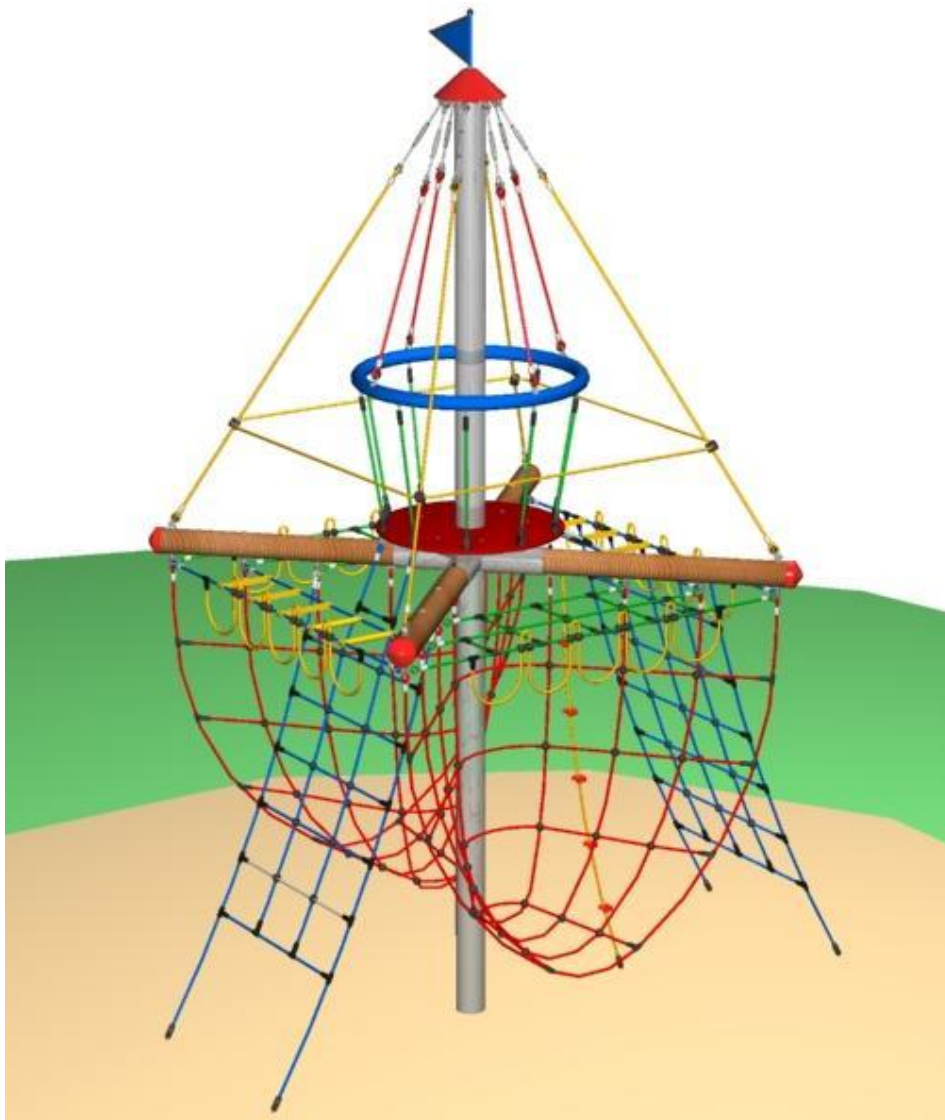


A Assembly Instructions

Pirate tower “Störtebeker”

Art. 4687-20

to set into concrete



Revision history

Revision 0 – 2005-13-10

The first released version

Assembly instruction AG

Revision 18 – 2017-10-12 PM Ansichten geänderten (Auf HDPE Platte , RM statt Gelenkadapter)

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Contents

A	Assembly instruction Pirate tower “Störtebeker” Art. 4687-20 to set into concrete	1
1	Introduction Assembling	4
2	Datasheet Pirate tower, article 4687-20	5
3	Delivery contents (parts list with part numbers).....	8
4	Erection instructions.....	15
B	Maintenance instructions Pirate tower “Störtebeker” Art. 4687-20 to set into concrete.....	39
5	Introduction Maintenance.....	41
6	General maintenance information	42
7	Specific maintenance advice	43
8	Maintenance timetable	44
9	Regular maintenance	45
10	Monthly maintenance.....	46
11	Quarterly maintenance.....	46
12	Half yearly maintenance	46
13	Annual maintenance	48
14	Maintenance printout	49
15	Hand over document.....	51

List of Tables

Table 3-1: Delivery contents, in words	8
Table 3-2: Delivery contents, in symbols	10

1 Introduction Assembling

1.1 General information

This equipment should be installed, inspected, maintained and operated in accordance with EN1176-7 guidelines.

Before installation work commences, please check that you have all of the equipment and fixation components in the parts list provided (see Tables 3-1 and 3-2).

Please consider that the installation has to be carried out only on even terrain (max.slope up to 3%).

Any spare parts that may be required can be obtained directly from your supplier.

Please do not hesitate to call your supplier if you have any problems during installation or with any other questions.



Following installation, complete assembly instructions, maintenance instructions and a maintenance record must be sent to the operator who must confirm receipt in writing. See the last page of this document.



All nuts and bolts are hot-dip galvanised or stainless steel.

One of the characteristics of stainless steel is that uncontrolled cold welding may occur when the nuts are tightened. To prevent this, it is necessary to spray the nuts and bolts with Teflon spray or another similar lubricant.

We hereby confirm that this play equipment has been tested and certified in accordance with the play equipment standard EN 1176.

2 Datasheet Pirate tower, article 4687-20

1. Space requirement: 3,75 m x 2.45 m and/or 7,05 x 7,20 m including safety zone, height of fall **2,75 m**
2. Required safety surface:

Surface material	Description mm	Minimum thickness of layer mm	Maximum height of fall mm
Topsoil grass			$\leq 1000^d$
Chipped bark	20 – 80 grain size	300 400	≤ 2000 ≤ 3000
Wood chippings	5 – 30 grain size	300 400	≤ 2000 ≤ 3000
Sand ^c	0.2 – 2 grain size	300 400	≤ 2000 ≤ 3000
Gravel ^c	2 – 8 grain size	300 400	≤ 2000 ≤ 3000
Other ground materials	As recommended by manufacturer		Critical fall height as checked
^a Appropriate ground material, prepared for use at playgrounds ^b In case of loose fill material, 100mm have to be added onto the minimum layer thickness to compensate the falling away effect (see 4.2.8.5.1). ^c Without silty or clayey proportions. Grain size can be determined by a sieve test according to EN 933-1. ^d See note 1 in 4.2.8.5.2.			

3. Name and overall dimension of the largest component:
Steel post with 4 connecting sleeves (1 item), length 6.00 m, $\varnothing$ 159 mm
4. Name and weight of the heaviest component:
1 steel post (1 piece) approx. 160 kg
5. Intended age group: 6 years and over
6. **Please note that this equipment is set in concrete.**
Concrete: C25/30
Required concrete: 1.7 m³
Foundations/area to be excavated:
Top edge of concrete 30 cm below ground level
1 x 1.20 m long x 1.20 m wide x 0.70 m high, total depth 1.10 m including 10 cm drainage
1 x 1.50 m long x 0.40 m wide x 0.50 m high, total depth 1.10 m including 10 cm drainage
1 x 1.60 m long x 0.40 m wide x 0.50 m high, total depth 1.10 m including 10 cm drainage
1 x 0.40 m long x 0.40 m wide x 0.70 m high, total depth 1.10 m including 10 cm drainage

**Attention!**

Round off foundation edges (min.R = 100 mm)! Sizes of foundations are designed for soils class“4-5” (natural ground).

Soil class 4: soft to medium plasticity, interleave bound, with minor portion of stone (portion < 30% with bigger diameter of 63 mm grain size)

Soil class 5 : ground with soil class 3 and 4 with big portion of stones (portion > 30% with bigger diameter of 63 mm grain size)

In case of sandy and soft soils, the surface measure of foundations have to be enlarged for about 50%!

(Top edge of concrete 40 cm below play level)

7. Assembly time, once foundations complete: approx. 4 hours.
Required assistance: 2 people.
8. Any spare parts which may be required can be obtained directly from your supplier
9. **We hereby confirm that this item of play equipment has been tested and certified in accordance with the play equipment standard EN 1176.**

10. Drawings / Views

All optical drawings are showing only the measurements/dimensions and are no mandatory technical views of the complete item.

We reserve the right to change technical details of our articles which are serving for the further development of our articles and are reasonable for the customer.

Measurement tolerances

Because of the properties and characteristics of the components, minor measurement tolerances compared to the indication on the sketches are possible.

This concerns all shown measurements except the foundation measurements resp. measurements below upper edge ground level/play area.

3 Delivery contents (parts list with part numbers)

3.1 In words

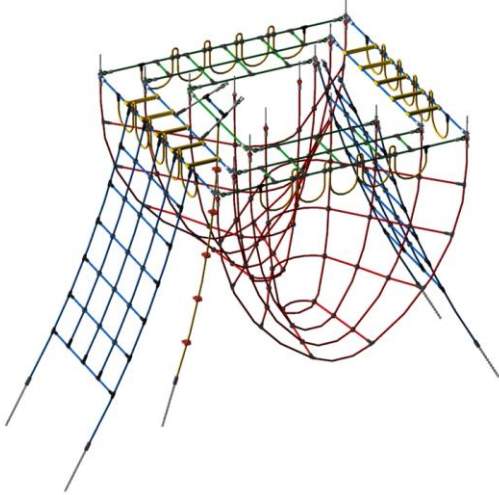
Table 3-1: Delivery contents, in words

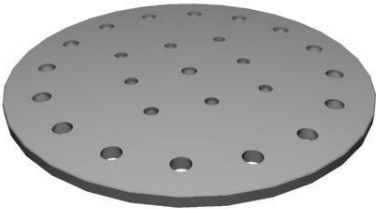
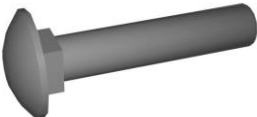
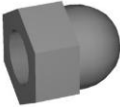
Pos.	Quantity	Element / Description	Size	O.K.	Missing
1	1	Steel post with 4 connecting sleeves and L-shaped support	Ø 159 mm, 6.0 m long		
2	4	Laminated beams	Ø 140 mm, 1.65 m long		
3	1	Upper play element (preassembled)			
4	1	Lower play nets (preassembled)			
5	1	Tensioning ropes with circular connecting rope (preassembled)			
6	1	Cover plate, galvanised	Ø 360 mm x 12 thick		
7	8	torx screw	4,25 x 25 mm		
100	4	Threaded bolt with 2 cap nuts and 2 washers	M10 x 175 mm		
101	8	Carriage bolts	M8 x 40, galvanised		
102	8	Washers	Ø 8.4, galvanised, DIN 125		
103	8	Cap nuts	M8, galvanised		
104	4	Hexagon bolts	M12 x 30, galvanised		
105	12	Tooth lock washers	For M12, galvanised		
106	8	Hexagon bolts	M12 x 25, galvanised		
107	8	Ring nuts	M12, galvanised		
108	6	Ring nuts with PA bush	M12, VA		
110	16	Washers	Ø 13.0, galvanised		
111	12	Stop nuts	M12, galvanised		
112	12	Blue/Yellow caps	For M12		
113	9	Threaded pins	For 10 mm VA shackle		
114	2	Hexagon nuts	M16, galvanised		
115	1	Threaded rod	M16 x 460, galvanised		
116	1	Post cover, red	Ø 375 mm x 140 high		
117	1	Washer	Ø 17.0, galvanised, DIN 9021		

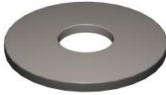
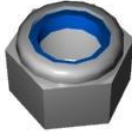
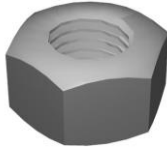
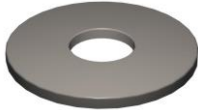
Pos.	Quantity	Element / Description	Size	O.K.	Missing
118	1	Flag, blue	260 mm high		
119	1	Stop nut	M16, VA, DIN 985		
120	1	Black cap	For M16		
121	5	chain (to concrete)	Ø 7 mm – 960 mm lg.		
122	4	Caps, Ø 140 mm, red			
123	12	Oval head screws	5 x 30, VA		
124	2	Loctite			
125	2	Threaded rods	M12 x 250 long, galvanised		
126	4	Hexagon nuts	M12, DIN 934, galvanised		
127	5	peg			
128	5	cambered shackle	10 mm		
129	5	cambered shackle	6 mm		
130	12	Torx screws	4x25mm		
	1	Drainpipe (to be provided by customer)	approx. Ø 300 x 700 long		
10	1	Paintbrush	Customer request		
11	2	Tins of paint	Customer request		

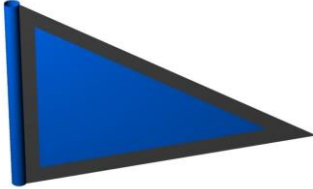
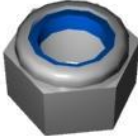
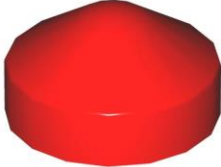
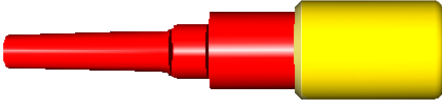
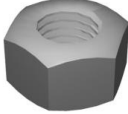
3.2 In symbols

