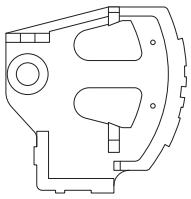
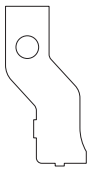
Parts for 3D printing

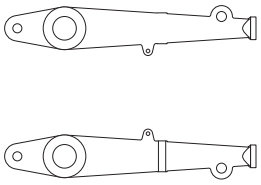
all parts to be printed out of PETG or PLA
part colour provided next to the part number



1a
1a.stl
grey
1×

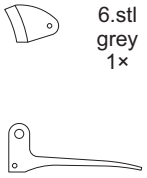


1b
1b.stl
grey
1×



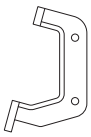
2a
2a.stl
green
1×

2b
2b.stl
green
1×

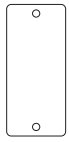


6
6.stl
grey
1×

3
3.stl
green
1×



4
4.stl
grey
1×



5
5.stl
white
1×

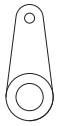
7a
7a.stl
grey
1×

7b
7b.stl
grey
1×

8
8.stl
grey
2×

9
9.stl
grey
1×

10
10.stl
grey
1×



11a
11a.stl
grey
1×*

11b
11b.stl
grey
1×*

11c
11c.stl
grey
1×*

11d
11d.stl
grey
1×*

12a
12a.stl
grey
2×*

12b
12b.stl
grey
2×*

12c
12c.stl
grey
2×*

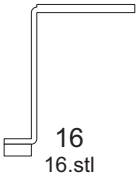
12d
12d.stl
grey
2×*

13a
13a.stl
grey
1×*

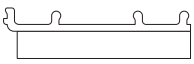
13b
13b.stl
grey
1×*

13c
13c.stl
grey
1×*

15
15.stl
grey
1×

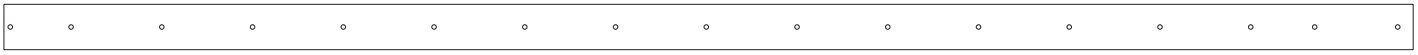


16
16.stl
grey
1×



17
17.stl
grey
1×

14a 14a.stl, grey, 1×

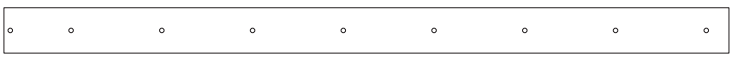


14b 14b.stl, grey, 1×

Alternatively, instead of parts 14a and 14b (see p. 6 of the manual)

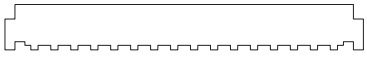
14c 14c.stl, grey, 1×

14d 14d.stl, grey, 1×



14e 14e.stl, grey, 1×

14f 14f.stl, grey, 1×



18
18.stl
grey
2×‡

19
19.stl
grey
4×‡

* Depends on the variant of the drive shaft - see p. 5 of the manual
‡ Total count for the whole interlocking
If not indicated otherwise, number of parts is provided for a complete assembly of a single locking bar (including lever, drive shaft and locking bar proper).

Route locking bars (block instrument base), scale 1:5

List of 3D printed parts

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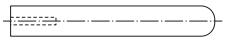
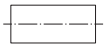
Other required parts

I
wire
Ø 1,5 mm
× 15 mm len.
1×



II
aluminium rod
Ø 4 mm
× 27 mm len.
1×



III
aluminium rod
Ø 5 mm
× 11 mm len.
1×

IV
wire
Ø 2 mm
× 5 mm len.
1×

V
spring
Ø 0,2 mm piano wire
26 coils
1×

VI
wire
Ø 1 mm
× 5 mm len.
1×

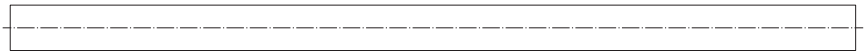
VII
wire
Ø 1 mm
× 3 mm len.
18×

VIII
M1÷M1,4 bolt
4 mm len.
12×

IX
wire
Ø 3 mm × 103 mm len.
1×

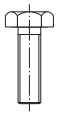
XI
wire
Ø 1 mm
× 10 mm len.
3× lub 4×*

XII
wire
Ø 2 mm
× 3,6 mm len.
2× lub 4x*



X
aluminium rod
Ø 6 mm × 112 mm len.
1×

XIII
M3 nut
6×



XIV
M3 bolt
10 mm len.
6×

XV
M2 nut
8×‡

XVI
M2 bolt
6 mm len.
8×‡

XVII
wire
Ø 2 mm
× 6 mm len.
1×

XVIII
wire
Ø 2 mm
× 7,5 mm len.
1×

* Depends on the variant of the drive shaft - see p. 5 of the manual
‡ Total count for the whole interlocking
If not indicated otherwise, number of parts is provided for a complete assembly of a single locking bar (including lever, drive shaft and locking bar proper).

Route locking bars (block instrument base), scale 1:5

List of other required parts

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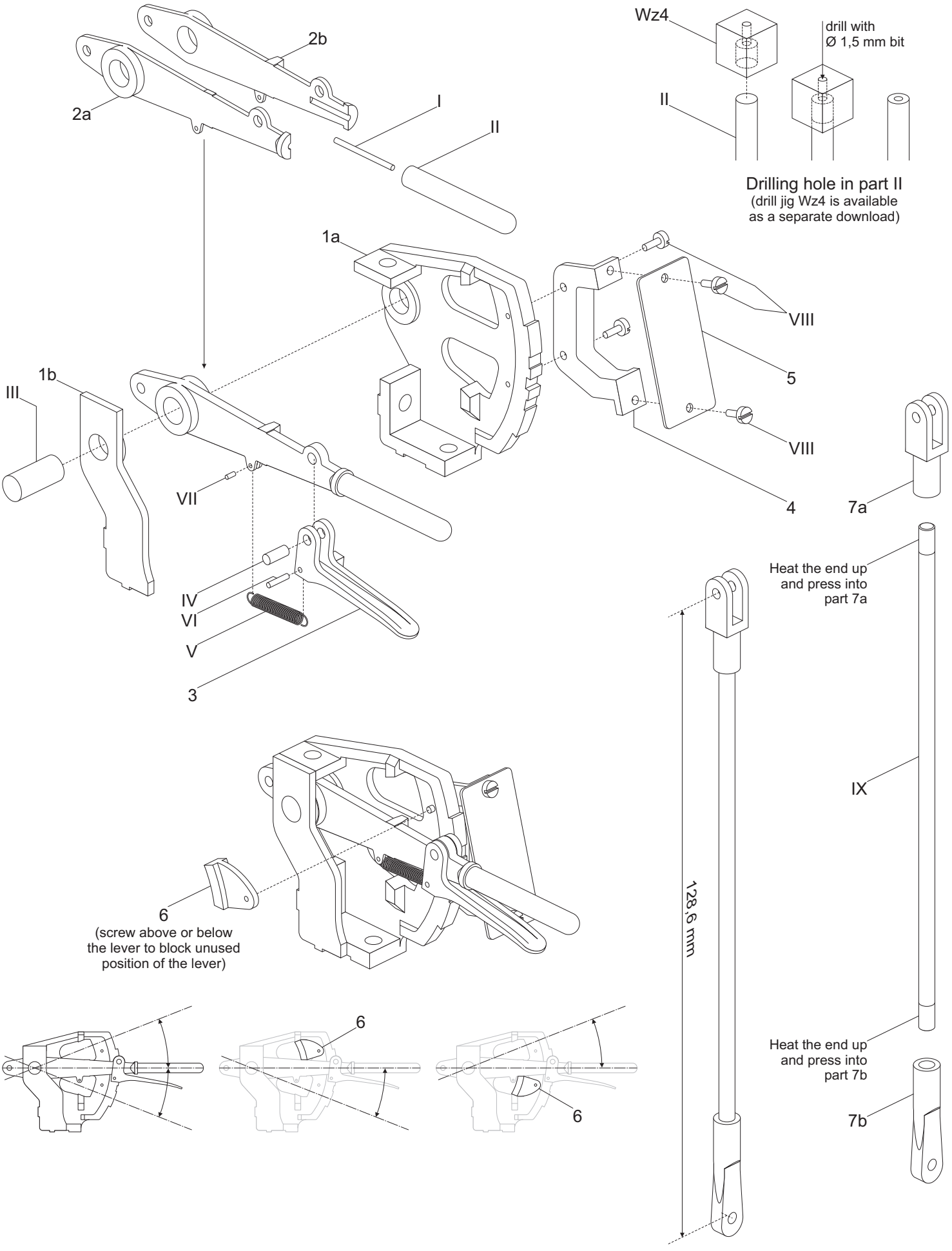

