

General hints:

A. Surfacing requirements

This equipment should be installed on an impact absorbing surfacing / loose fill material that accords with EN 1177 and is adequate for a maximum free height of fall of 2.00 m.

B. Foundations

Please see detailed instructions at the end of this document.

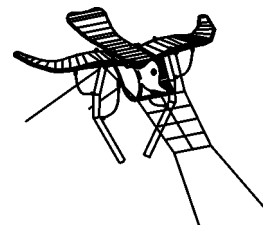
Special information:

Tested by TÜV Product Service GmbH.

Please do not alter any parts of the equipment or the construction itself since this may affect the safety standards and your guarantee.

We reserve the right to make technical alterations!
For further information please call your local agent.

Ornithopter
Order no. 8.85000



Data for shipment:

Number of parts: 8

- 1 body
- 2 wings
- 2 stand posts
- 1 frame
- 1 trunk with ropes
- 1 tie-bar

Total weight: 860 kg
Heaviest single part: 260 kg
Largest single part: 4.80 x 1.35 x 1.25 m

En-EN 09.02.2007

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Foundation blocks

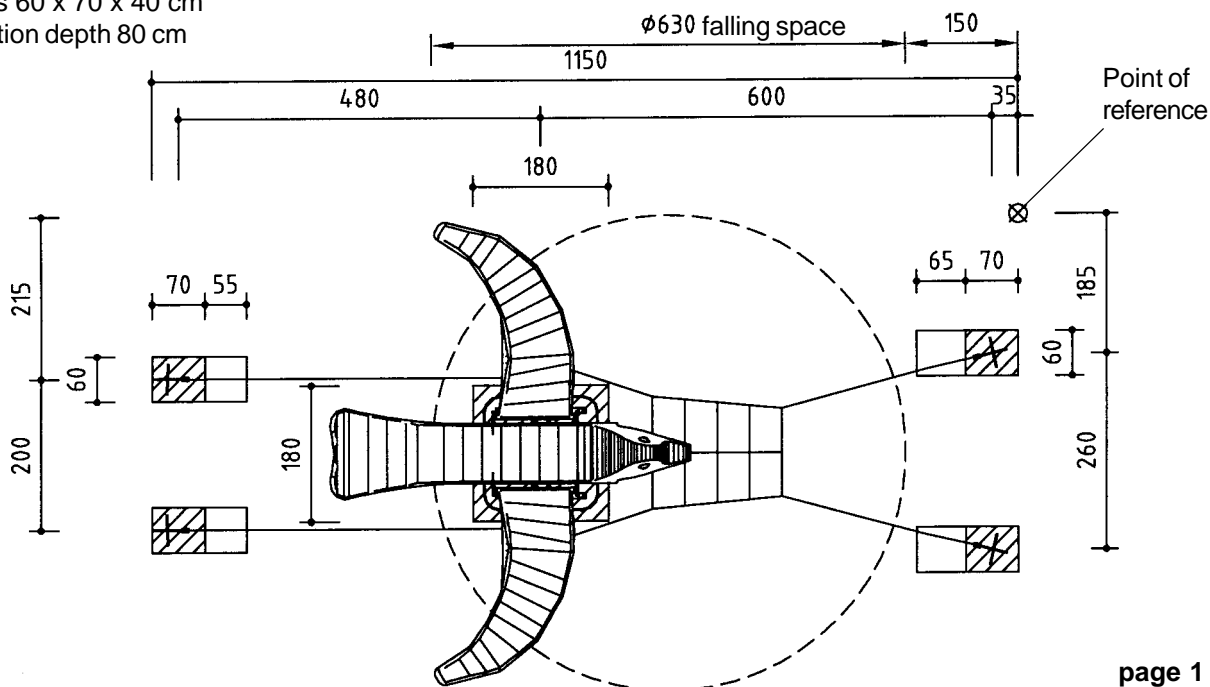
Quality of concrete C25/30

1 piece 180 x 180 x 80 cm reinforced
Excavation depth 120 cm

4 pieces 60 x 70 x 40 cm
Excavation depth 80 cm

Required space including safety distances (EN 1176):
1150 x 650 cm

Ground elevation
Scale 1:100
all dimensions in cm




Recommended assembly tools:

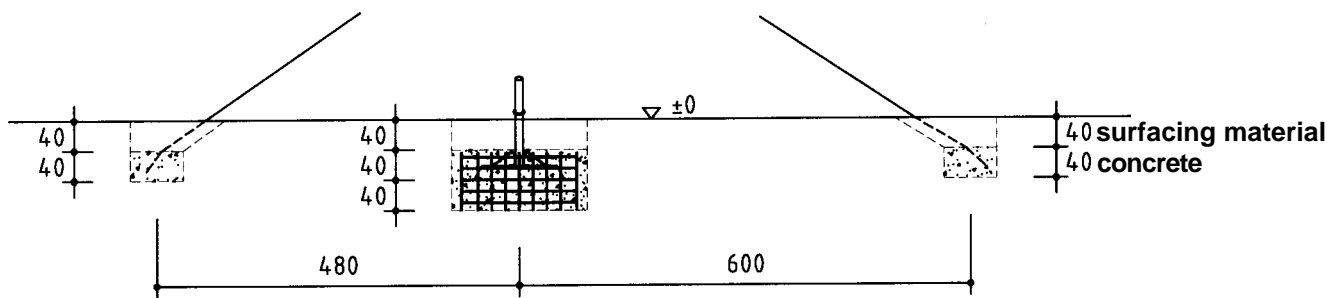
- Set of carpenter's tools
- Set of ratchets, set of allen keys
- Rubber mallet
- Lifting equipment with slings (min. lifting height 4.50 m)
- Beams for support during assembly

Attention!

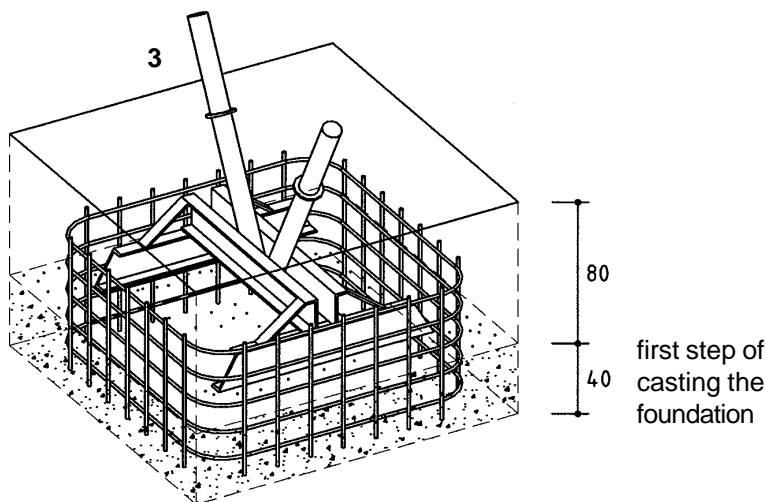
During the assembly period (including the setting of the concrete) it is not allowed to play on or put any weight on the equipment in order to secure stability during use after the assembly. Standard concrete requires at least 2 weeks to set.

Sequence of assembly operations:

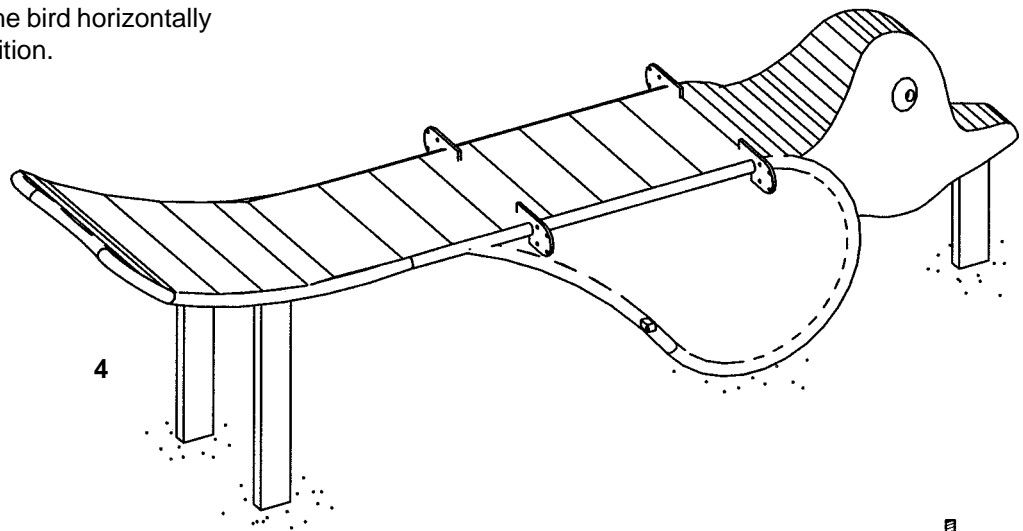
1. Locate the site and take into account the space required, including the safety distances, according to the ground elevation on page 1.
2. Start surveying at the point of reference  and dig out the foundation holes.