Table 3-2: Delivery contents, in symbols

Pos.	Quantity	Symbol
1	1	
2	4	
3	1	
4	1	
5	1	

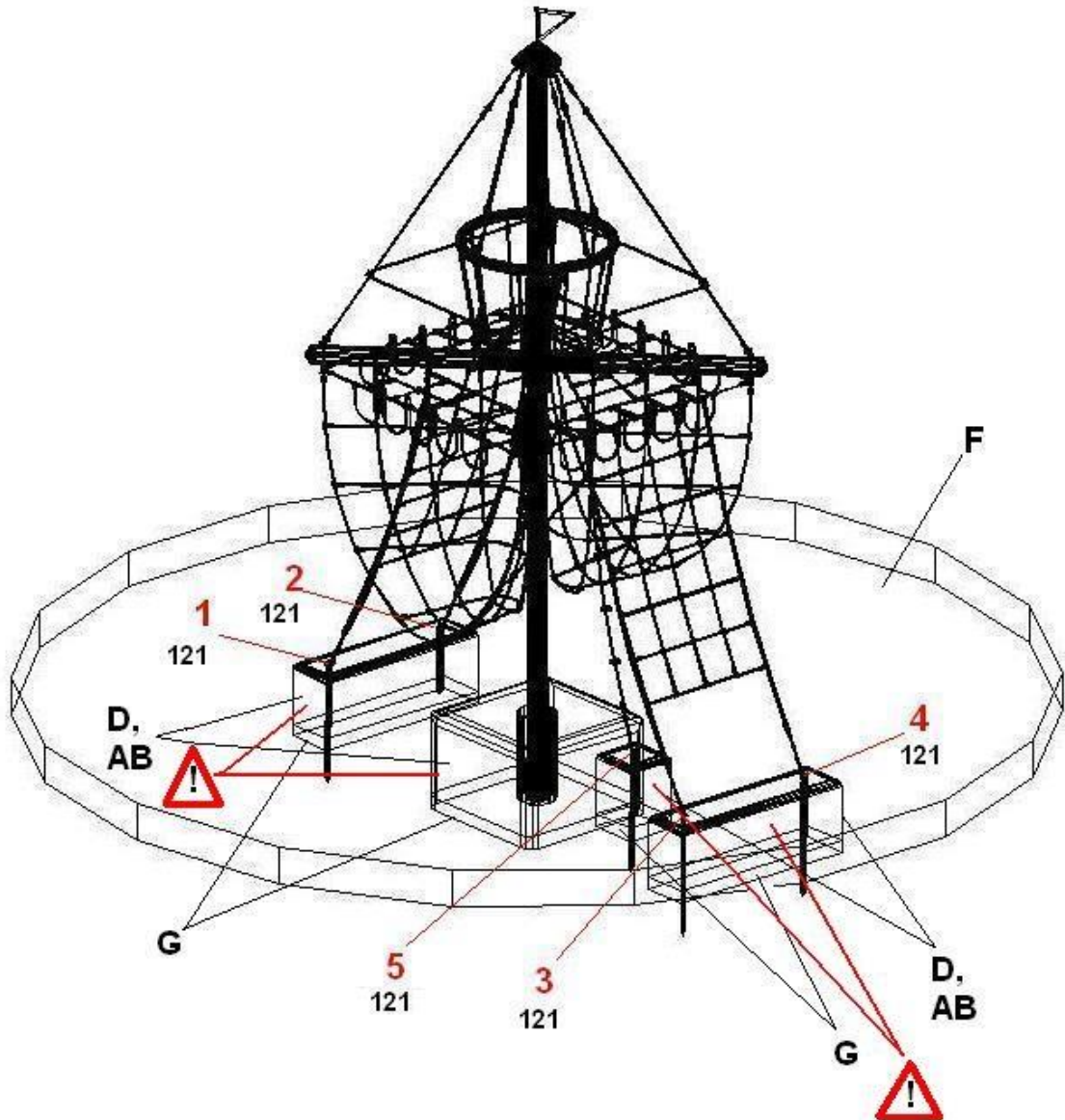
Pos.	Quantity	Symbol
6	1	 Ø 360 mm
7	8	 4,25 x 25 mm
100	4	 M10 x 175 mm
101	8	 8 x 40 mm
102	8	 Ø 8,4
103	8	 M8
104	4	 M12 x 30 mm
105	12	 f. M12
106	8	 M12 x 25 m
107	8	 M12, verz.

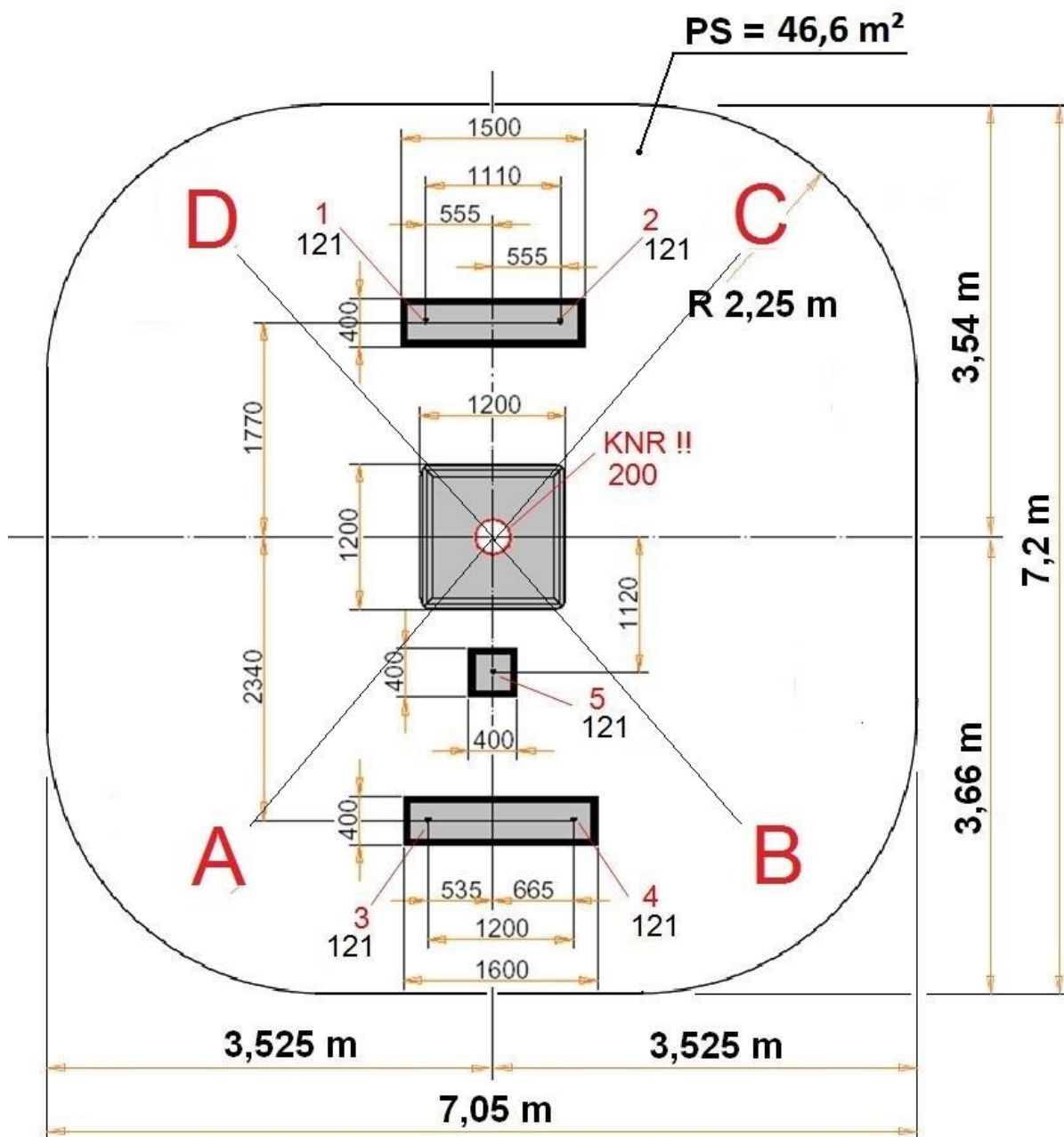
Pos.	Quantity	Symbol
108	6	 M12, VA
110	16	 f. M12 (Ø 13)
111	12	 M12
112	12	 f. M12
113	9	 f. M10
114	2	 M16
115	1	 M16 x 460 mm
116	1	 Ø 375 mm x 140 mm hoch
117	1	 f. M16 (Ø 17)

Pos.	Quantity	Symbol
118	1	
119	1	 M16
120	1	 for M16
121	5	 Ø 7 mm – 960 mm lg.
122	4	 Ø 140 mm
123	12	 5 x 30 mm
124	2	 Loctite (bolt lock) per 3 ml
125	2	 M12 x 250 mm
126	4	 M12
127	5	

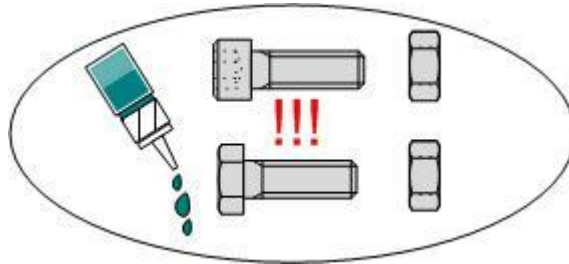
Pos.	Quantity	Symbol
128	5	 Ø 10 mm for Pos. 127
129	5	 Ø 6 mm for Pos. 4, 121 + 121a
130	12	 4,25 x 25 mm

