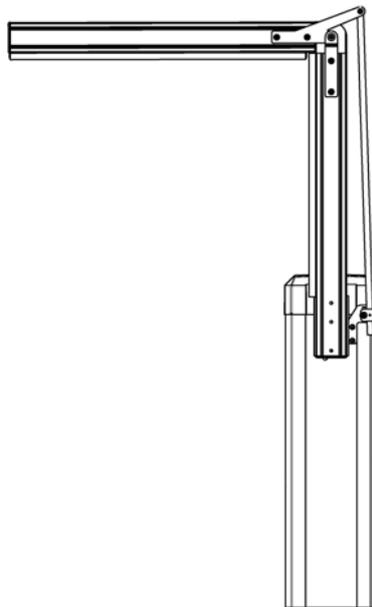


Installation and operating instructions

Accessories Articulation kit P 2500-4000



Translation of original installation and operating instructions

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1 Preface

1.1 General notes

These operating instructions must be available on site at all times. It should be read thoroughly by all persons who use, or service the appliances. Improper usage or servicing or ignoring the operating instructions can be a source of danger for persons, or result in material damage. If the meaning of any part of these instructions isn't clear, then please contact ELKA-Torantriebe GmbH u. Co. Betriebs KG before you use the appliance.

This applies to all setup procedures, fault finding, disposal of material, care and servicing of the appliance. The accident prevention regulations and applicable technical regulations (e.g. safety or electrical) and environment protection regulations of the country in which the appliance is used also apply. All repairs on the appliances must be carried out by qualified persons. ELKA-Torantriebe GmbH u. Co. Betriebs KG accepts no liability for damage which is caused by using the appliance for purposes other than those for which it is built.

ELKA-Torantriebe GmbH u. Co. Betriebs KG cannot recognise every possible source of danger in advance. If the appliance is used other than in the recommended manner, the user must ascertain that no danger for himself or others will result from this use. He should also ascertain that the planned use will have no detrimental effect on the appliance itself. The appliance should only be used when all safety equipment is available and in working order. All faults which could be a source of danger to the user or to third persons must be eliminated immediately. All warning and safety notices on the appliances must be kept legible.

All electrical periphery equipment which is connected to the appliance must have a CE Mark, which ensures that it conforms to the relevant EEC regulations. Neither mechanical nor electrical alterations to the appliance, without explicit agreement of the manufacturer, are allowed. All alterations or extensions to the appliance must be carried out with parts which ELKA-Torantriebe GmbH u. Co. Betriebs KG have defined as suitable for such alterations, and be carried out by qualified personnel. Please note that with any alteration of the product, no matter whether mechanical or electrical, the warranty expires and the conformity is revoked. Only the use of ELKA accessories and original ELKA spare parts is allowed. In case of any contravention ELKA disclaims liability of any kind.



INFORMATION!

The operation of the system within CEN countries must also be conformant with the European safety-relevant directives and standards.

We reserve the right to make technical improvements without prior notice.

1.1.1 Symbol explanation

Remarks regarding the safety of persons and the gate opener itself are marked by special symbols. These remarks have to be absolutely observed in order to avoid accidents and material damage.

**DANGER!**

...points to an imminent dangerous situation, which can cause death or serious injuries if it is not avoided.

**WARNING!**

...points to a potentially dangerous situation, which can cause death or serious injuries if it is not avoided.

**ATTENTION!**

...points to a potentially dangerous situation, which can cause minor or slight injuries if it is not avoided.

**ATTENTION!**

...points to a potentially dangerous situation, which can cause property damage if it is not avoided.

**REMARK!**

Important notice for installation or functioning.

