PRINT
BUILD
DEVELOP
YOUR OWN ROBOT

How to build your robot

www.pib.rocks/build

assembly instructions for:

Finger

pib#4

Printable parts

Pib´s finger consists of **5 printable parts** and is assembled in **4 steps.** For one hand, you should build 5 identical fingers, so print each part 5 times.

Please note: For better readability we use the abbreviations in the tutorial: D05 instead of D05-Finger_proximal_lower.

Printable parts
D05-Finger_proximal_lower
D06-Finger_proximal_bracket
D07-Finger_proximal_upper
D08-Finger_distal
D09-Finger_tip

Non-printable parts

You will also need the following non-printable parts from our pib.Box Master.

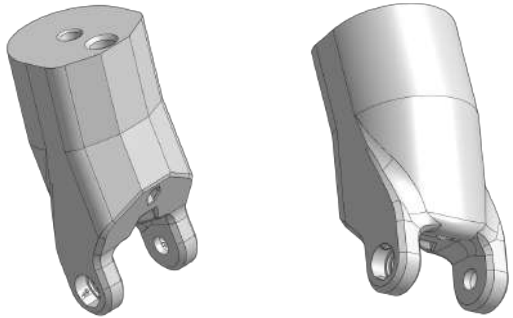
If you do not have it yet, you can buy in our shop https://shop.pib.rocks.

Non-printable parts
2x **S01** M3 nuts
1 x **S06** M3 16 mm screws
1 x **S08** M3 20 mm screws
1 x **M08** 20 mm metal rods
2 x **M01** Ballbearing_2x5x2,3
2 x **M10** Spring_TOR410L
160 cm Fluorocarbon string – *for each finger*

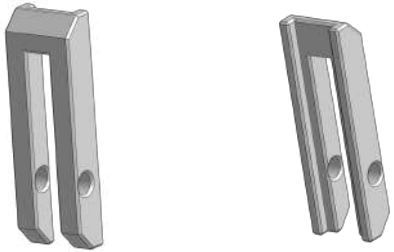
Please note: the table shows the amount of non-printable parts for just one finger!

Printable parts - Overview

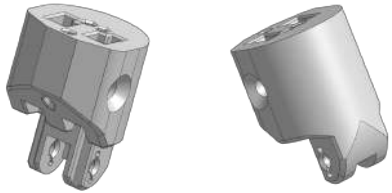
D08-Finger_distal



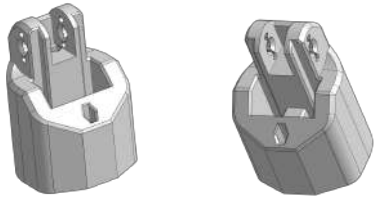
D06-Finger_ proximal_bracket



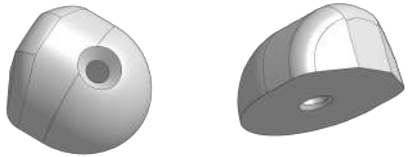
D05-Finger_proximal_lower



D07-Finger_proximal_upper



D09-Finger_tip



Build it better: our suggestion for assembling pib

We recommend **tools** for each step. These are a suggestion, you can of course also use other tools.

1-5

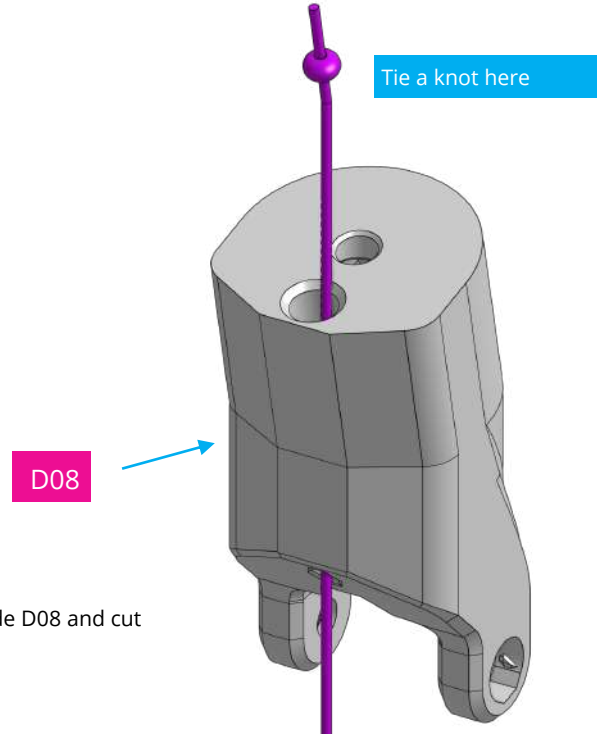
We have categorized each step according to its **difficulty** - from **1-5** (1 being the easiest, 5 the hardest)

