

Installation instructions SZ150

Anchor tube to be embedded in concrete for type **SCHATTELLO**

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



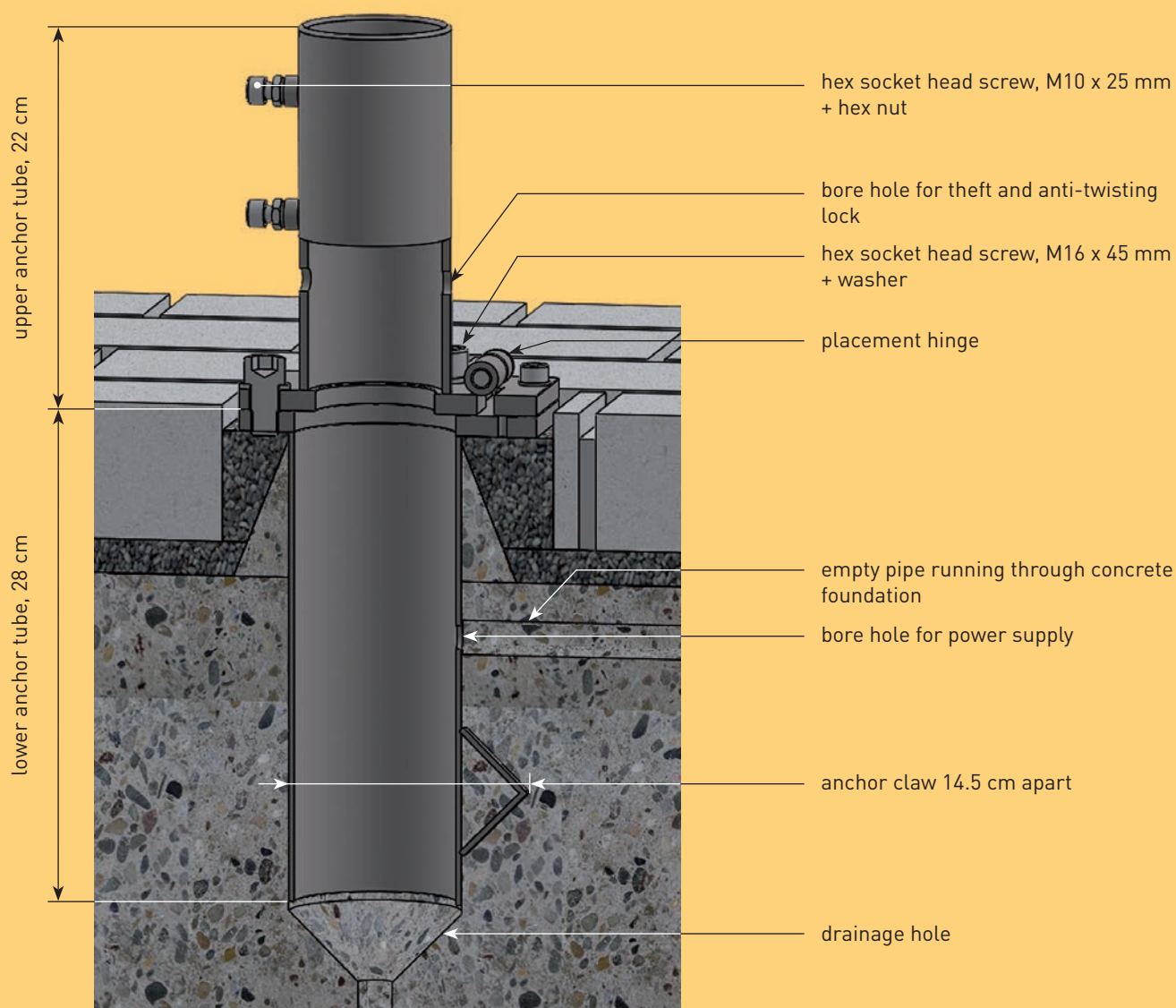
Caution

Non- observation of installation 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 installation instructions, please contact your MAY dealer.

Diagram showing installation components



Determining the location for the foundation

1. Allow sufficient space between parasols or between the wall of the house and the parasol.



Caution

Parasols that are located too close together wear sooner.