Route locking bars (block instrument base), scale 1:5

Assembly manual 1/10

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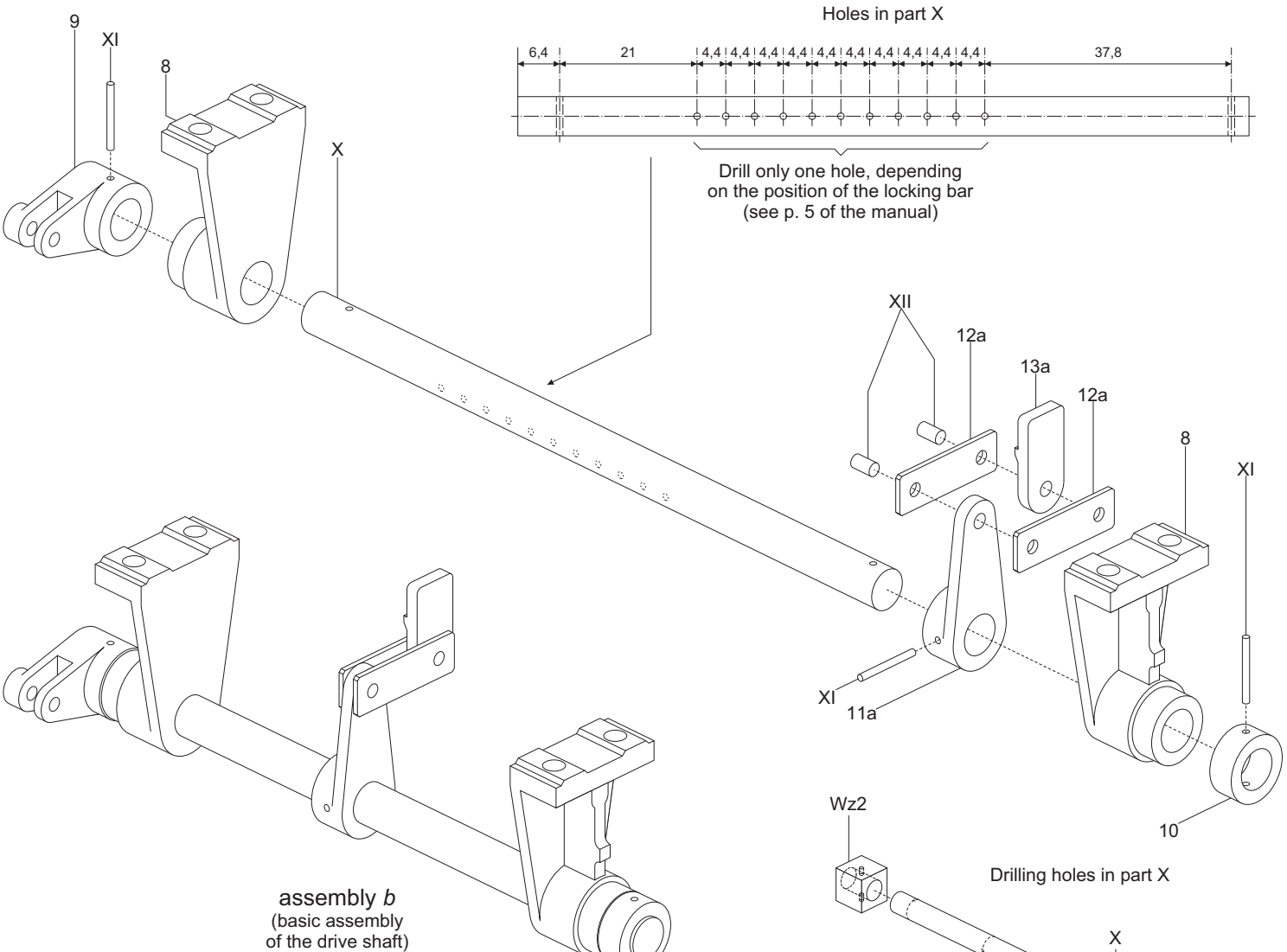
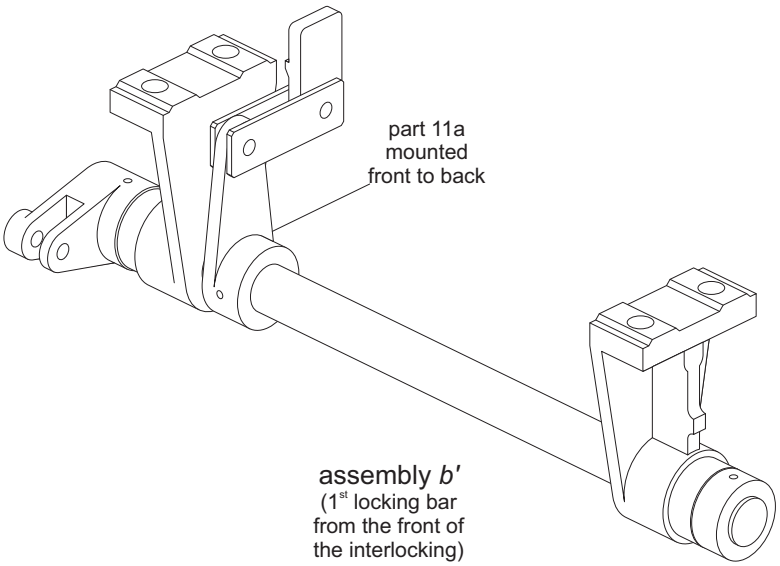
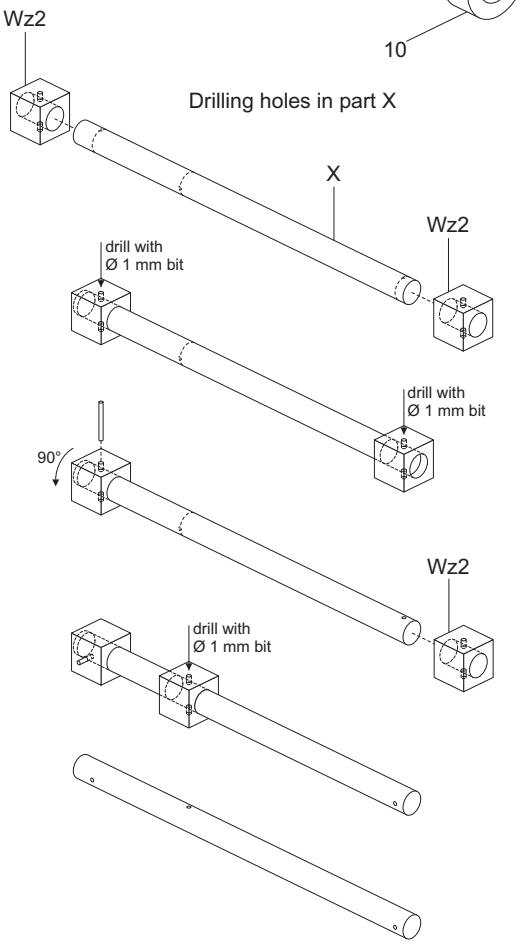


assembly *b*
(basic assembly
of the drive shaft)



assembly *b'*
(1st locking bar
from the front of
the interlocking)



