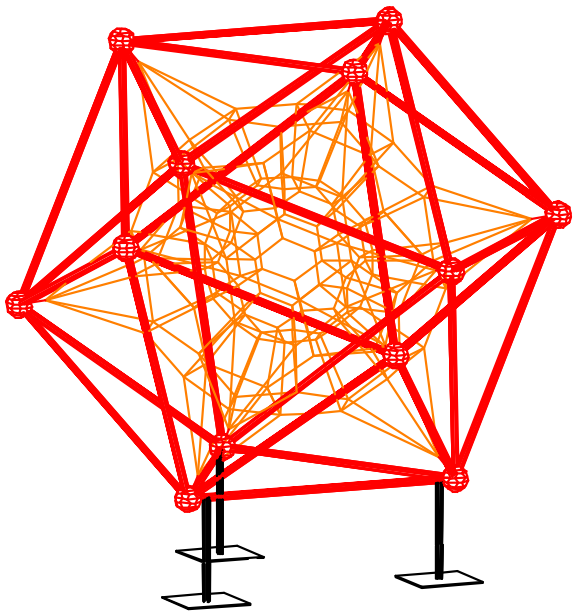
Mounting instruction

For Roplay Type 1
Icosahedron net structures



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Appendix Set of drawings and Parts list

Appendix Maintenance Instruction

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1 Labor and Tools

1.1 Labor

You need a minimum of 2 versed workers for the assembly.

1.2 Tools

The following tools are required for the mounting:

1 lifting gears (e.g. pulley block, rope pulley)

2 ladder: for type **123** abt. 2m long, for type **135** appr. 3m long, for type **147** appr. 4m long

3 ratchet with ½" square drive

4. Extension with ½" square drive, 70 mm long

5. Socket for wrenches with ½" square drive, wrench size 24

6. Box spanner wrench size 24 (included in delivery)

7. Hexagon socket wrench, wrench size 8

8. Hammer

9. Spade

10. Water level

If required tools can be purchased from Roplay.

2 Foundation

2.1 Foundation works

Please use the foundation plan as reference. That plan and a setting jig (consisting of members for the upper framework*) are included in the delivery.

It is absolutely important to adhere to the specified dimension for the foundation works.

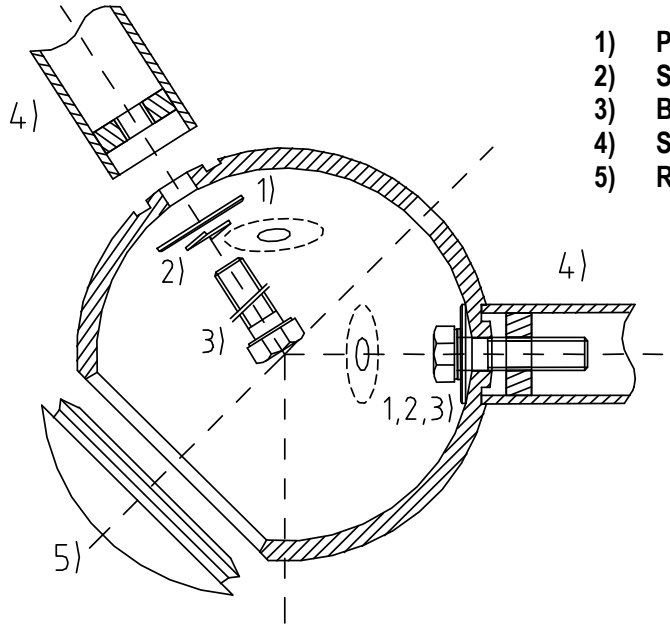
These are the work steps for the foundations:

A. Rough localization of the foundation points in the play area.
(The precise dimensions are in the foundation plan.)

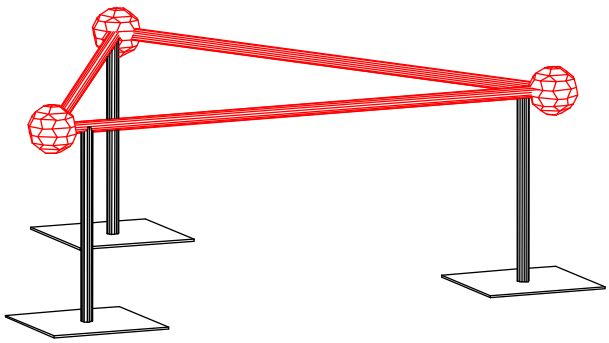
B. Do the excavations for every single foundation point.

C. Assemble the setting jig (refer to drawing).

- The setting jug consists of 3 structural pipes, 3 foundation pipes, 3 foundation plates, 3 clamps and 3 system balls.
- Center the structural tubes at the 3 foundation balls. Then fix the structural tubes with hexagon socket head cap screws M 16 x 80, washers and spring washers from the inner side of the balls.
- Then attach the foundation plates to the foundation pipes L=720mm. Glue the screws with the provided locking adhesive.



1) Plain washer M16 3D
2) Spring washer M16
3) Bolt M16x80
4) System tube
5) Rubber cap

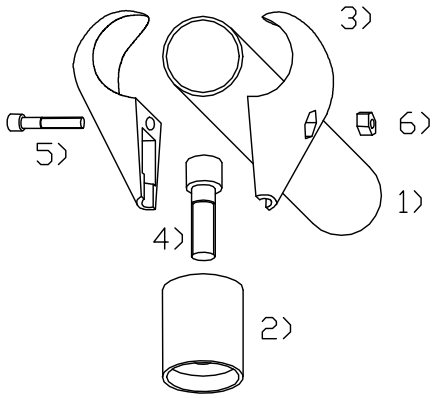


Systemball Type ICO48/L

Foundationframe

D. When all bolts are fastened and the setting jig is centered, the 3 foundation pipes have to be attached to the system pipes with the clamps (clamp should be places appr. 50mm from the end of the system pipe).

1) **System pipe 48,3mm**
2) **Foundation pipe 60,3mm**
3) **Clamp 48,3mm**
4) **Pan head screw M16x70**
5) **Pan head screw M10x35**
6) **Hex-nut M10**



E. Compaction of ground beneath the foundation plates. The base of the ground hole must be level (parallel to ground level).
F. Alignment of the setting jig (see foundation plan)
As per the foundation plan the jig should be adjusted so that all the pipes are on the same level and the bottom of each foundation ball is concordant with the horizontal to-be-play level.
G. Filling of holes and compacting of the soil above the foundation plate.

3 Framework

3.1 Assembly

Please note the following details for the assembly:

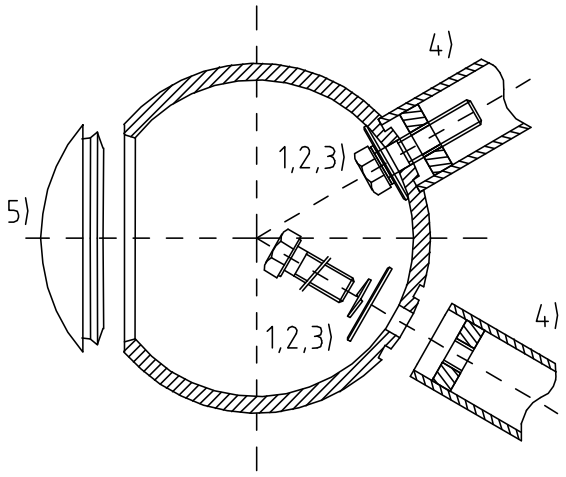
- The right position of structural tubes and balls is described in the framework plan.
- The framework will be assembled level by level.
- The markers for the ball types are at the edge of the assembly openings or at one of the connection rings.
- The system balls are in the right assembly position if the assembly opening is pointing outwards. The assembly opening is always opposite to the net tensioning points. Given this position also the points for the pipe attachments are already in the right place.
- At first just slightly fasten the bolts at the balls.
- After the complete assembly of the frame all connections must be tightened. Don't use other tools than the ones listed in chapter 1.2. to avoid too much prestress.

Please do the assembly in the following order:

A. For the arrangement and the positions of the system balls and –pipes please refer to the plan of the framework.

B. At first center the system pipes at the system balls and fasten from the inside of the balls with washers, spring washers and hexagon bolt M16x80.

C. Proceed with the assembly of balls and pipes level wise.



1) Washer for M16 3D
2) Spring washer for M16
3) Hexagon bolt M16x80mm
4) System pipe 48,3mm
5) Rubber cap

D. When the assembly is completed all fastenings must be tightened. Don't use additional extensions for that.

4 Spacenet

4.1 Hang On

Please note the following details:

- All the tensioners are pre-assembled to the spacenet, as well as the tension devices M16.
- At first just hand-screw the pre-assembled tensioners with the self-locking nuts M16.
- **It is important to make sure that no rope ends are crossing.**

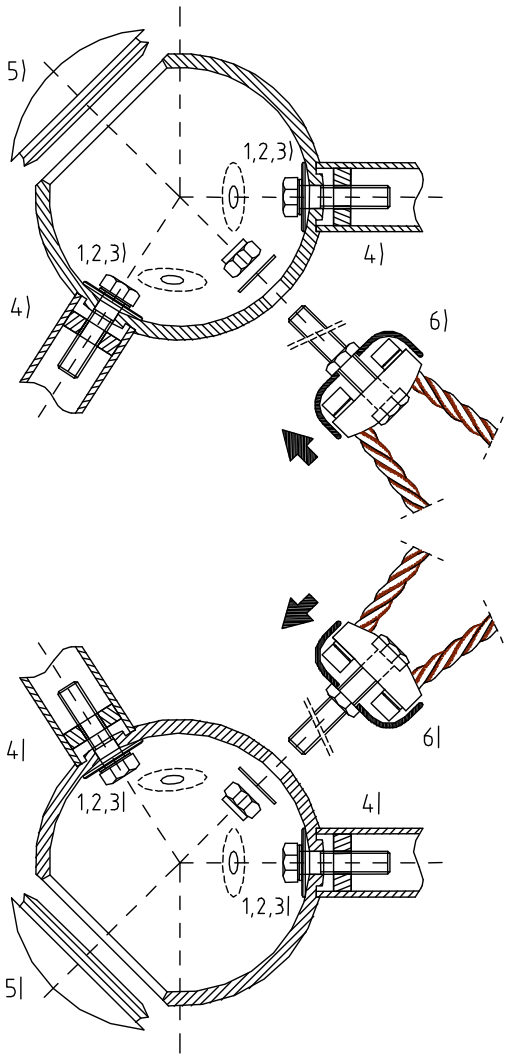
Please install the net in the following order:

A. Pull the 3 marked tensioners to the 3 upper balls utilizing a suitable lifting gear (f.e. a pulley).

B. Put the bolt of the tensioner through the exposed borehole ø17mm at the bottom side of the upper ball and fix it with washer M16 and self-locking nut M16.

C. Attach the other two marked tensioners to the other two top-balls accordingly.

D. From the top to the bottom please do the same procedure until all tensioners are connected.



1) **Washer M16 3D**
2) **Spring washer M16**
3) **Hexagon screw M16x80mm**
4) **System pipe 48,3mm**
5) **Rubber cap**
6) **Tensioner M16**

4.2 Tensioning

Please tension the net as follows:

A. Before the tensioning it is recommendable to check the right position for all the cloverleaf rings at the rope crossover points in the nets and if necessary to adjust them. Also double-check that no rope ends are crossing.

B. When everything is found correct in step A now tension the tensioners at the lower balls. With the box spanner SW24 all the nuts M16 are to be fastened until the tensioning points look like in the picture shown below

C 

C. Depending on the play frequency the net has to be re-tensioned after 1-2 weeks.

5 Closing works

To the end it is recommendable to double-check all the fastenings.

Restore the ground level.

Close all the assembly openings at the frame balls by plugging in the rubber caps with a hammer.

Important: Depending on the play frequency the net has to be re-tensioned after 1-2 weeks.