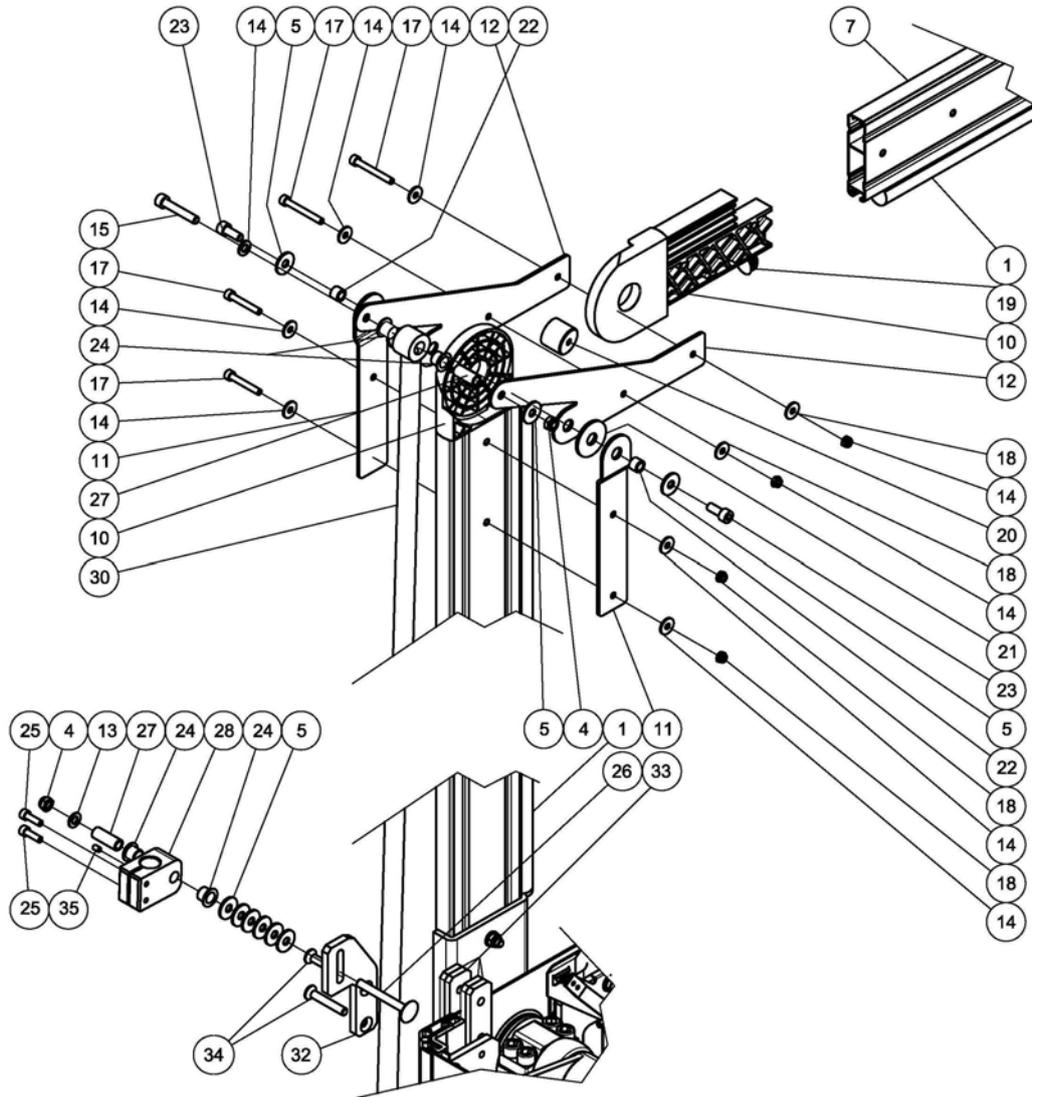
1.2 Copyright

The operating manual and the contained text, drawings, pictures, and other depictions are protected by copyright. Reproduction of any kind – even in extracts – as well as the utilization and/or communication of the content without written release certificate are prohibited. Violators will be held liable for damages. We reserve the right to make further claims.

1.3 Information regarding installation instruction

This document is to be used as installation instruction for partly completed machinery (according to machinery directive 2006/42/EG, article 13, (2)).

