

## **A Assembly Instructions**

### **Pendulum Seat Combination**

#### **Art-No. 20.01.040**



**Revision history**

Revision 0 – 2004-02-06

First approved version

Assembly instructions

Revision 8 – 2011-11-15

Zusatztext für Bremsscheibe FH

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## Contents

<b>A</b>	<b>Assembly Instructions</b> .....	<b>1</b>
1	Introduction Assembly.....	4
2	Datasheet.....	5
3	Delivery Contents (parts list with part numbers) .....	8
4	Erection Instructions.....	11
5	Post Installation Checks .....	17
<b>B</b>	<b>Maintenance Instructions</b> .....	<b>19</b>
6	Introduction Maintenance.....	21
7	General Maintenance Information.....	22
8	Regular Maintenance Advice.....	23
9	Maintenance Timetable .....	24
10	Monthly Maintenance .....	26
11	Quarterly Maintenance .....	26
12	Annual Maintenance.....	27
13	Maintenance Printout .....	29
14	Hand Over Document .....	31

## List of Tables

Table 3.1: Delivery contents, in words .....	8
Table 3.2: Delivery contents, in symbols.....	9

## 1 Introduction Assembly

### 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 in case of any other questions.



**Attention**

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



**Attention**

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.

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

## 2 Datasheet

Space requirement: Ø 3.80m  
Urgent recommended safety zone: Ø 14.00m  
Lawful required safety zone: Ø 11.00m  
Height of fall 1.50m



### Attention!

**According to EN 1176-5 (paragraph 5.3) the statutory fall protection area has to be an additional 2m diameter in relation to the space requirement.**

**We strictly recommend keeping our specified, increased safety area although it is sufficient to place fall protection material onto the statutory safety area. Never limit the transition to e.g. lawn or similar material with solid or hard bordering! No solid objects (e.g. benches, bollards, dustbins, fences etc.) are to be installed within the specified, increased safety area!**

#### 1. Required Safety Surface:

Surface material	Description mm	Minimum thickness of layer mm	Maximum height of fall mm
Topsoil grass			<= 1000*
Chipped bark	20 – 80 grain size	400	<= 3000
Wood chippings	5 – 30 grain size	400	<= 3000
Sand	0.2 – 2 grain size	400	<= 3000
Gravel	2 – 8 grain size	400	<= 3000
Other ground materials	As recommended by manufacturer		

- Name and overall dimension of the largest component:  
Steel post (1 item) length 3.50m, Ø 193 mm
- Name and weight of the heaviest component:  
Rocking spinning mechanism (1 item), 110 kg
- Intended age group: 5 years and over

5. **Please note that this equipment is set in concrete.**

Concrete: B25

Foundations/area to be excavated:

1 x 1.20 m long x 1.20 m wide, total depth 1.10 m including 10 cm drainage

1 x 1.20 m long x 1.20 m wide x 0.80 deep

Top edge of concrete rounded.



Attention!

**Round off foundation edges (min.R = 100 mm)! Sizes of foundations are “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%!**

6. Assembly time, once foundations complete: 2 – 3 hours.

Required assistance: 2 – 3 people.

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

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

## **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.

## **Carousels with optional breaking disk**

Please consider that the installation of the optional breaking disk is not mandatory according the regulations of the EN 1176. It is only an additional option to reduce the rotational speed.

We recommend to install this disk in case of any tight dimensioned fall areas (please see general note regarding fall areas below) resp. surrounding and adjoining solid objects like fences, palisades, benches, etc.

By the installation of the disk the rotational speed and the resulting centrifugal force will be reduced extremely but we would like to consider that the general play value of the article will also be impaired.

## **Note regarding fall areas / safety zones**

### **Statutory safety zone**

- has to be provided with the prescribed fall protection

### **Recommended safety zone**

- an additional area with fall protection as per EN 1176

We strictly recommend keeping our specified, increased safety area although it is sufficient to place fall protection material onto the statutory safety area. Never limit the transition to e.g. lawn or similar material with solid or hard bordering! No solid objects (e.g. benches, bolards, dustbins, fences etc.) have to be installed within the specified, increased safety area.

