

# Installation instructions DMZ169

## Bayonet-anchor tube to be embedded in concrete for type MEZZO, DACAPO and FILIUS

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

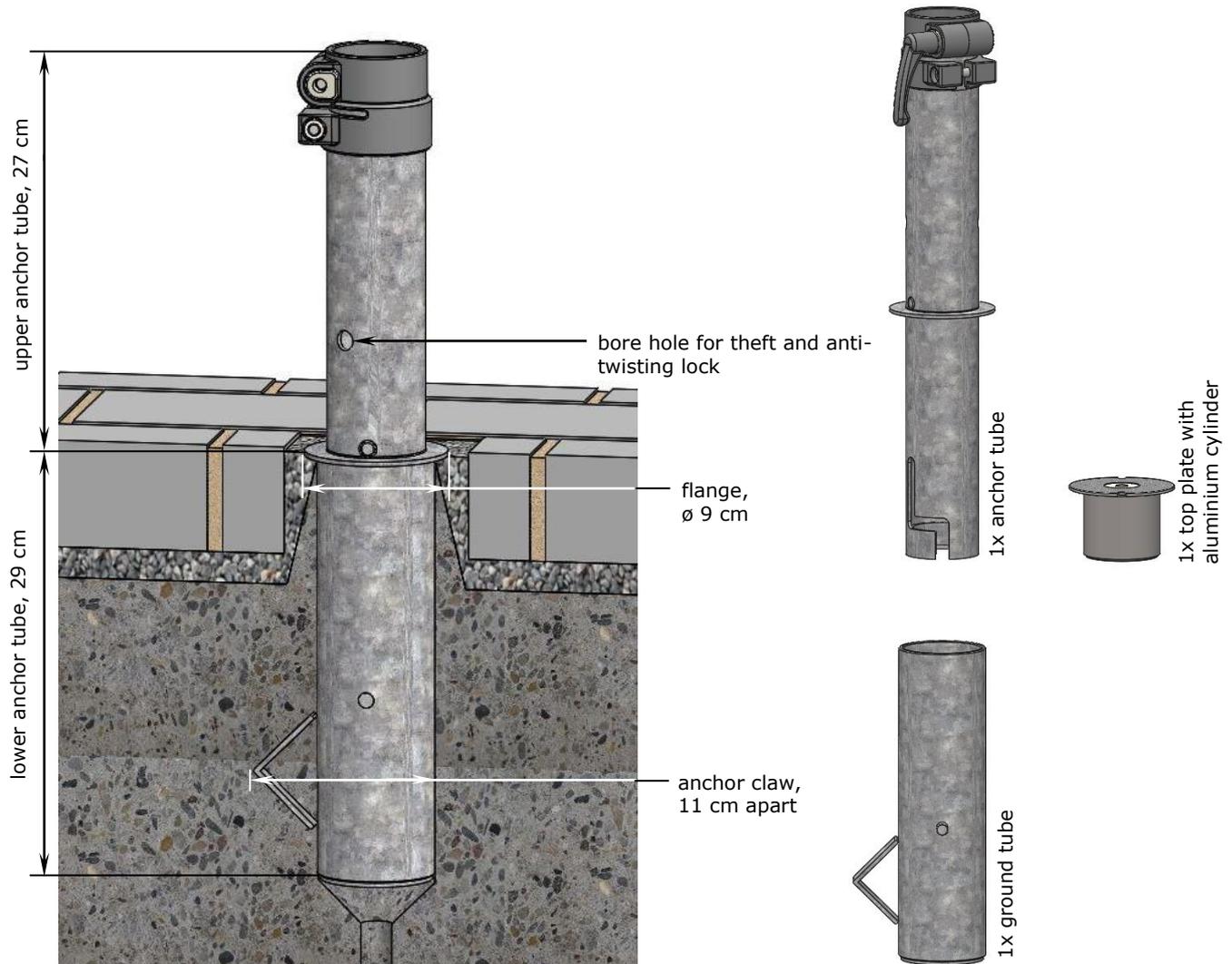
**Non- observation of installation instructions can result in personal injuries or damage to property.**

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 operating instructions, please contact your MAY dealer.