3. The main foundation must be constructed in two steps: First cast the bottom section and reinforce using welded wire mesh according to the sketch. After the concrete has set place the frame onto this partial foundation and align.



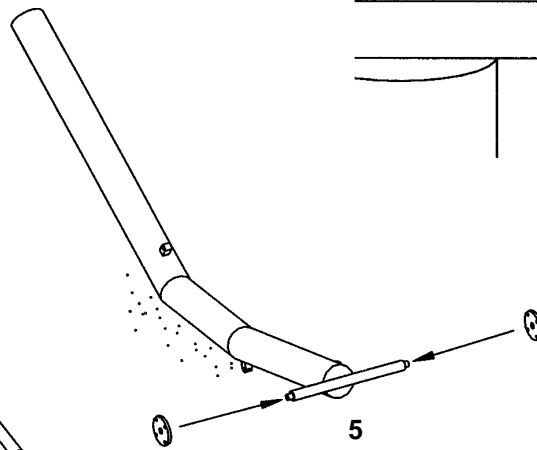
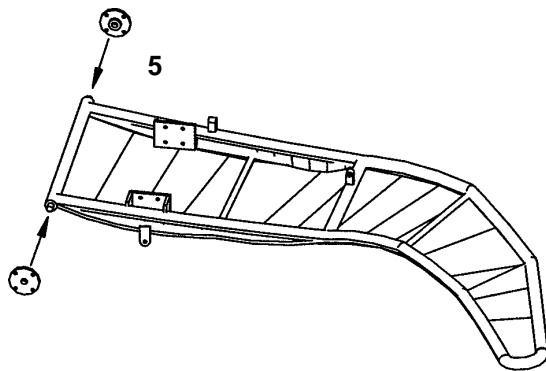
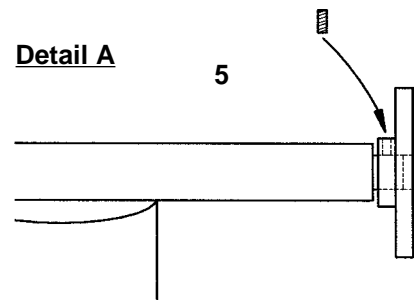
4. Align the body of the bird horizontally and support in position.



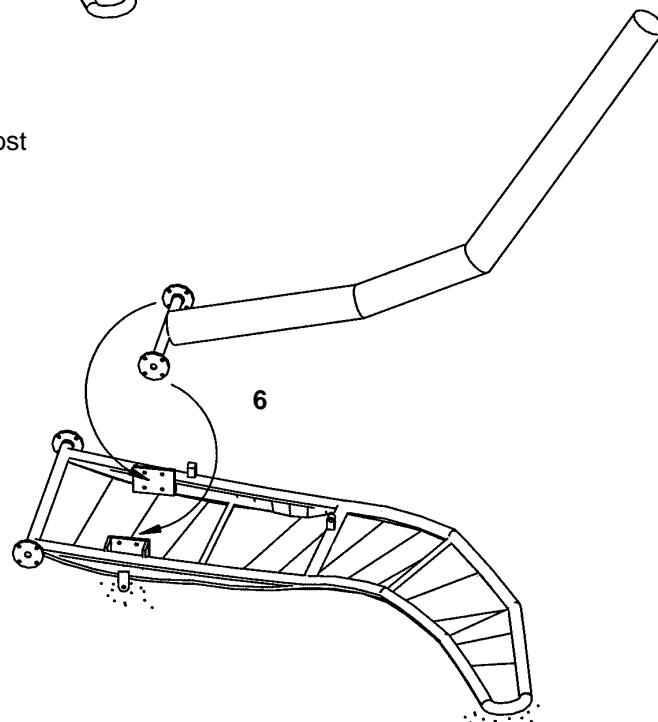
5. Push the bearings onto both the axles of the stand posts and of the wings, secure with the supplied grub screws. **(see detail A).**