### 3 Delivery Contents (parts list with part numbers)

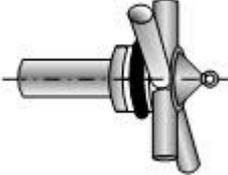
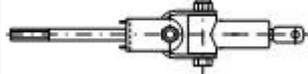
#### 3.1 In Words

Table 3.1: Delivery Contents, in words

Pos.	Quantity	Element / Description	Size	O.K.	Missing
1	1	Steel post	Ø 193 mm, 3.50 m long		
2	1	Bearing plate (screwed to the post)			
3	1	Rocking spinning mechanism			
4	4	Laminated beams	Ø 135 mm, 1.80 m long		
5	4	Caps (red)	Ø 140 mm		
6	4	Pendulum seats with 2.25 m chain (not including Art. 4603)			
100	1	Brake disc	Ø 125, 18 mm		
101	4	Universal joints with rotating swivel, VA, Art. 4608-2 (preassembled)			
102	4	Sleeve nuts, VA (preassembled)	M12 x 50		
103	1	Washer with large external diameter, DIN 9021	Ø 17 mm		
104	1	Hexagon nut (self-locking), VA, DIN 985	M16		
105	1	Cap (black)	For M16		
106	12	Pan head screws, VA	M5 x 30		
107	8	Thread bolt	M10 x 175 mm		
108	16	Cap nut	M10		
109	4	Shackles, VA (preassembled)	M8		
110	4	Cylinder head bolts, VA, DIN 912	M10 x 25 mm		
111	4	Hexagon nut (self-locking), VA, DIN 985	M10		
112	1	Loctite (bolt lock)	3 ml		