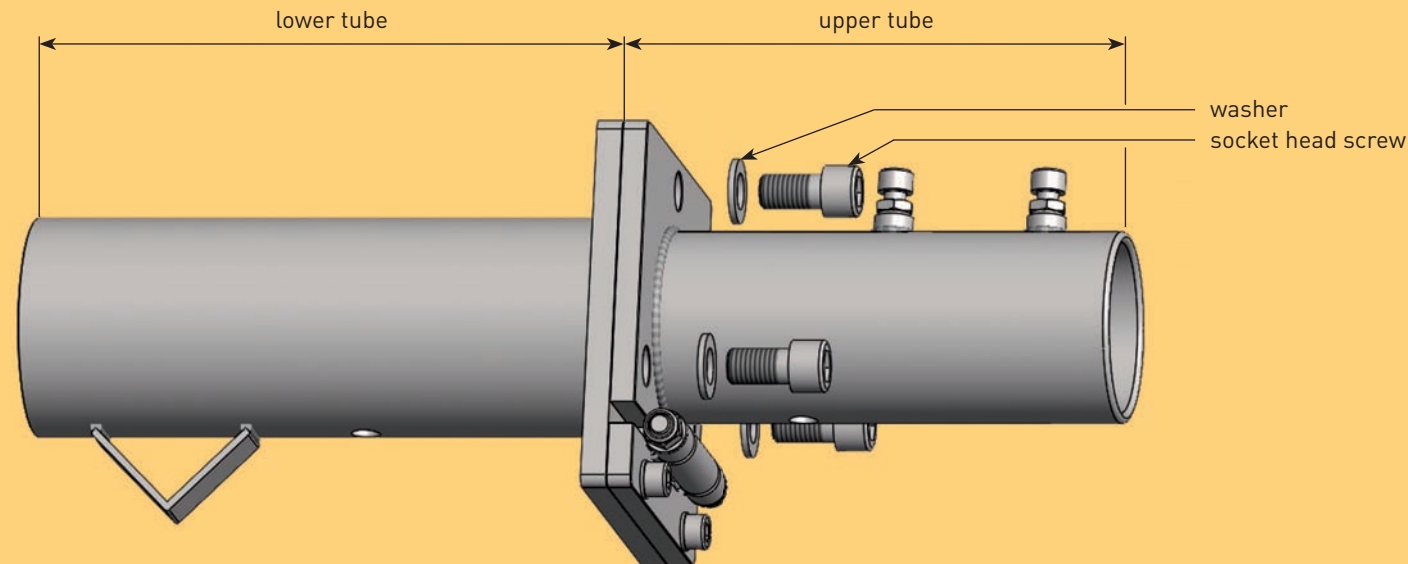
Parasols may sway slightly. If there is not enough space between them, they may touch and abrade or scour the canopy fabric at the spoke ends.

- Make sure that there is a clearance of 15-20 cm between the parasols (or between the parasol and the wall of the house).

2. We are able to compensate any unevenness of the ground by adjusting the height of each individual parasol. Extra - length upper tubes are available at 10 cm gradation and can be adjusted and accommodated on location.

Assembling the anchor tube

1. Screw the upper anchor tube onto the lower tube (cf. illus.). Slip the 16mm washer on the M16x30mm socket head screw and tighten, using the enclosed 14mm hex key.



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 screws manually using the hex key and extension provided. Exert as much force as possible. With the enclosed tools there is virtually no risk of overstressing.
- The correct torque for a torque wrench is 210 Nm for M16, 49 Nm for M10.

Embedding the anchor tube in concrete

1. Lay the concrete foundation. Consult the formwork and reinforcement plan on pages 9 and 10. For width and length of the foundation see the chart below. The depth of the foundation will depend on how sensitive the ground is to frost. We recommend a depth of at least 60 cm.

Size of parasol	Foundation: width / length
all SCHATTELLO sizes except Ø 6 m, Ø 7 m, 4 x 6 m, 5 x 5 m	50 / 50 cm
Ø 6 m, Ø 7 m, 4 x 6 m, 5 x 5 m	60 / 60 cm



Danger

A falling parasol can cause serious or even fatal injury.

If the foundation for the lower anchor tube is not dimensioned to match the size of the umbrella, the parasol may fall and cause injuries.

- Keep to the dimensions specified in the above chart.
- In case of poor-quality ground, opt for a larger-size foundation.

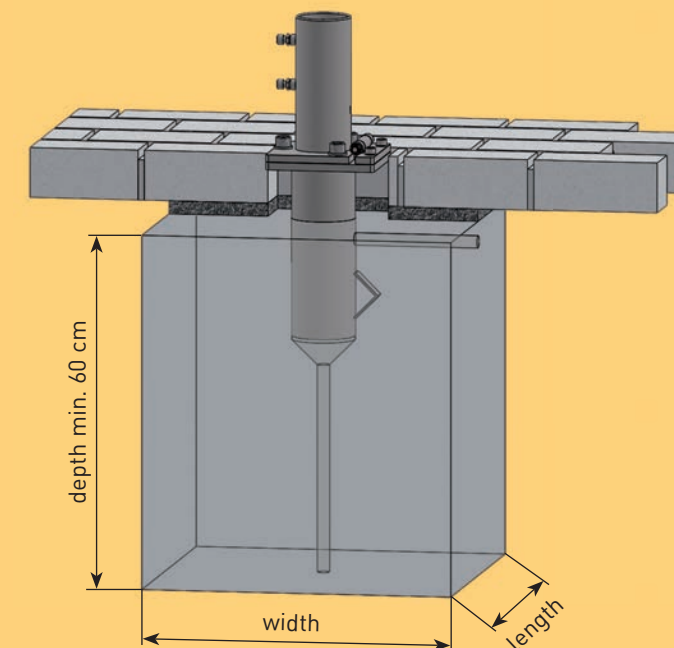


Caution

The concrete foundation can be damaged by frost.

Temperatures below freezing point may have a negative impact on the concrete foundation.

- Inquire up to what depth the ground of the designated parasol location is frost-proof and choose the size of the concrete foundation accordingly.