### Mounting drawing

### Scope of supply



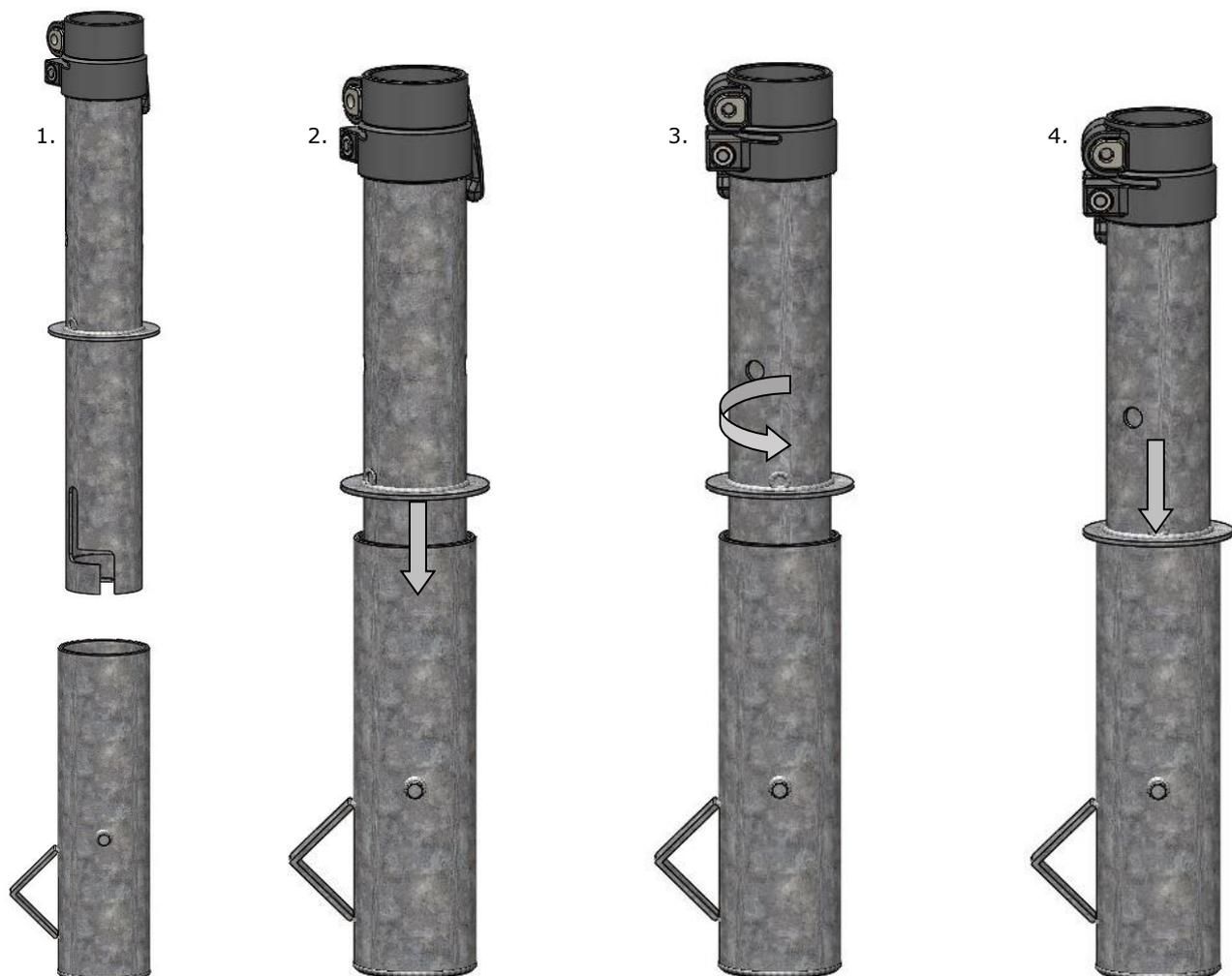
## Application

The DMZ169 enables assembly and disassembly of your MAY parasol without any tools. FILIUS including DMZ169 comes to a weight of approximately 20 kg. The DMZ169 provides a solution for pedestrian areas that require quick disassembly to protect the parasol from vandalism or theft at nights.