(drill jig Wz2 is available
as a separate download)

Route locking bars (block instrument base), scale 1:5

Assembly manual 2/10

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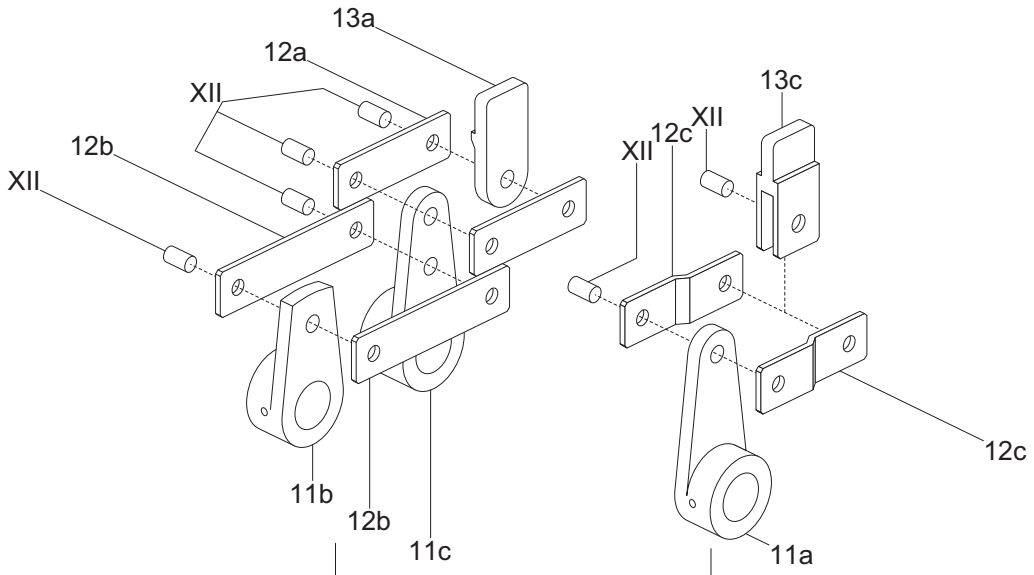
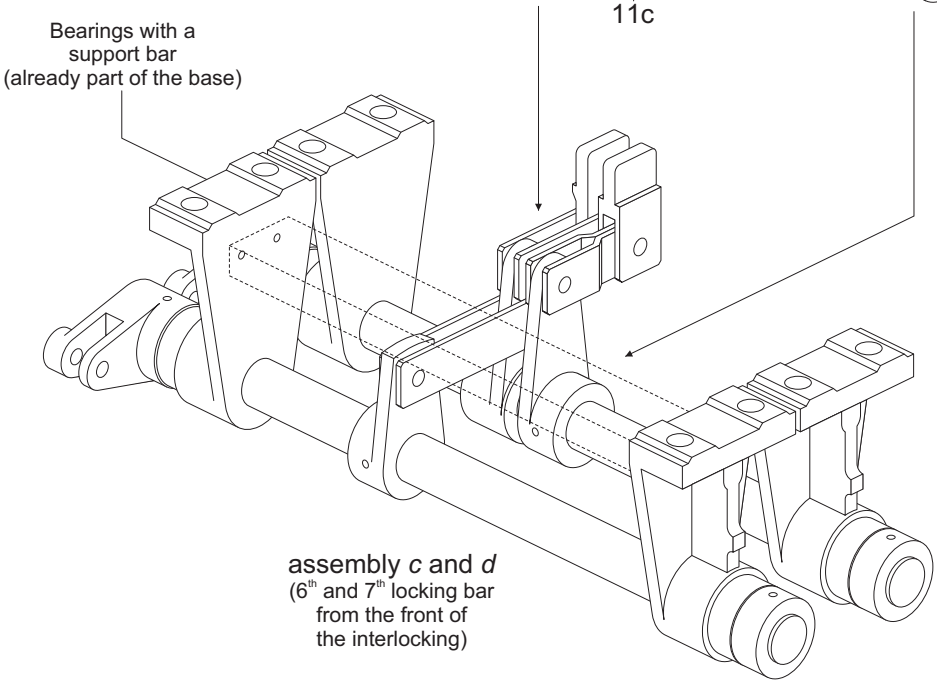
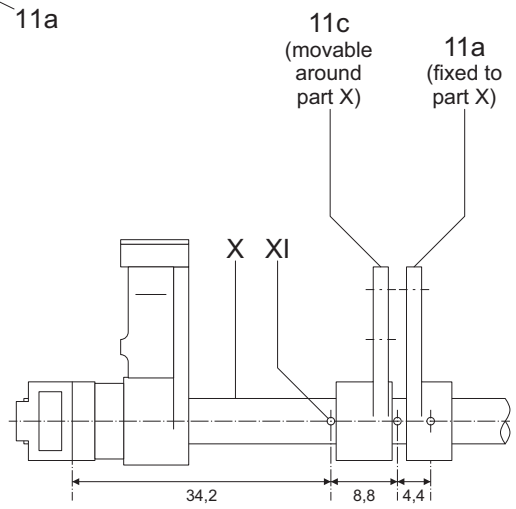
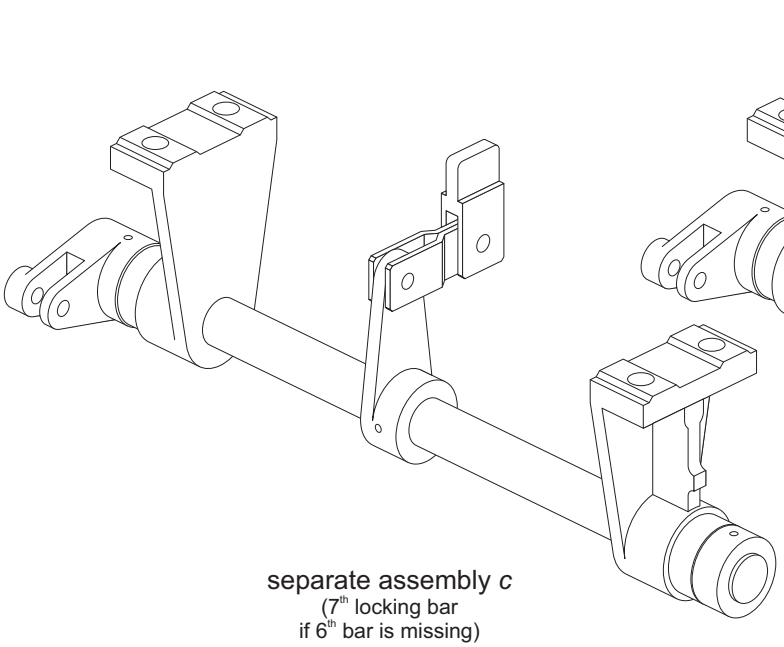