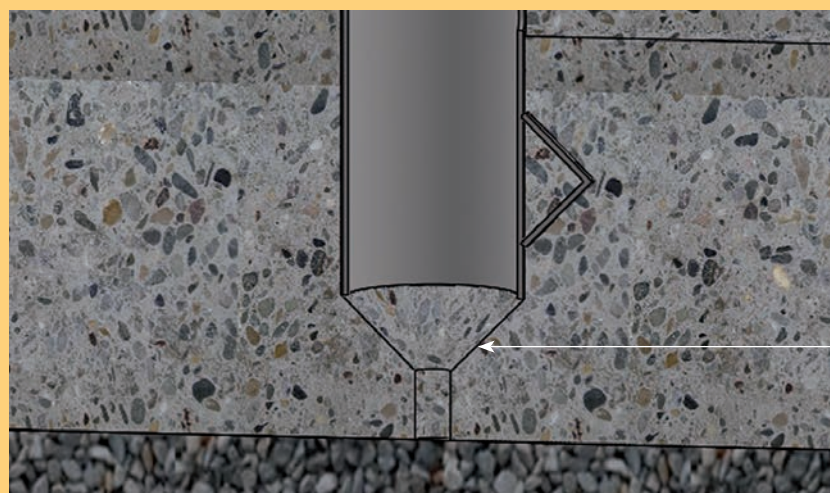


2. The following chart shows the volume calculation for the foundation in cubic metres (m³). It may help you to estimate the amount of material required.

width / length	depth	volume
50 / 50 cm	60 cm	0.15 m ³
50 / 50 cm	70 cm	0.18 m ³
50 / 50 cm	80 cm	0.20 m ³
50 / 50 cm	90 cm	0.23 m ³
50 / 50 cm	100 cm	0.25 m ³

width / length	depth	volume
60 / 60 cm	60 cm	0.22 m ³
60 / 60 cm	70 cm	0.25 m ³
60 / 60 cm	80 cm	0.29 m ³
60 / 60 cm	90 cm	0.33 m ³
60 / 60 cm	100 cm	0.36 m ³

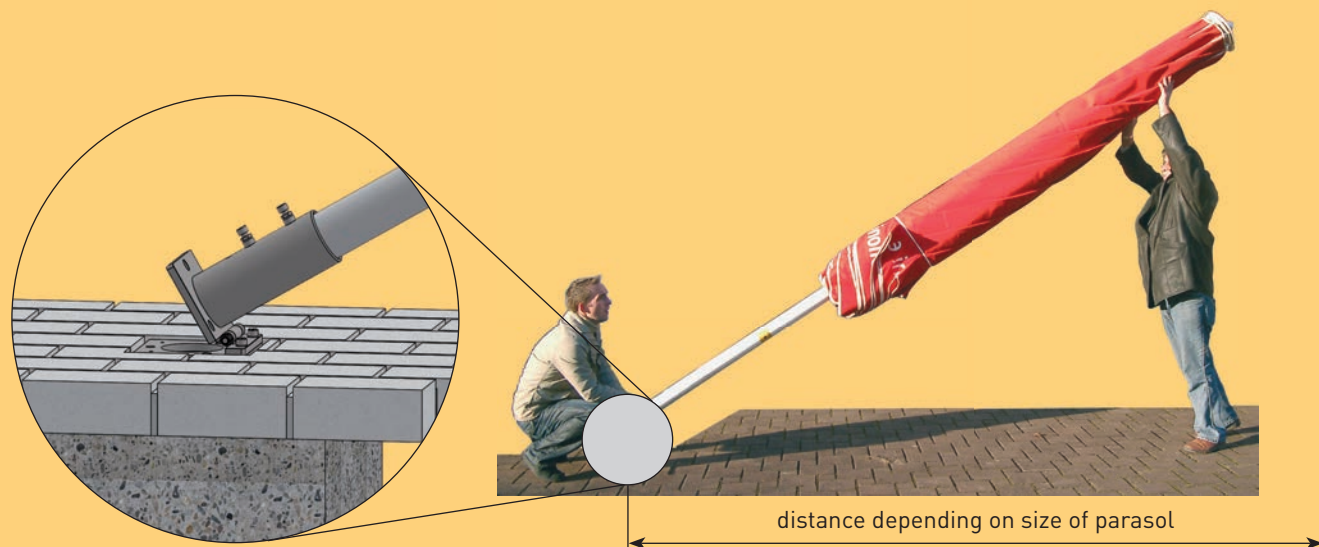
3. Spread gravel on the bottom of the foundation, thereby allowing enough space for a recess or a drainage pipe at the end of the lower anchor tube so that rainwater can drain off.