2 Layout



Drawing 1

No.	Qty	Part		Tensioning torque
1	2	Rubber profile		
4	2	Stop nut	DIN 985 - M8 A2	16Nm
5	11	Washer	DIN 9021 - 8,4 A2	
7	1	Barrier boom		
10	2	Joint		
11	2	Reinforcement plate I		
12	2	Reinforcement plate II		
14	8	Washer	DIN 9021 - 6,4 A2	
15	1	Cylinder head screw	DIN 912 - M8 x 45 A2	20Nm
16	1	Bushing A		
17	4	Cylinder head screw	DIN 912 – M6 x 40 A2	7Nm
18	4	Stop nut	DIN 985 - M6 A2	
19	2	End cap of rubber profile		
20	1	Hinge bolt		
21	2	Slip washer		
22	2	Bushing		
23	2	Cylinder head screw	DIN 912 M8 x 20 A2	16Nm
24	4	Plain bearing bush		
25	2	Cylinder head screw	DIN 912 M6 x 20 A2	25Nm
26	1	Carriage bolt	DIN 603 – M8 x 65 A2	
27	1	Bushing - articulation kit		
28	1	Counter holder		
30	1	Draw pipe		
32	1	Bracket		
33	4	Distance plate		
34	2	Countersunk Allen screw	ISO 10642 - M8 x 50	20Nm
35	1	Headless screw		

Table1

3 Installation

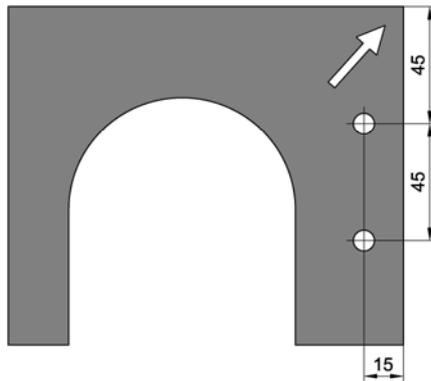
**WARNING!**

Rotating and/or linear movable components can cause serious injuries.

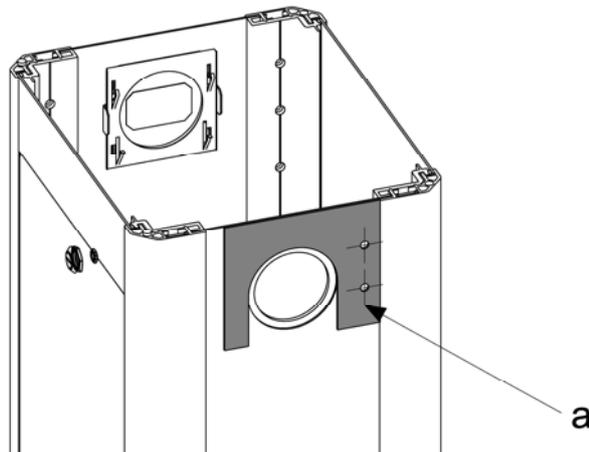
Do not reach into moving parts or handle any moving components during operation.

- Turn the appliance off before any maintenance work, repair work or other work and secure it against unintentional restarting.

1. Drill the two fastening holes (diameter \varnothing 10mm) for the articulation kit into the barrier housing. Use drilling template a. When aligning the drilling template make sure that you select the required mounting side of the boom (the drawings show the right mounting side).