Detail A

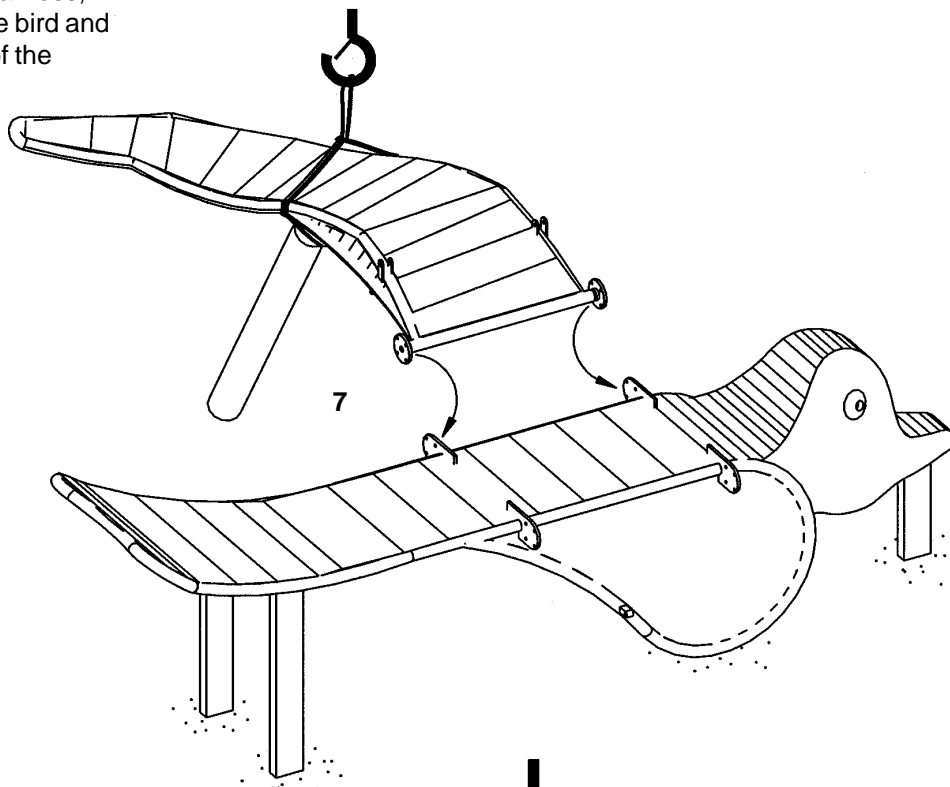
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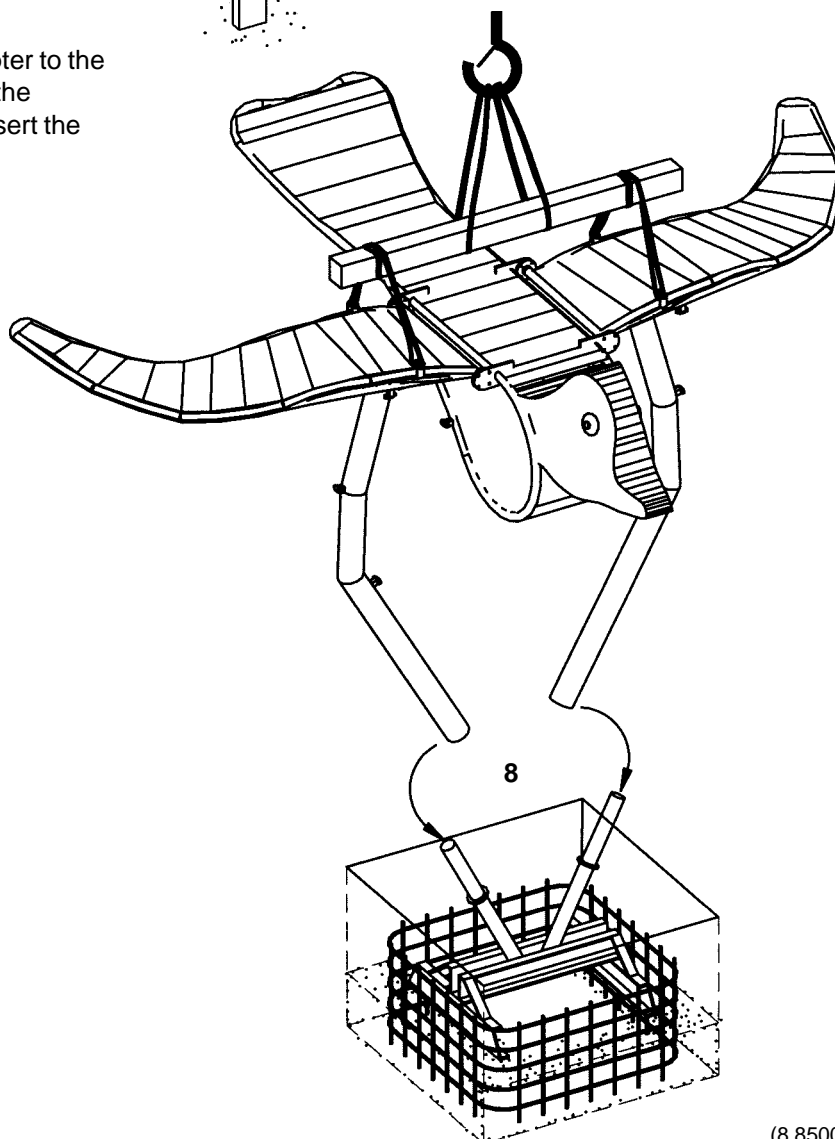
6. Screw the housings of the stand post bearings onto the underside of the wings. Pay attention to the marks.



