



Die Baumschützer



Tree protection systems 2.0

Installation and assembly instructions

General information

The installation instructions below are merely a recommendation for how to install the tree protection systems 2.0! Observe and adhere to the accepted technological rules and regulations in their currently valid version. The planner or company executing the construction work have the responsibility for planning and the specific situation of the tree location as well as the execution of construction work itself. In particular, ensure that the installation site is suitable for the maximum load of the tree grating (wheel loads of up to 50 kN - max. LKW SLW 30 without braking at walking speed in traffic-calmed areas).

Prior to installation on site, check the tree protection systems and all accessories for damage and completeness. Do not install damaged components. Unfortunately we cannot take later complaints into account.

We reserve the right to make technical changes for reasons of product safety.



Installation and assembly instructions, tree protection systems 2.0

(Installation situation for wheel loads of up to 50 kN - max. LKW SLW 30 without braking at walking speed in traffic-calmed areas).

Cast tree grating

- 4 cast individual segments (2x closed, 2x with opening Ø 125 mm)
- optionally, segments with openings for buried spotlights Ø 245 mm may be contained in the set
- 2 supply lids (incl. lock screw and nut, see screw set)
- 4 segment connectors
- 1 screw / installation set (incl. cushioning elements and plastic cover caps, black)

Steel border frame (optional)

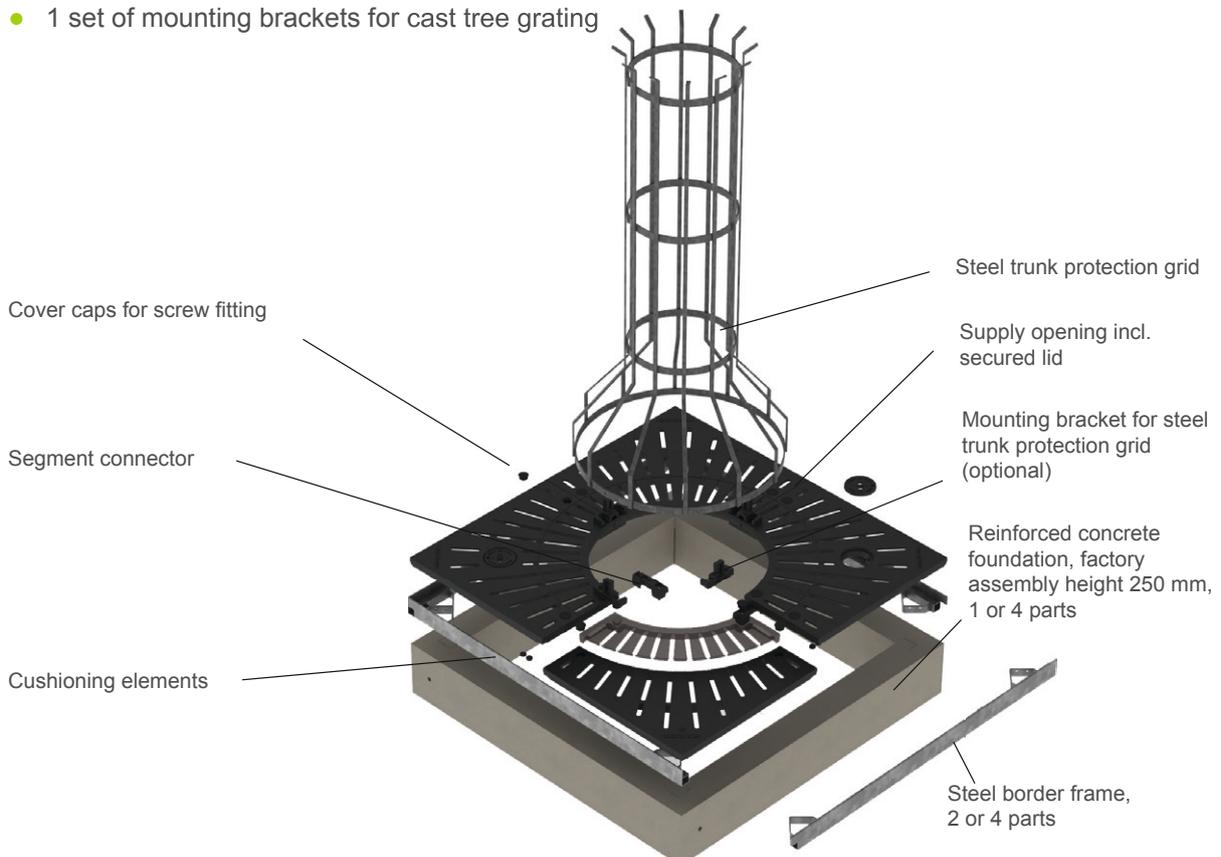
- 4 steel elements (square design) or
- 2 steel semi-circles (round design)
- 1 set of connecting screws