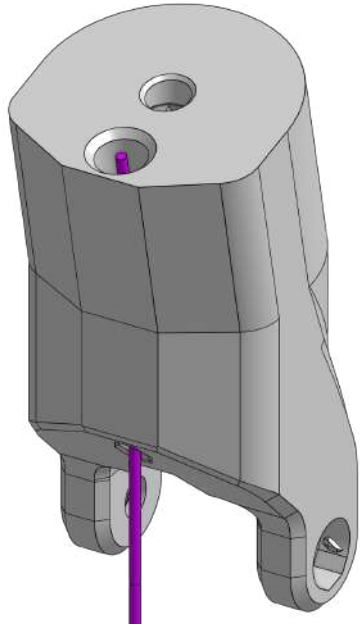
We also show you which **non-printable parts** you need for each step

Step 1

1 160cm

Cut a piece of **160 cm** length of the **fluorocarbon string** and insert it into **D08** as shown in the picture.





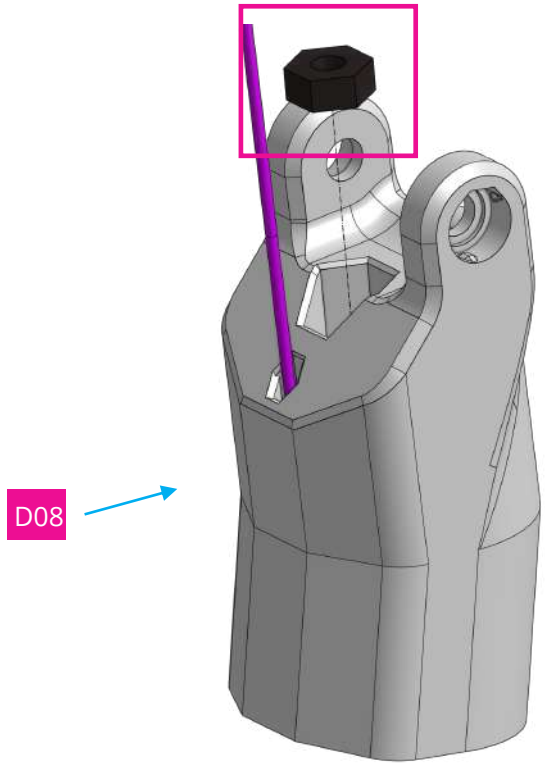
Tie a simple knot at the end. Pull the wire to be inside D08 and cut off remaining wire above the knot.

Pull gently on the string to tighten the knot further.

Step 2a

3 1x

Insert **1x nut** through the shown hole in **D08** (all the way till the end).