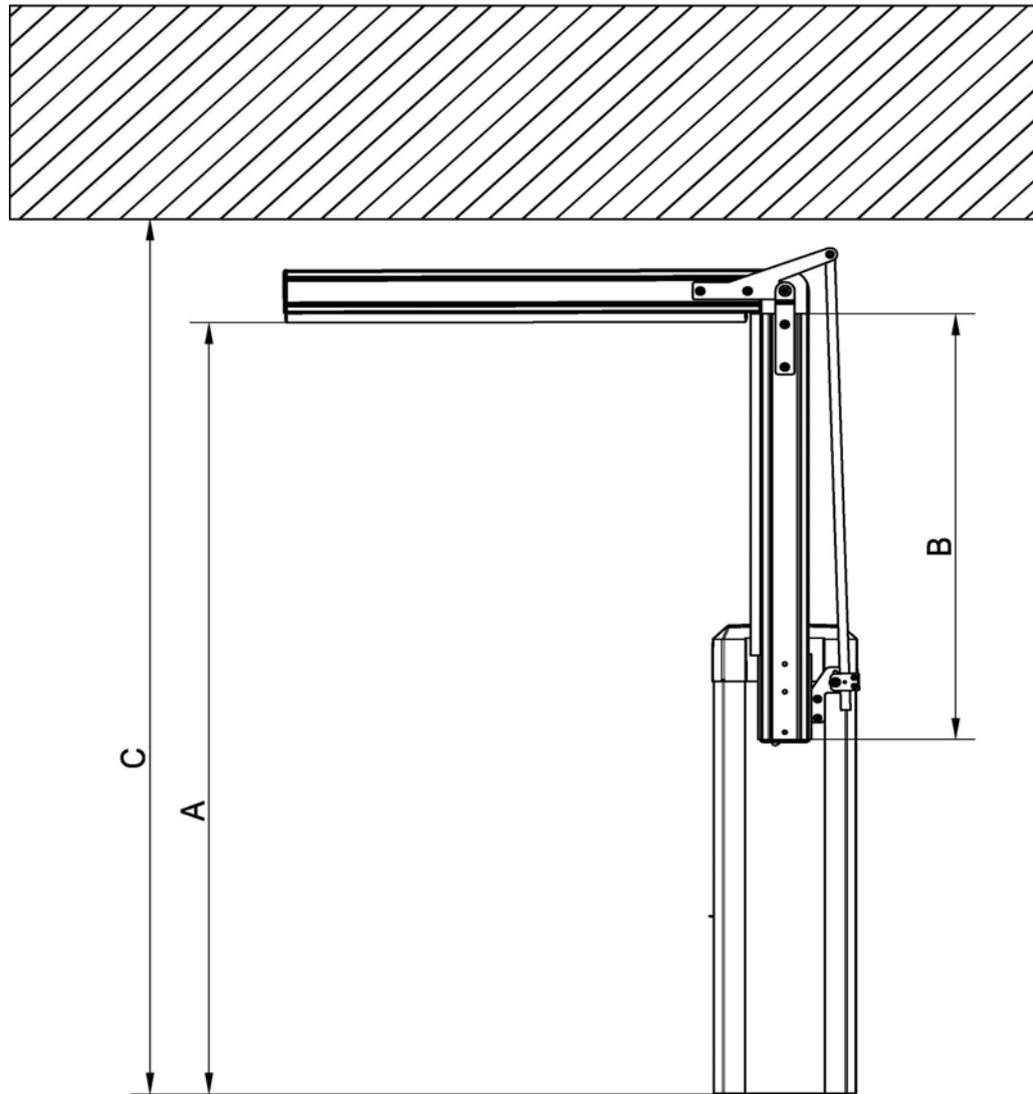


Drawing 2



Drawing 3

2. Determine the required length of the vertical part of the boom based on the following table.



Drawing 4

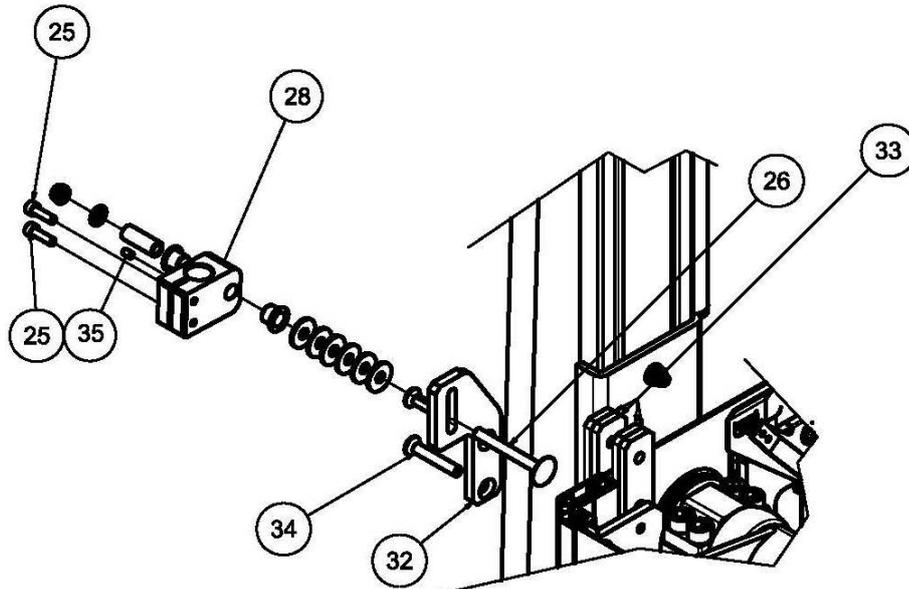
A	B	C
2,250mm (max.)	1,420mm (max.)	> 2,435mm
2,200mm	1,370mm	> 2,385mm
2,150mm	1,320mm	> 2,335mm
2,100mm	1,270mm	> 2,285mm
2,050mm	1,220mm	> 2,235mm
2,000mm	1,170mm	> 2,185mm

Table 2

- A = Clearance height
- B = Length of vertical boom part = A – 830mm
- C = Ceiling height (min.) = A + 185mm

The max. possible height up to the upper boom edge is 2,430mm. The lower boom edge equals upper boom edge less 160mm.