Reinforced concrete foundation (optional)

- 1 monolithic concrete piece or
- 4 foundation beams (incl. connecting material)

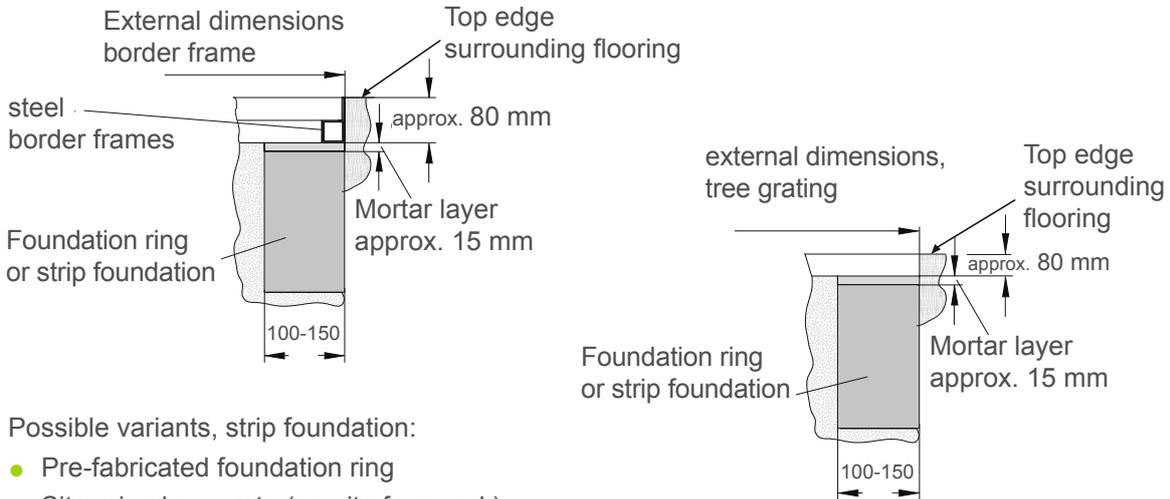
Steel trunk protection grid (optional)

- 2 semi-elements
- 1 set of connecting screws
- 1 set of mounting brackets for cast tree grating



1. Preparatory work - foundation:

Tree grates can only perform their function (self-supporting superstructure above the tree trunk from the exterior foundation), if they are supported by a load-bearing (up to 50 kN wheel load) foundation at the edge of the tree pit and this support is provided accordingly on-site. Regardless of the selected application variant (with or without steel border frame) an all-around strip foundation (support width ≥ 100 mm) must be provided according to the exterior contours. Ensure that the foundation support surface is level.



Possible variants, strip foundation:

- Pre-fabricated foundation ring
- Site-mixed concrete (on-site formwork)
- Suitable prefabricated parts, e.g. flush kerb 10-30
- Manhole rings with suitable dimensions, e.g. DIN 4034

2. Assembly / installation - steel border frame (optional)

Assemble the individual parts of the border frame and place the frame on the foundation. For trees already in place, assemble the frame around the trunk. Then ensure the angular geometry (square design) or circular geometry (round design) through cross / lengthwise measurement. Now align the height and incline of the border frame according to the surrounding surface. If necessary, provide a load-bearing support surface under the frame, if the foundation was not already precisely adapted to the surrounding surface. For providing a full-surface support of the border frame, use pressure-resistant resin-bonded mortar. If necessary, dowels can be used to connect the steel border frame to the foundation after height and incline adaptation. Ensure that the steel profiles are not warped due to lateral pressure, in particular when using compressing machines (vibrating plates, etc.). Take appropriate safety measures (e.g. wooden reinforcements).