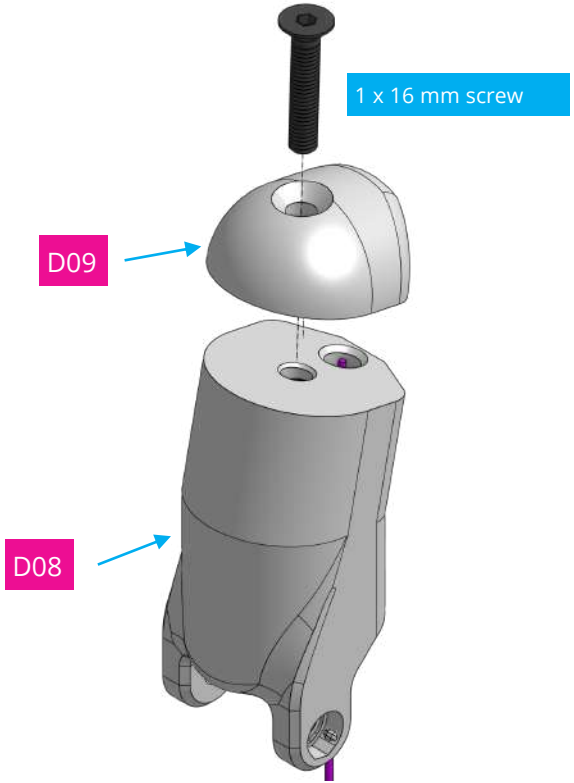


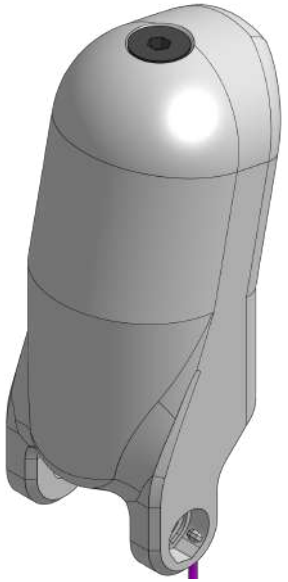
Use a small screw driver and insert the nut through the hole, then push the nut till the end of D08.
This step can be a little tricky.

Step 2b

1 1x

Connect **D09** to **D08** using **1x 16mm screw**.



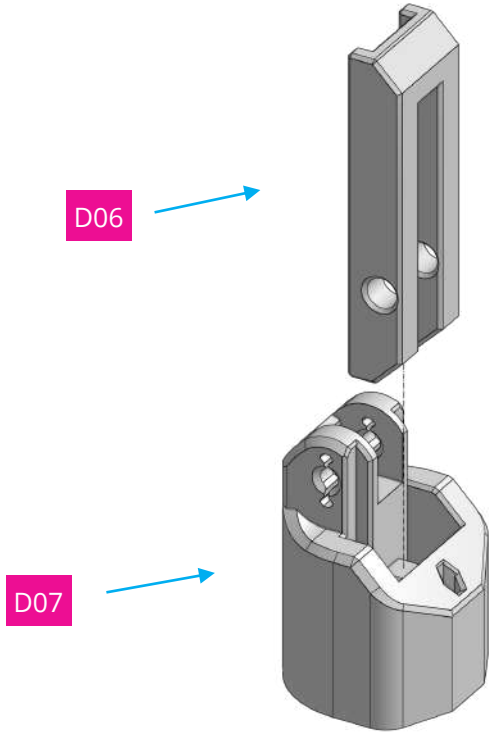


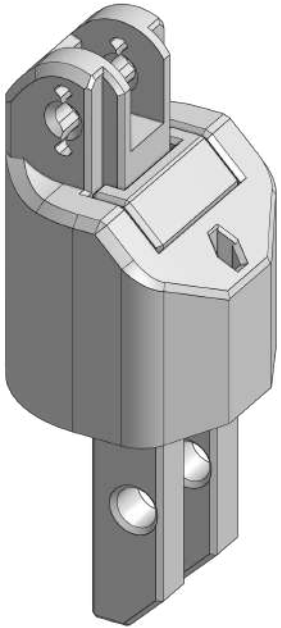
Please note: it may happen that the fingertip can still be turned slightly after assembly.

Step 3a

1

Insert **D06** through the shown spot in **D07**.