3. Remove the barrier boom from the barrier (if already connected).
4. Connect the articulation kit bracket (32) and the four distance plates (33 – two inside and two outside) to the barrier housing using the countersunk Allen screws (34).

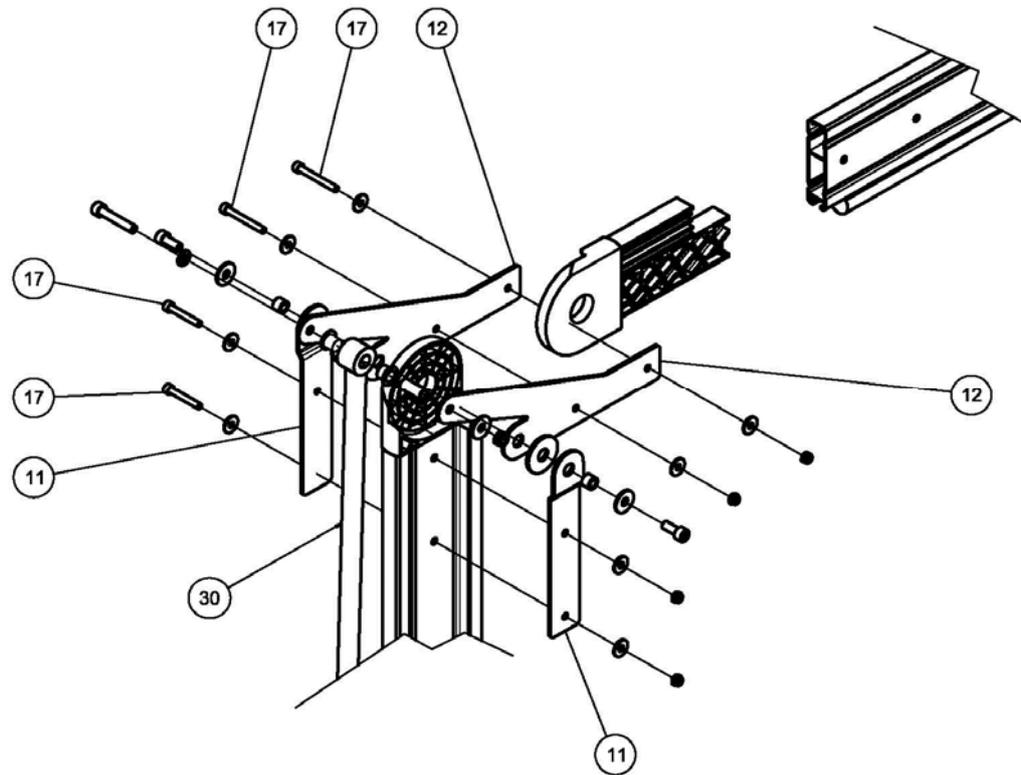


Drawing 5



Insert the countersunk screws (34) using screw locking adhesive.

5. Saw the barrier boom into two parts at the requested length.
6. Remove 30mm rubber profile at the cutting edge of the vertical barrier boom part.
7. Connect the vertical barrier boom part to the boom connector.
8. Mount all components of the articulation kit according to the drawing. Then push the draw pipe (30) through the counter holder (28) - see drawing 6.

