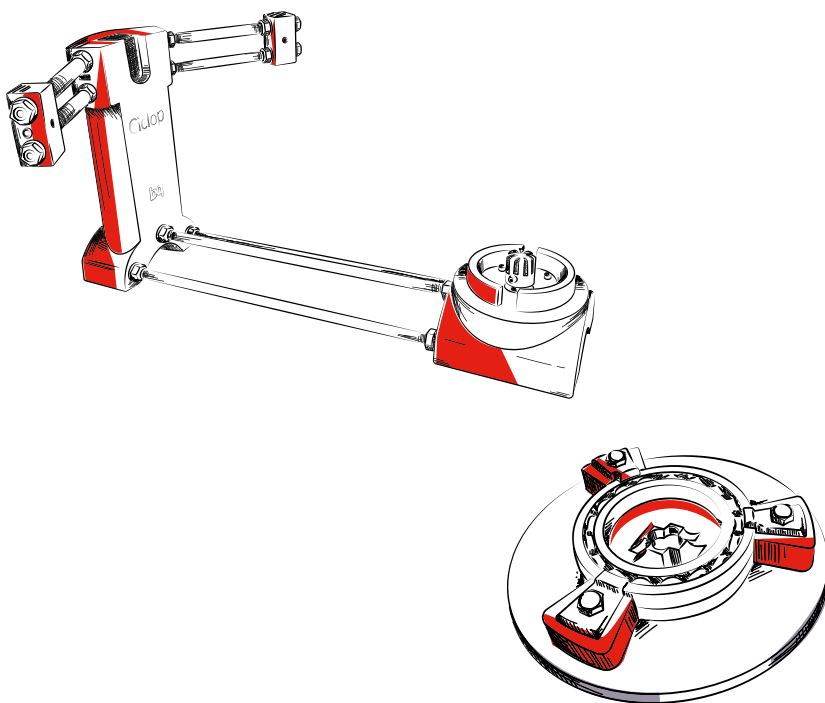


1

Assembly of the Disc and the Structure



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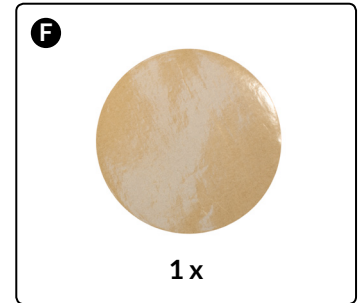
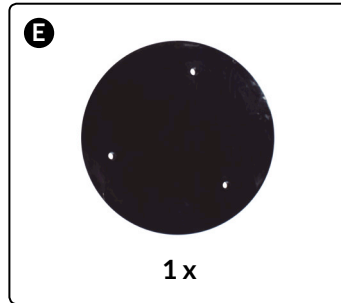
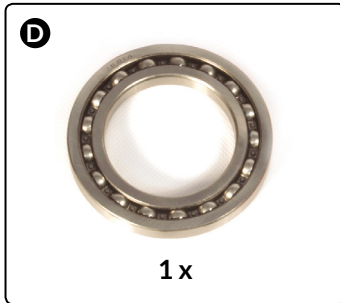
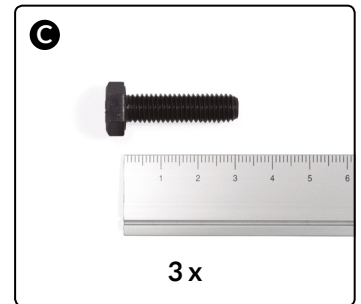
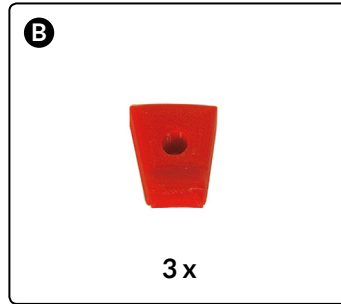
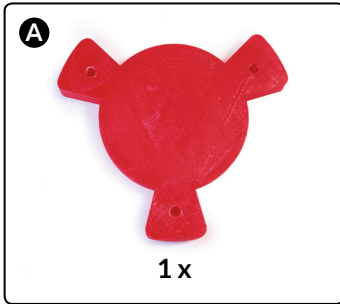
List of components for the structure