position of recess
or drainage pipe,
e.g. PE 56

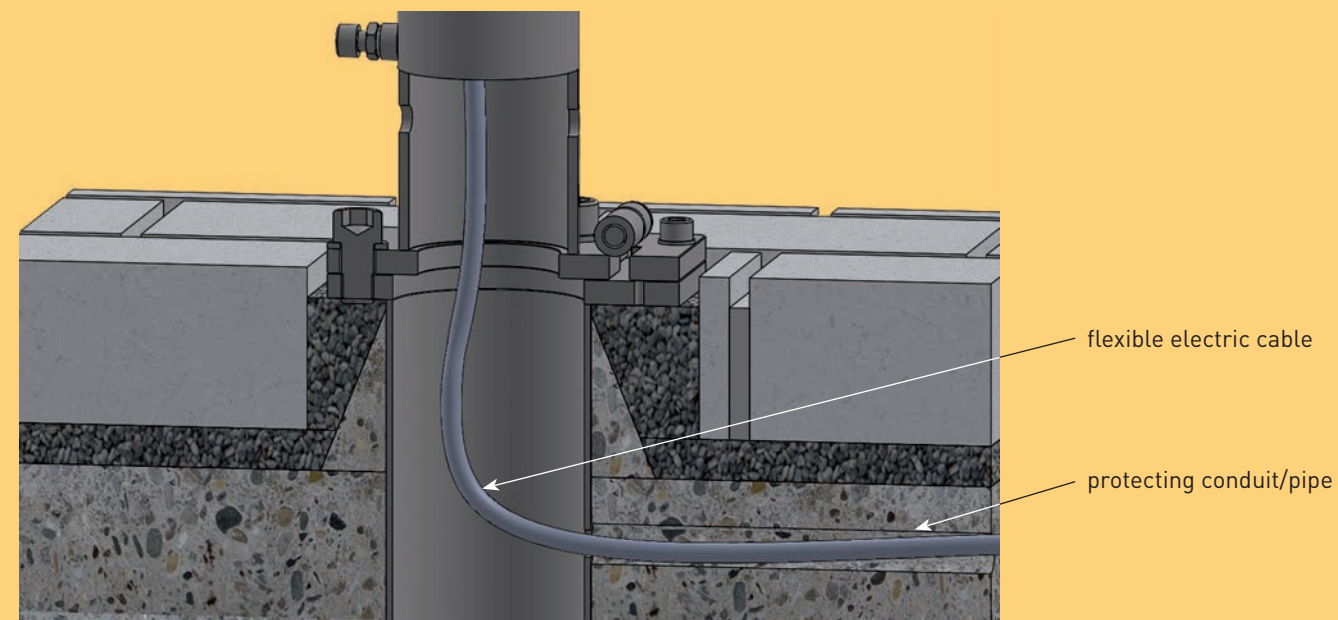
seepage layer round gravel 16-32

4. Press the lower anchor tube into the concrete foundation. Be sure to observe the embedment depth, cf. pages 11/12.
5. When choosing the location for the anchor tube, take into consideration that there must be sufficient space to erect and dismantle your parasol.



distance depending on size of parasol

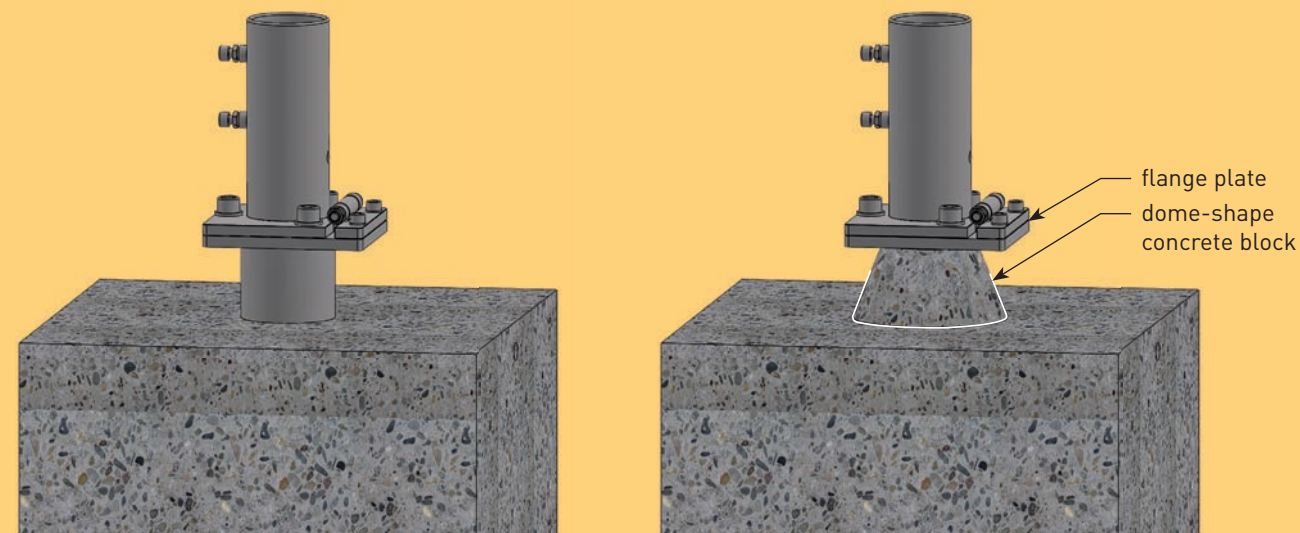
6. Lay the underground power cable. Protect the electric cable with a sheath tube. Protect the electric cable in an empty pipe. For full cable protection make sure that no concrete gets into the pipe.