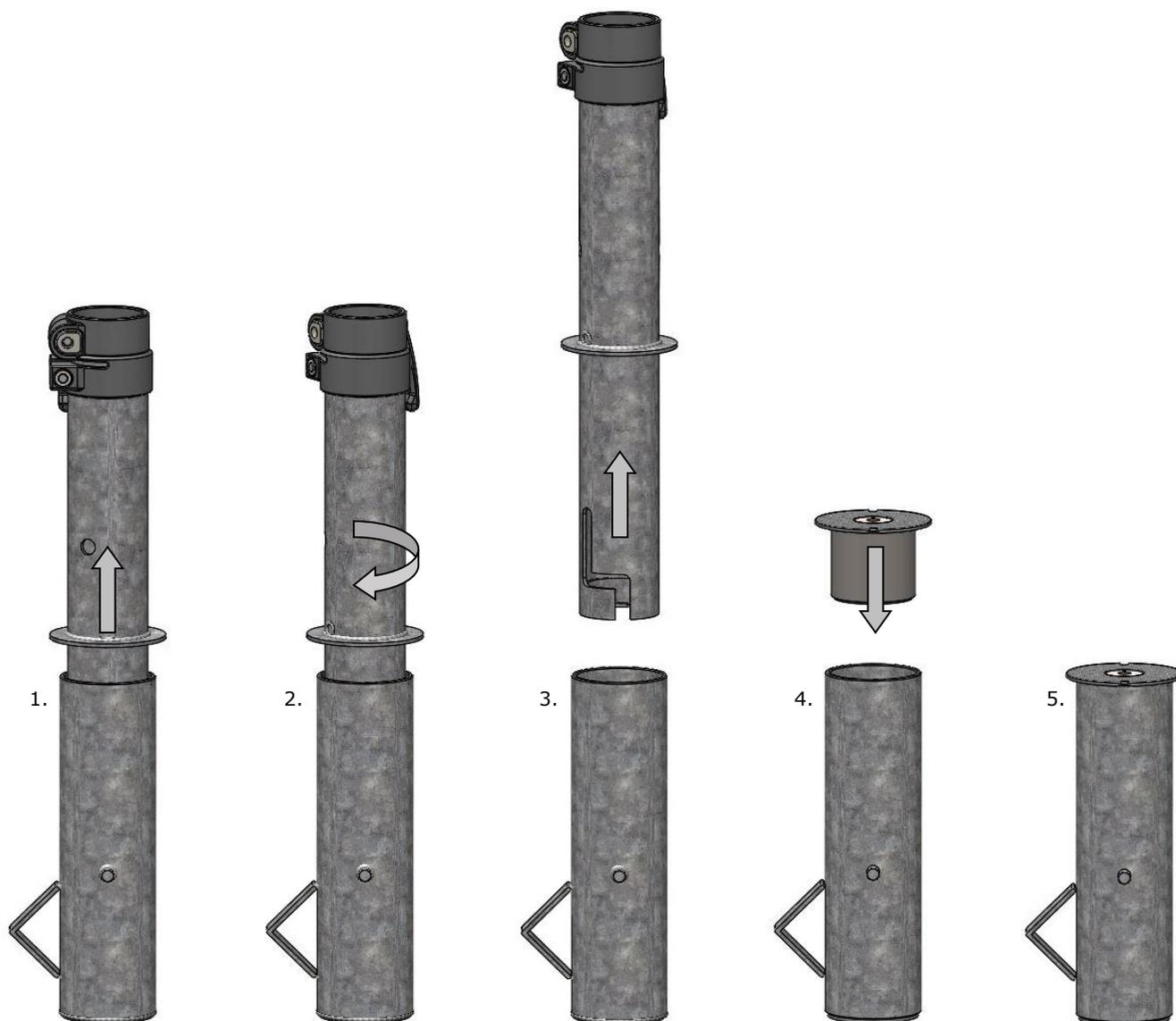
Due to constructional design the DMZ169 fits loose within the anchoring. Therefore, it may jiggle, e.g. during wind. However, this does not affect the stability or durability of the parasol or anchor tube and is no reason for concerns or claims.