Required tools:

- Combination / ring wrench, width across flats 13
- Ratchet with socket, width across flats 13
- Levelling rod (spirit level or similar)



3. Assembly / installation - cast tree grating

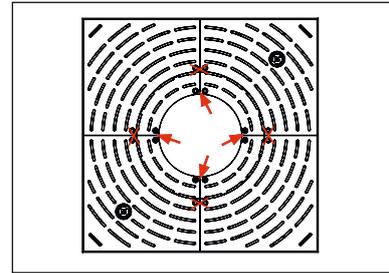
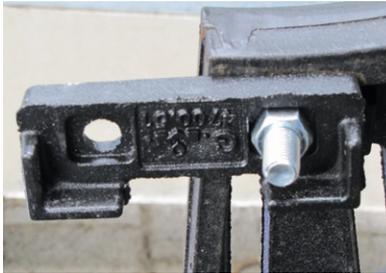
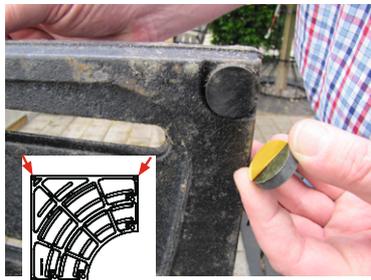
For tree grates without border frames, the individual segments are assembled directly on the strip foundation (prerequisite: level surface).

Apply 3 cushioning elements (adhesive) to all segments prior to insertion.

When assembling the tree grating, we recommend starting with one of the two supply elements (note the position of the irrigation / drain pipe). Ensure that you position other segments, e.g. buried spot-light opening, etc., correctly as you continue. Loosely fit 2 segment connectors (screw tightening torque only hand-tight) on the first segment before insertion. The connectors have a level and an inclined (roof shape) side. In standard cases, we recommend always using the „roof shape side“ of the connector. During initial assembly, the connectors are only ever fitted at the first row of holes from the interior / tree opening. The holes in the second row are simply closed with the supplied plastic cover caps. Position the next segments one after another and only screw-fit the corresponding connectors loosely until the nut in the anti-twist protection on the bottom of the connector is fastened in place.

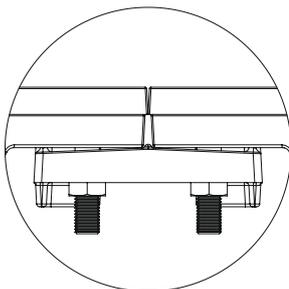
Required tools:

- Allen key (width across flats 14)
- Combination / ring wrench, width across flats 24
- Ratchet with socket, width across flats 24
- Mounting iron, clamping iron or similar

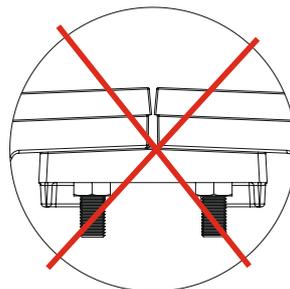


After completing the basic assembly, use the segment connectors to tighten the segments enough to create a level (possibly slightly elevated in the centre) surface. The screw tightening torque is reached at approx. 70 Nm. To a certain extent, it is possible to correct the positioning by undoing or tightening the screw connections. Prevent the segment connectors or individual segments from getting wedged. We recommend using a gauge (straight edge) positioned from one exterior to the other for aligning.

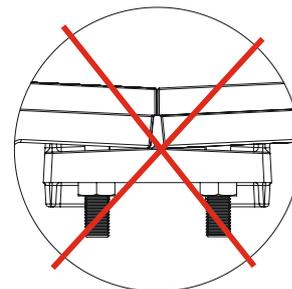
Segment connection
level to slightly elevated



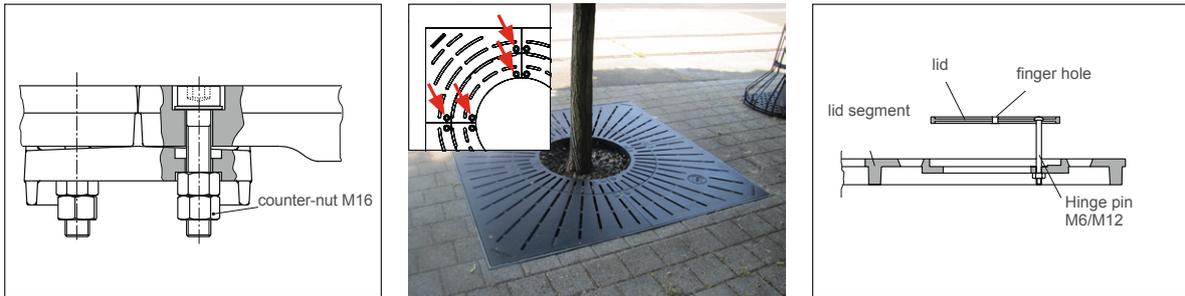
False
Excessive tightening
torque



False
Insufficient tightening
torque



After completing assembly, position the counter nuts on the fastening screws and close the holes with the plastic cover caps. Insert the supply lid and screw in place.



4. Mechanical extension of the interior opening

For the tree grates 2.0 - with the exceptions of models Q 1,250 x 1,250 mm and K 1,500 mm - the interior openings must be extended from $\text{Ø } 700 \text{ mm}$ to $\text{Ø } 1,100 \text{ mm}$. The cast element is cut in half at the visible break notch by means of an angle grinder cut while installed. Proceed segment by segment. Undo the segment connector of the respective segment, carry out the cutting procedure and knock off any residual material with a hammer. Re-connect segment connectors on the 2nd connection level. Proceed accordingly for all further segments. Once extension of the interior opening has been completed, re-install the cast tree grate according to point 3. **ATTENTION:** Metal particles created by cutting with the angle grinder may lead to a rust-coloured discolouration of the surrounding surface when wet. For this reason, it is absolutely necessary that the area where sparks may fly is covered with suitable materials.

Required tools:

- Angle grinder with metal cutting disc $\text{Ø } 125 \text{ mm}$, optionally
- Angle grinder with metal cutting disc $\text{Ø } 230 \text{ mm}$
- Hammer (sledge hammer)
- For other tools, refer to point 3.

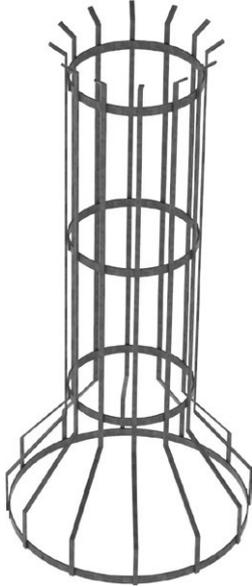


Miscellaneous:

With regards to actual planting of trees, we recommend the „Recommendations for tree planting“ issued by the FLL (Forschungsgesellschaft Landschaftsentwicklung Landschaftsbau e.V. - Research association for landscape development and construction) Part 1 (planning etc.) and part 2 (location preparation etc.). Only proper planting can ensure that no roots break through to the surface and strain the cast tree grating or the surrounding surface.



Installation and assembly instructions, steel trunk protection grid „LIGERO 780-400“ on MEIERGUSS tree trunk systems 2.0



Scope of delivery (for cast tree grates 2.0):

- 2 semi-elements $r = 780/400$ mm; height 1,800 mm
- 1 fastening set BEF 01, consisting of:
 - 4 fastening / U brackets with level compensation incl. clamping screw / grub screw (M6x20) and 8 connecting screws (M8x25 incl. nut / disc) for the semi-elements

The cast tree grate must already be properly installed according to the instructions above. Then insert the fastening / U brackets staggered by 90° around the centre opening of the tree grating from the inside and tighten the grub screw of the bracket so that it can still be freely moved. The bracket with the slot must point upward. Then place the trunk protection grid halves around the tree and connect them with the hexagon screws M8x25. Afterwards, position the tree protection grid above the brackets and fasten the bottom-most ring to the fastening / U brackets using screws. Now vertically align the tree protection grid using the slots (if necessary, provide a support underneath according to the required height) Finally, tighten all screws.



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