4 Erection instructions

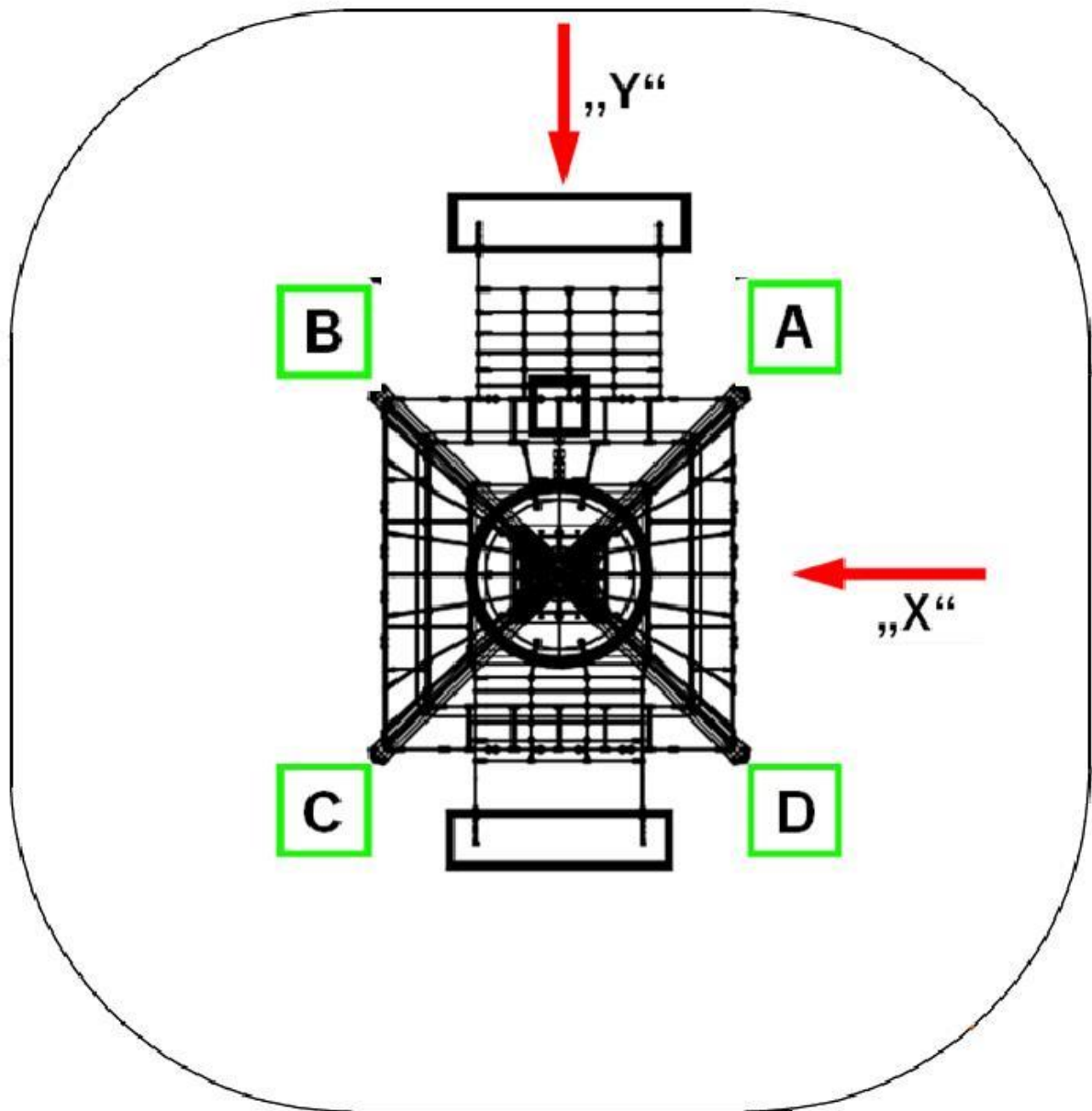


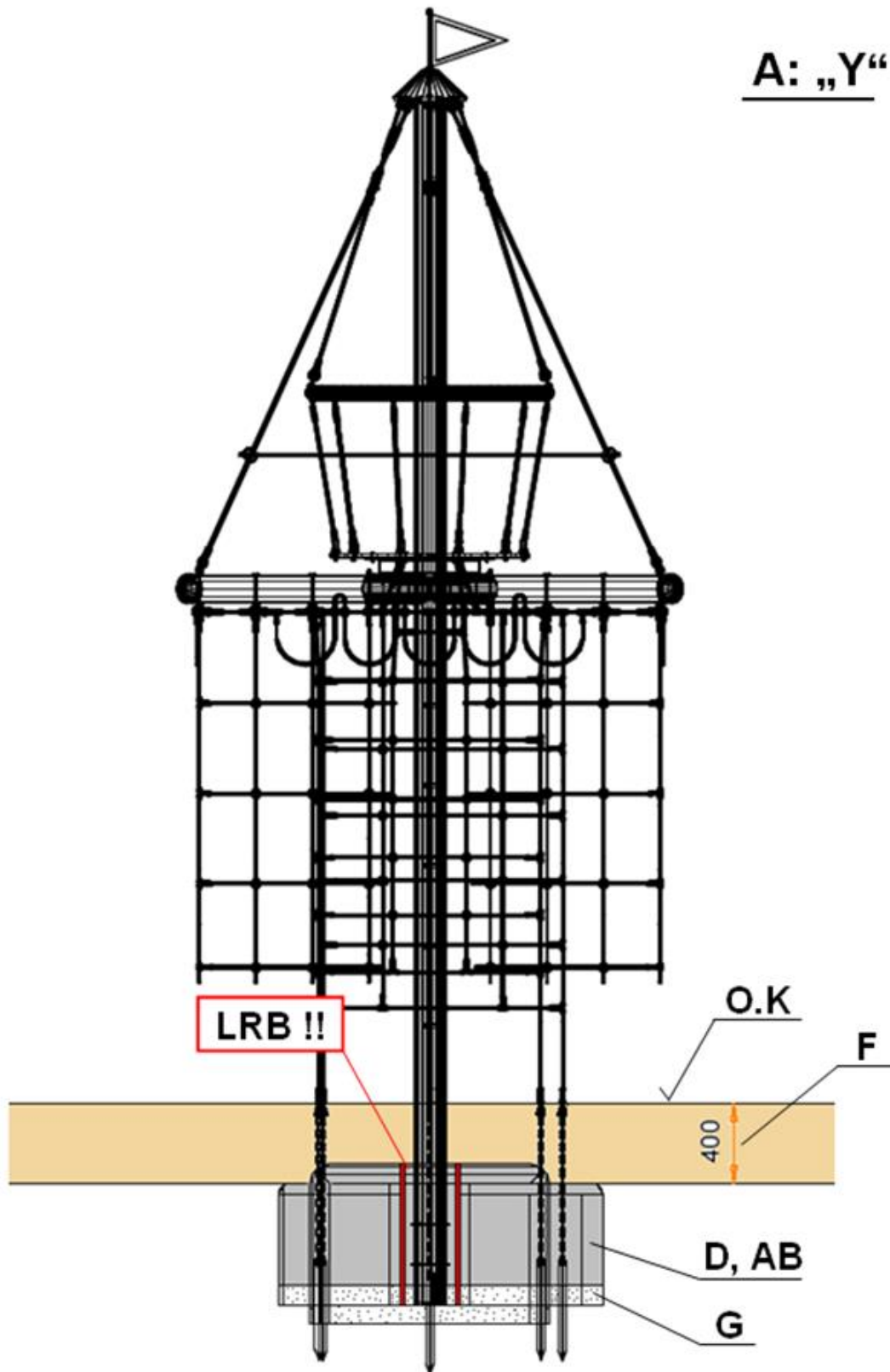


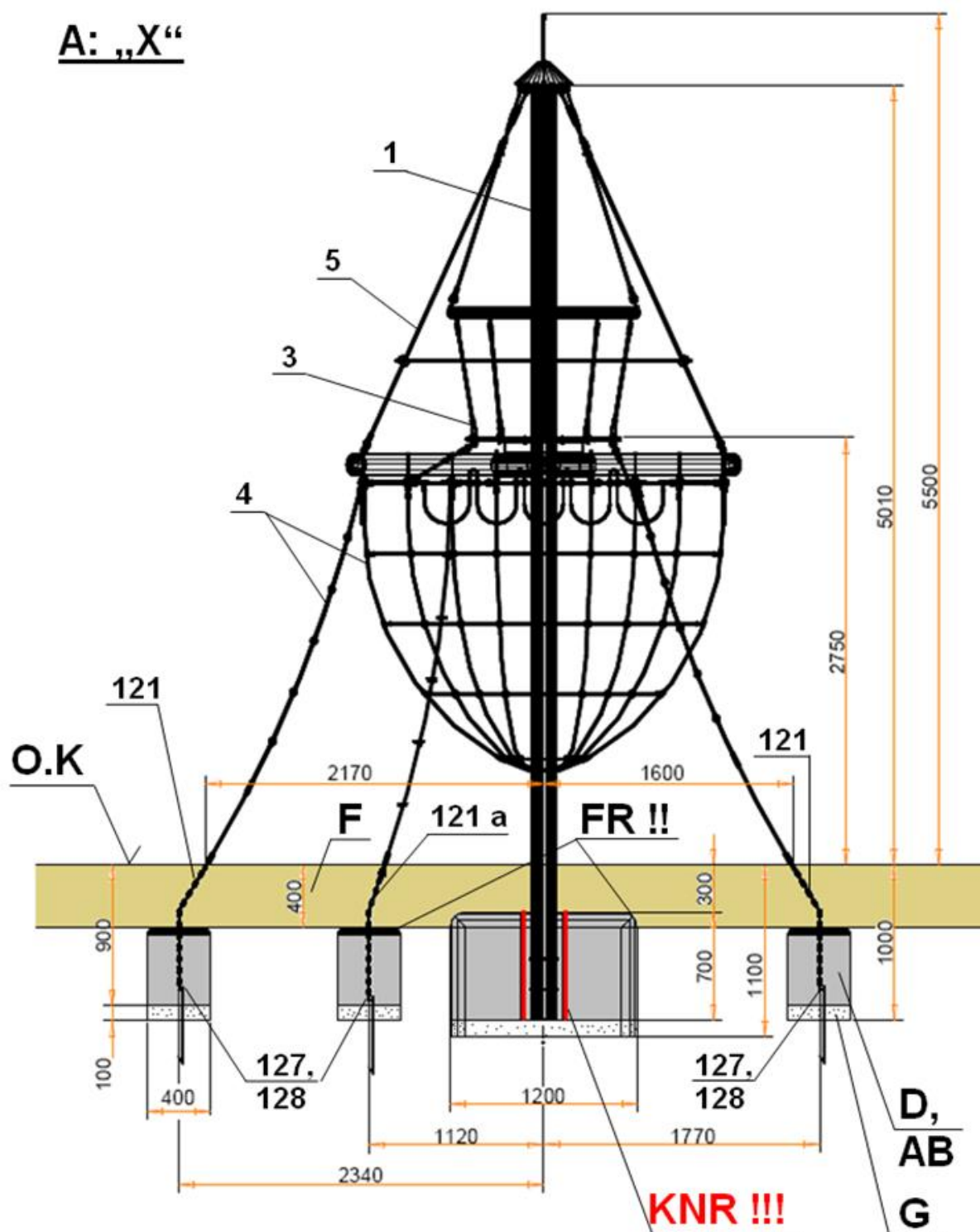
Screw locking device!

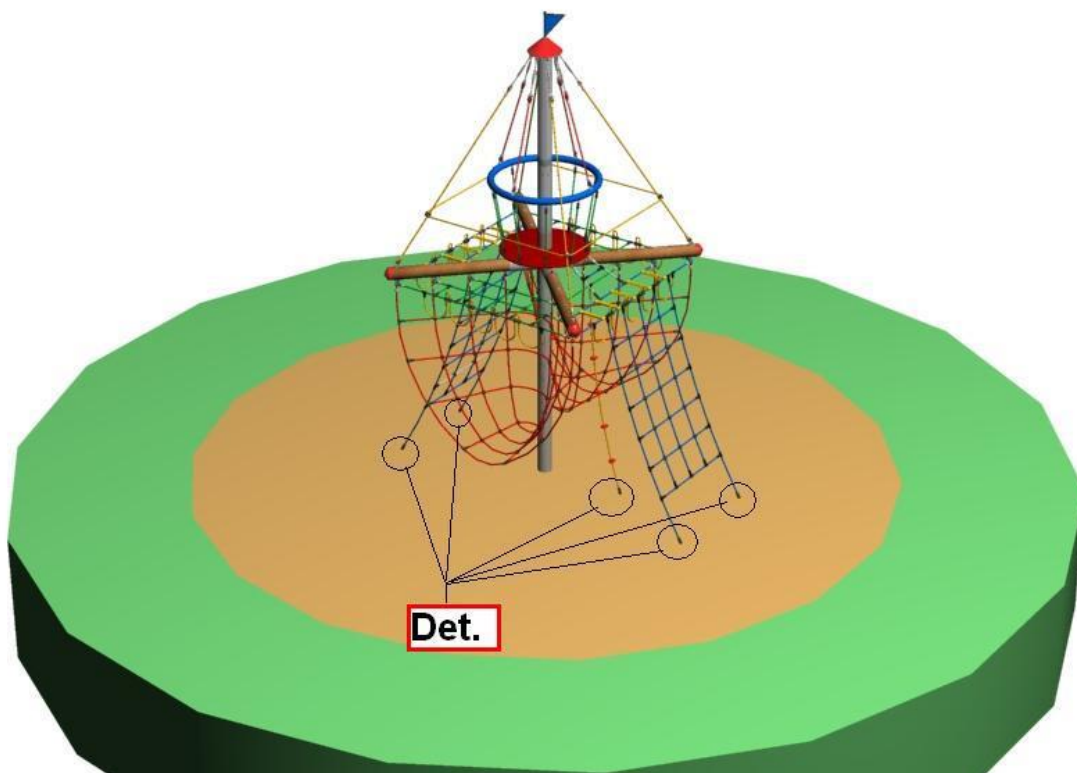
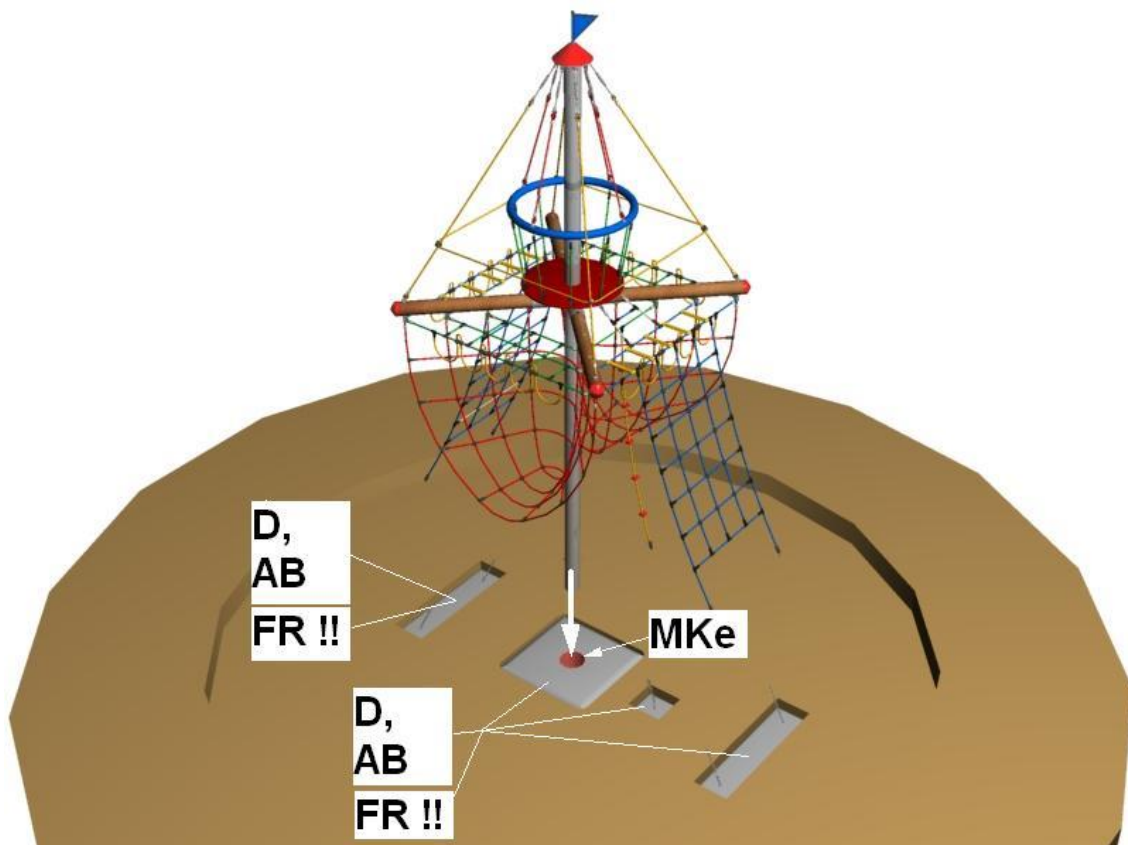


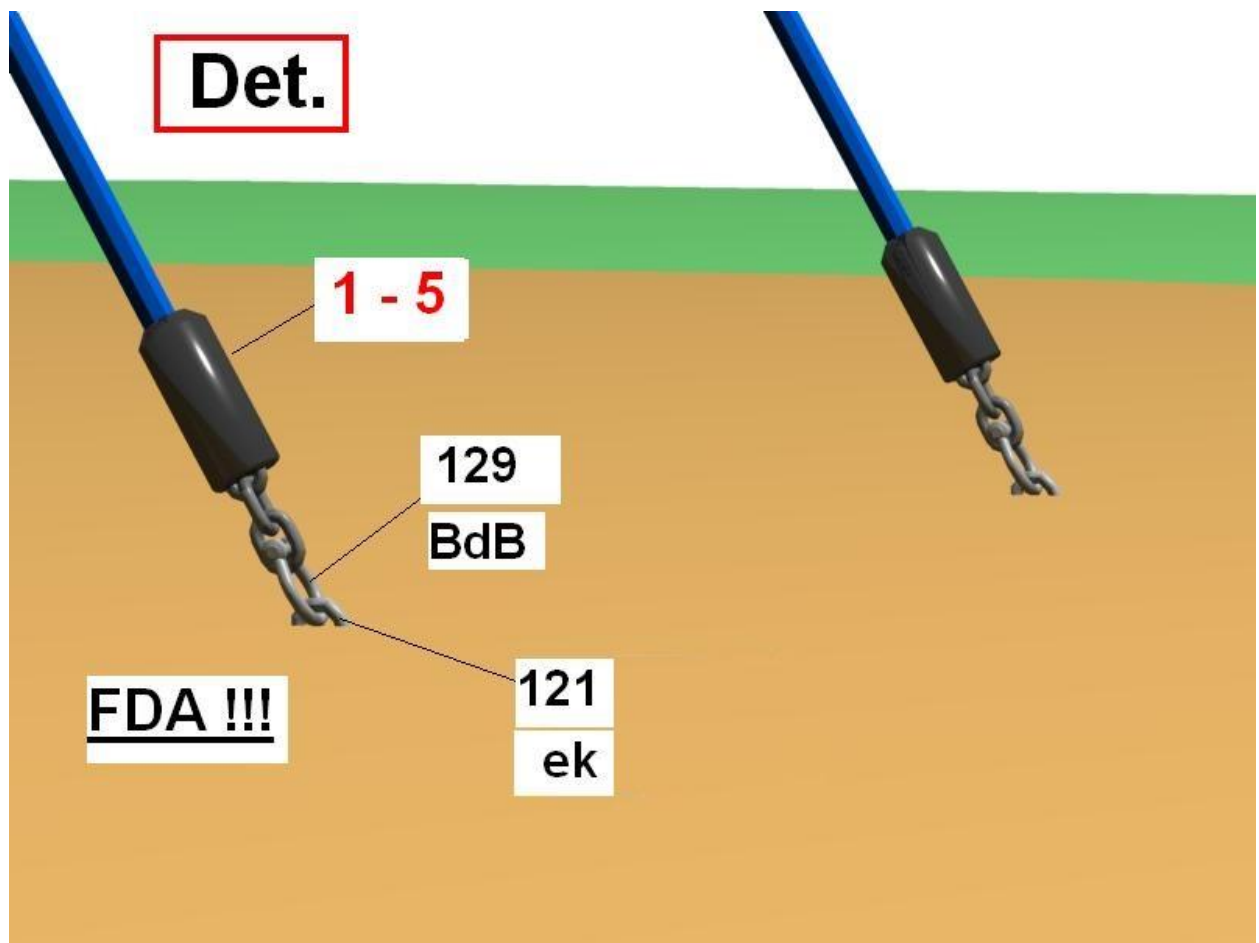
**glue all screws, nuts and sleeves with loctite.
(not less than 5 drops !)
(except for lock nut)**