Only for FILIUS: In the worst case, the wind develops a vertical drag (suction) onto the parasol. This suction will try to lift the parasol including anchor tube out of the ground anchor tube. In case the anchor tube will no longer fit tightly in the ground anchor tube, the parasol including anchor tube will be lifted about maximally 10 mm (until stop). As soon the wind calms down, the parasol will drop down into the ground anchor tube again. This free movement is due to the technical design and no reason for complaints.

## Function: Inserting the anchor tube into the ground anchor tube



## Function: Removing the anchor tube from the ground anchor tube.



## Determining the location for the foundation

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).

## Embedding of ground anchor tube

1. The concrete foundation should be approx. 50 x 50 cm. in size. Consult the formwork and reinforcement plan on pages 7 and 8. The depth of the foundation will depend on how sensitive the ground is.



**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 above.
- In case of poor-quality ground, opt for a larger-size foundation.

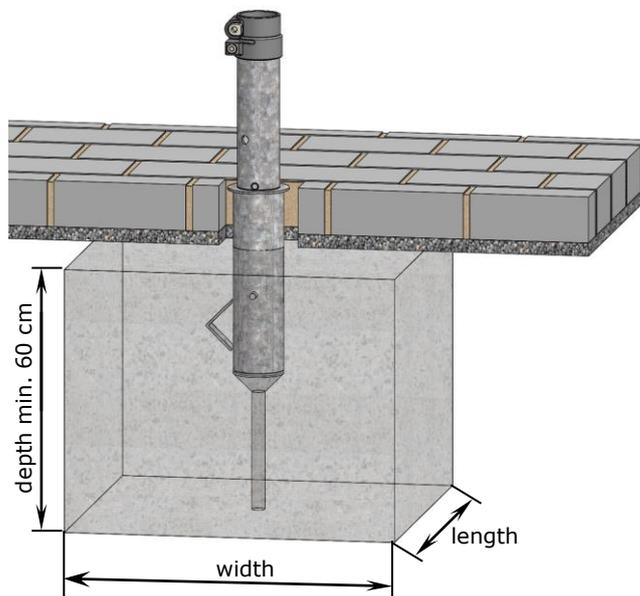


**Caution**

### **The concrete foundation can be damaged by frost.**

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

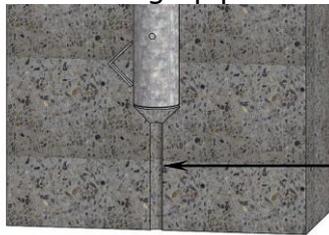
- Inquire up to what depth the ground of the designated location for your anchor tube is frost-proof.



2. The following chart shows the volume calculation for the foundation in cubic metres (m<sup>3</sup>). It may help you to estimate the amount of material required.

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

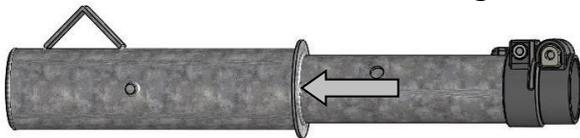
- Spread gravel on the bottom of the foundation, thereby allowing enough space for a recess or a drainage pipe at the end of the ground tube so that rainwater can drain off.