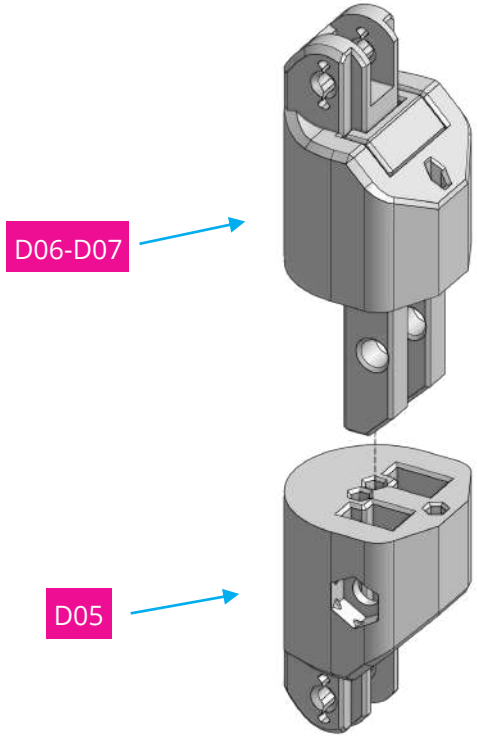


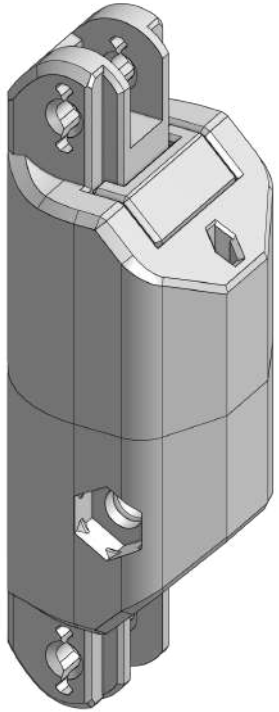


Step 3b

1

Insert the assembly from step 3a to **D05**.

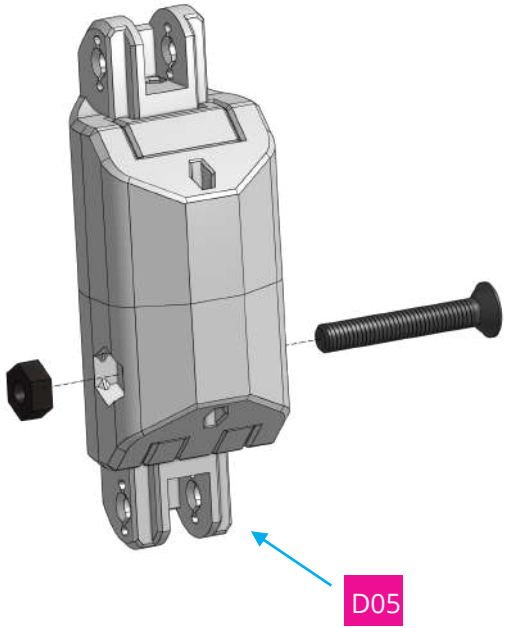


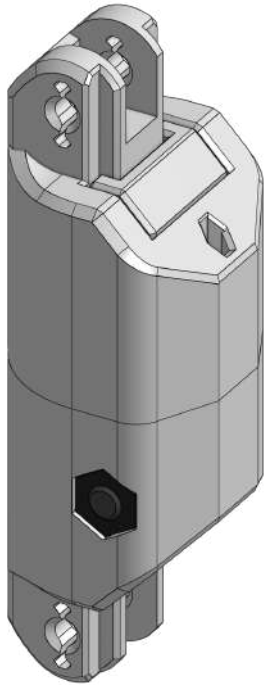


Step 3c

1 1x 1x

Place **1 x nut** through the shown spot in **D05** and fasten the parts using **1 x 20mm screw**.

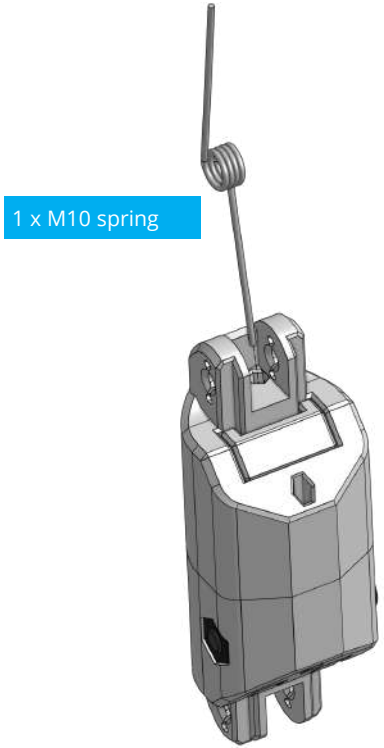


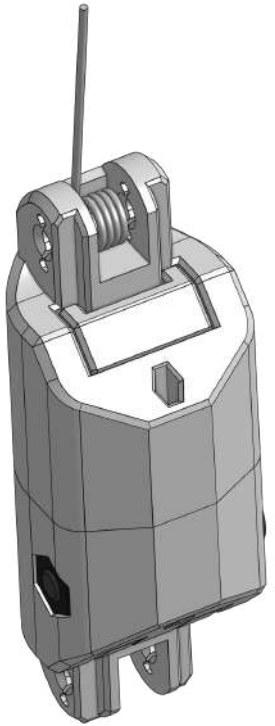


Step 4a

1 1x

Place **1 x M10 spring** through the shown spot in previous assembly from step 3c.

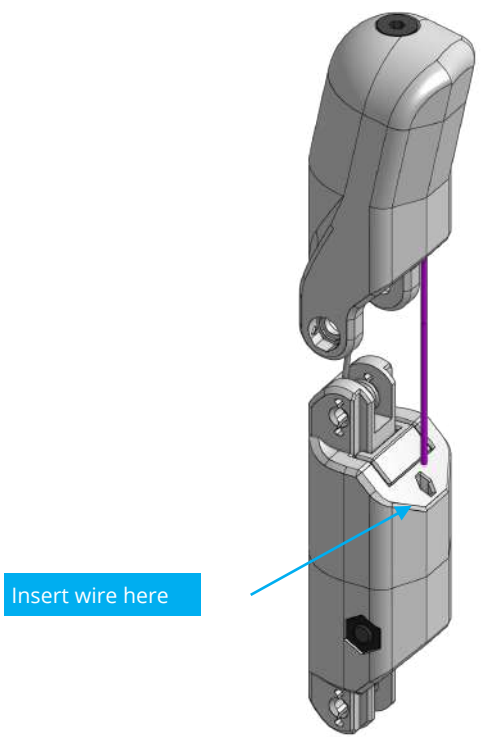


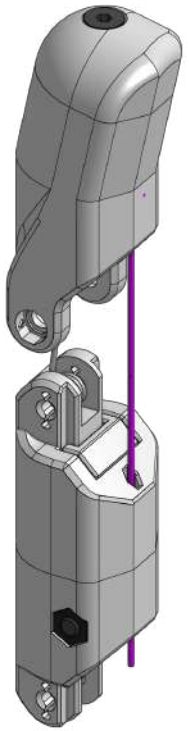


Step 4b

1

Insert the fluorcarbon string coming out of **D08** through the shown hole in assembly from step 3c.



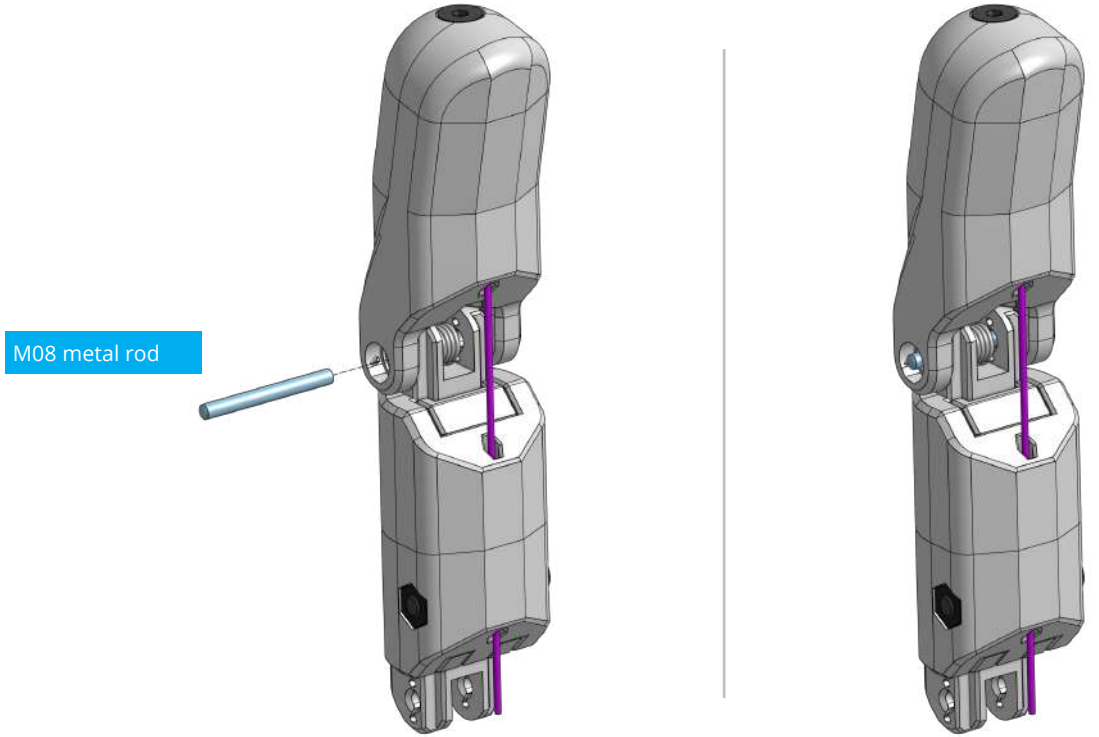


Now we can start to connect both assemblies.

Step 4c

1 1x

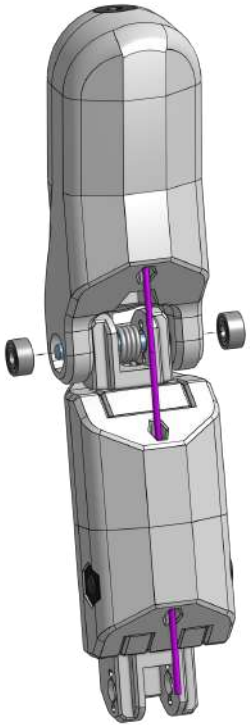
Use **1 x M08 metal rod** to connect both assemblies.

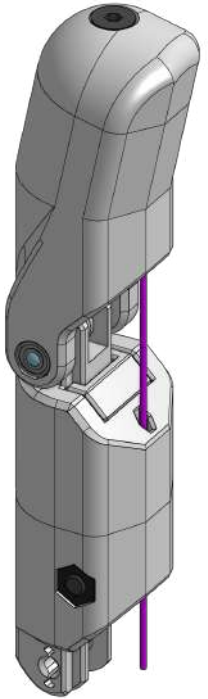


Step 4d

1 2x

Insert **2 x M01 ball bearings** through the shown spots in **D08.**



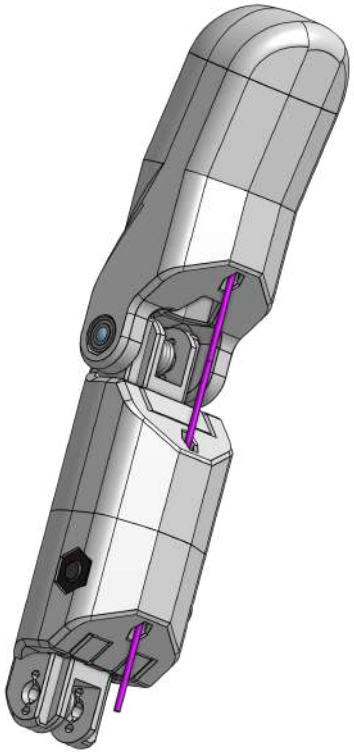


Use a small hammer to push the ballbearings onto the ends of the metal rod.

Congratulations

You did a great job, pib´s finger is assembled!

Repeat this tutorial 4 times and you will have all five finger of pib´s hand.



Do you need support?

Or do you need our pib.Box with all non-printable parts?

Or maybe you have some new ideas and improvements?

Please contact us.

team@pib.rocks
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