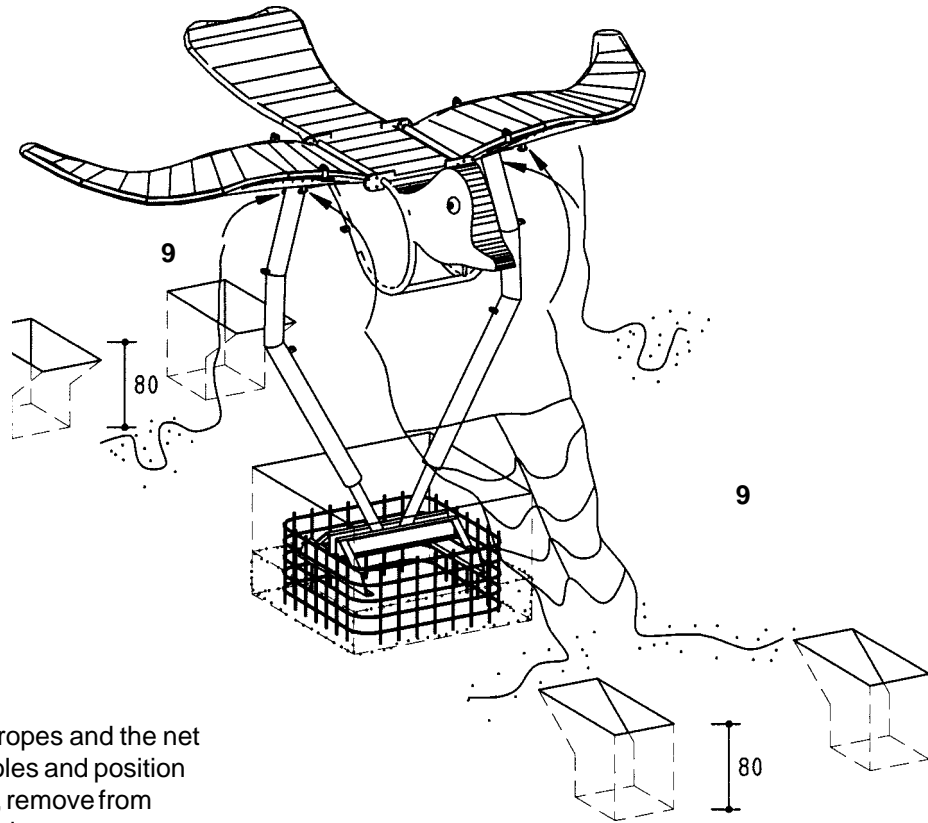
7. Tilt the wing with the attached stand post, attach to the lifting harness, transport to the body of the bird and screw onto the housings of the bearings.



8. Attach the complete Ornithopter to the 4 hoisting point on top using the supplied tie-bar, lift up and insert the stand posts into the frame.