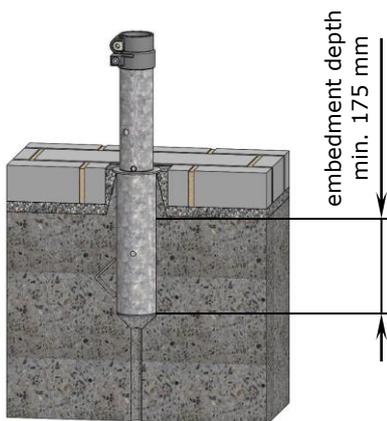
position of recess or drainage pipe, e.g. PE 56

seepage layer round gravel  
16-32

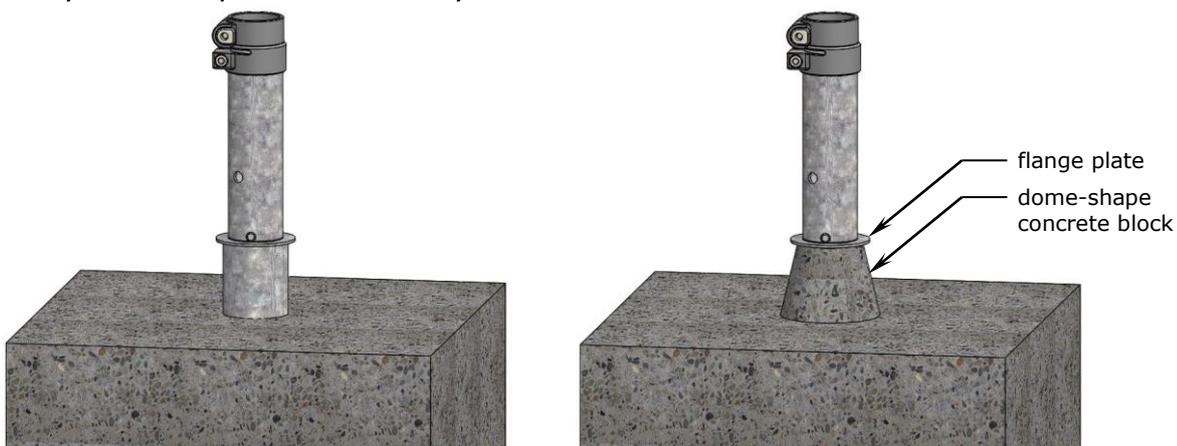
- Insert the anchor tube into the ground anchor tube completely.



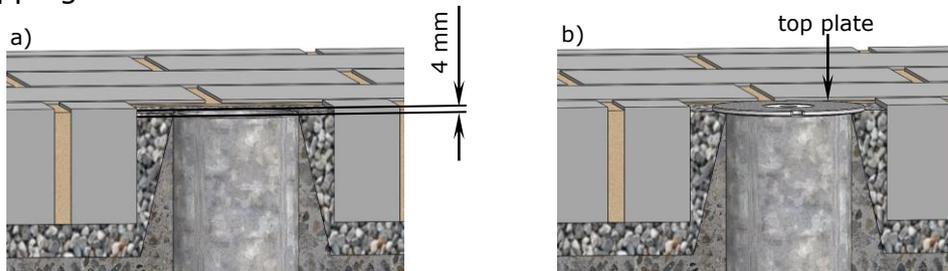
- Press the ground tube into the concrete foundation. Pay attention to the embedment depth.



- 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.