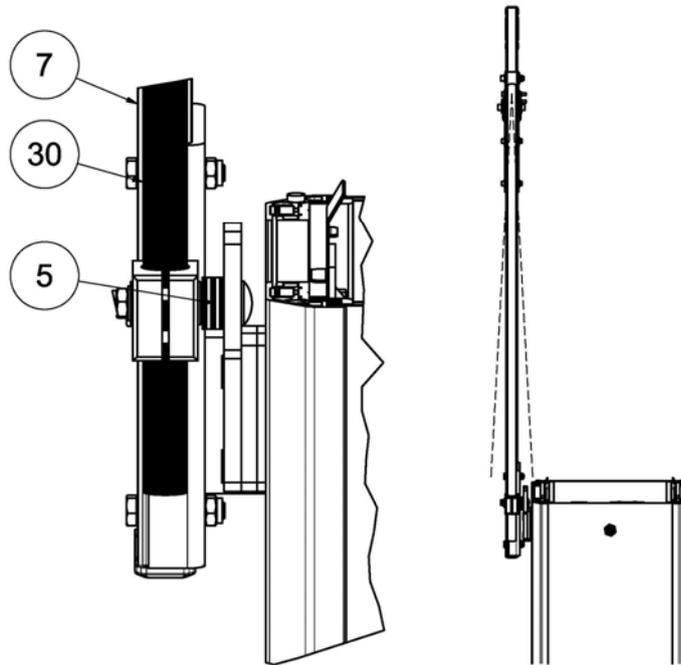


Drawing 6

9. Adjust the reinforcement plates (11+12) in boom direction and, using a twist drill $\text{\O}6.5\text{mm}$, drill through the two bore holes of the reinforcement plates through the boom. Mount the matching screw after each drilling (17) in order to prevent the reinforcement plate from twisting.

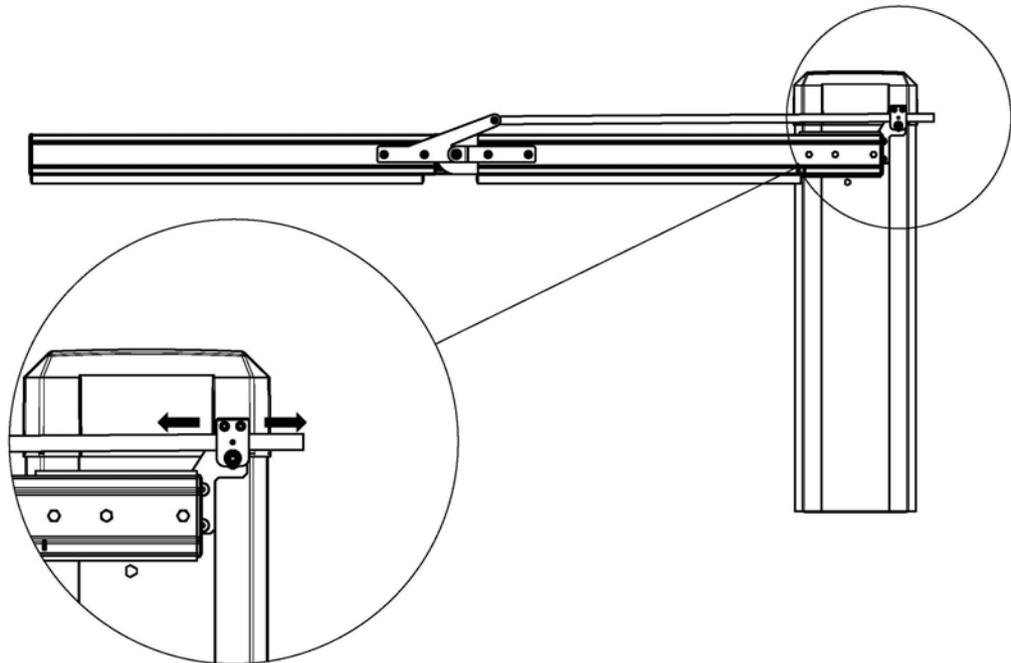
10. Alignment:

- a. The draw pipe (30) must be aligned parallel to the boom (7). Correct the alignment by the number of mounted washer (5).