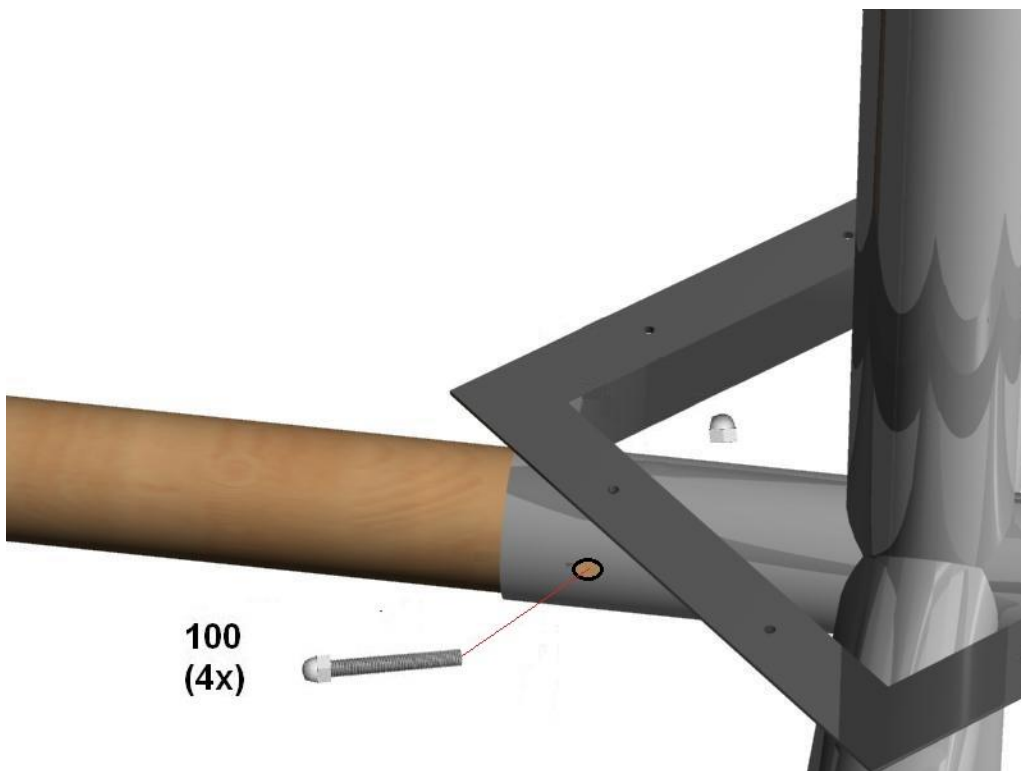
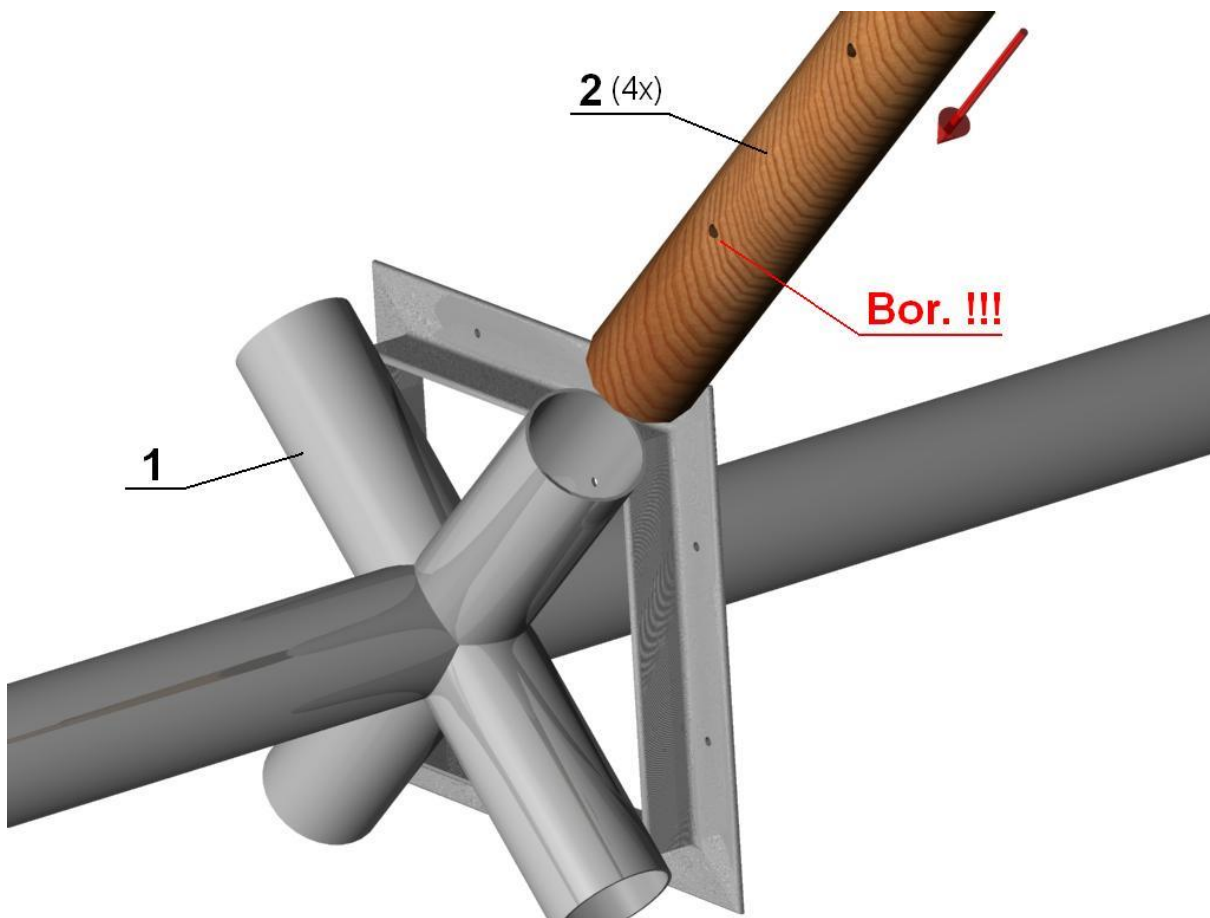


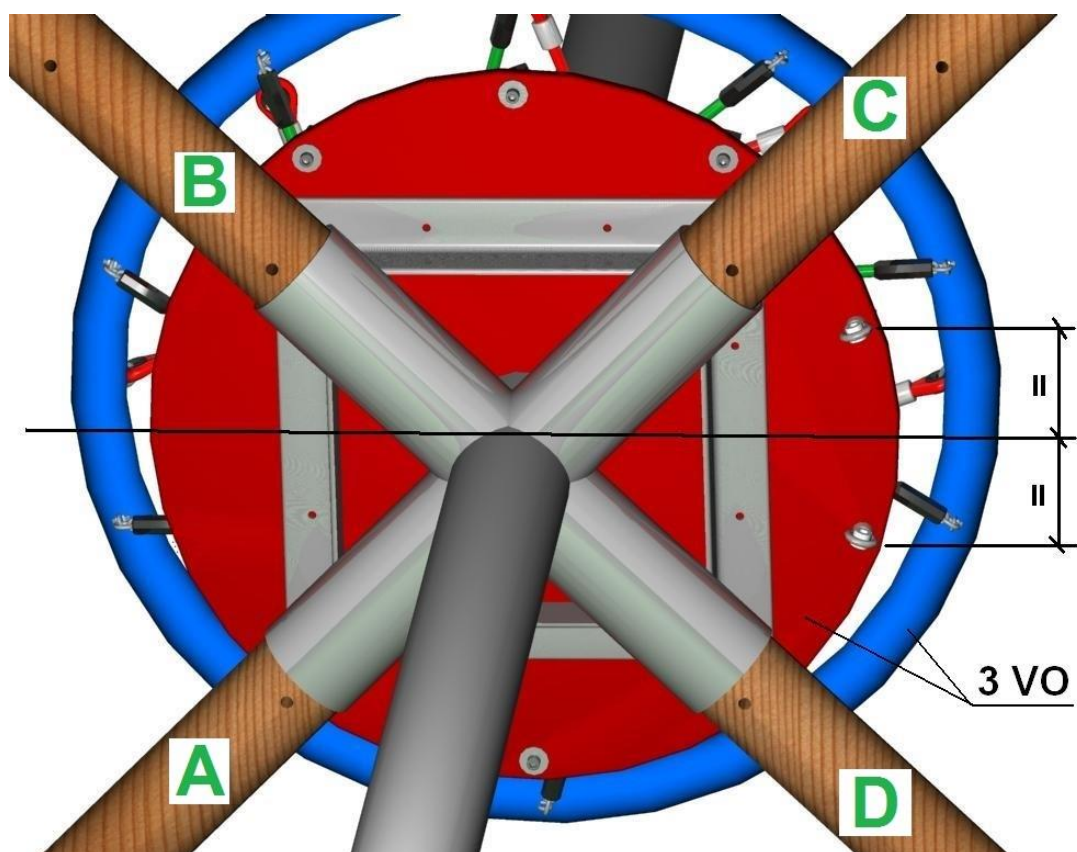
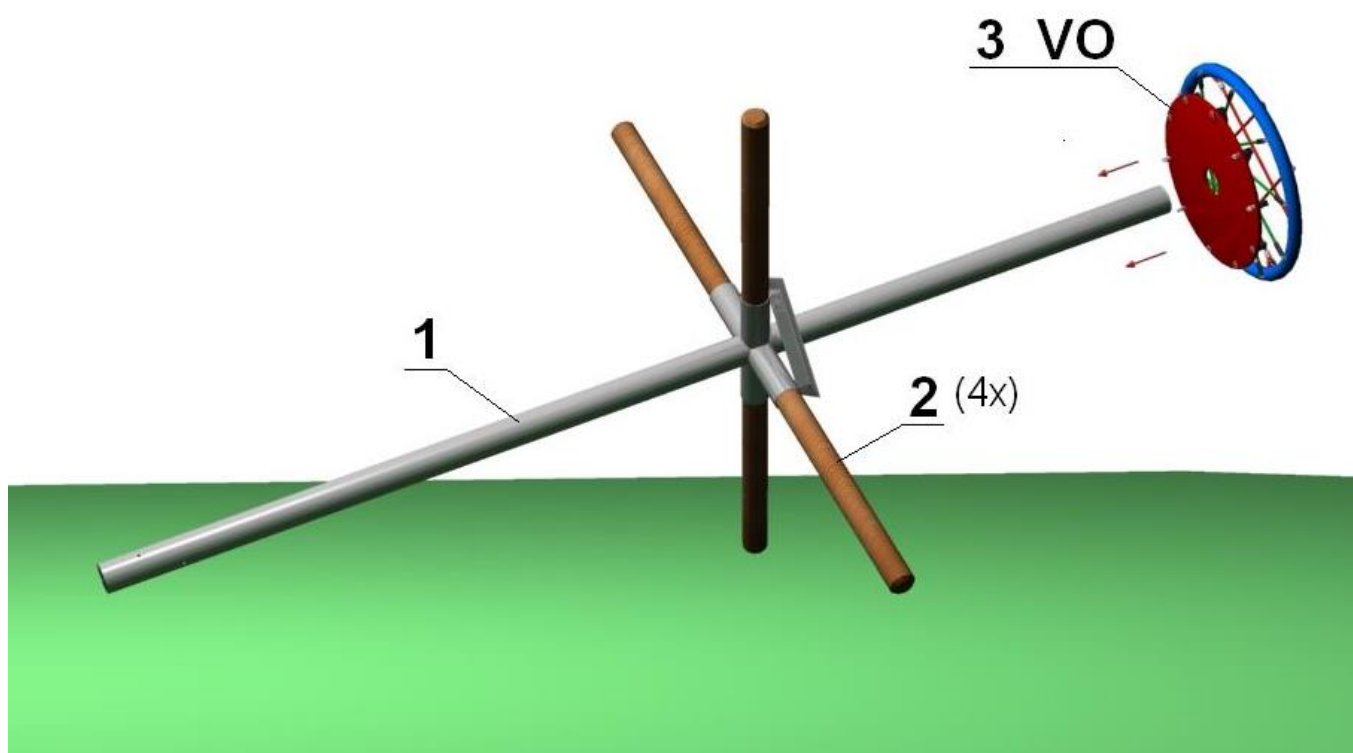