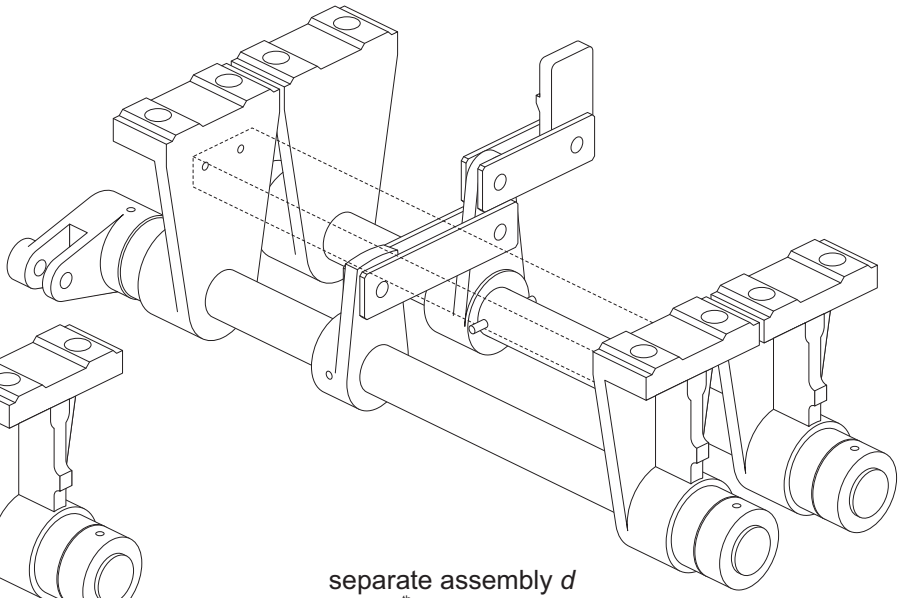


assembly *c* and *d*
(6th and 7th locking bar
from the front of
the interlocking)





separate assembly *c*
(7th locking bar
if 6th bar is missing)



separate assembly *d*
(6th locking bar
if 7th bar is missing)

Route locking bars (block instrument base), scale 1:5

Assembly manual 3/10

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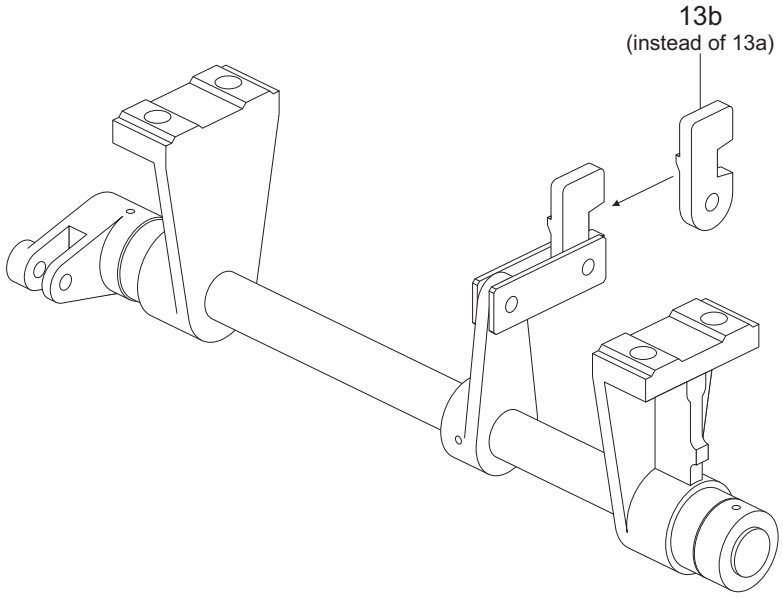
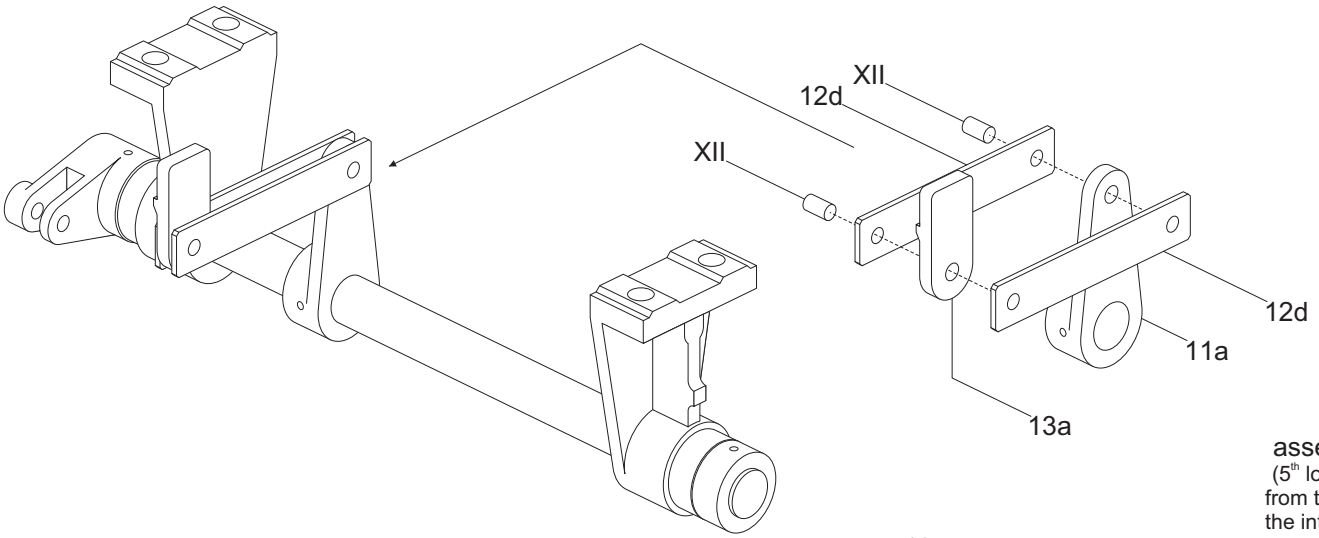
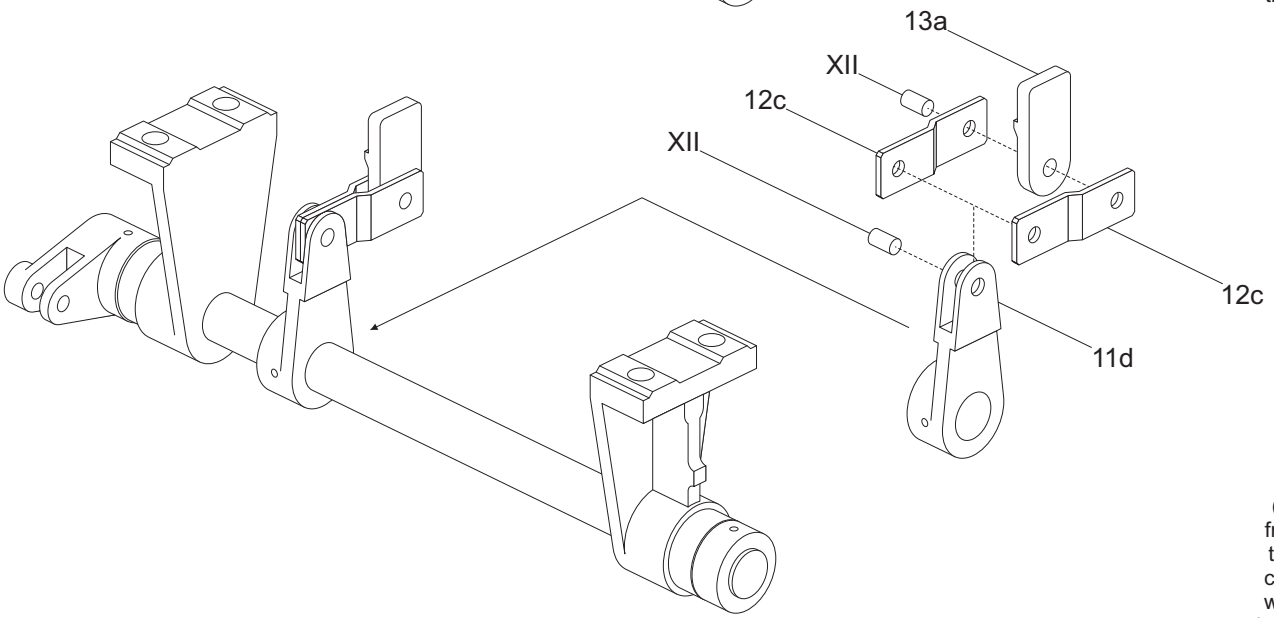