- 1 x** 16014 ball bearings
- 1 x** Ø200 x 8 mm black methacrylate disc
- 3 x** Printed piece bearing clamp
- 1 x** Ø200 mm non-slip surface
- 2 x** M8 x 400 mm black threaded rod
- 1 x** M8 x 292 mm black threaded rod
- 4 x** M8 x 170 mm black threaded rod
- 1 x** Printed piece for motor support
- 1 x** Printed piece for camera support
- 2 x** Printed piece for laser support
- 1 x** Printed piece for motor-disc fitting
- 1 x** Nema bipolar stepper motor (1.7A 1.8 deg/step) with connector*
- 7 x** M3 x 10 mm black screw - DIN 912 Class 8.8
- 3 x** M8 x 30 mm black screw - DIN 931 class 8
- 3 x** M3 black nut - DIN 934 Class 8
- 28 x** M8 black nut - DIN 934 class 8
- 18 x** M8 black washer - DIN 125 class 6
- 6 x** Non-slip silicone beads
- 1 x** Allen key

* In the electronics box

1

Assembly of the disc

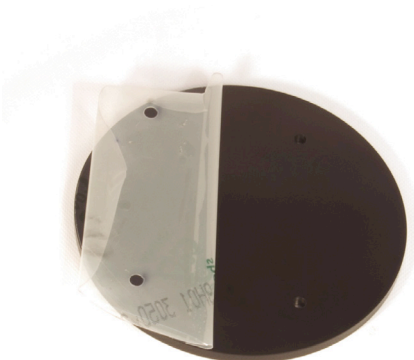


- A** Printed piece for disc support
- B** Bearing clamp clip
- C** M8 x 30 mm screw
- D** 16014 ball bearing
- E** Ø200 mm methacrylate disc
- F** Ø200 mm non-slip surface



Keep the disc (**E**), its support (**A**) and the bearing clamp clips (**B**) together when you tighten each screw. Use a fixed 13 mm key to tighten the screws (not included).

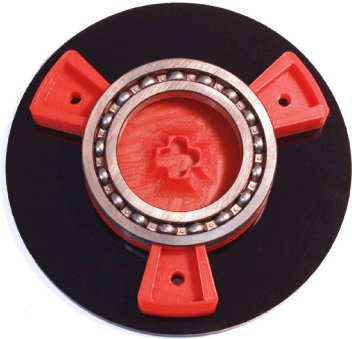
1.



2.



3.



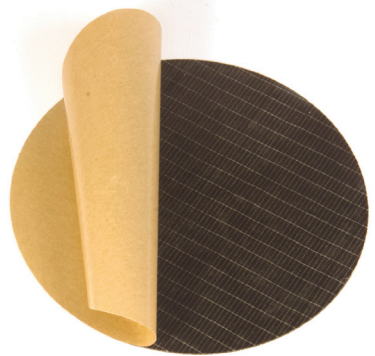
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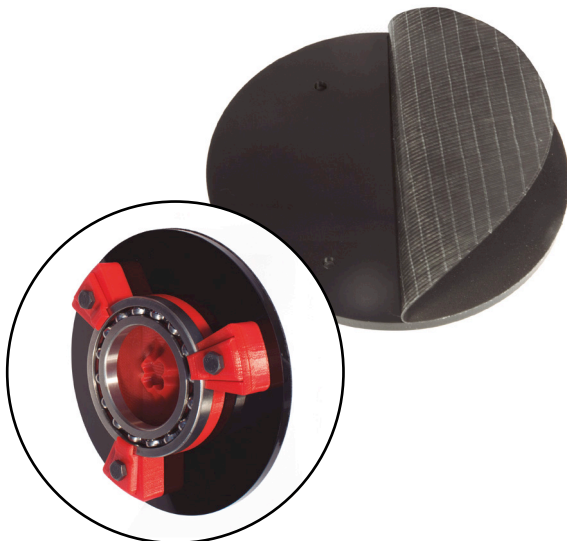
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6.