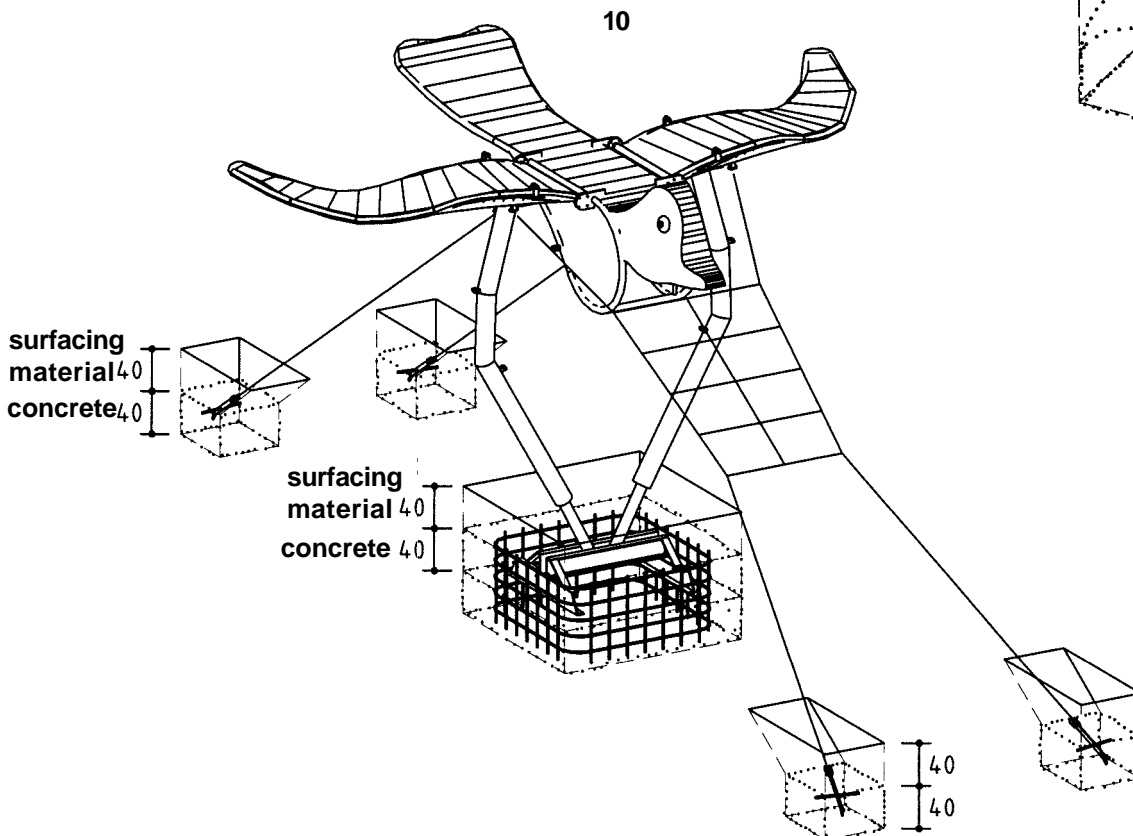
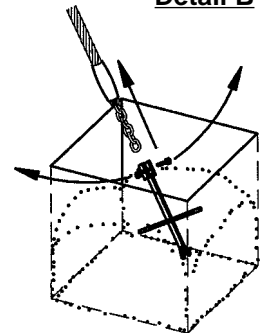


9. Hook on the tensioning ropes and the net.

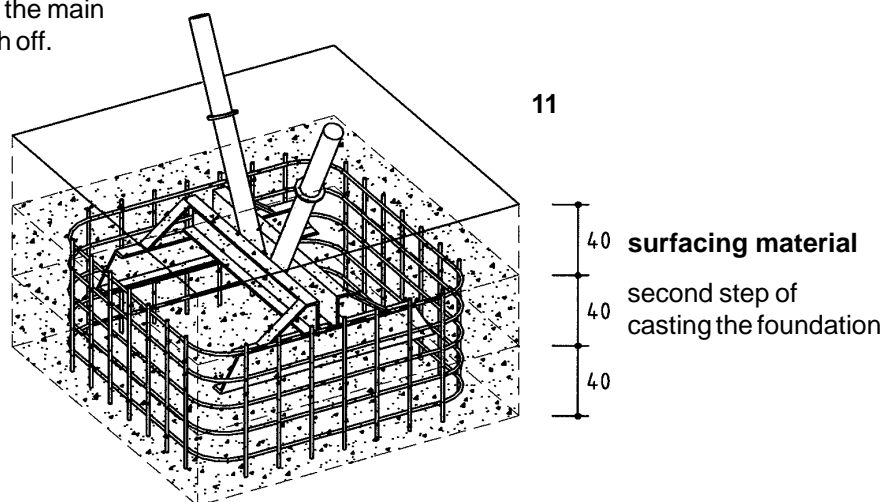


10. Pull the tensioning ropes and the net to the foundation holes and position the anchoring irons, remove from the chains and cast into concrete (see detail B).