assembly *a*
(for 11th locking bar from the front of the interlocking, only if the instrument base is to the left of the lever frame)



assembly *e*
(5th locking bar from the front of the interlocking)



assembly *f*
(4th locking bar from the front of the interlocking can be replaced with assembly *b* in simplified form)

Route locking bars (block instrument base), scale 1:5

Assembly manual 4/10

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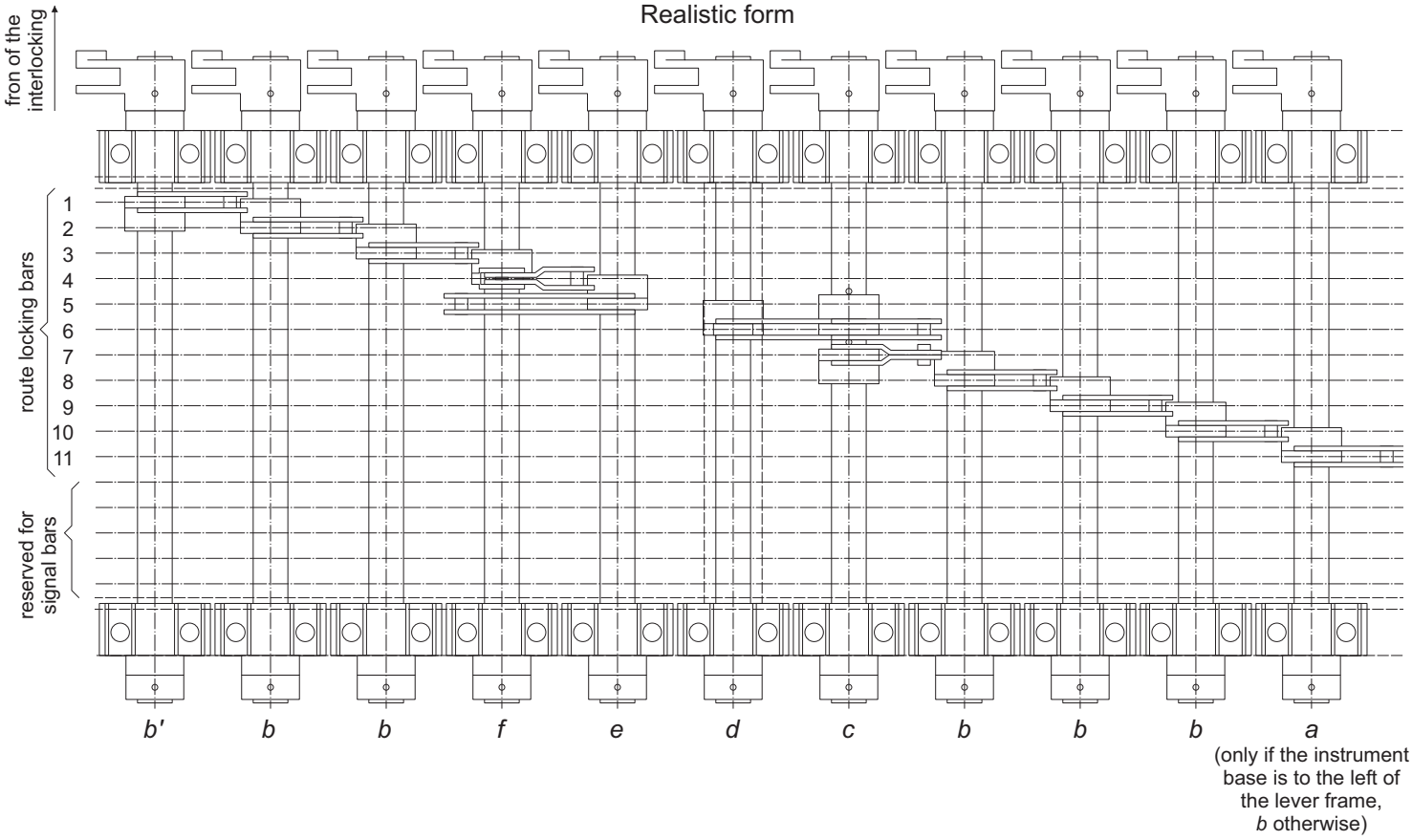
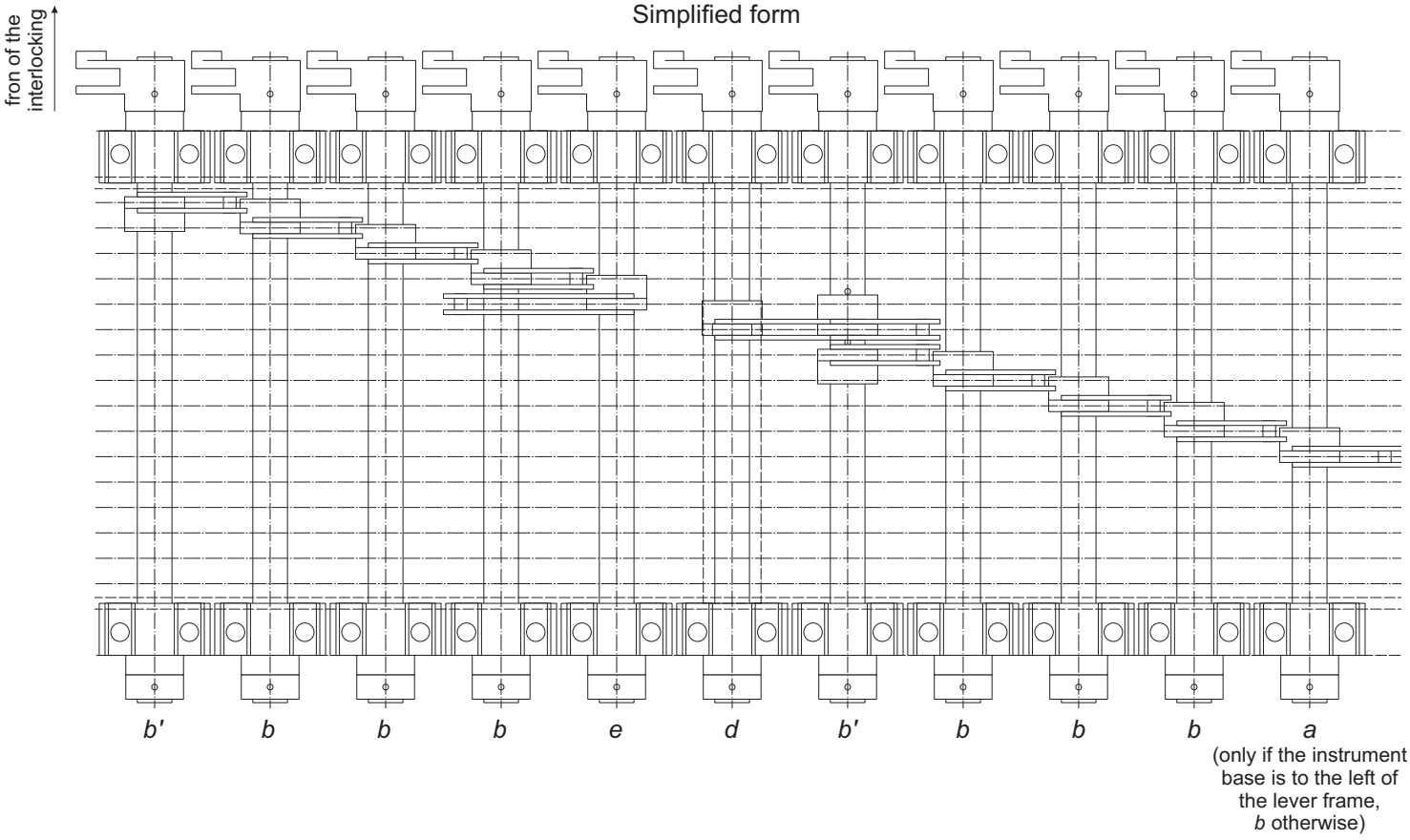
Drive shafts for route locking bars
(in case a particular bar is missing, its drive shaft has to be skipped)