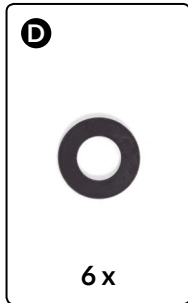
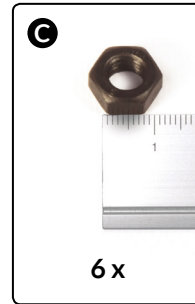
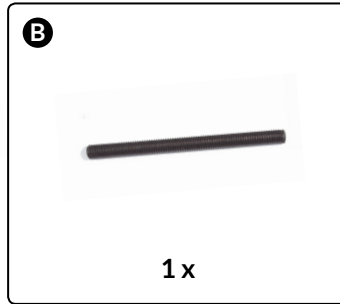
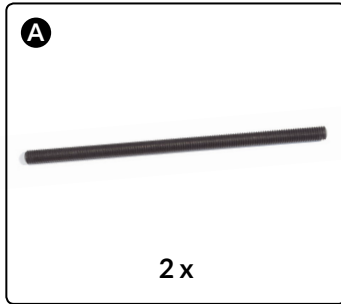


7.



2

Assembly of the structure: preparing the rods

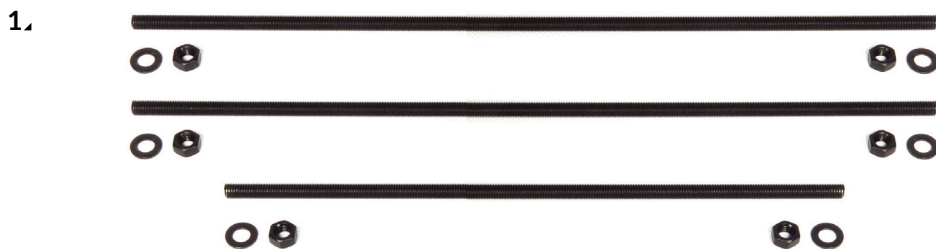


A M8 x 400 mm black threaded rod

B M8 x 292 mm black threaded rod

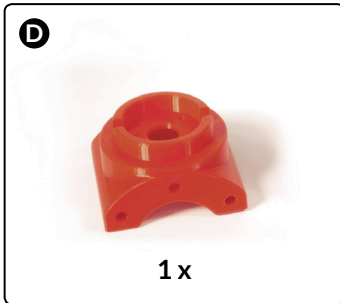
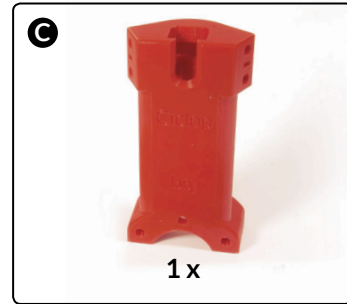
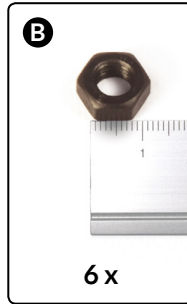
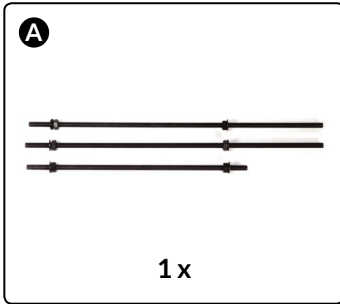
C M8 nut

D M8 washer



3

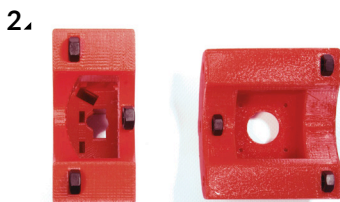
Assembly of the structure: screwing in the central rods



- A** Ensemble from Step 2
- B** M8 nut
- C** Printed piece for camera support
- D** Printed piece for motor support



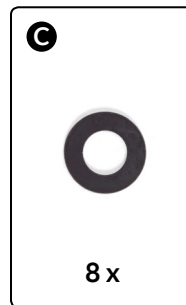
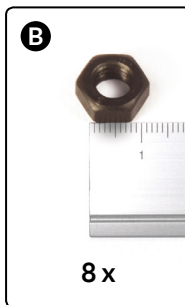
First insert the central and shortest rod into the motor support, then fit the two longer rods into each en (1). The nuts should be pressed into the holes underneath each piece. If required, file the hole a little.