flexible electric cable

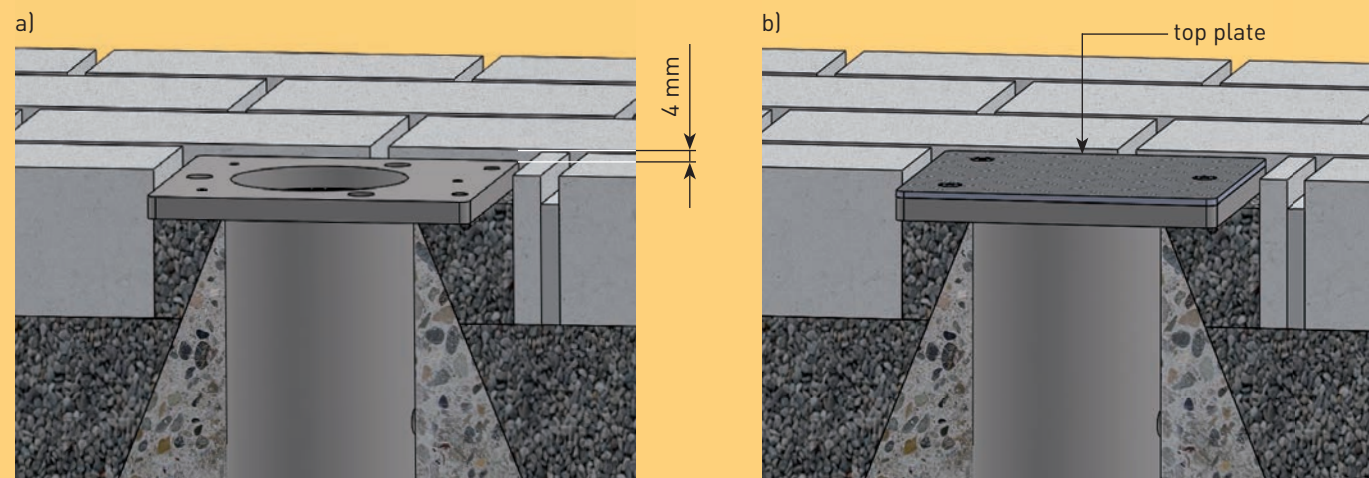
protecting conduit/pipe

7. This applies for paved or other floor covering only!
Form a dome-shape block of concrete on the foundation that reaches as far as the bottom end of the flange plate. The size of the dome-shape block will depend on what further structures or types of floor covering are planned. The larger and stronger the block, the less likely that the parasol will sway in the wind. For more illustrations cf. page 11.



flange plate
dome-shape
concrete block

8. To assure that the top plate is flush with the ground after the upper anchor tube has been removed, (cf. illus. b) insert the lower anchor tube 4 mm deeper into the concrete than the patio surface (cf. illus. a: -to give a clearer picture, the upper anchor tube has been omitted). In this way tripping hazard is eliminated.

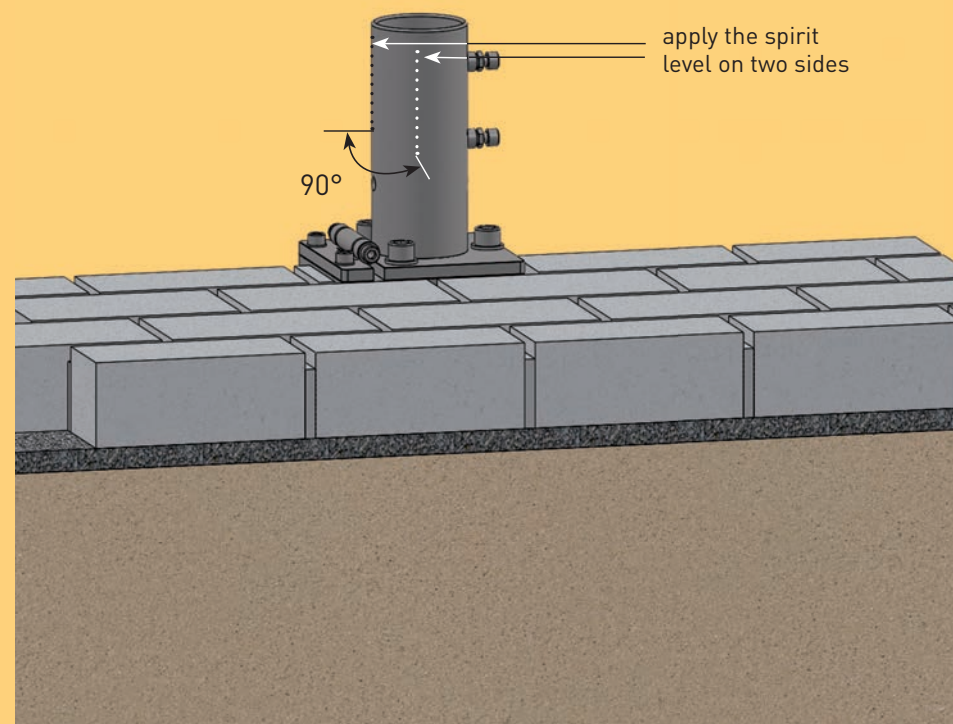


9. Check that the upper anchor tube is straight, using a spirit level. (cf. illus.)



If the parasol is to be in a vertical position, the anchor tube must be embedded in the concrete absolutely vertically.

Align the anchor tube and keep it in position until the concrete has cured completely.