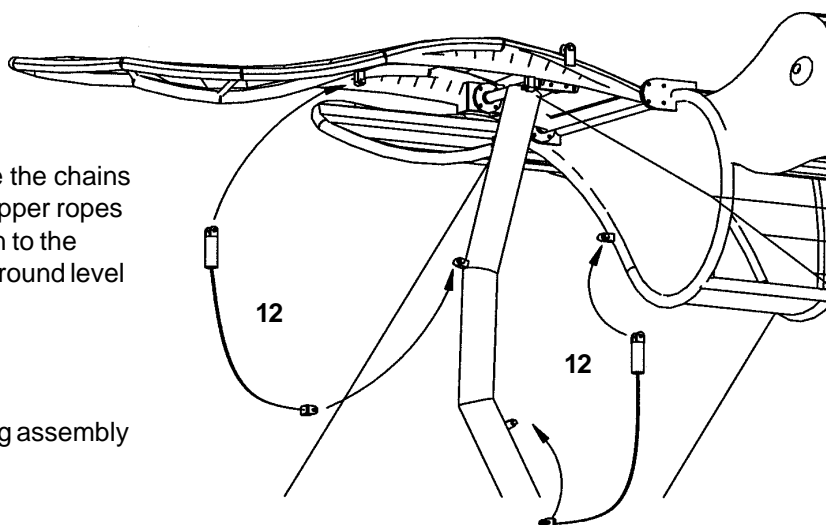
Detail B



11. Now top up the foundation hole of the main foundation with concrete and finish off.

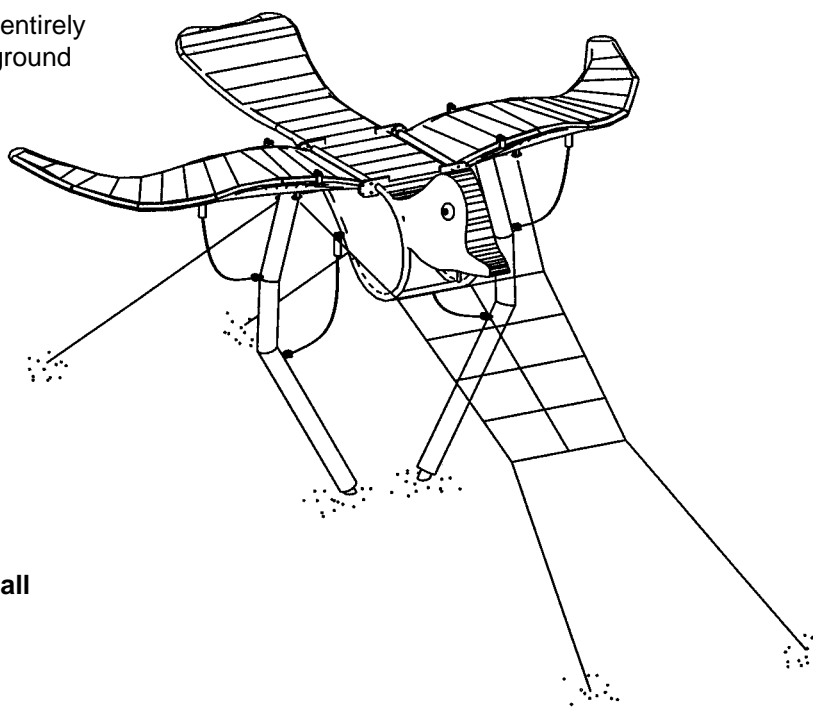


12. After the concrete has set attach the the chains to the the anchoring irons. Install the stopper ropes for the wing movement, pay attention to the marks. Cover the foundations up to ground level with surfacing material.



13. Repair minor damages caused during assembly or transportation.

14. Please ensure that all assembly aids, e. g. excess bolts, assembly instructions, distance battens or tape are removed entirely from the play equipment and the playground after work is finished.



Please note that after about 6 weeks all screws and bolts need to be checked and, if necessary, retightened.