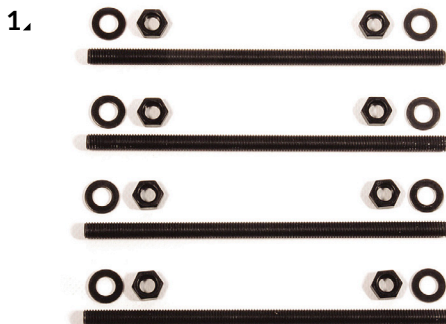


4

Assembly of the structure: preparing the laser support rods

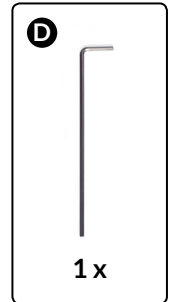
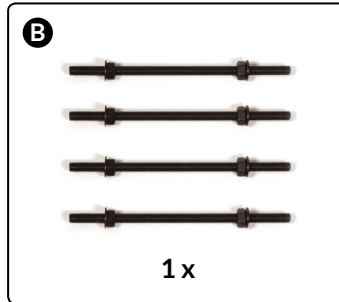
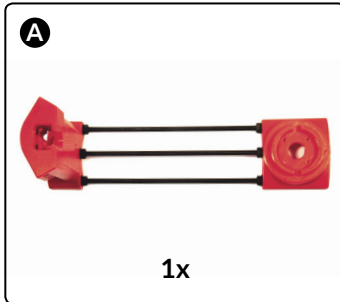


- A** M8 x 170 mm black threaded rod
- B** M8 nut
- C** M8 washer



5

Assembly of the structure: screwing in the rods of the lasers



A Ensemble for Step 3

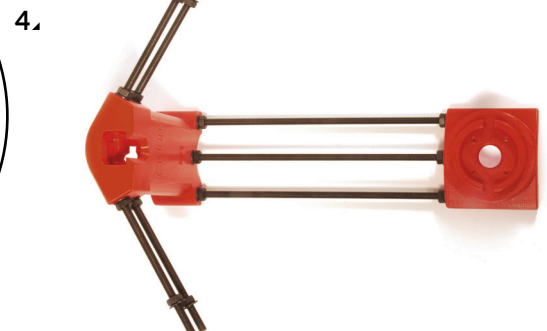
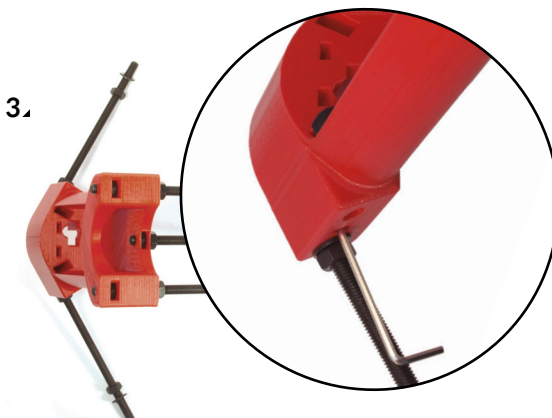
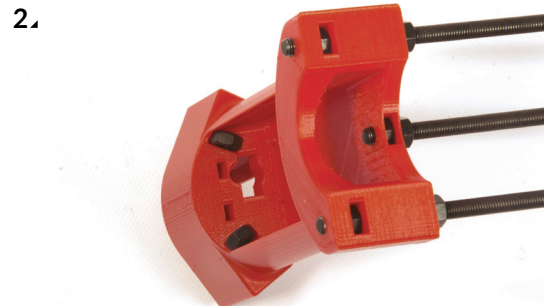
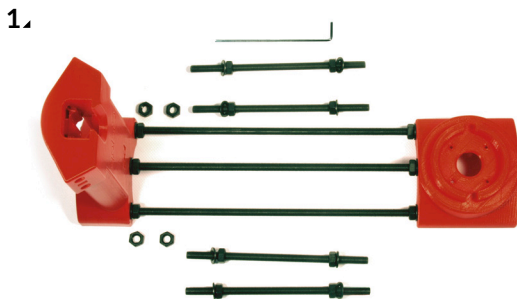
B Ensemble from Step 4