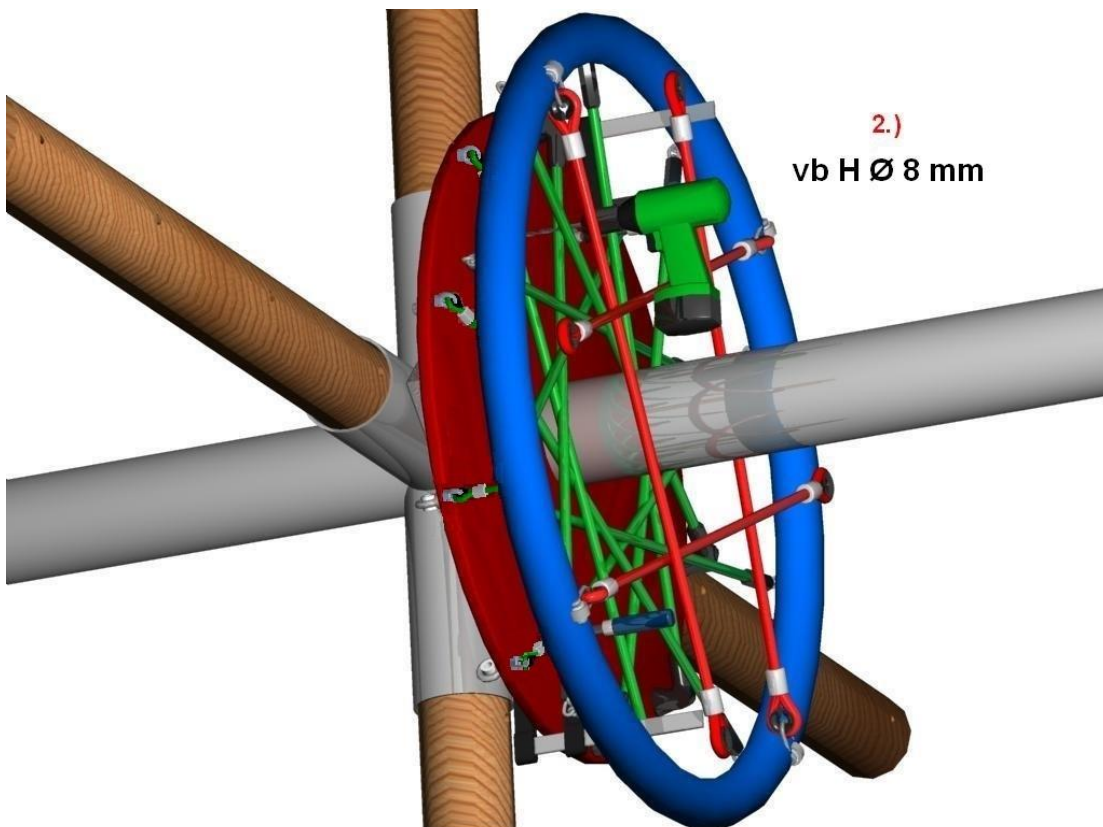
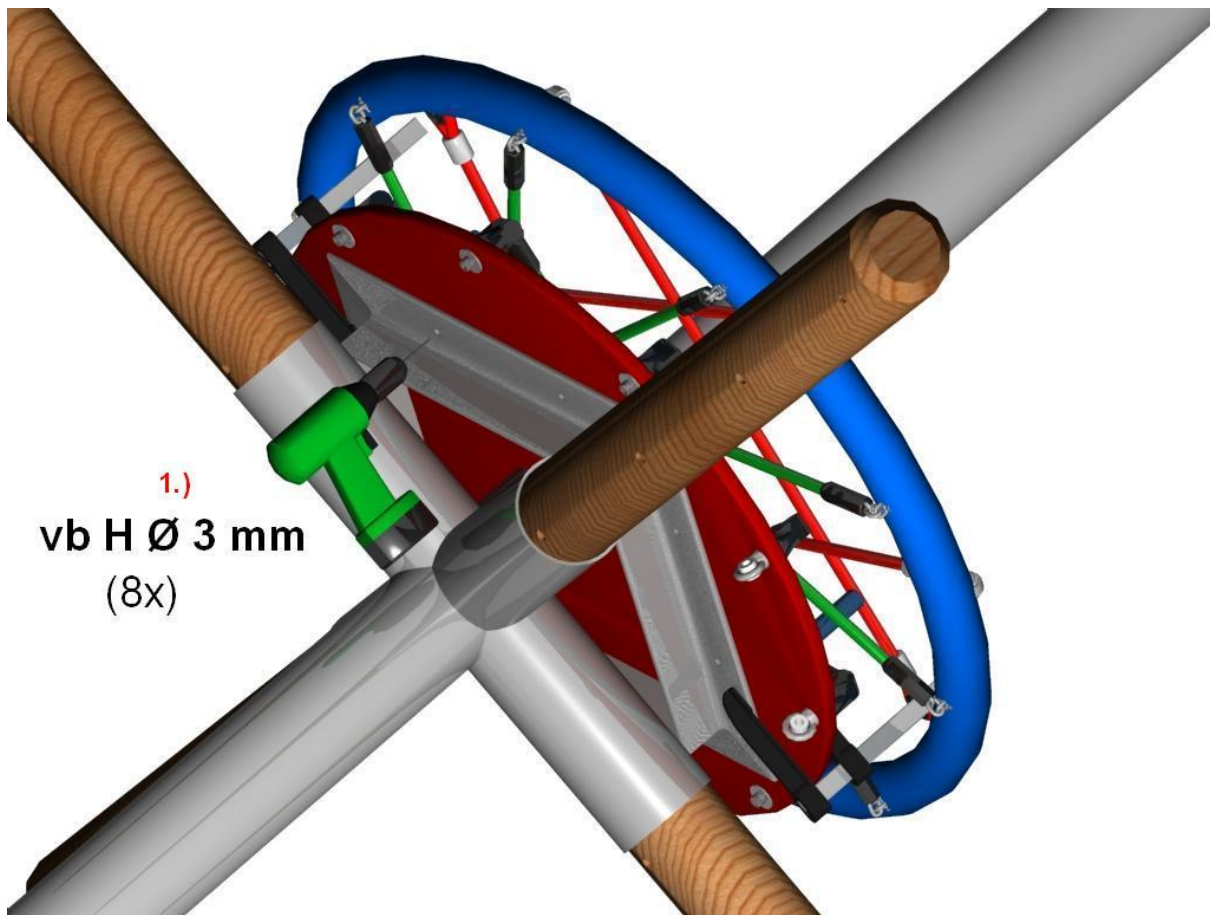


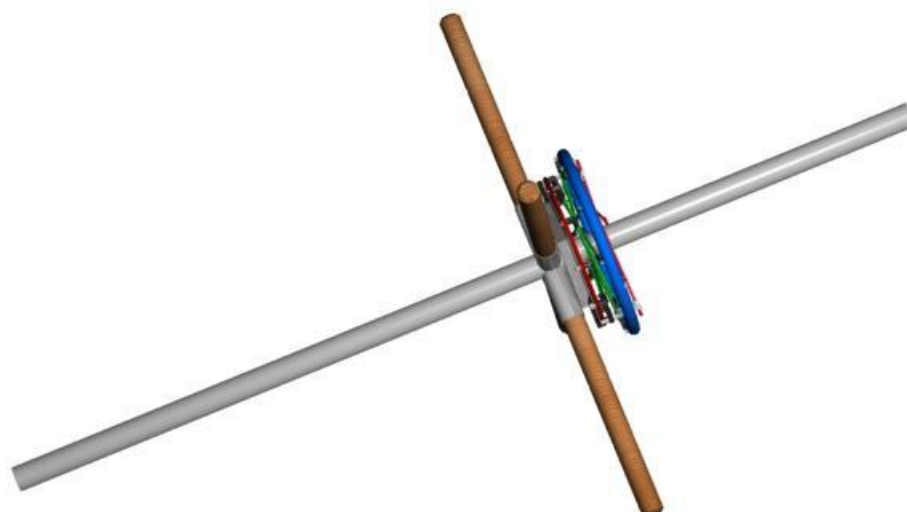
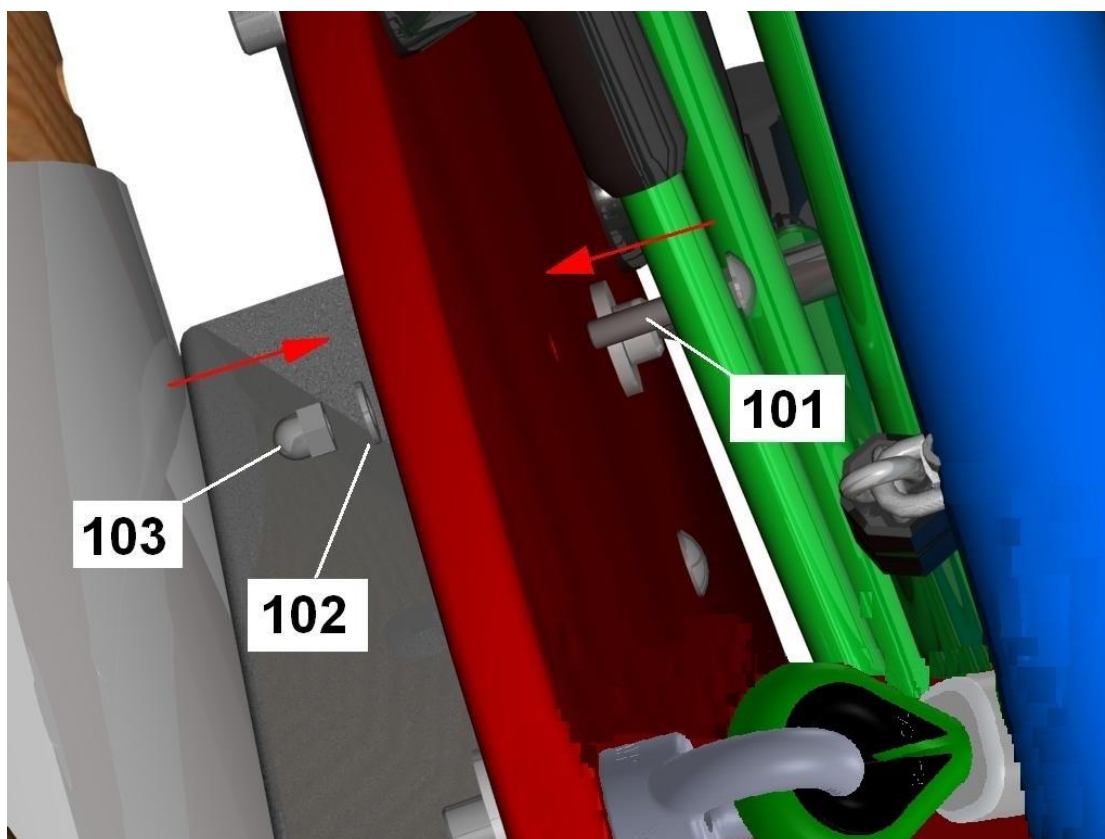


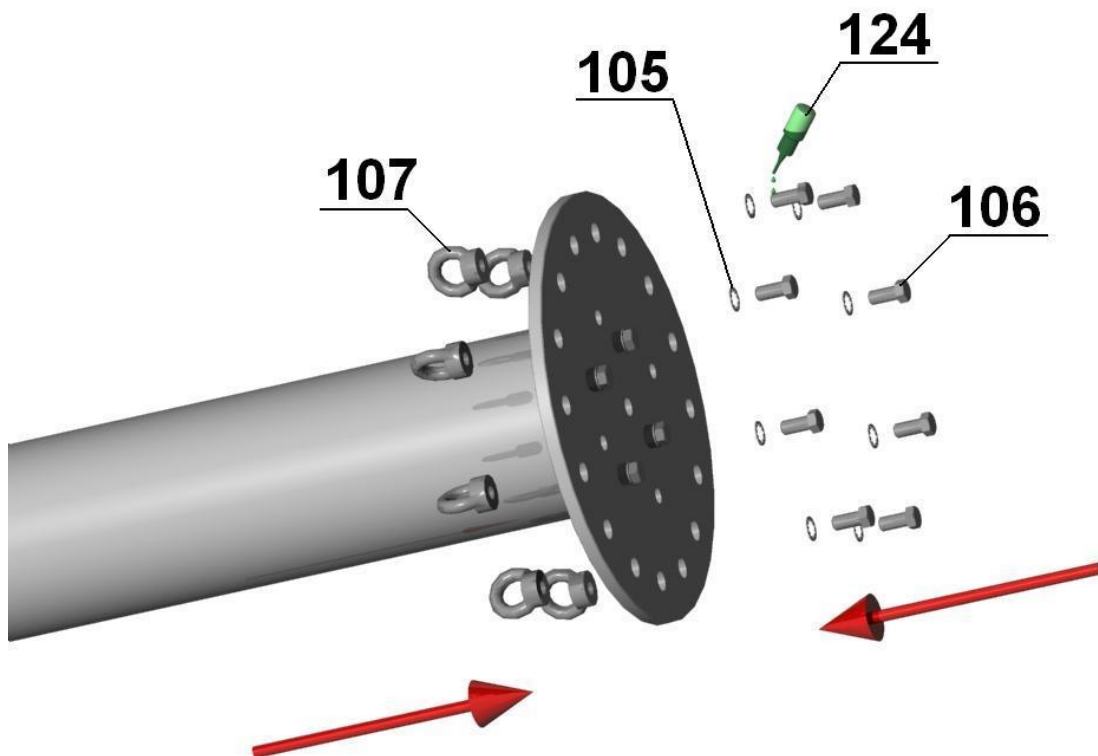
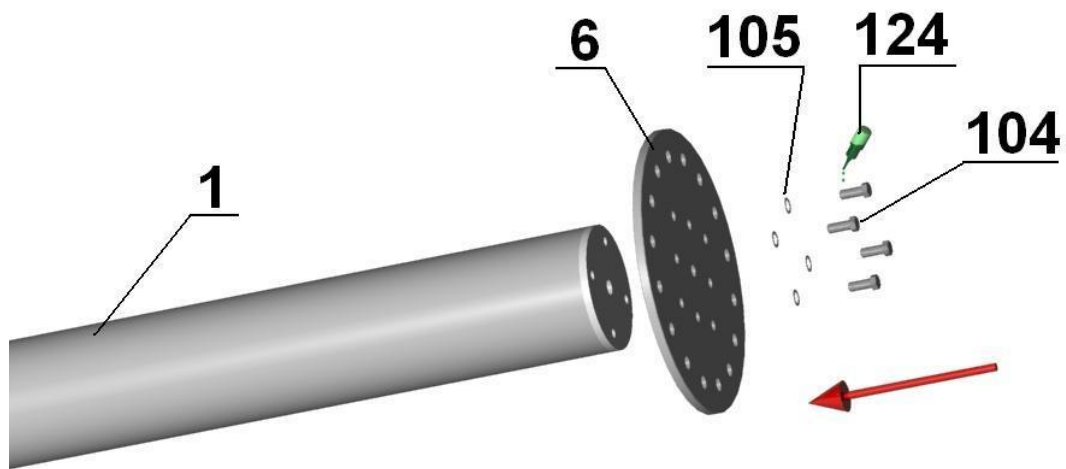