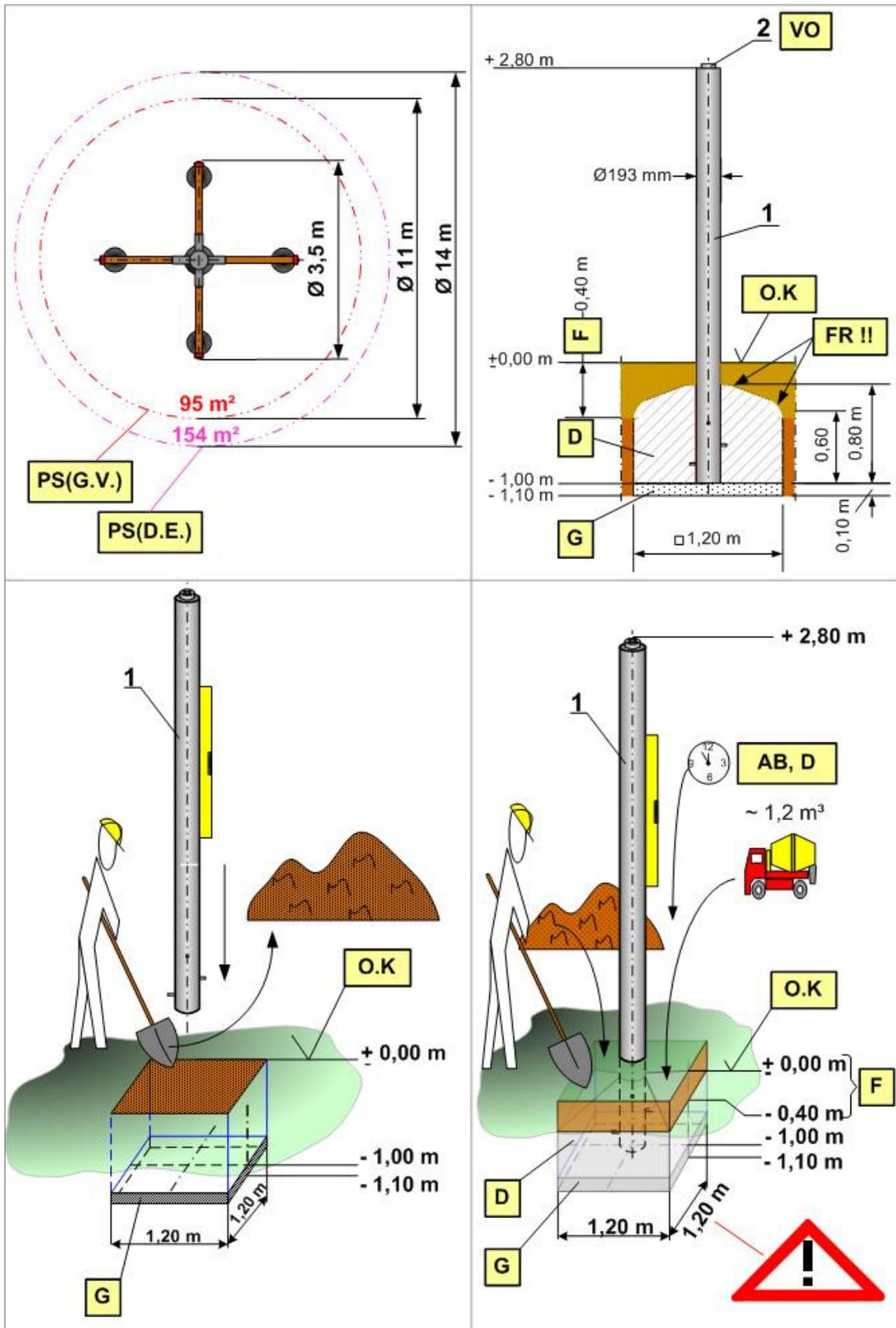
### 3.2 In Symbols

Table 3.2: Delivery Contents, in symbols

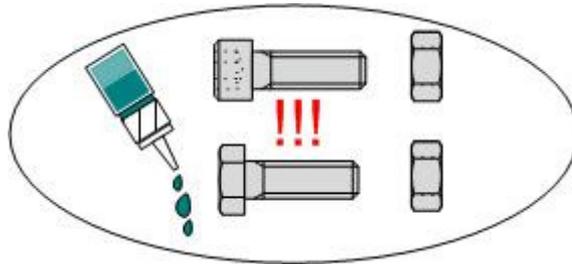
Pos.	Quantity	Symbol
1	1	 Ø 193 mm, 3,50 m long
2	1	
3	1	
4	1	 Ø 135 mm, 1,80 m lang
5	4	 Ø 140 mm
6	4	
100	1	
101	4	
102	4	 M12 x 50
103	1	 Ø 17 mm
104	1	 M16
105	1	 f. M16
106	12	  5 x 30
107	8	 M10 x 175
108	16	 M10

Pos.	Quantity	Symbol
109	4	 M8
110	4	 M10 x 25 mm
111	4	 M10
112	1	 Loctite (bolt lock) 3 ml