C M8 nut

D Allen key

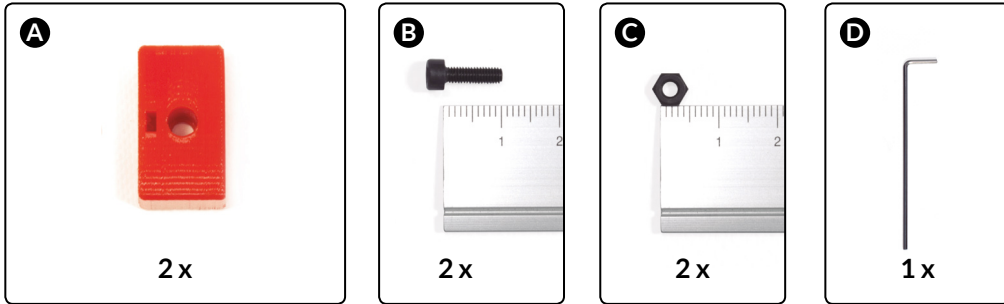


Insert the Allen key (3) to hold the nut, put it in place and screw the rod into the nut.



6

Assembly of the structure: preparing the laser piece



A Printed piece for laser support

B M3 x 10 mm screw

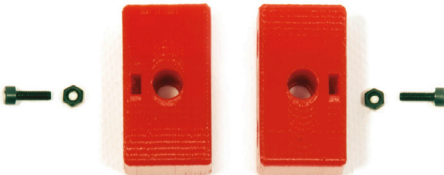
C M3 nut

D Allen key



Insert the nuts into the side holes. They should fit very tightly. If required, file the holes a little.

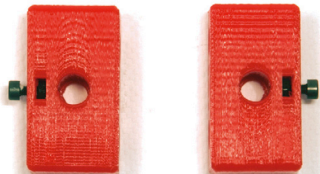
1.



2.

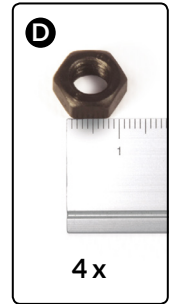
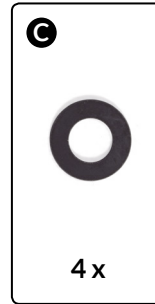
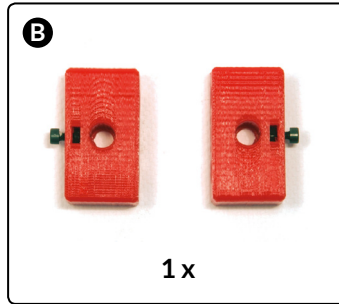
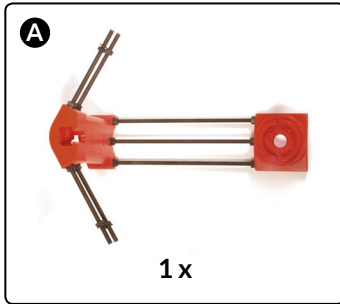


3.