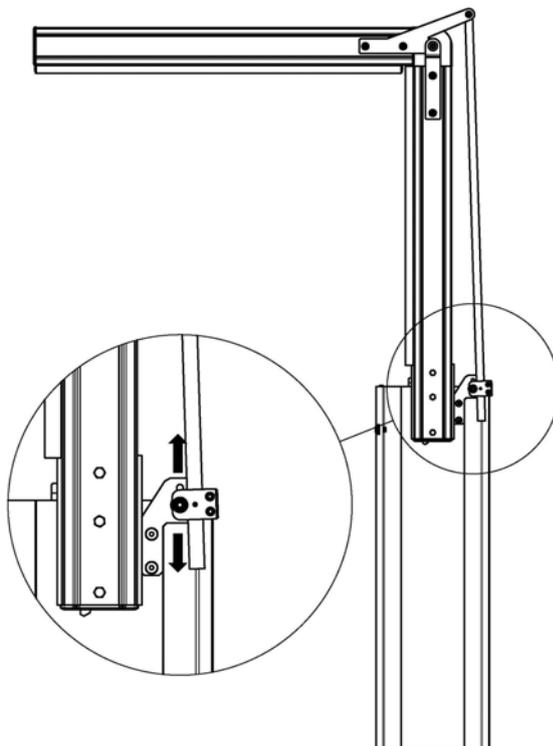
Drawing 7

- b. Adjust the carriage bolt into the counter holder in the bottom position.
- c. Hold the boom horizontal and clamp the draw pipe (30) tight (lightly) using the cylinder head screw (25).



Drawing 8

- d. Disengage the barrier and place the boom vertical.
- e. The horizontal part of the barrier boom can be adjusted by setting the cylinder head screw (bearing bolt) (26) higher or lower.



Drawing 9

- f. Check the position OPEN and CLOSED. If necessary, correct the position by repeating the previous steps.



All bolts must be tightened to the specified torque - see Table page 5.



Tighten the cylinder head screw (25) with a min. of 25Nm.

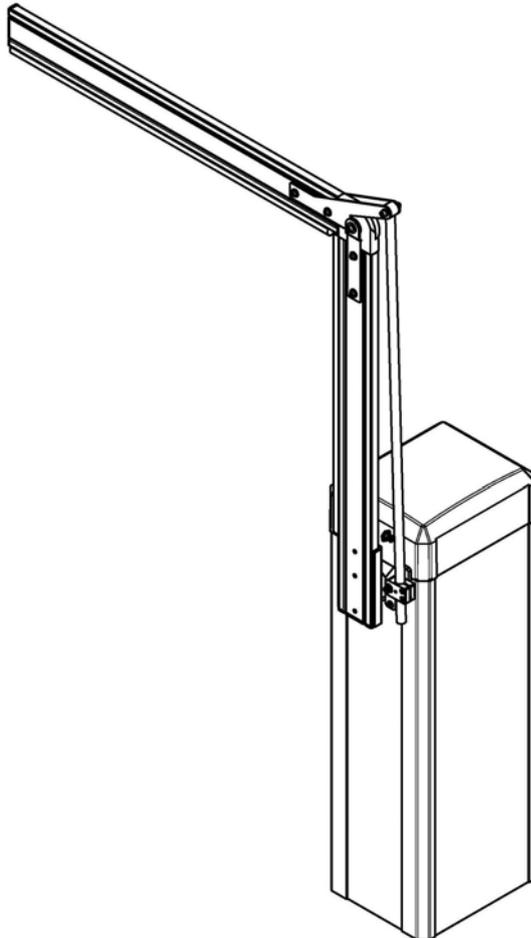
- g. Secure with the headless screw (35) in addition the draw pipe in the counter-holder (28).
h. Cut the protruding part of the draw pipe off approx. 30mm behind the counter-holder (28).



WARNING!

Sharp cutting edges can cause serious injuries.

- Deburr the cutting edges and bore holes carefully.



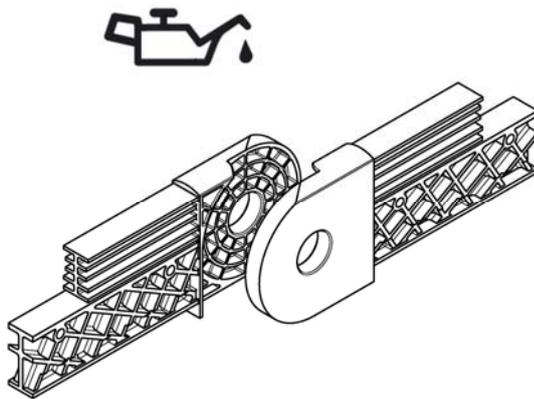
Drawing 10

4 Maintenance

The articulation kit should be checked during the regular recommended barrier maintenance. Make sure that also all screw connections are being checked for damage and that a tight fit is assured.



Grease the joint of the articulated kit with multi-purpose grease - see drawing (every 6 months or as needed).



Drawing 11