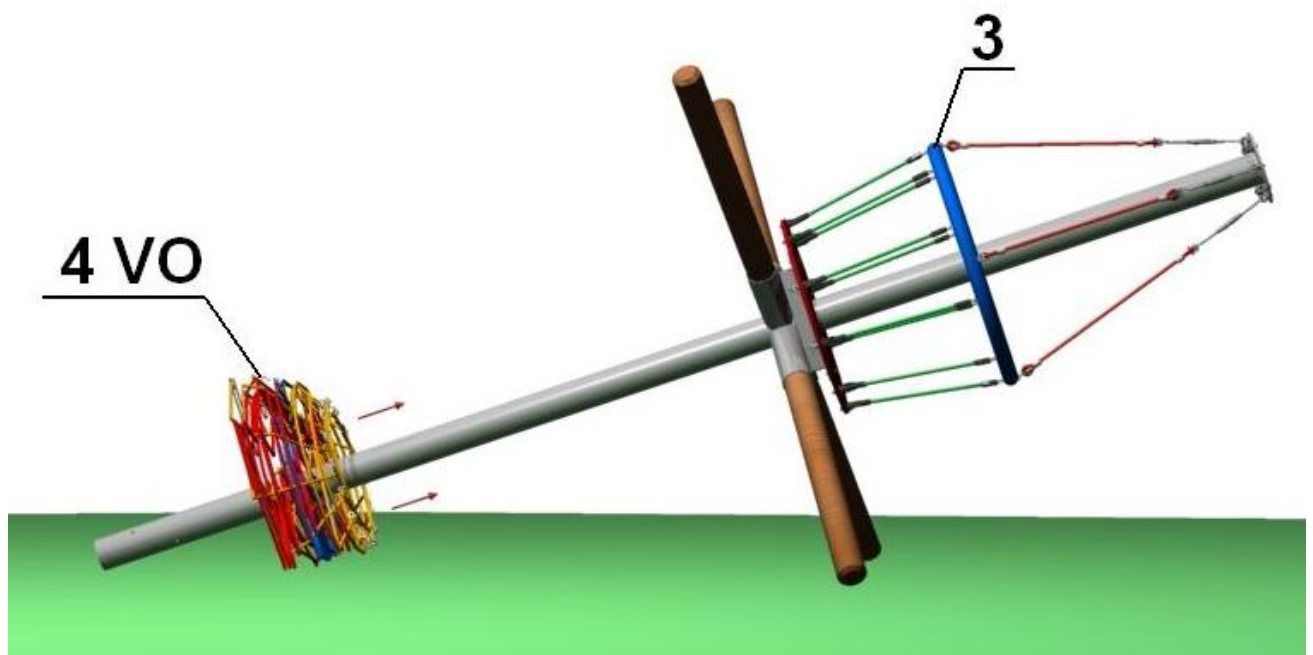
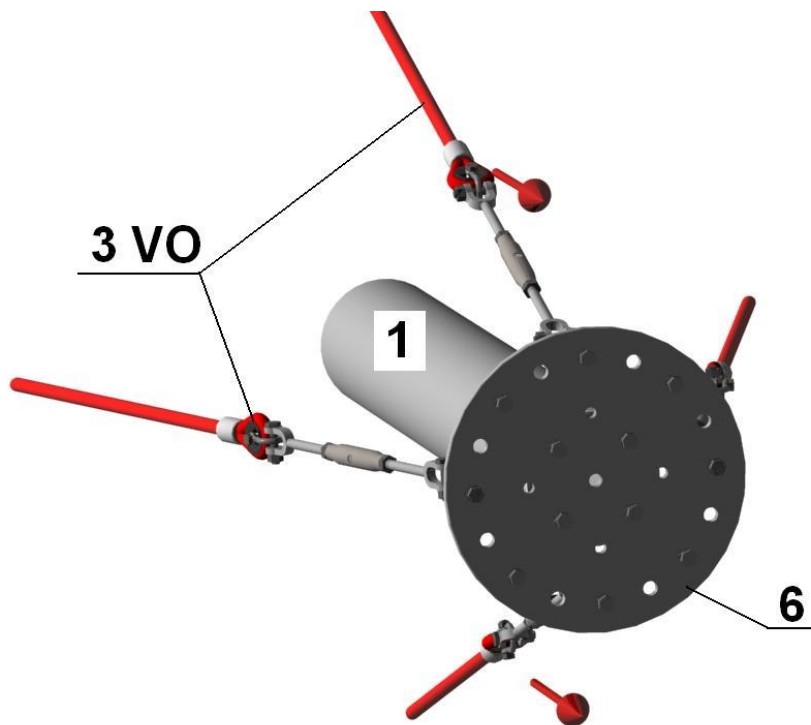


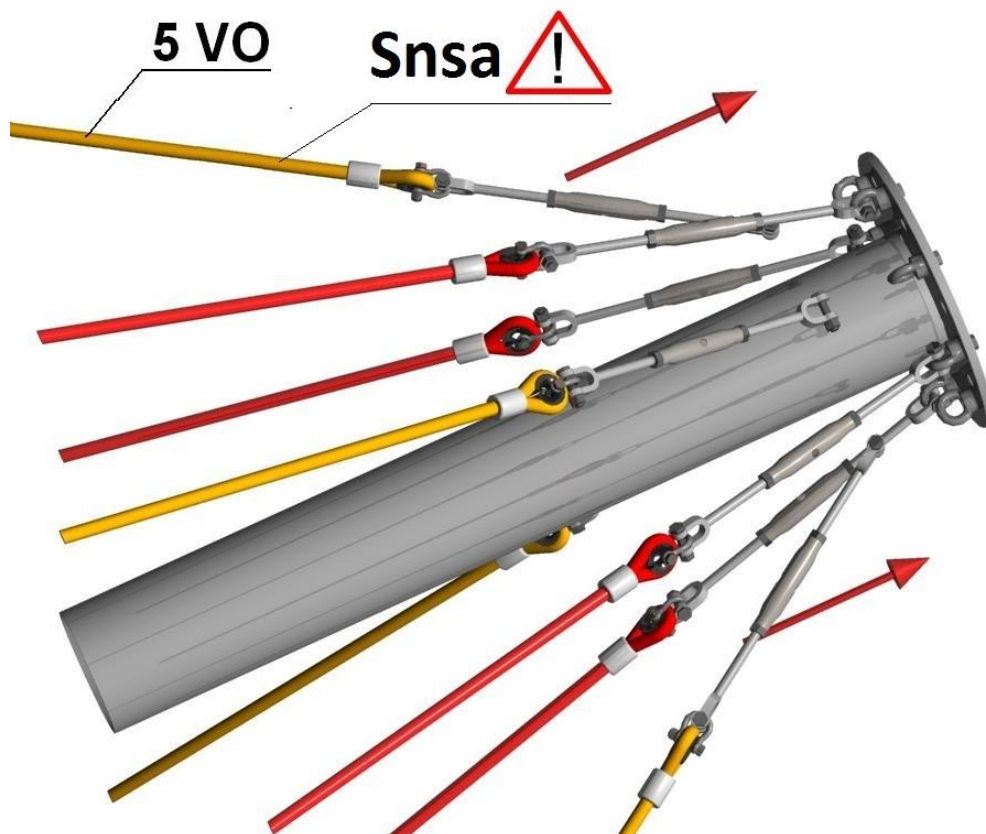
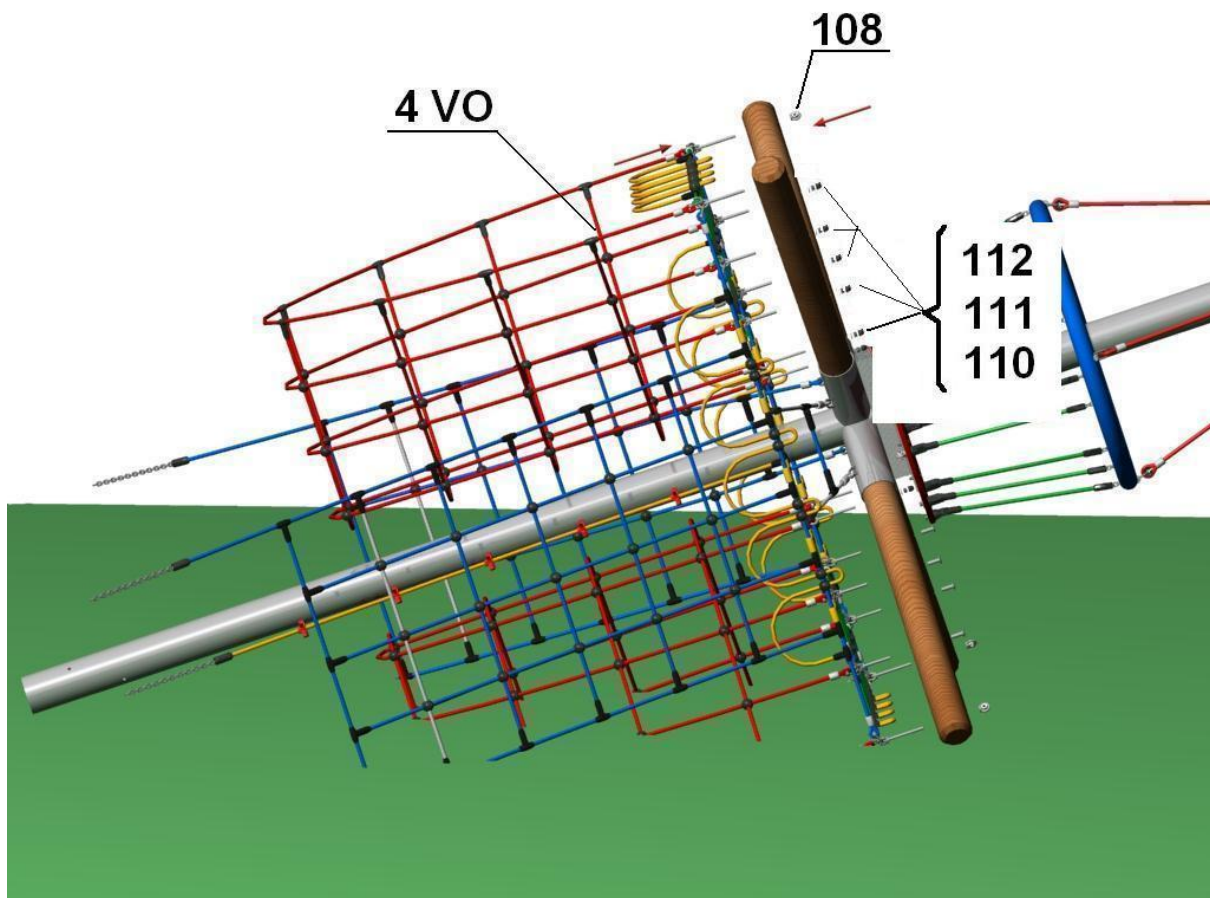


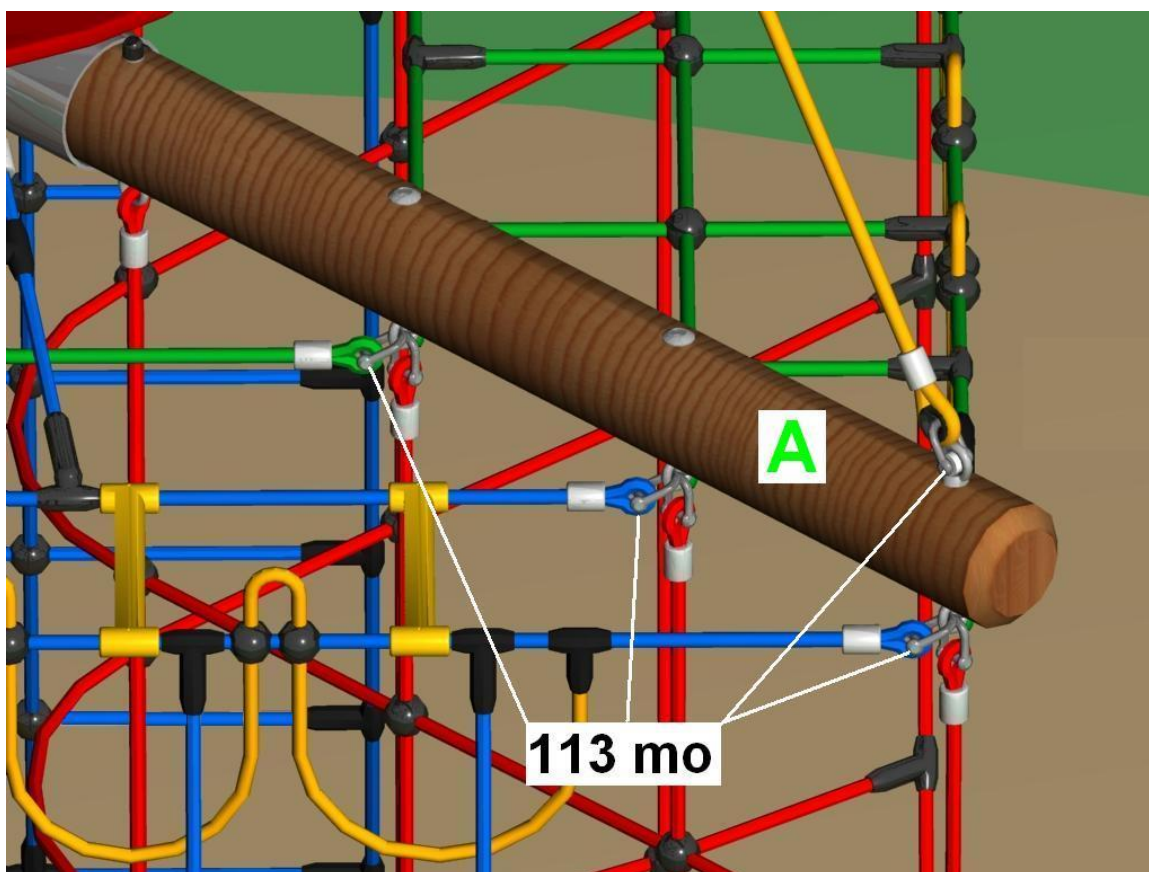
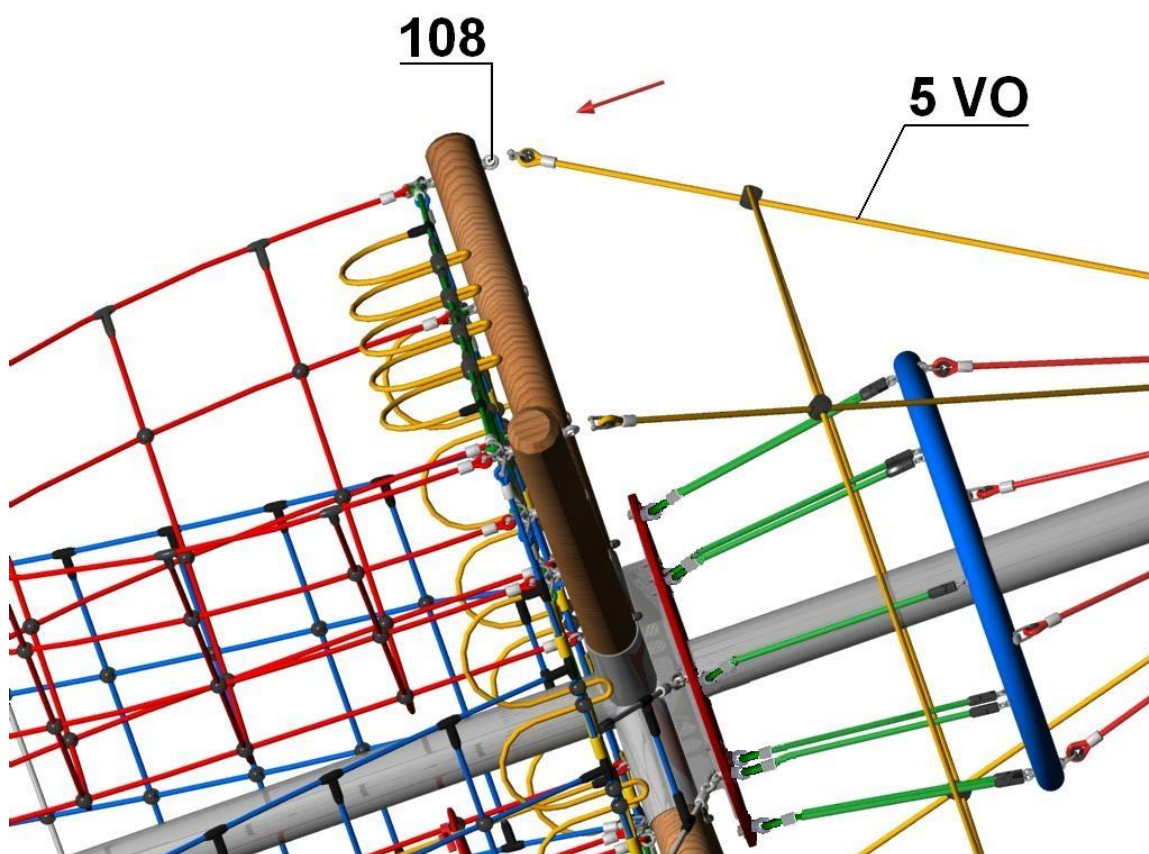


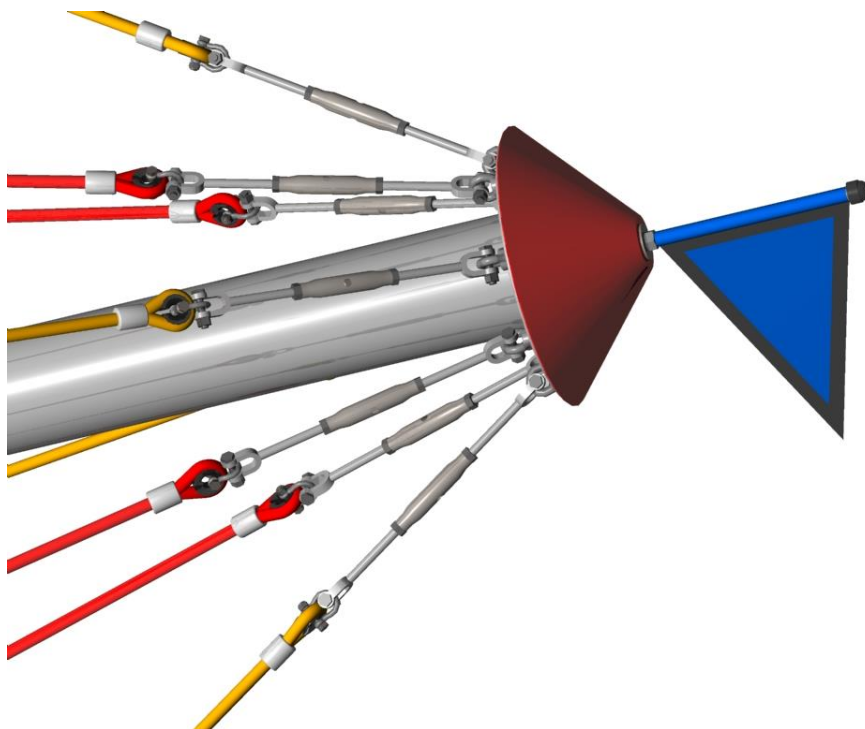
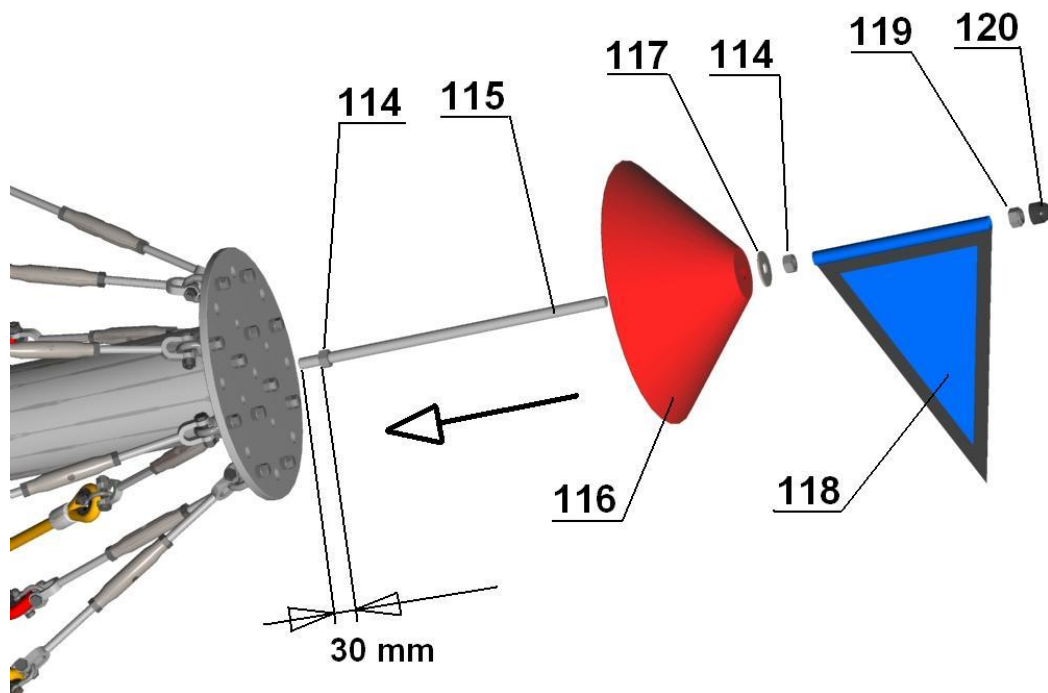


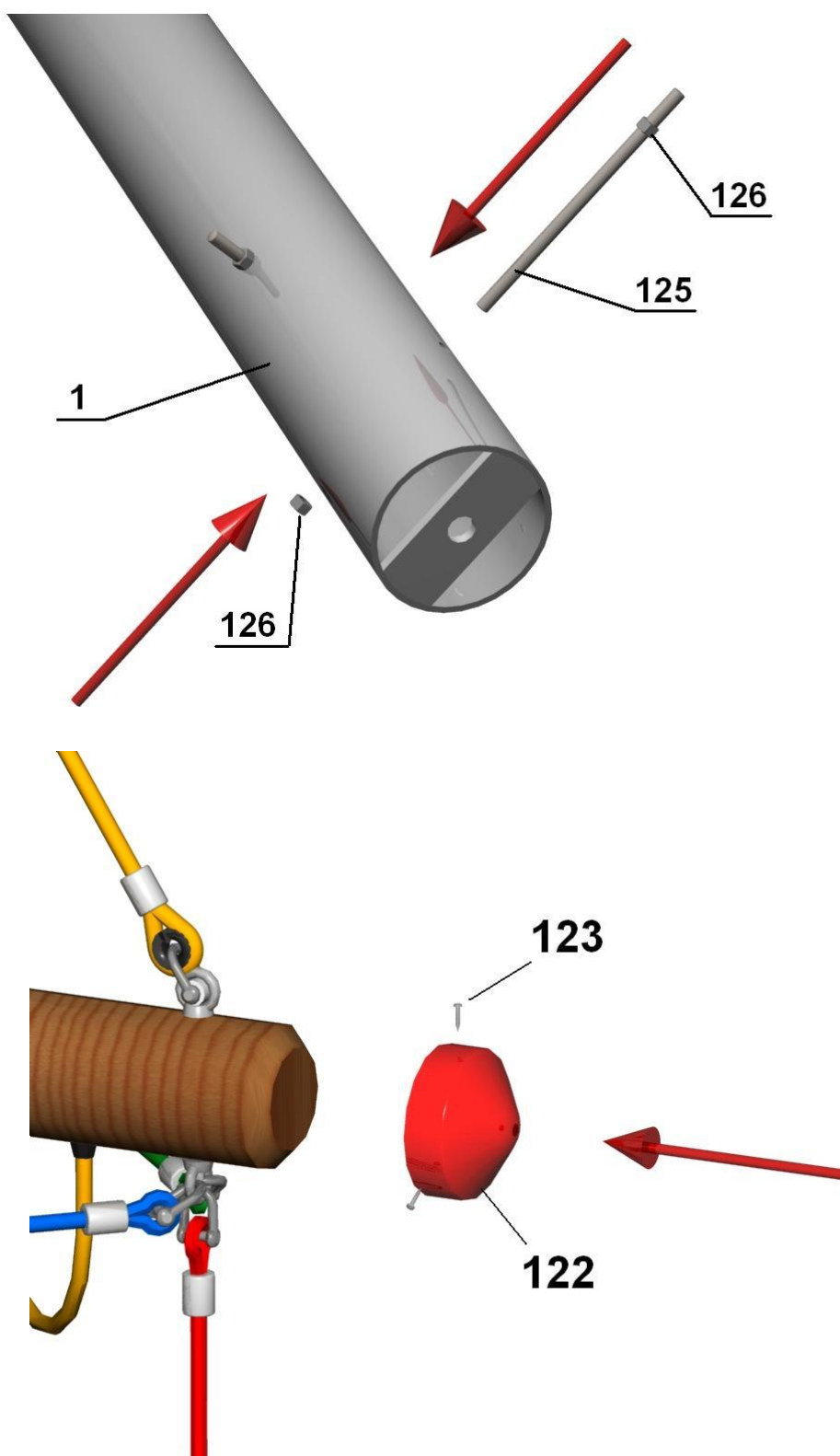


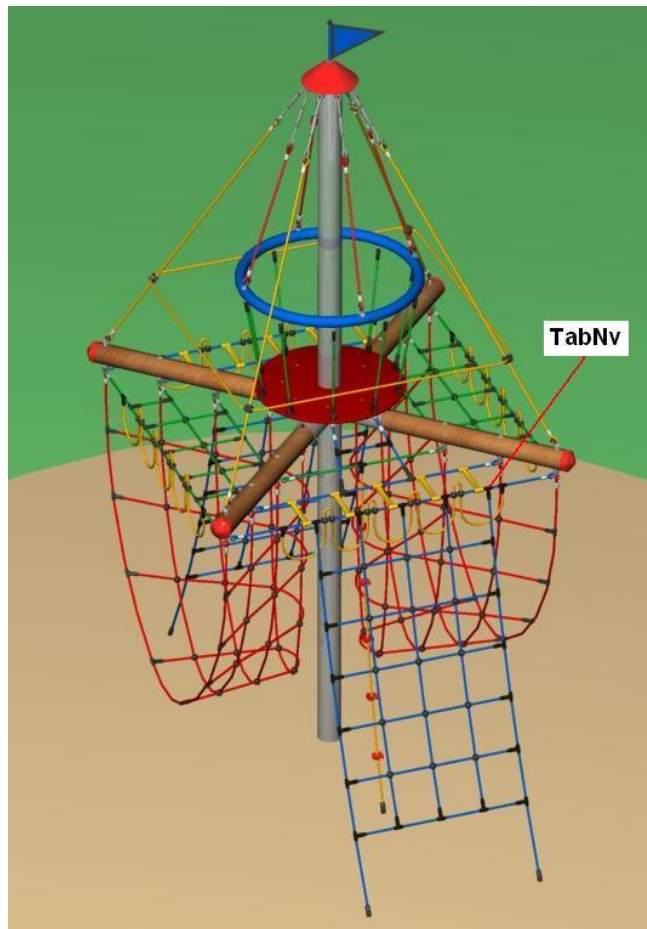












	Version: "Störtebeker" pirate tower
AB	Setting time of at least 7-8 days
AFH!	Attention! The foundations are in one height level
Bor	Please note drilling direction
BdB	Fix the netting on the ground with shackle M8
D	C25/30 concrete (for foundations) Concrete required: 1.7 m ³
Det.	Detail diagram
F	Fall protection
FDA	Pay attention on the foundation plan
FR!!!	The foundation radius of the upper foundation edge at least (R100!!)
G	Drainage layer
H	Ø ... (drill bit diameter)
KNR	Foundation pipe – (provided by customer!!!)
LRB	Fill space between pipe and steel post with concrete .
mo	Assemble
MKe	Place steel mast in foundation pipe and level out.
TabNv	Fix T-joint on the blue net!
O.K	Upper edge of playing level
PS	Space requirement including safety zone ~46,6 m ²
vb	Predrill
Snsa 	Do not over tension suspension ropes
1.)vb H	Pre-drill with Ø 3 mm drill
2.)vb H	After that drill with Ø 8 mm
VO	Preassembled
	Round off foundation edges (min.R = 100 mm)! Sizes of foundations are designed for soils class "4-5" (natural ground). Soil class 4: soft to medium plasticity, interleave bound, with minor portion of stone (portion < 30% with bigger diameter of 63 mm grain size) Soil class 5 : ground with soil class 3 and 4 with big portion of stones (portion > 30% with bigger diameter of 63 mm grain size) In case of sandy and soft soils, the surface measure of

	foundations have to be enlarged for about 50%!
--	--

See drawings for details of shortcuts

Drawings / Views

All optical drawings are showing only the measurements/dimensions and are no mandatory technical views of the complete item.

We reserve the right to change technical details of our articles which are serving for the further development of our articles and are reasonable for the customer.

Measurement tolerances

Because of the properties and characteristics of the components, minor measurement tolerances compared to the indication on the sketches are possible.

This concerns all shown measurements except the foundation measurements resp. measurements below upper edge ground level/play area.

Post installation checks



If the equipment has not been installed safely, you must ensure that the public is prevented from using it.

4.1 Marking filler depth

- Labelling the posts to show the depth of material provided as fall protection (i.e. loose filler).

4.2 The equipment has not been installed safely in the following cases:

- Safe equipment installation is not complete.
- The protective surface has not been installed yet.
- Appropriate maintenance work cannot guarantee operational safety.

4.3 Removal of all assembly aids

- Please make sure that all assembly aids have been removed from the playing area. The equipment must not be approved for use until this check has been made.

4.4 Information about inspection of the equipment before it is used for the first time

- There are no special inspection requirements to be met before the equipment is used for the first time.

4.5 Retighten bolts

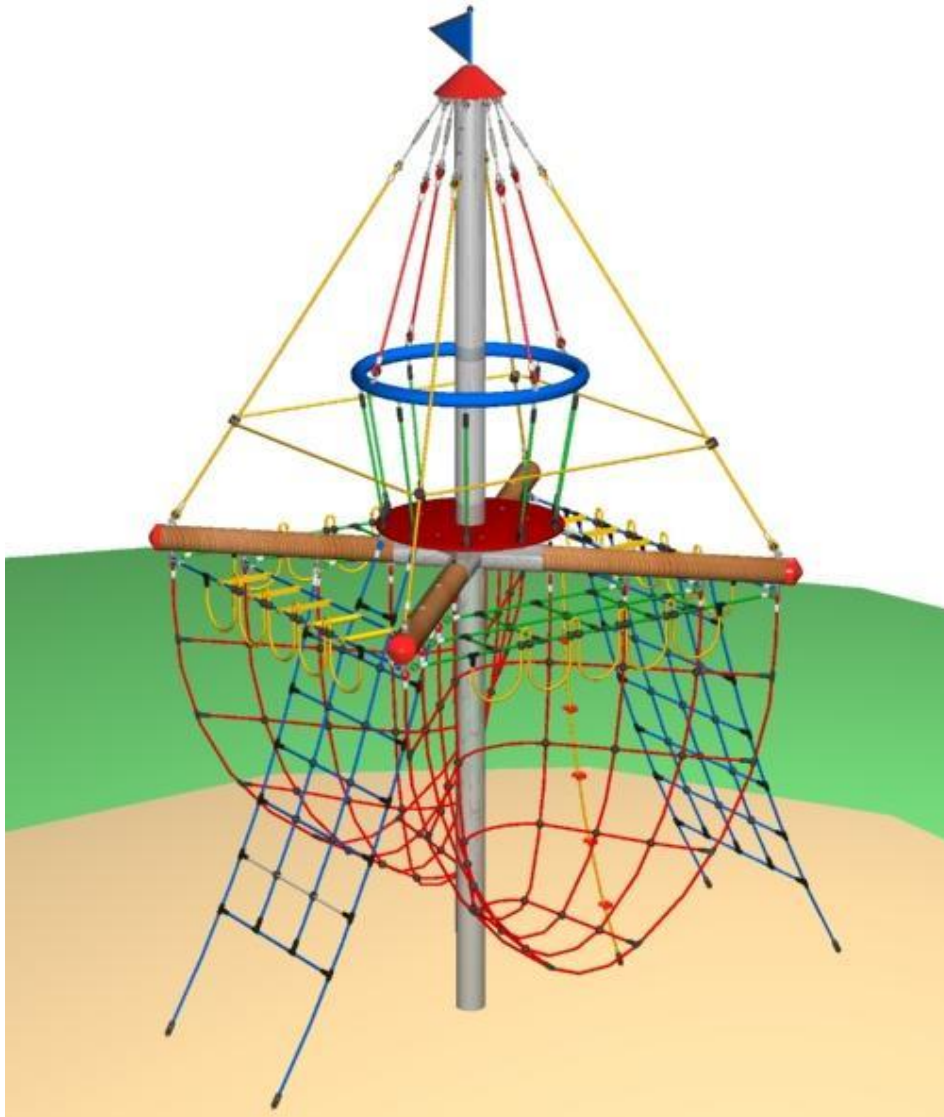
- After one week of play, please retighten all bolts again. Later upon respective maintenance.

B Maintenance instructions

Pirate tower “Störtebeker”

Art. 4687-20

to set into concrete



Revision history

Revision 0 – 2005-10-13

The first released version

Maintenance instruction

Revision 18 – 2017-10-12 PM

Ansichten geändert (Auf HDPE Platte , RM statt Gelenkadapter) All rights reserved

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5 Introduction Maintenance

5.1 General informations

This equipment should be installed, inspected, maintained and operated in accordance with EN 1176-7 guidelines.



Please note: Providing any necessary repairs are carried out, a piece of play equipment that is inspected regularly cannot become so damaged that it is dangerous.

Any spare parts which may be required can be obtained directly from your supplier.



This equipment should only be assembled, maintained and repaired by **persons with the necessary expertise**.
A copy of the inspection record should be given to the operator, who must confirm receipt.

**This maintenance instruction is based on the standard
“EN 1176-1:2008”.**

6 General maintenance information

6.1 Maintenance intervals

Maintenance intervals are based on average use. Please note that more frequent inspections and/or maintenance are required if the play equipment is subject to intensive use.

6.2 Inspection frequency

The frequency of inspections must be based on actual use. Factors that affect frequency include vandalism, location (e.g. coastal proximity), air pollution and the age of the equipment.

6.3 Maintenance products and procedures

All nuts and bolts are hot-dip galvanised or stainless steel. One of the characteristics of stainless steel is that uncontrolled cold welding may occur when the nuts are tightened. To prevent this, it is necessary to spray the nuts and bolts with Teflon spray or another similar lubricant.

6.4 Spare parts

All spare parts must conform to the manufacturer's specifications.

6.5 Identifying spare parts

All spare parts are listed in the parts list. The parts list follows the installation requirements.

6.6 Special instructions for the disposal of individual equipment components

No special instructions are necessary for the disposal of individual equipment components.

6.7 Special measures during the break-in period

No later than 2 weeks after assembly, all screwed connections should be checked and tightened if necessary.

6.8 Drainage holes

All drainage holes should be kept clear.

6.9 Maintenance of protective surfaces

Surfaces providing fall protection must also be maintained regularly. It is particularly important to maintain the correct level of loose surface material and add more if necessary.

6.10 Faults



Faults must be repaired as soon as they are detected. If serious defects that compromise safety cannot be repaired straight away, the public must be prevented from using the equipment with immediate effect.

6.11 Loose screws



Loose screws always cause quality problems and put safety at risk. Therefore, loose screws should always be tightened and checks carried out to ensure that there are no missing screws (e.g. look out for holes you can see through).

6.12 Preventing equipment use

Use of the equipment should be prevented in the event of incomplete installation, disassembly, maintenance, repairs and faults.

6.13 Claims/liability for faults

Steel posts and footings are guaranteed if regular maintenance is carried out and recorded in writing. Our general terms and conditions apply. Maintenance first takes place after 3 years. The steel posts must be excavated as far as the concrete foundations and checked for corrosion.

Zinc paint should be applied to any corroded areas and scratches.

Check ropes for abrasion. Retreat any that are very worn.

7 Specific maintenance advice

None

8 Maintenance timetable

8.1 Special advices

8.1.1 Maintenance interval

We strongly advise you to carry out inspections and maintenance work within the specified periods as use of the equipment, the weather and malicious vandalism cause wear and tear that compromises the safety and function of the equipment.

8.1.2 Maintenance intervals in the event of intensive use

Please note that more frequent inspections and/or maintenance are required if the play equipment is subject to intensive use.

8.1.3 Faults that compromise safety



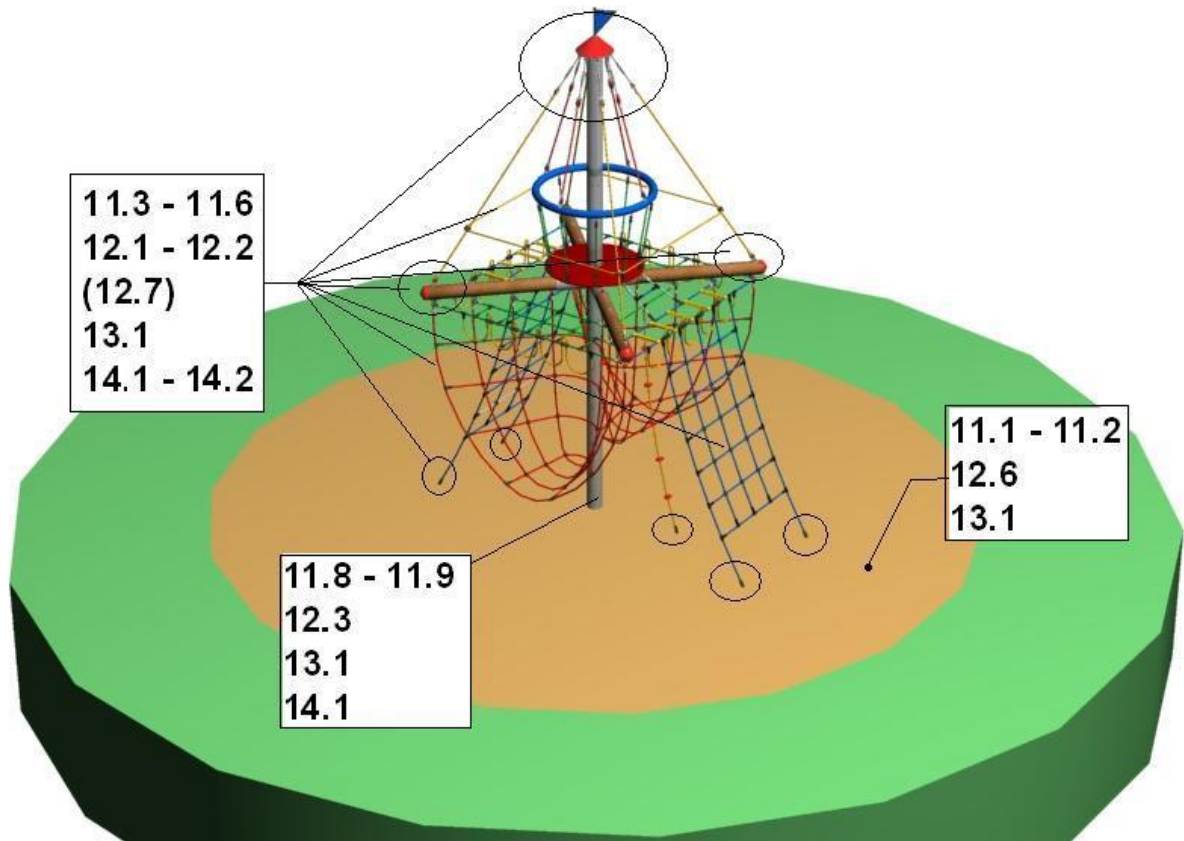
In the event of a fault that compromises safety, quick action must be taken. This may involve repairing it immediately or shutting down and dismantling the equipment.

8.1.4 Faults that compromise function



Faults that compromise function should also be repaired immediately. Such faults lower the value of the equipment to the user and encourage malicious vandalism, which may render the equipment less safe. Any damage should also be repaired immediately.

9 Regular maintenance



10 Monthly maintenance

- **11.1** Check the spaces between the equipment and the ground (clearance and height of fall).
- **11.2** Check the ground surface in the area with fall protection for hard objects and loose foundations.
- **11.3** Check all connecting elements and fittings for wear and tear and tighten if necessary. Replace damaged or missing parts.
- **11.4** Check that moving metal parts (joints, springs, etc.) move smoothly and are not worn. Replace if necessary. It is not necessary to lubricate joints as we only use maintenance-free metal roller bearings.
- **11.5** Check all attachments such as chains, ropes, nets, etc. for damage and replace if necessary.
- **11.6** Check rubber parts, sleeves, etc. for wear and tear or damage and replace if necessary.
- **11.7** If necessary, remove excess padding material from the post footings due to danger of rotting.
- **11.8** Check the surface of wooden parts for damage caused by the weather or external influences and mould. Repair or replace if necessary.
- **11.9** Check the surface of plastic and metal parts, e.g. slides, for damage and replace if necessary.

11 Quarterly maintenance

- **12.1** Detailed inspection of the operation and stability of the equipment paying particular attention to any wear and tear.
- **12.2** Tighten all forms of attachment.
- **12.3** Repaint and retreat surfaces.
- **12.4** Maintenance of fall protection surfaces.
- **12.5** Lubrication of joints.
- **12.6** Check the height of the fall and top up with loose filler if necessary. If the posts are labelled, top up as far as the mark.
- **12.7** Retighten all bolts
-

12 Half yearly maintenance

- **13.7** Stability (check posts, bracing, foundations, etc.). Ascertaining whether there are any changes in equipment safety as a result of repairs

that have been carried out or components that have been added or replaced.



Annual Maintenance

13 Annual maintenance

- **14.1** Ascertaining that the equipment, foundations and surfaces are safe for operation.
- **14.2** In particular, the equipment should be checked for decay and corrosion. It may be necessary to dig out or excavate certain components in order to do so. Zinc paint should be applied to corroded areas and scratches.



The equipment must be inspected by someone **with the necessary expertise** in strict compliance with the instructions issued by Huck Seiltechnik GmbH.

A copy of the inspection record should be given to the operator, who must confirm receipt.

14 Maintenance printout

Name of item: Pirate tower "Störtebeker" / Art. No. 4687-20 _____

Location: _____

Customer or operator: _____
(Town, Town council, Kindergarten)

Date of inspection	Inspector	O.K.	Accessible	Barriered	Defects	Repaired by	Date

Please copy and return once a year after main inspection has been carried out to the manufacturer by Telefax
0049 6443 83 11 79

Place the confirmation form in your existing play equipment files.

15 Hand over document



After the installation of the equipment pass the installation and maintenance documents to the operator. The operator has to receive the hand over documents. The complete filled and signed hand over document should be sent to the supplier.

Art.-No.: 4687-20

Type of item: Pirate tower "Störtebeker"

Serial number:

Customer or operator (Town, Town council, Kindergarten, etc.):

Competent person in charge:

Installation company (address):

Responsible assistant (assembler):

Received the complete assembly instructions, maintenance instructions and maintenance printout .

(Signature of operator)
(Stamp)

(Signature of installation company)

Date: _____