Realistic form



Simplified form



Route locking bars (block instrument base), scale 1:5

Assembly manual 5/10

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Route locking bars (block instrument base), scale 1:5

Assembly manual 6/10

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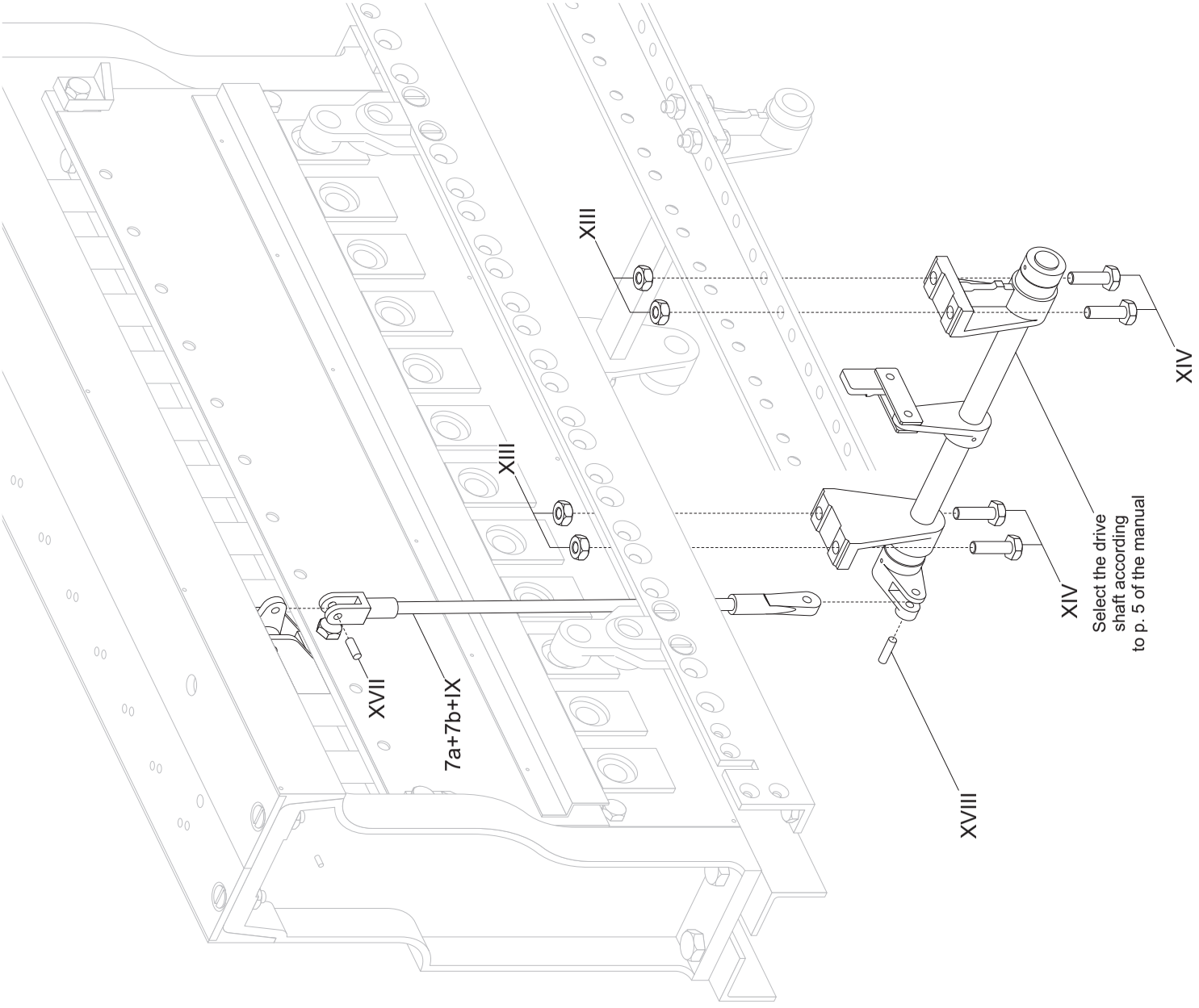
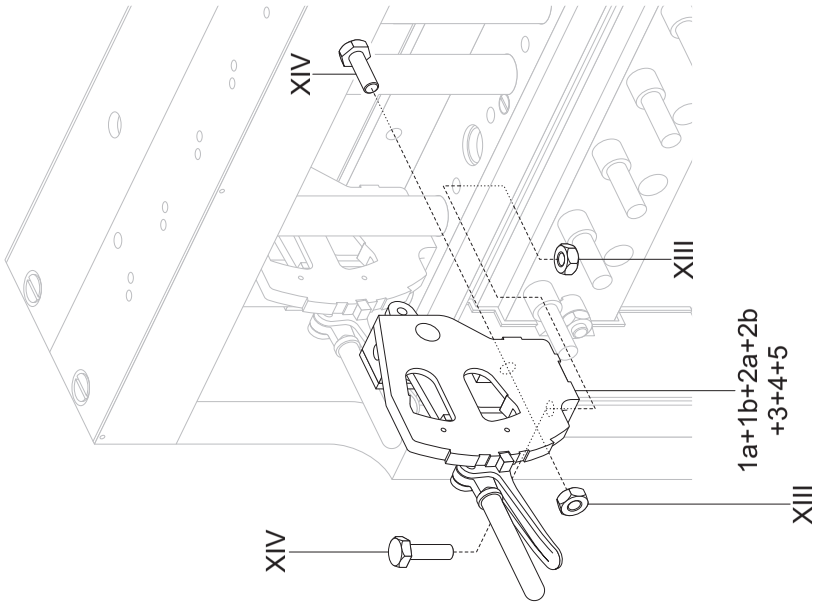
Attention!

Long parts may contract slightly during printing. Check the provided dimensions after print (see also p. 8 of the manual).

Selected parts may be longer than the print area. Place the parts diagonally to the print area in the slicing software or use alternative shorter parts 14c..f.





Route locking bars (block instrument base), scale 1:5

Assembly manual 7/10

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Route locking bars (block instrument base), scale 1:5

Assembly manual 8/10

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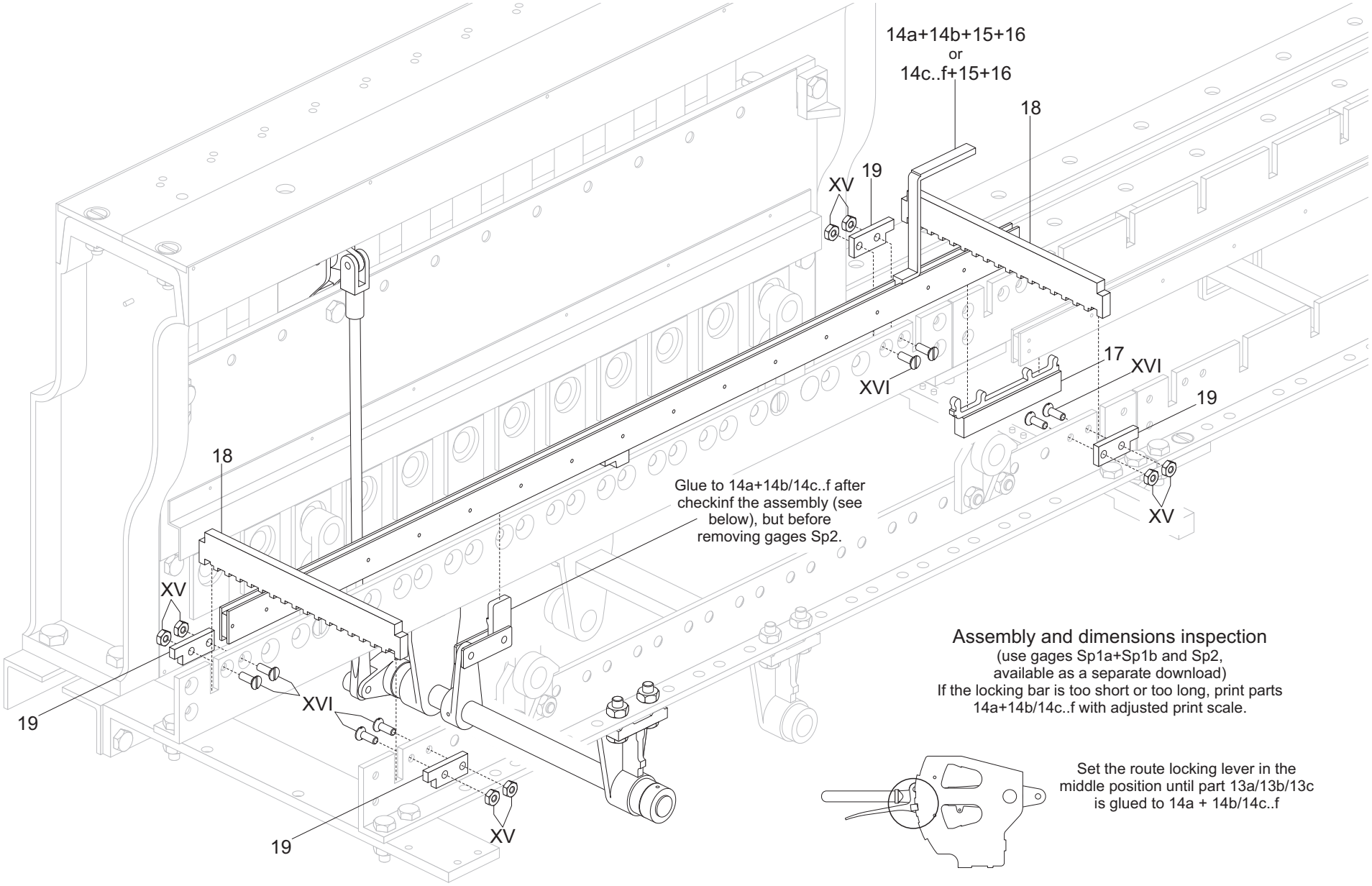
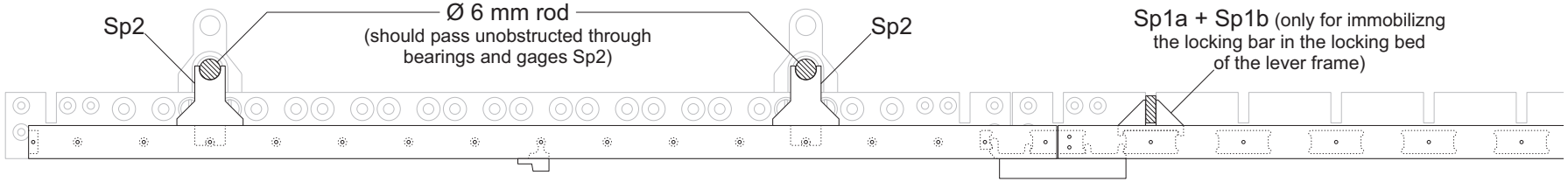
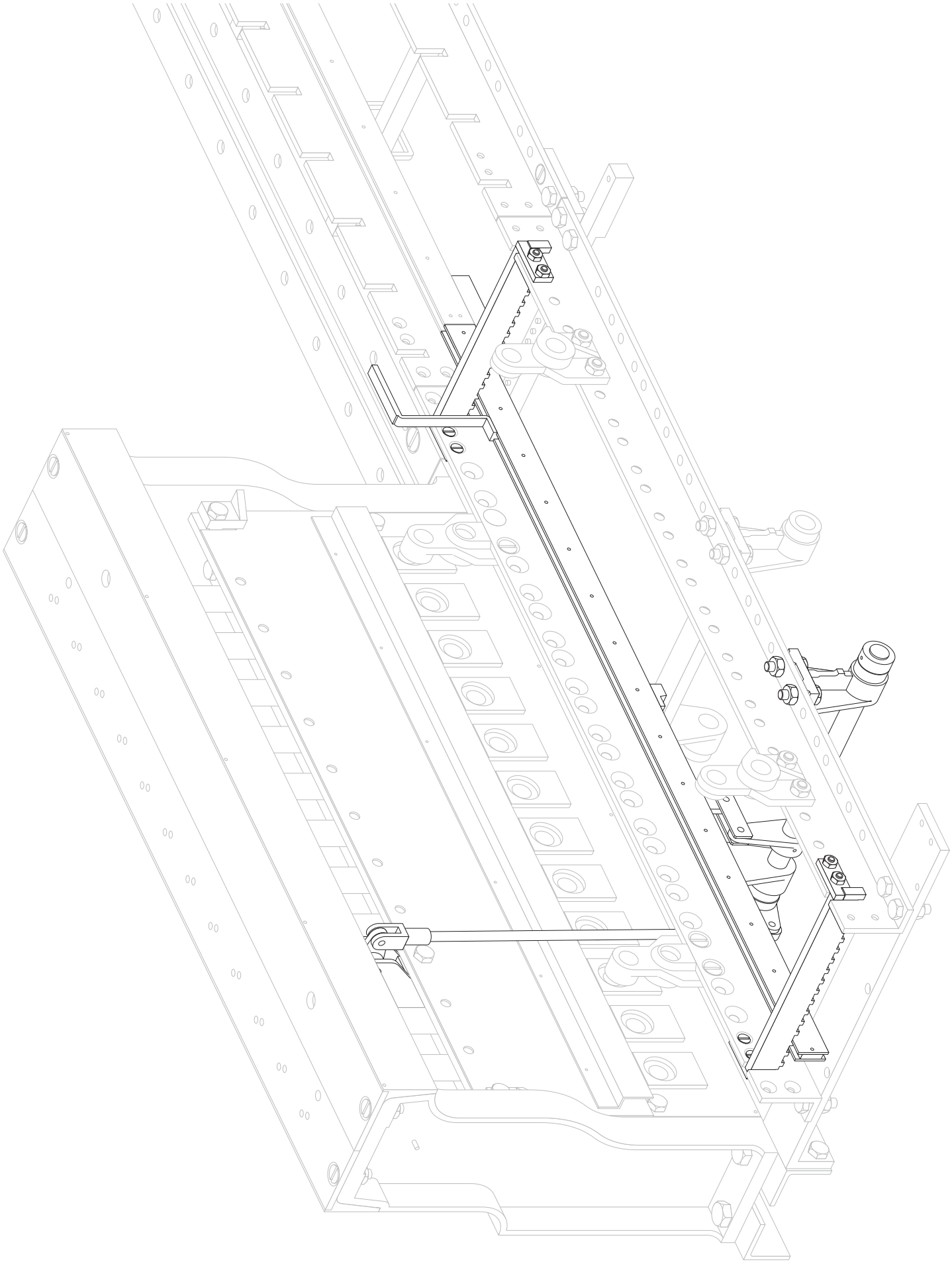


Assembly and dimensions inspection

(use gages Sp1a+Sp1b and Sp2, available as a separate download)
If the locking bar is too short or too long, print parts 14a+14b/14c..f with adjusted print scale.

Set the route locking lever in the middle position until part 13a/13b/13c is glued to 14a + 14b/14c..f





Route locking bars (block instrument base), scale 1:5

Assembly manual 9/10

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Route locking bars (block instrument base), scale 1:5

Assembly manual 10/10

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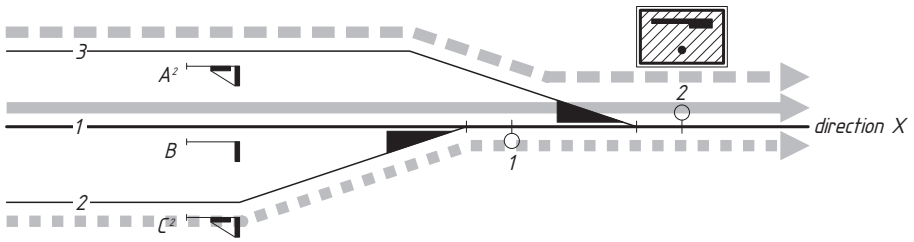
Example of a simple interlocking design

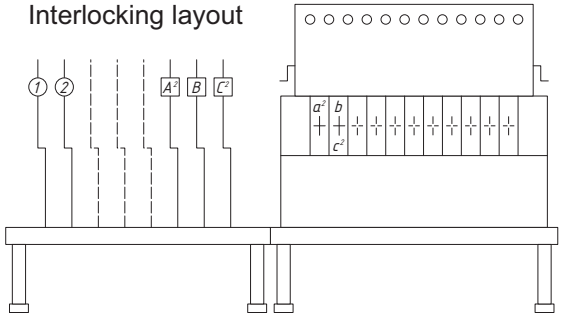
Track layout

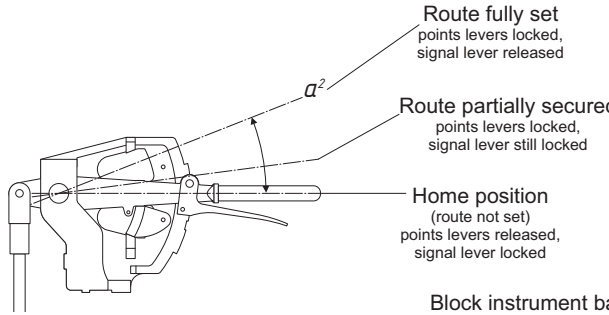


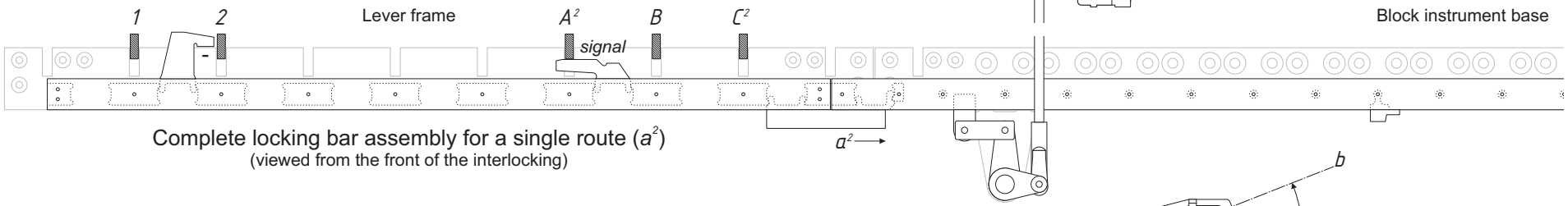
Locking table

Ordinal number	Signal	Routes	1	2	3	4	5	6	7	8	1	2	3-11
			Points levers				Signal lvrs				Route locking lvrs		
			1	2				A²	B	C²	a²	b c²	
1	A²	To X from track 3		—				+			—	+ +	
2	B	To X from track 1	+	+					+		+	— +	
3	C²	To X from track 2	—	+						+	+	+ —	

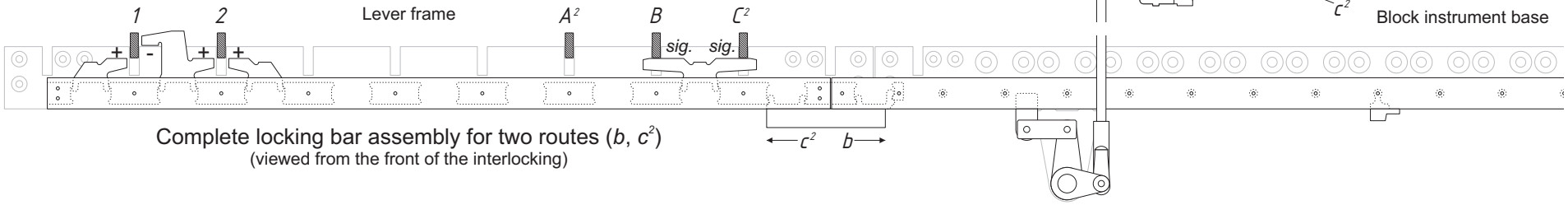
Interlocking layout







Complete locking bar assembly for a single route (a^2)
(viewed from the front of the interlocking)



Complete locking bar assembly for two routes (b, c^2)
(viewed from the front of the interlocking)