Power supply

1. Connect the flexible rubber lead (certified approval for outdoor use necessary) and the parasol power supply. The connection must be absolutely watertight. The ground cable should be installed by a qualified electrician and should be appropriate for the designated consumers and length of the lead.

- for high-voltage current: min. 5-pole, min. 4 mm² cable cross section
- for luminous flux: min. 3-pole, min. 1.5 mm² cable cross section



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.

- Secure parasol 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 when the parasol is erected.
- Seal the connector with silicon.



Caution

Fire hazard.

Do not use a dimmer switch. Otherwise the parasol may catch fire. If the parasol is equipped with a timer switch or automatic switch-off, a dimmer will interfere with the electrical system.

2. Wire colours (number dependent on consumers installed):

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

Storage / Dismounting

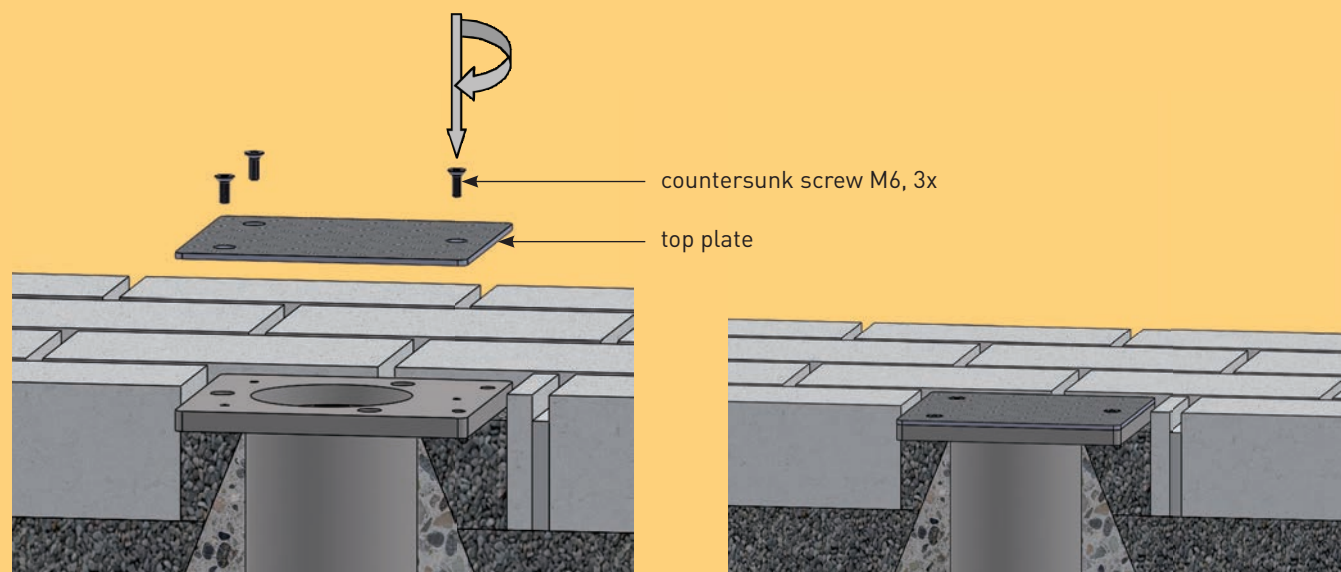
1. Lift the parasol out of the anchor tube.
2. Screw off the upper anchor tube.
3. Unscrew the set screws with a 3 mm hex key. These serve to protect the internal thread against dirty water and sand.
4. Screw the top plate onto the lower anchor tube. (cf. illus.)



Caution

The thread can get damaged.

When the top plate is not on the lower anchor tube, sand may get washed into the flanks of the thread. As sand is harder than steel, the thread may get damaged when the screw is turned.



5. If you have two or more parasols, it is advisable to mark them and their installation option (e.g. with metal-stamped numerals or using a waterproof marker) as soon as they have been dismantled (e.g. for winter storage).



Tip

Marking saves a lot of time and helps to keep things in order.

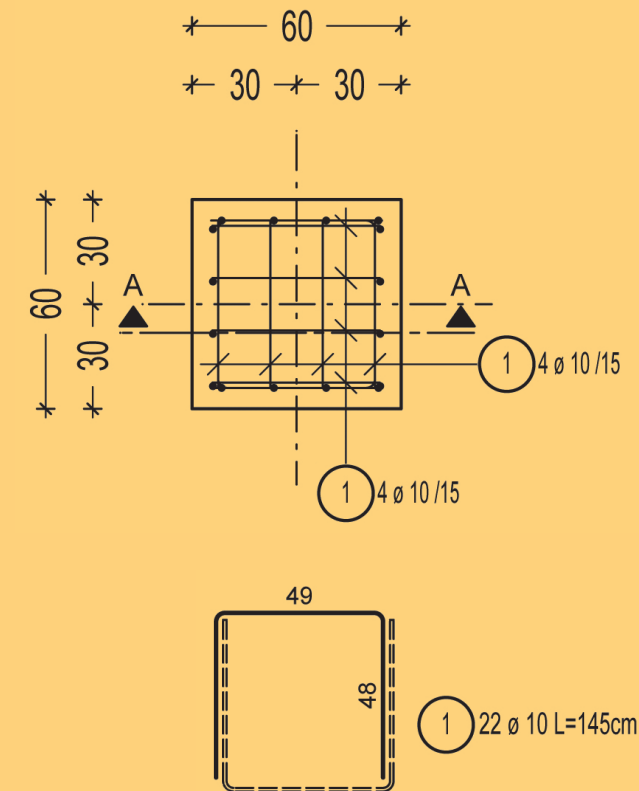
If clearly marked, each parasol can easily be assigned to its proper location and re-erected parallel to the wall of the house or next to the others.