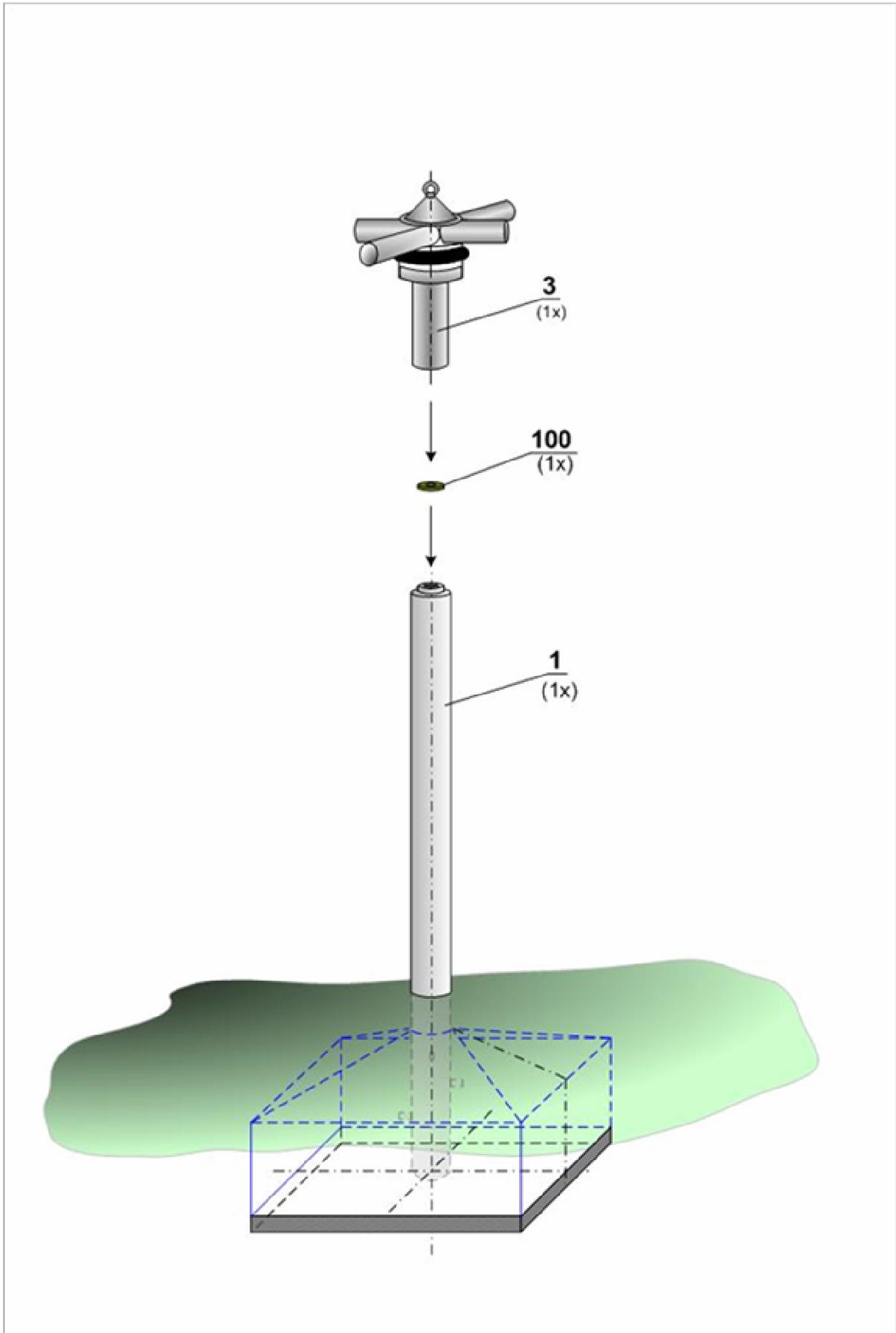
## 4 Erection Instructions

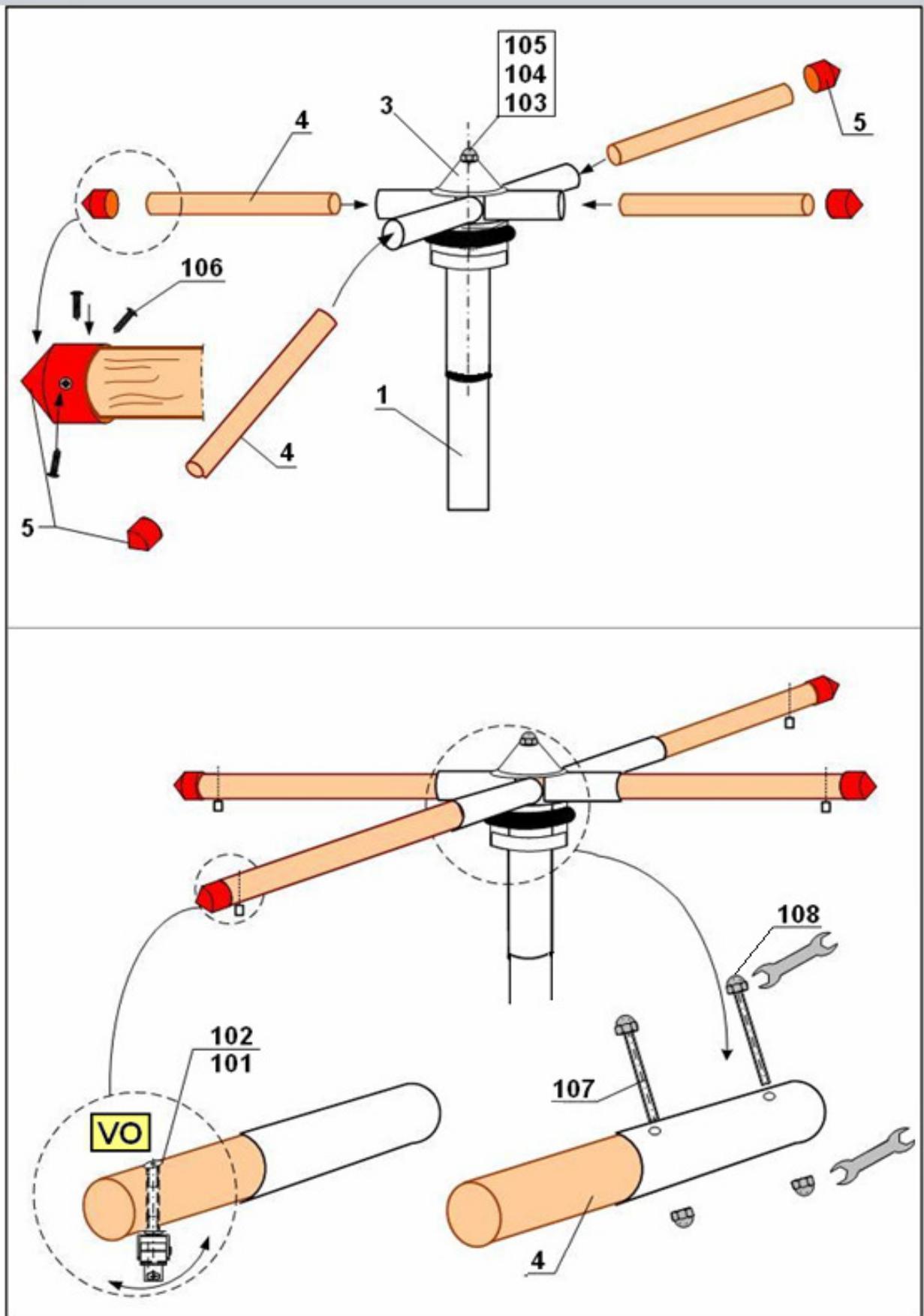


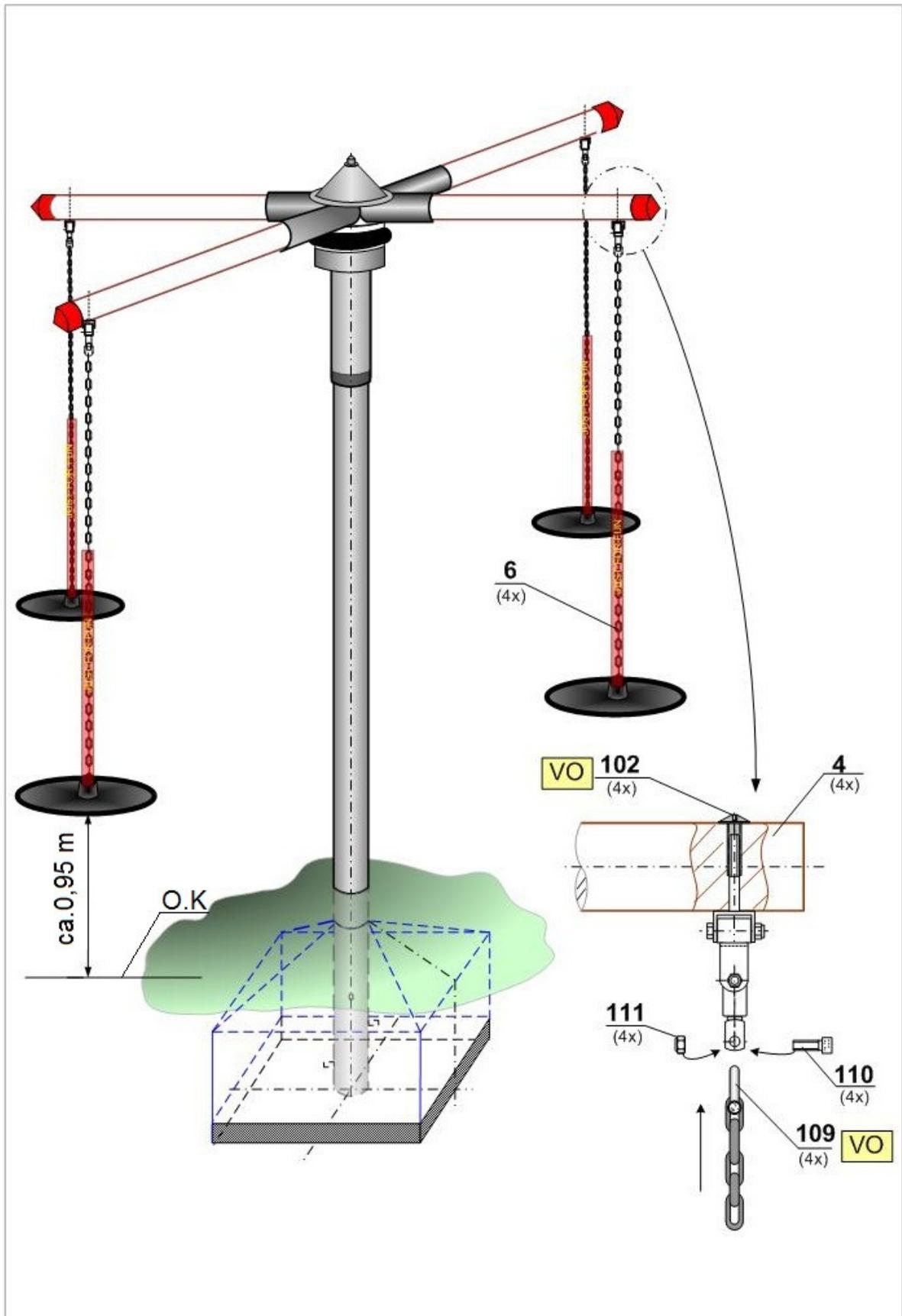
# Screw locking device !



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







AB	Setting time for B25 concrete at least 4-5 days
D	B25 concrete
F	Fall protection
FR !!	<u>Radius of foundations at least 10 cm !</u>
G	Drainage layer
vb	Predrill
O.K	Upper edge of playing level
PS (D.E.)	urgent recommended safety zone: Ø 14.00 m / 154 m <sup>2</sup>
PS (G.V.)	lawful required safety zone: Ø 11.00 m / 95 m <sup>2</sup>
Sil	Affix with silicone
Te	Remove transport lock
	<p>Round off foundation edges (min.R = 100 mm)! Sizes of foundations are "4-5" (natural ground).</p> <p>Soil class 4: soft to medium plasticity, interleave bound, with minor portion of stone (portion &lt; 30% with bigger diameter of 63 mm grain size).</p> <p>Soil class 5: ground with soil class 3 and 4 with big portion of stones (portion &gt; 30% with bigger diameter of 63 mm grain size).</p> <p>In case of sandy and soft soils, the surface measure of foundations have to be enlarged by about 50%!</p>

**See drawings**

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## 5 Post Installation Checks

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

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### 5.1 Marking filler depth

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

### 5.2 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.

### 5.3 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.

### 5.4 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.

### 5.5 Retighten bolts

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



## **B Maintenance Instructions**

### **Pendulum Seat Combination**

#### **Art-No. 20.01.040**



**Revision history**

Revision 0 – 2004-02-06

First approved version

Maintenance instructions

Revision 8 – 2011-11-15

Zusatztext Bremsscheibe FH

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## 6 Introduction Maintenance

### 6.1 General Information

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.