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



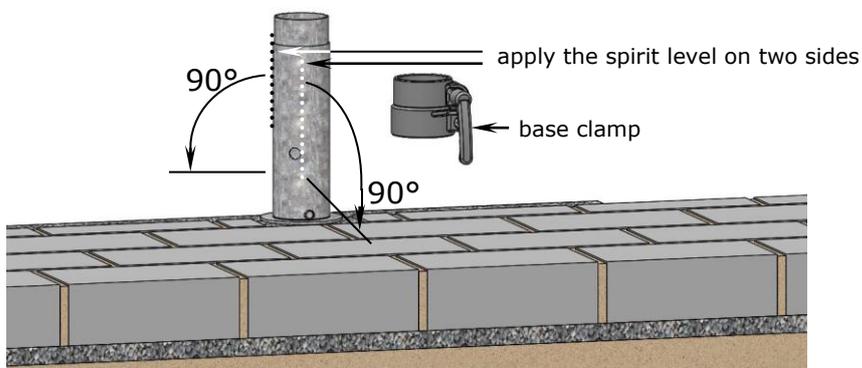
8. Check that the upper anchor tube is straight, using a spirit level. (cf. illus.)



**Attention**

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

- Remove the base clamp.
- Apply the spirit level on two sides.
- Align the anchor tube and keep it in position until the concrete has cured completely.



## Storage / Dismounting

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

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

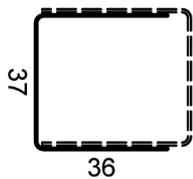
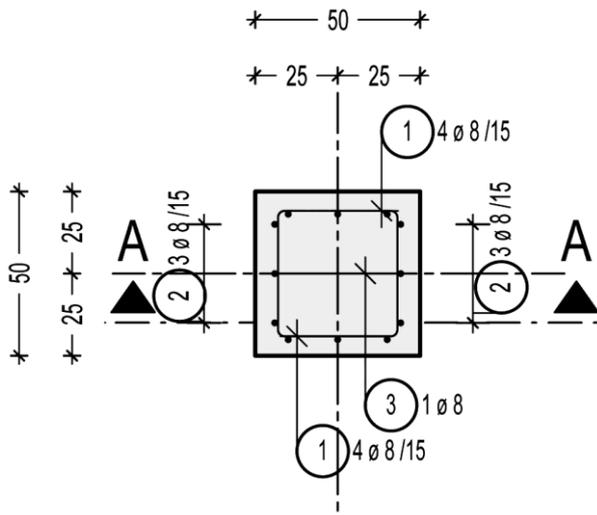
**Tip**

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

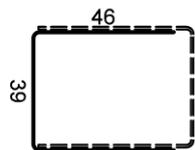
- For clear and easy later assignment use the same number to mark the centre pole, the anchor tube and the ground tube. For example, for sunshade No. 1, all three parts should carry number 1, all three parts of sunshade No. 2 should be marked with a 2, etc.

## Foundation formwork and reinforcement plan

ground plan

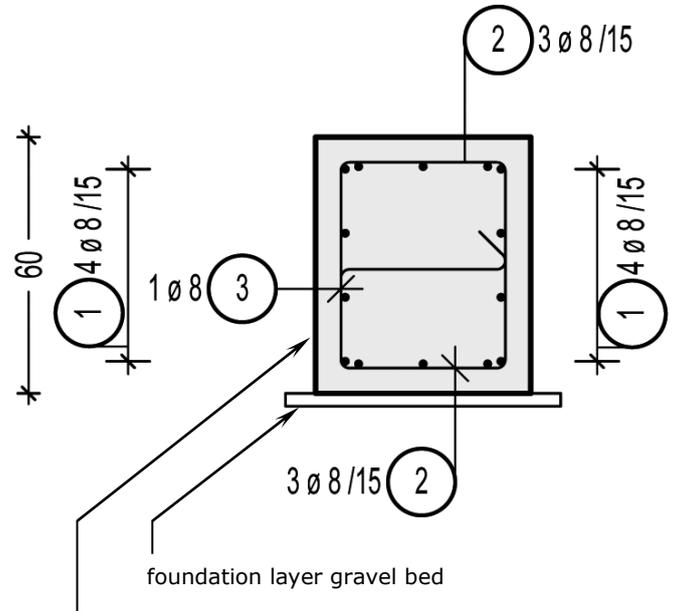


① 8  $\varnothing$  8 L=109cm

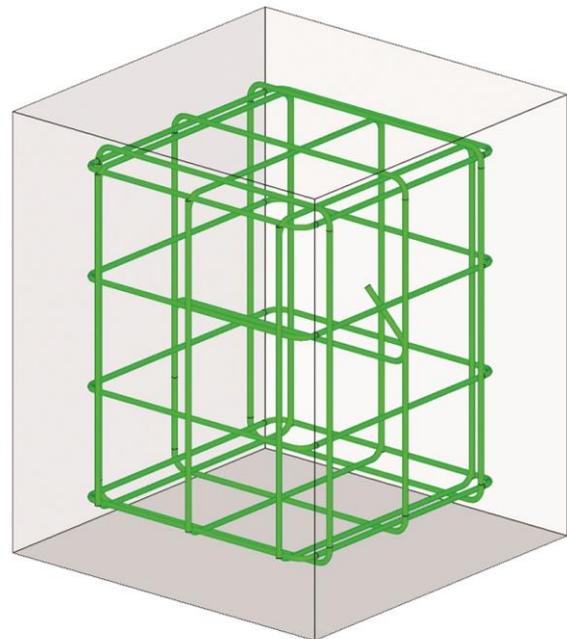


② 12  $\varnothing$  8 L=131cm

cross section A – A

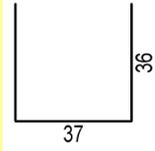
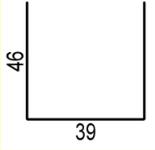
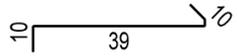


Mounting and securing of parasol in central position. Reinforcement to be placed to suit the anchorage.

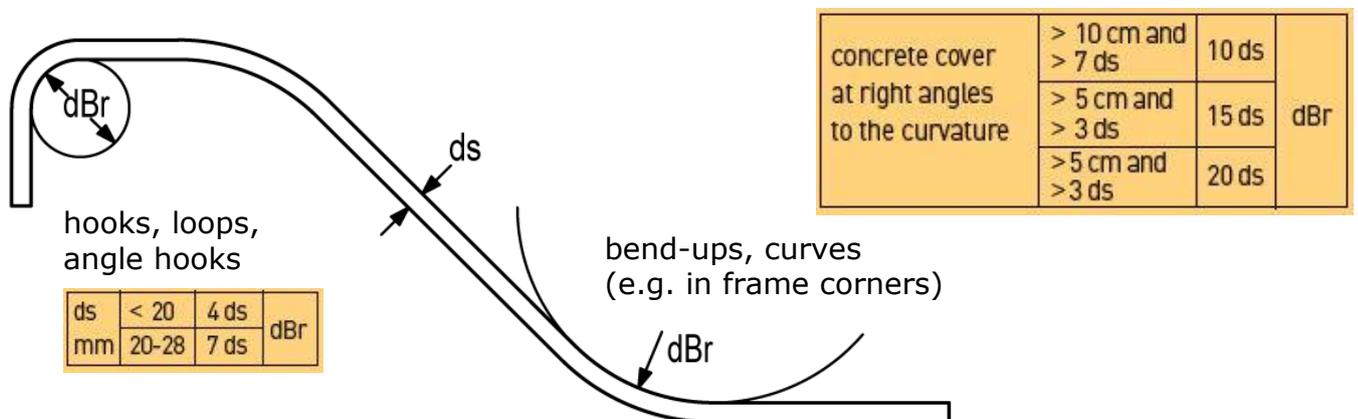


1. The allowable footing pressure must be 200 kN/m<sup>2</sup>. This must be certified in a geotechnical report by an expert soil surveyor.

2. Bar details – bending shape:

quantity	bar diameter	length each	dimensioned bending shape	total length	weight	
[pieces]	[mm]	[m]		[m]	[kg]	
8	8	1.09		8.72	3.44	
12	8	1.31		15.72	6.21	
1	8	0.6		0.6	0.24	
total weight $\Sigma$ 10,53 kg						

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.



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