7

Assembly of the structure: adjusting the laser piece

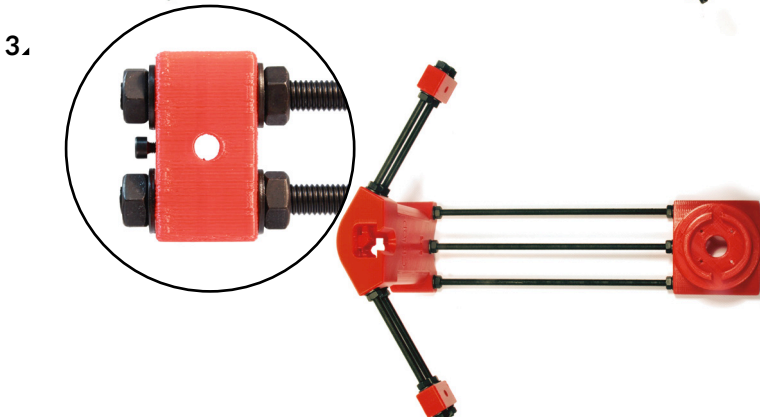
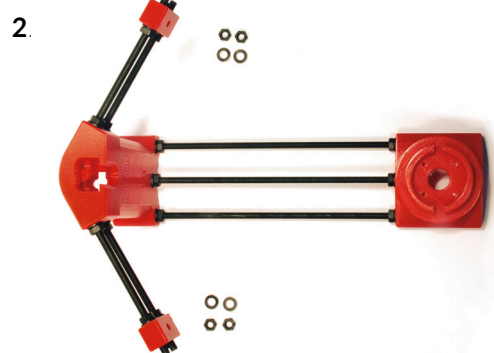
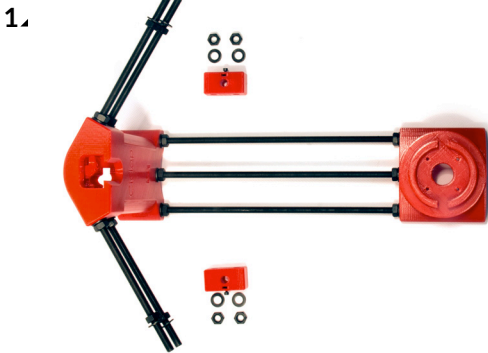


A Ensemble from Step 5

B Ensemble from Step 6

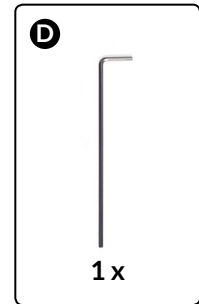
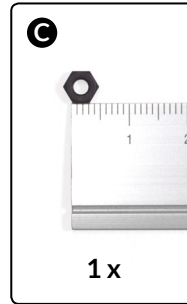
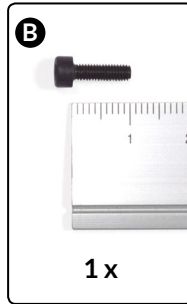
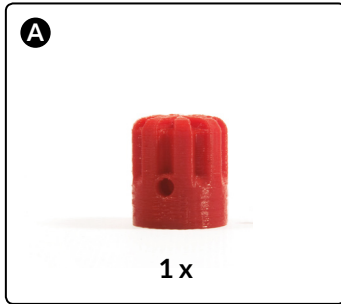
C M8 washer

D M8 nut



8

Assembly of the structure: adjusting the laser piece



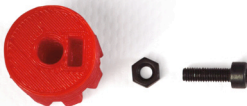
A Printed piece for motor-disk fitting

B M3 x 10 mm screw

C M3 nut

D Allen key

1.



2.

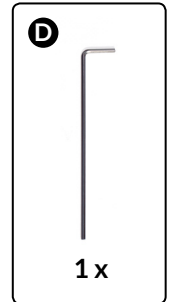
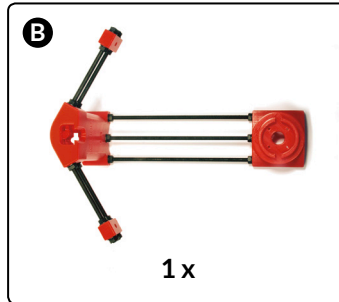
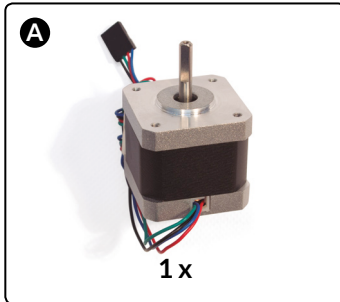


3.



9

Assembly of the structure: preparing the Nema motor



1.



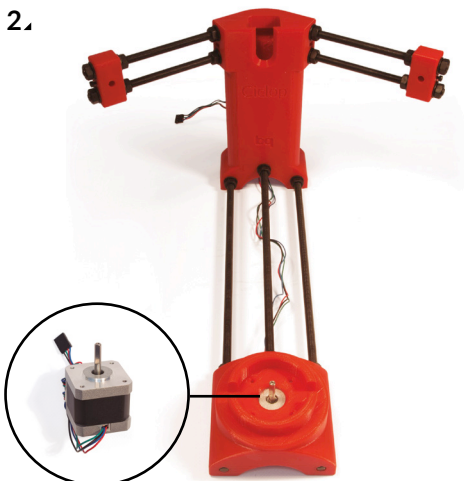
A Nema motor (1.7A 1.8 deg/step)

B Ensemble from Step 7

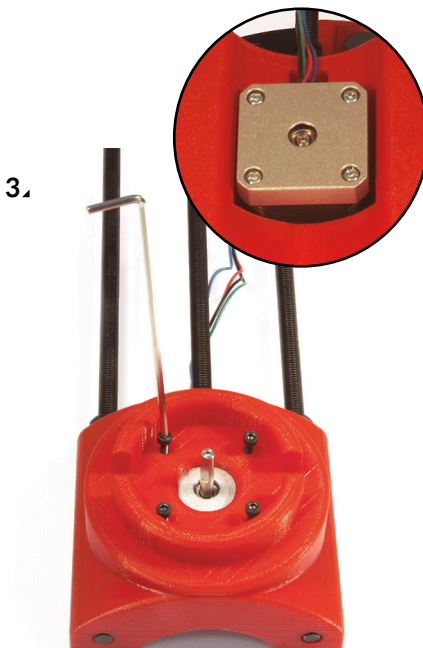
C M3 x 10 mm screw

D Allen key

2.

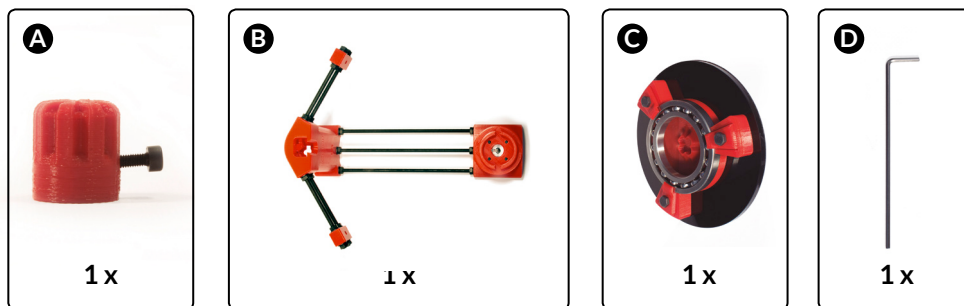


3.



10

Assembly of the structure: joining the attachment piece and the disc

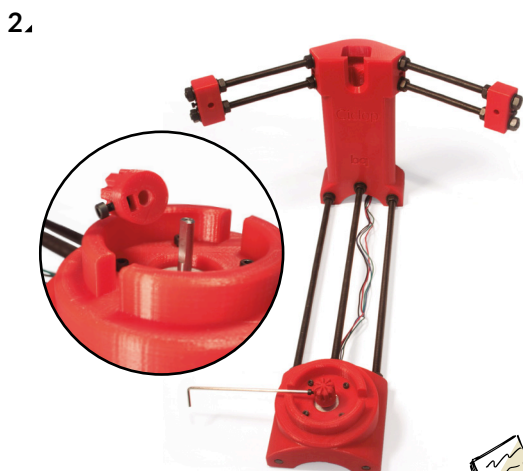


A Ensemble from Step 8

B Ensemble from Step 9

C Ensemble from Step 1

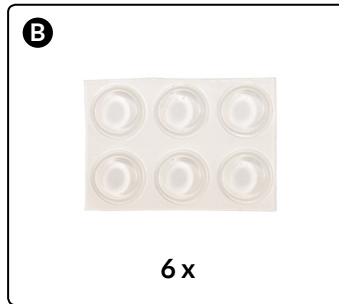
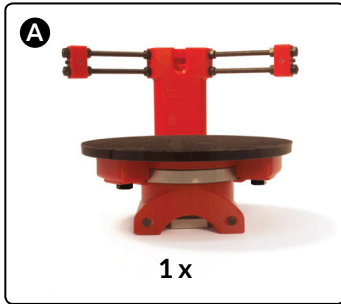
D Allen key



Attach the screw to the flat part of the motor axis

11

Putting the non-slip silicone beads into place



A Ensemble from Step 10

B Non-slip beads

1.



2.