- For clear and easy later assignment use the same number to mark the centre pole, the upper anchor tube and the lower anchor tube. For example, for parasol No. 1, all three parts should carry number 1, all three parts of parasol No. 2 should be marked with a 2, etc.

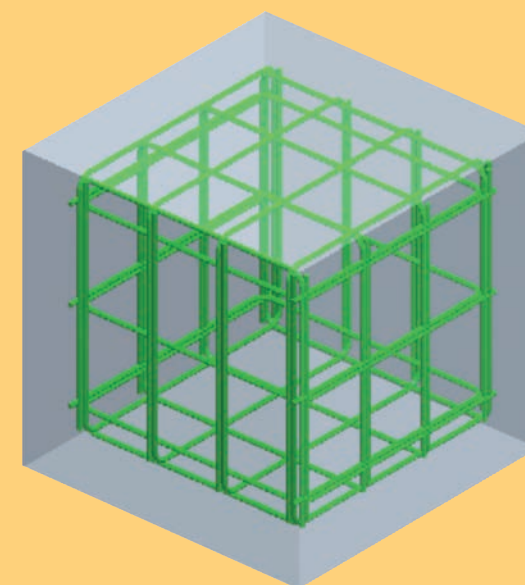
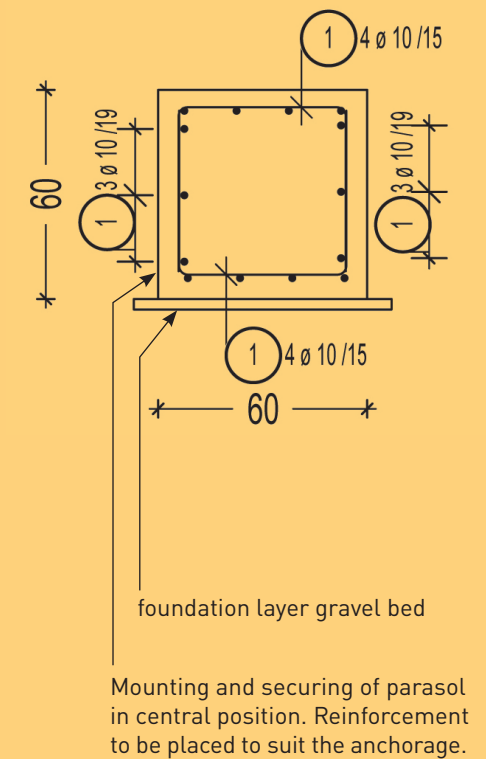
6. Grease the screws regularly to prevent them from rusting.

Foundation formwork and reinforcement plan

ground plan



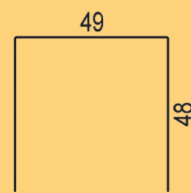
cross section A – A



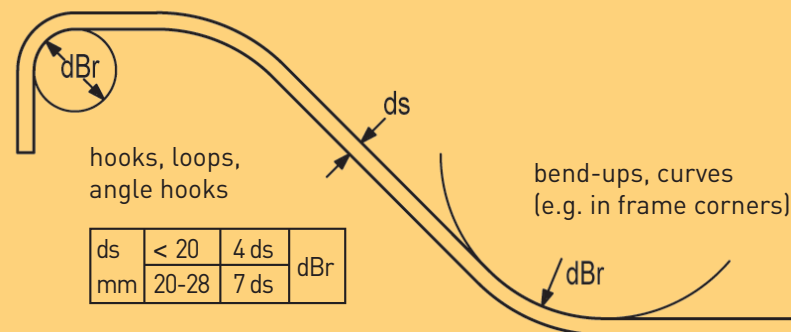
1. The allowable footing pressure must be 200 kN/m². This must be certified in a geotechnical report by an expert soil surveyor.

2. Bar details - bending shape:

- quantity: 22 pieces
- diameter: Ø 10 mm
- length each: 1.45 m
- total length: 31.9 m (22 x 1.45 m)
- weight: 19.68 kg
- dimensioned bending shape: not true to scale



3. Minimum values for bar bending roll diameter dBr for reinforcing steel B500B according to DIN EN 1992 -1-1/NA:2011-01 Chart NA.8.1.



ds	< 20	4 ds	dBr
mm	20-28	7 ds	

concrete cover at right angles to the curvature	> 10 cm and > 7 ds	10 ds	dBr
	> 5 cm and > 3 ds	15 ds	
	> 5 cm and > 3 ds	20 ds	

Bend measurements are external measurements.

