits flush.



## Project management

All persons involved should discuss this installation option on site. If these instructions are provided to everyone during the planning period, arguments can be harmonised and therefore unnecessary costs for incorrect planning can be saved. In case this installation option is found not to be suitable, you may select another option from the MAY program. Customized options are available upon request depending on complexity.

Following parties may be involved:

1. House owner: Approval of project, assumption of costs, order placement, etc.
2. Leaseholder / gastronome: Is the positioning of the parasols suitable for the seating, assumption of costs, etc.
3. Architect: General legal planning, positioning, statics of the flat roof (dynamic and static load by weight and wind), control and supervision of the workmen, etc.
4. Workmen: Roofer clarifies and mounts the installation option, pay attention to waterproofing sealing, setting heavy-duty anchor bolts, etc.
5. Electrician: Defines electrical connection, clarifies cable and control, etc.

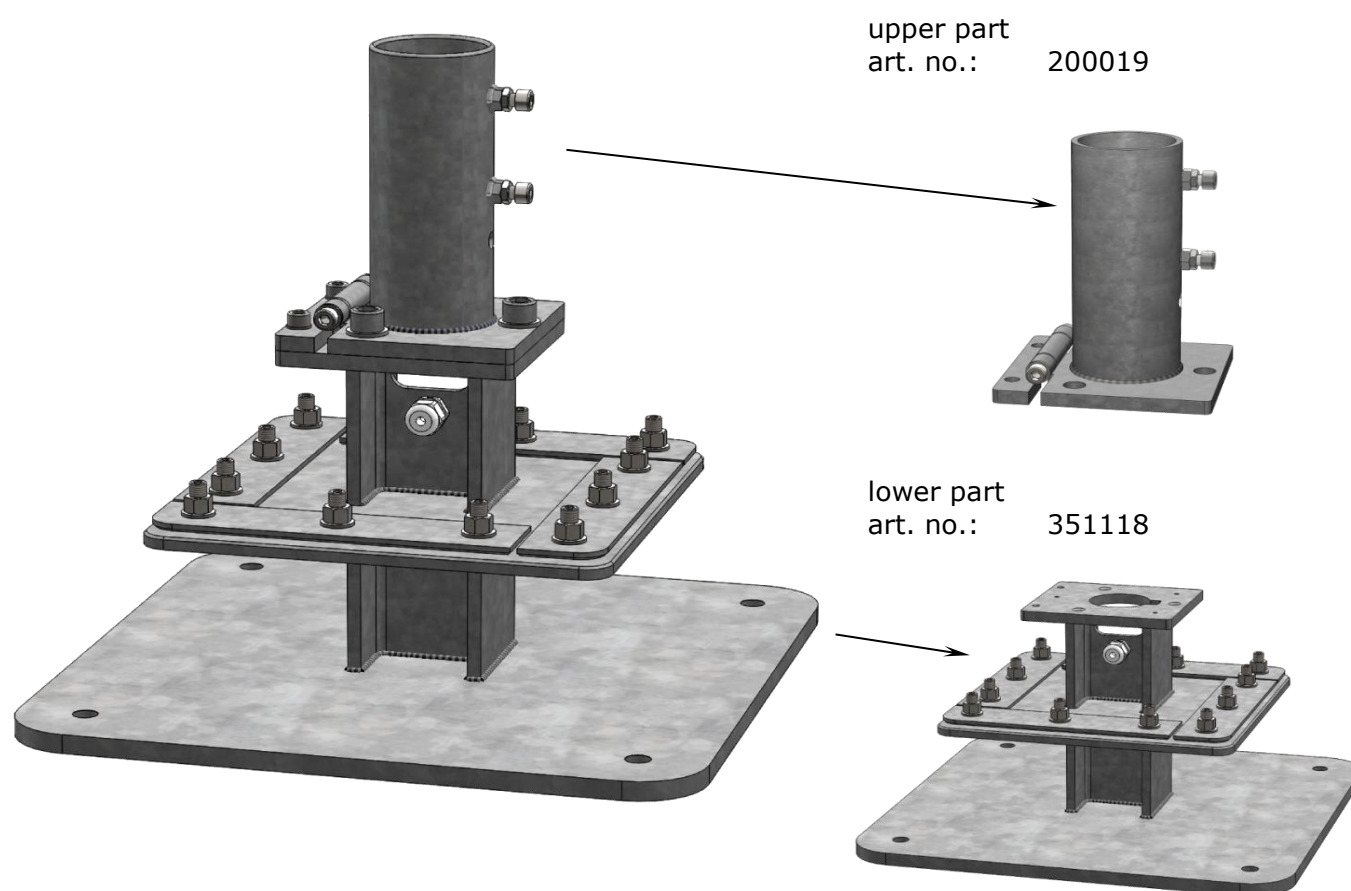


# Dowel-anchored plate with placement hinge and glueboard, SZ194

This order sheet must be filled out completely and supplied to the MAY company before production.

art. no. SZ194: 2 pieces, screw-off upper part, fits for pole  $\varnothing$  76 mm

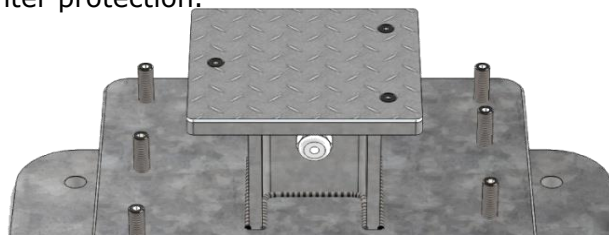
This technical version is in accordance with DIN 18195 for loose-and-fixed flange assembly. The method is used with bitumen sheet insulation and sealing with plastic roofing membranes (loosely laid), in case of non-pressing water.



## 3-D views of SZ194



3-D view of lower part with top plate for winter protection.



Combinable with pin and padlock, art. no. 200103.

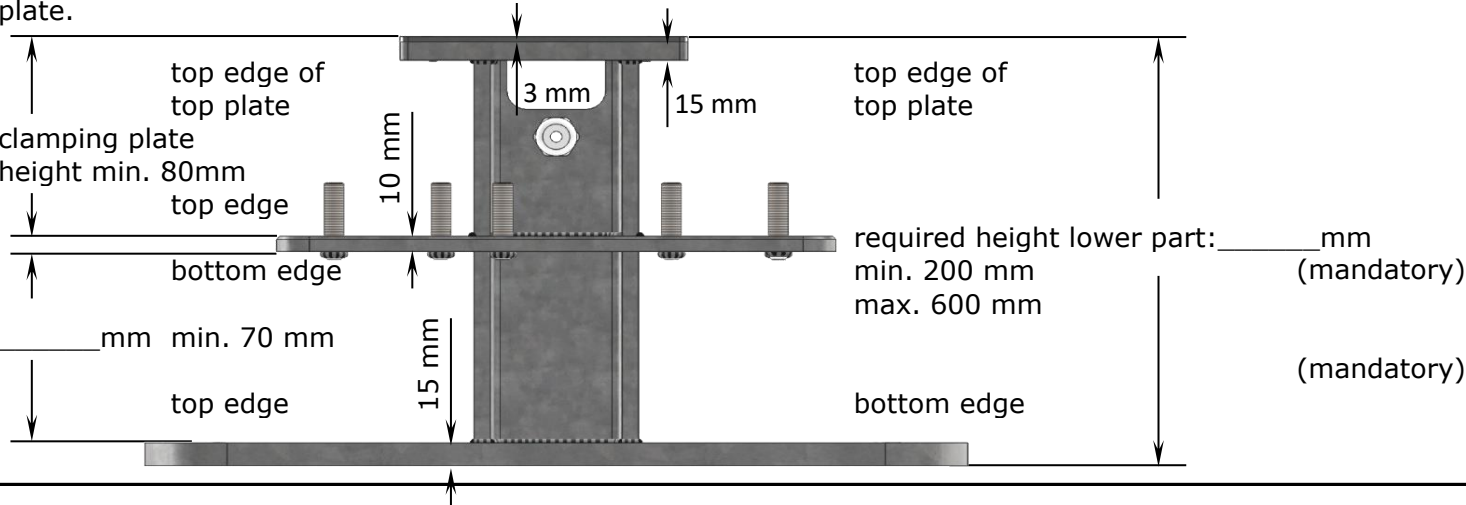


# Dowel-anchored plate with placement hinge and glueboard, SZ194

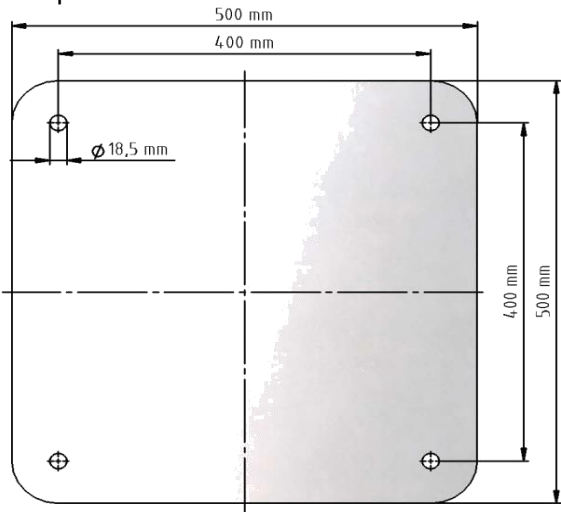
This order sheet must be filled out completely and supplied to the MAY company before production.

art. no. SZ194: 2 pieces, screw-off upper part, fits for pole  $\varnothing$  76 mm

All bases are custom-made. When ordering, please state the total height required, including winter top plate.

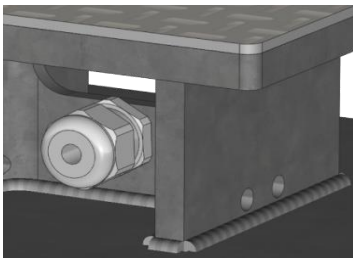


anchor plate



When drilling the heavy-duty anchor bolts into the designated site position, use the anchor plate as a drilling jig. You will need 4 heavy-duty anchor bolts. Available in stainless steel A4, art. no. 200900.

Cable gland for tension relief. Only necessary if power supply is planned.



required \_\_\_\_\_ (mandatory)  
not required \_\_\_\_\_

When ordering, please fill in the fields below:

Quantity: \_\_\_\_\_ (mandatory)

(Dealer-) Name and address: \_\_\_\_\_ (optional)

(Dealer-) Commission: \_\_\_\_\_ (optional)

(Dealer-) Order number: \_\_\_\_\_ (optional)

(Dealer-) Name of clerk in charge: \_\_\_\_\_ (optional)

Order placed: \_\_\_\_\_ (mandatory)

Name

Date

Only for May Gerätebau GmbH:

Order number: \_\_\_\_\_