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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.**

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

## **7 General Maintenance Information**

### **7.1 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.

### **7.2 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.

### **7.3 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.

### **7.4 Spare parts**

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

### **7.5 Identifying spare parts**

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

### **7.6 Special instructions for the disposal of individual equipment components**

No special instructions are necessary.

### **7.7 Special measures during the break-in period**

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

### **7.8 Drainage holes**

All drainage holes should be kept clear.

### **7.9 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.

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## 7.10 Faults

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**Attention**

Demages must be repaired as soon as they are detected. If serious defects that affect the safety cannot be repaired straight away, the playground item must be blocked with immediate effect.

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## 7.11 Loose screws

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**Attention**

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.

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## 7.12 Preventing equipment use

The use of the equipment should be prevented in case of incomplete installation, disassembly, maintenance, repairs and faults.

## 7.13 Claims/liability for faults (steel poles)

Steel posts and footings are covered by our guarantee if regular maintenance is carried out and recorded in writing.

Our general terms and conditions apply. Maintenance of steel poles first takes place after 3 years. The steel posts must be excavated down to the concrete foundations and checked for corrosion.

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

Check ropes for abrasion and replace ropes where coating is damaged down to the steel inlet.

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## 8 Maintenance Timetable

### 8.1 Special Advices

#### 8.1.1 Maintenance interval

We strongly advise 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

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In the event of a fault that compromises safety, quick action must be taken. The item has to be blocked immediately and repaired or dismantled.

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#### 8.1.4 Faults that compromise function

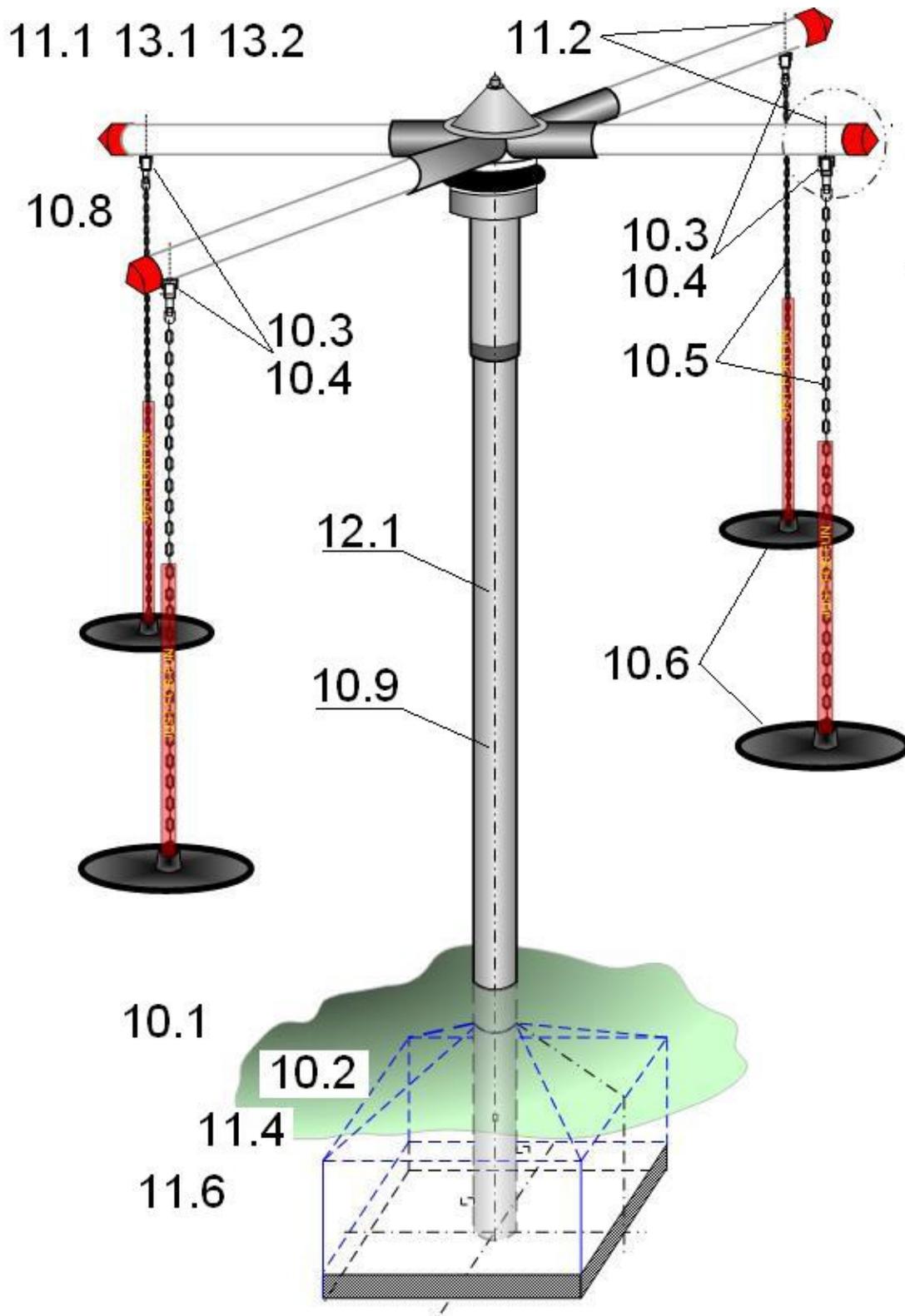
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Faults that compromise function should also be repaired immediately. Such faults lower the value of the equipment to the user and encourage malicious vandalism, which may render the equipment less safe. Any damage should be repaired immediately.

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## 9 Regular Maintenance



## 10 Monthly Maintenance

- Check the spaces between the equipment and the ground (clearance and height of fall).
- Check the ground surface in the area with fall protection for hard objects and loose foundations.
- Check all connecting elements and fittings for wear and tear and tighten if necessary. Replace damaged or missing parts.
- 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.
- Check all attachments such as chains, ropes, nets, etc. for damage and replace if necessary.
- Check rubber parts, sleeves, etc. for wear and tear or damage and replace if necessary.
- If necessary, remove excess padding material from the post footings due to danger of rotting.
- Check the surface of wooden parts for damage caused by the weather or external influences and mould. Repair or replace if necessary.
- Check the surface of plastic and metal parts, e.g. slides, for damage and replace if necessary.

## 11 Quaterly Maintenance

- Detailed inspection of the operation and stability of the equipment paying particular attention to any wear and tear.
- Tighten all forms of attachment.
- Repaint and retreat surfaces.
- Maintenance of fall protection surfaces.
- Lubrication of joints.
- 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.
- Retighten all bolts

## 12 Semi Annual Maintenance

- 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

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### 13 Annual Maintenance

- Ascertaining that the equipment, foundations and surfaces are safe for operation.
- 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 the manufacturer.

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

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## 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.: 20.01.040

Type of Item: Pendulum seat combination

Serial Number: \_\_\_\_\_

**Customer or Operator (Local Authority, School, etc.):**

\_\_\_\_\_  
\_\_\_\_\_

Competent Person in Charge:

\_\_\_\_\_  
\_\_\_\_\_

**Installation Company (Address):**

\_\_\_\_\_  
\_\_\_\_\_

Responsible Assistant (Assembler):

\_\_\_\_\_  
\_\_\_\_\_

Received the complete assembly instructions, maintenance instructions and maintenance printout

\_\_\_\_\_  
(Signature of Operator)      (Signature of Installation Company)  
(Stamp)

Date: \_\_\_\_\_