4. Nominal dimension for concrete cover (nom C):

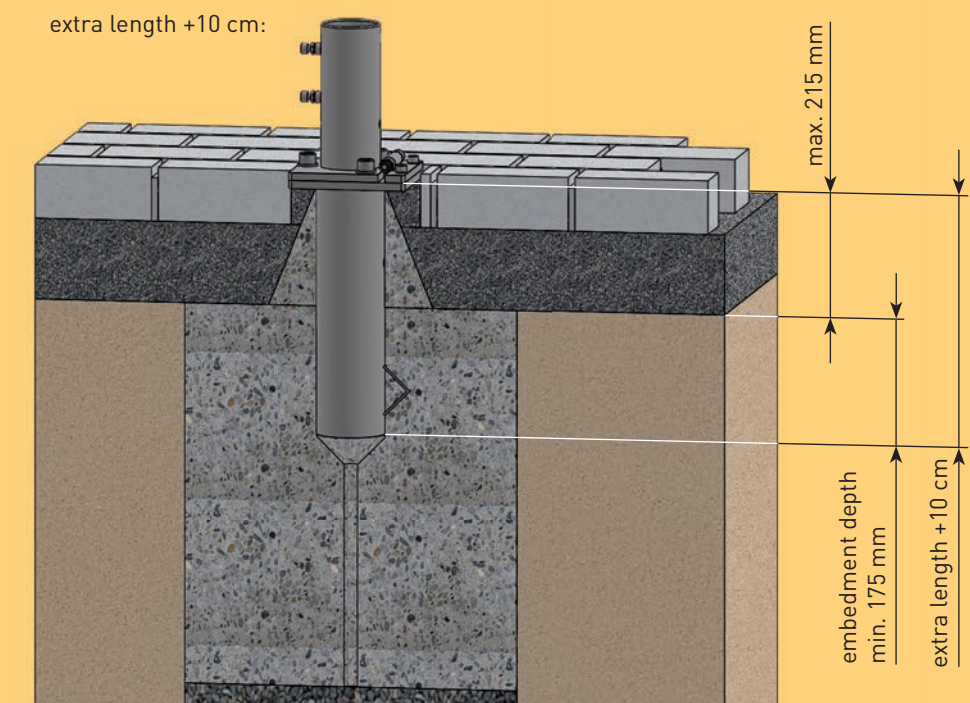
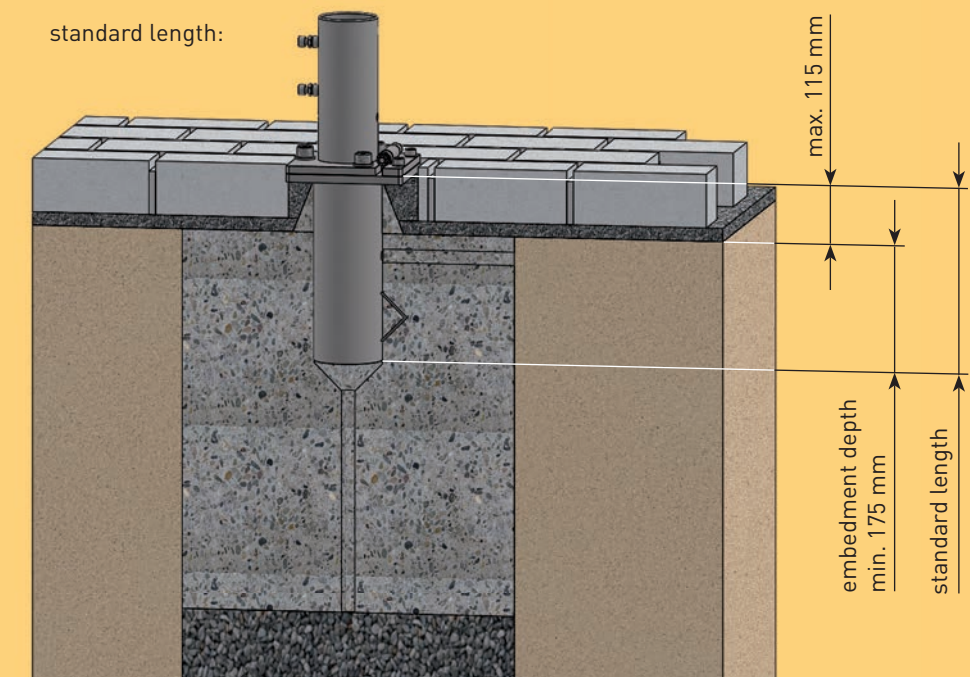
- foundation top 5.5 cm
- foundation bottom 5.5 cm
- foundation sides 5.5 cm

5. Construction steel B500 A / B500 B:

- with de-icing salt: grade of concrete C30/37 (LP), consistency F3, exposure classes XC4, XD3, XF4, moisture class WF
- without de-icing salt: grade of concrete C25/30 (LP), consistency F3, exposure classes XC2, XF1, moisture class WF

Extra-length lower anchor tube

There are various terrace structures for which standard-length lower anchor tubes are not long enough, e.g. those with high floor tiles or with wooden terrace constructions. For static reasons it is essential to observe an embedment depth of min. 175 mm. Otherwise the lower anchor tube will not be sufficiently anchored in the foundation. This measurement does not include the dome-shaped concrete block. Lower anchor tubes are available in the following additional lengths: +10, +20, +30 and +40 cm. These can be delivered from our stock at any time. Lengths exceeding those quoted can be custom-made after consultation with the MAY company.



extra length +20 cm:

