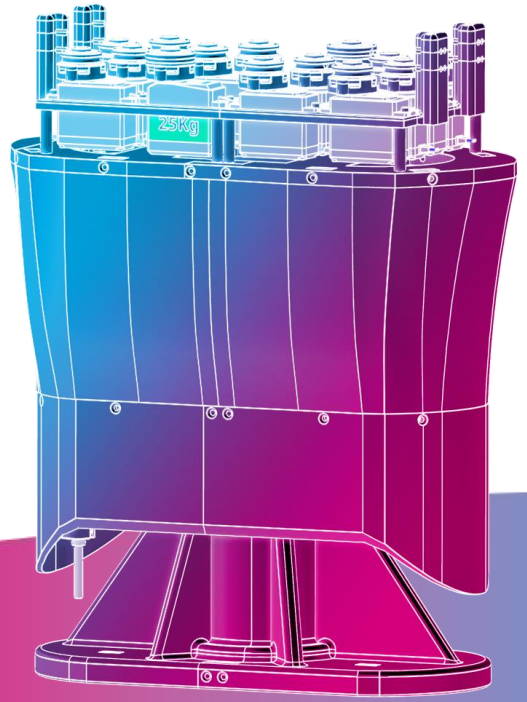
How to build your robot

www.pib.rocks/build

assembly instructions for:

Upper body - ribcage



You
Print
Build
Develop

your own robot!

Printable parts

Pib´s upper body (ripcage) consists of **15 different printable parts** and is assembled in **11 steps.** We suggest to assemble the upper body more to the end of your construction, as the upper body connects everything together and houses the majority of the electronical parts.

In order to construct the upper body, you will need to print the parts as seen in the table.

Please note: For better readability we use the abbreviations in the tutorial: B03 instead of B03-Ripcage_middle_left.

Printable parts
B03-Ripcage_middle_left
B04-Ripcage_middle_right
B05-Ripcage_helper_left
B06-Ripcage_helper_right
B08-Electronics_back
3 x **B12**-Electronics_hinge
4 x **B16**-Servo_scaffold_leg
B17-Ripcage_middle_right_opering
B19-Flat_stand_right
B20-Flat_stand_left

Non-printable parts

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

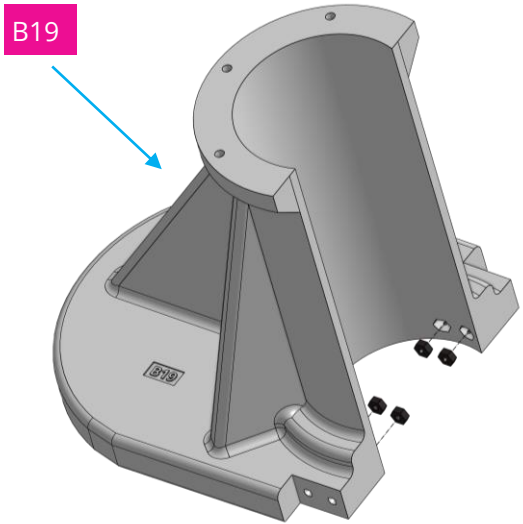
If you do not have it yet, you can buy in our shop .

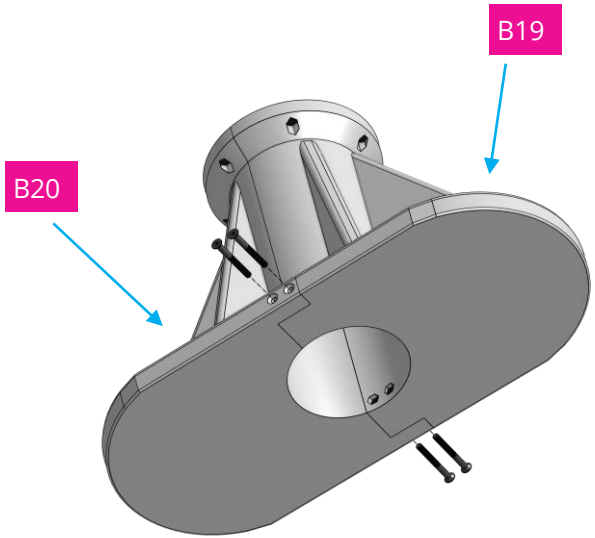
Non-printable parts - Electronics
1 x **E13-**SPL-82
1 x **E14**-Power_Supply-cable

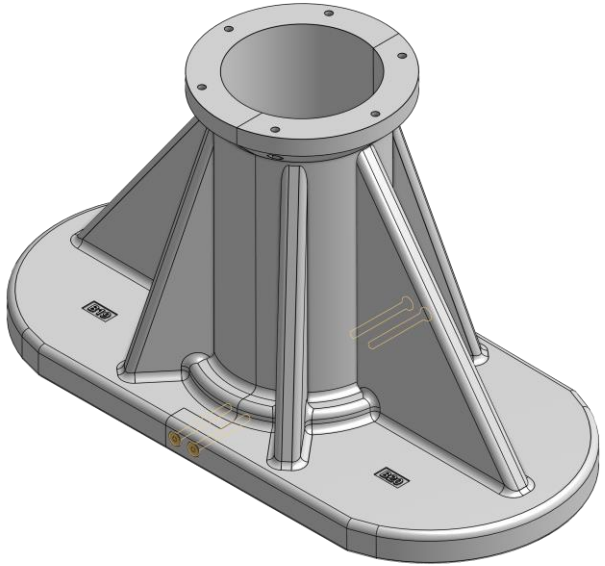
Non-printable parts
42 x **S01** M3 nuts
4 x **S04** M3 10 mm screw
10 x **S06** M3 16 mm screws
6 x **S08** M3 20 mm screws
6 x **S09** M3 22 mm screws
4 x **S10** M3 25 mm screws
8 x **S11** M3 30 mm screws
4 x **S13** M3 40 mm screws
3 x **M08** 20 mm metal rods

Step 1

Place 4 x nuts in shown spots in B19 and B20 and use 4 x 30mm screws to fix them.

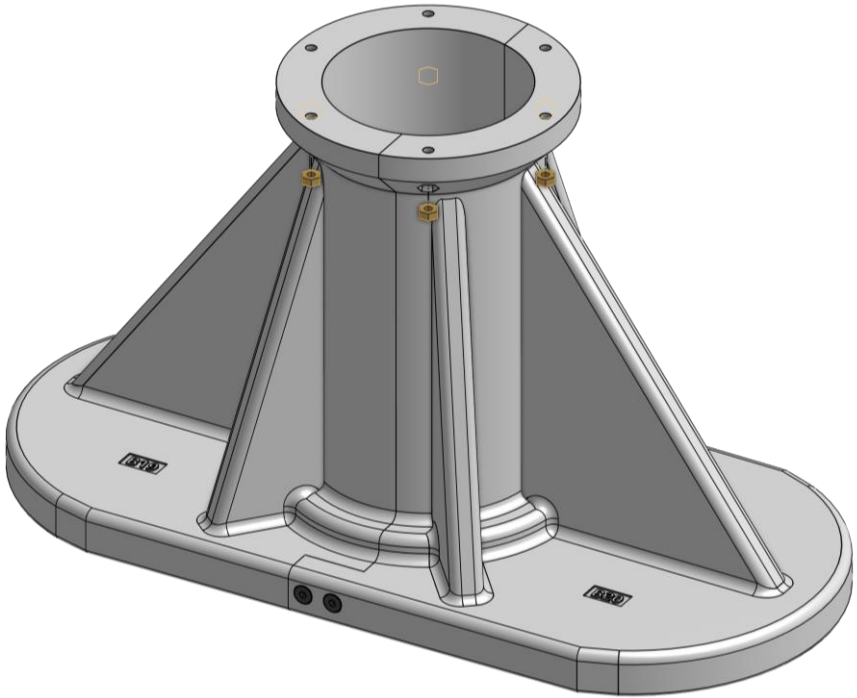






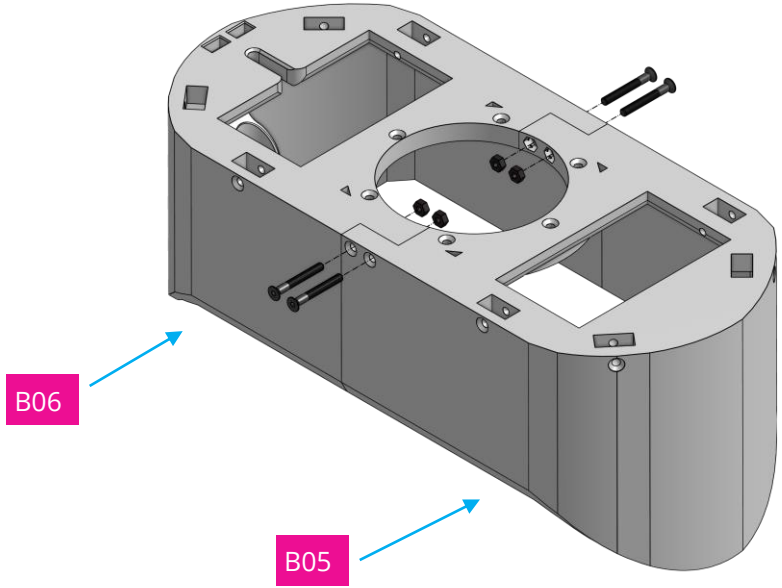
Step 2

Place 6 x nuts in shown spots in B19 and B20.



Step 3

Use 4 x nuts and 4 x 25mm screws to connect B05 and B06.



Step 4a

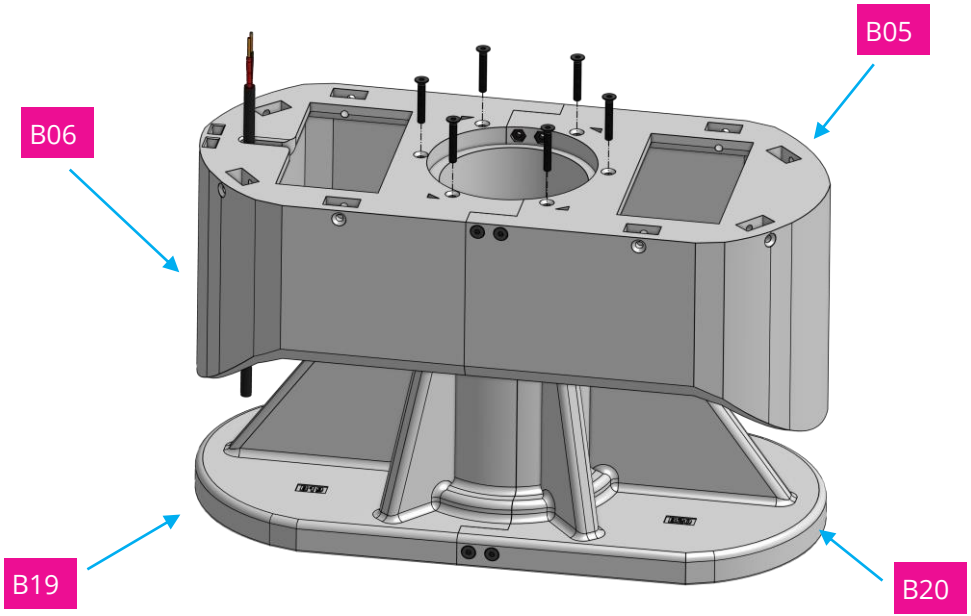
Cut the output barrel of the power supply E14 as shown in the pictures.

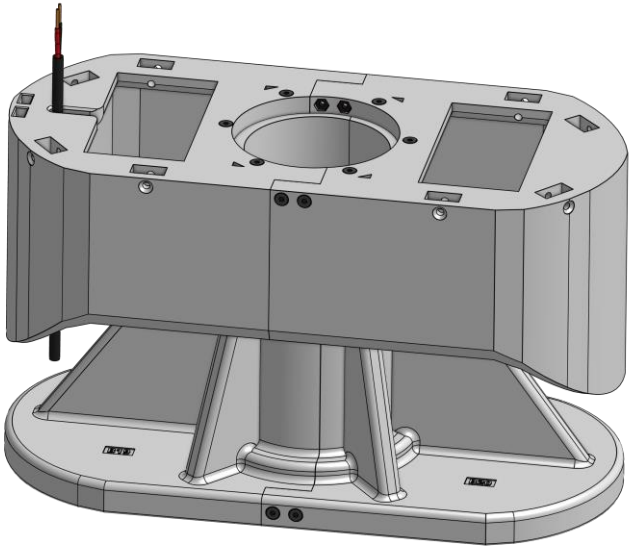
Step 4b

Place the output wire in the shown spot in B06.

Step 5

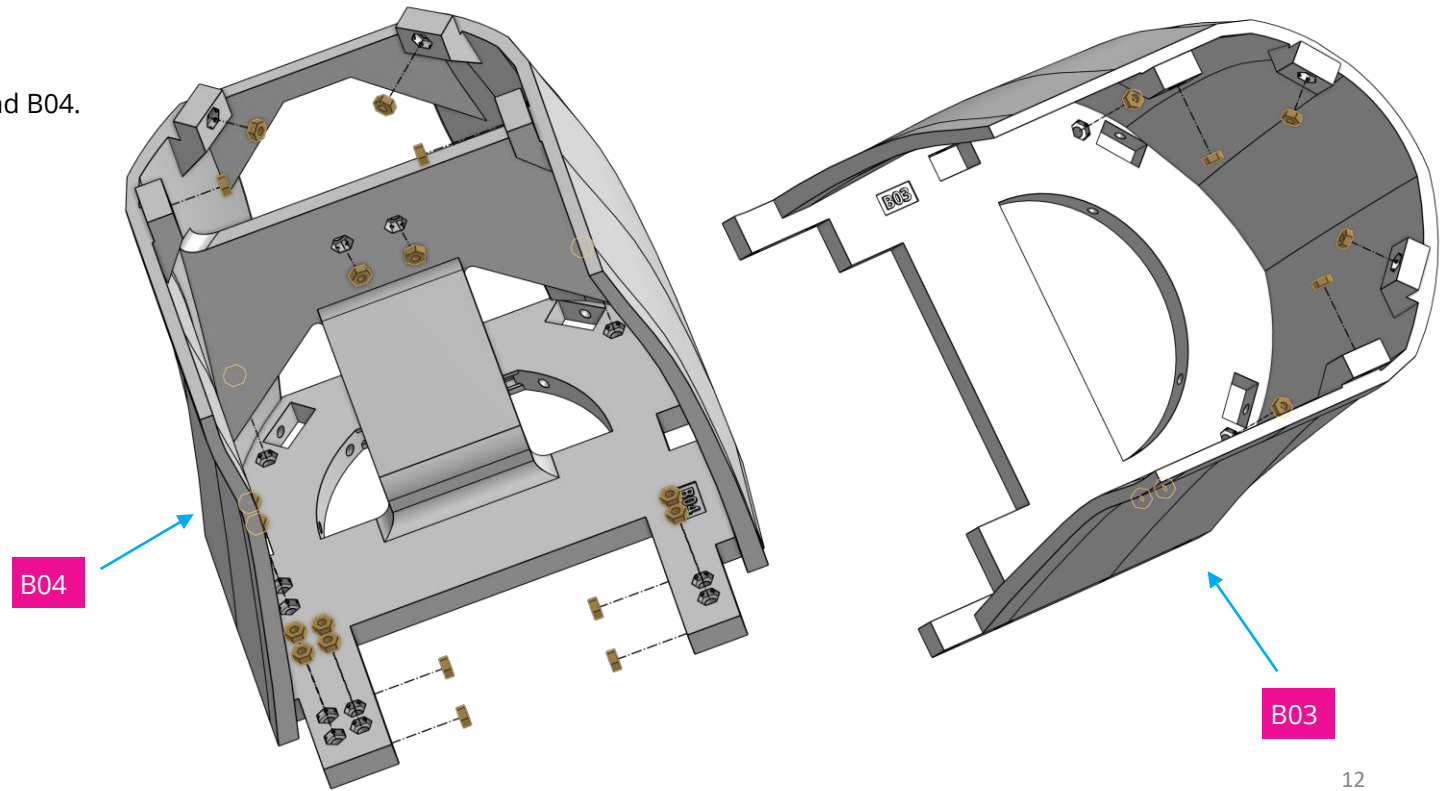
Connnect the assembly from step 2 to the assembly from step 4 using 6 x 20mm screws





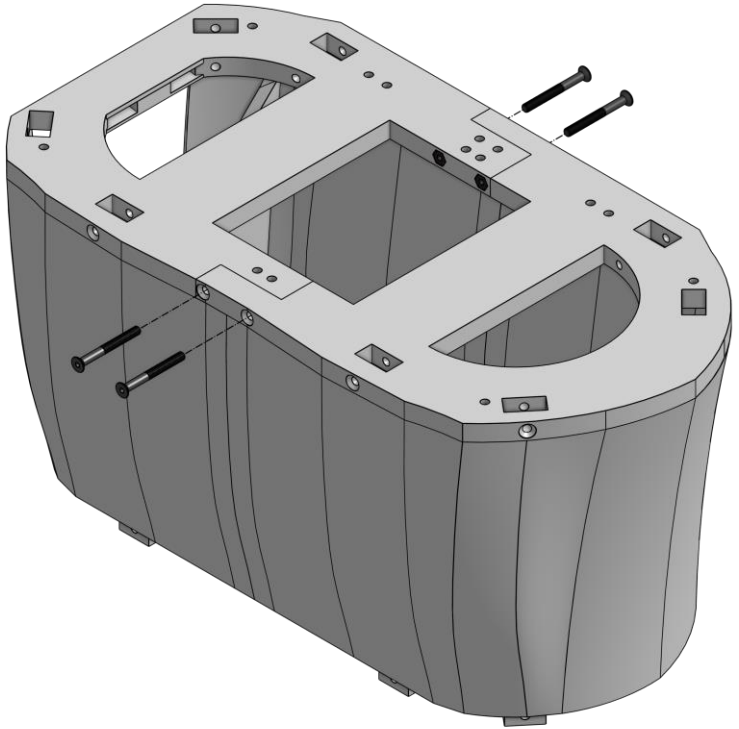
Step 6a

Place 28 x nuts in B03 and B04.



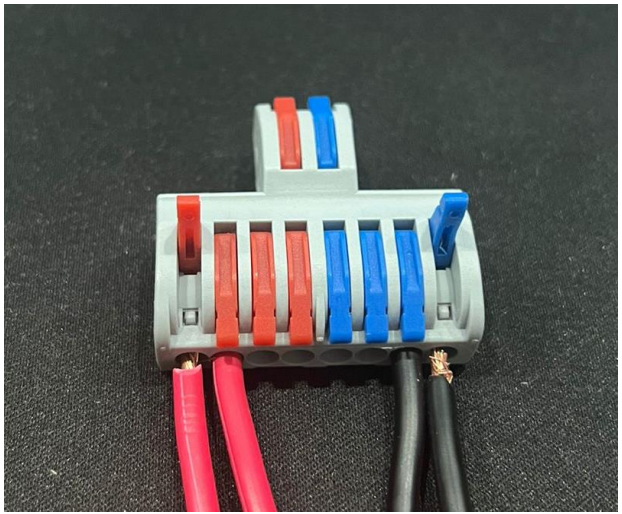
Step 6b

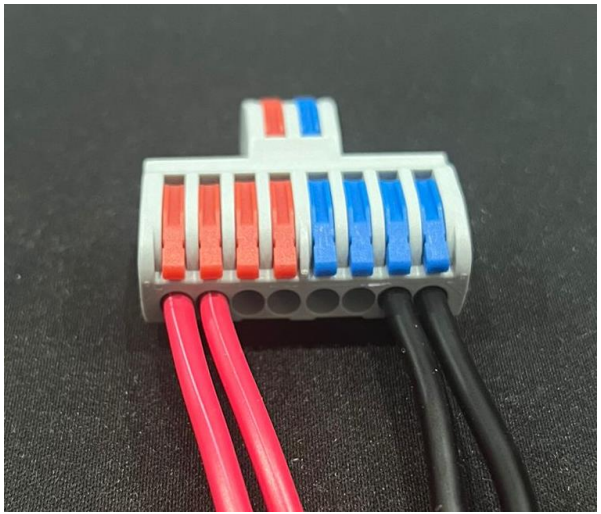
Use 4 x 30mm screws to connect them.



Step 7a

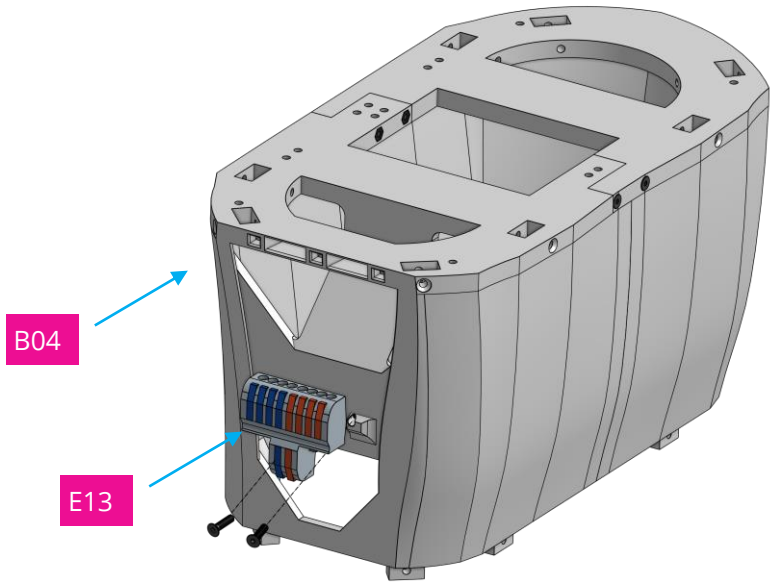
Pull the red and blue switches in E13, insert the wires for bricklet power from „Hand to motors tutorial“ into E13 like shown in the pictures and close them.

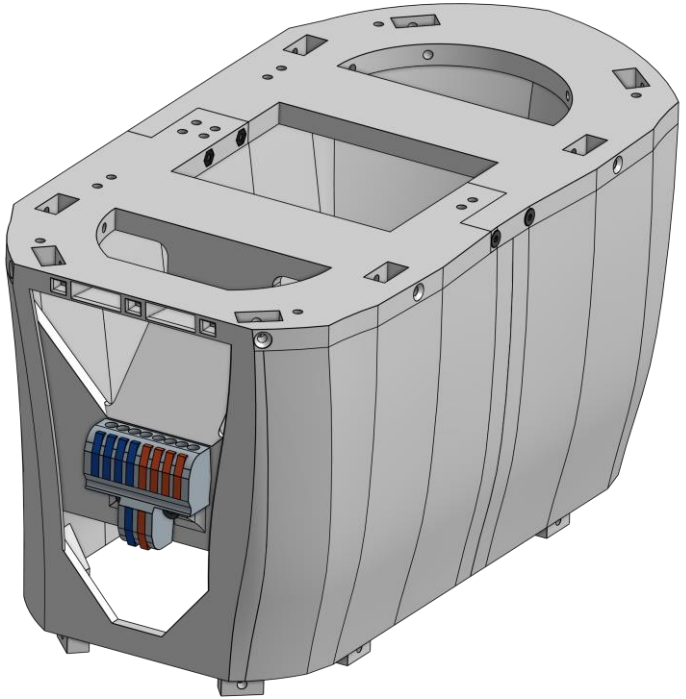




Step 7b

Use 2 x 16mm screws to fix E13 to B04.

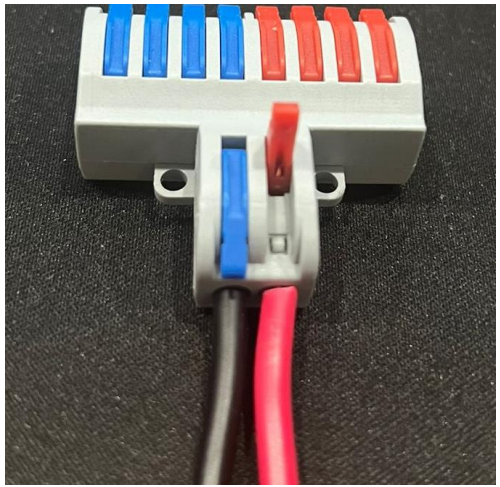


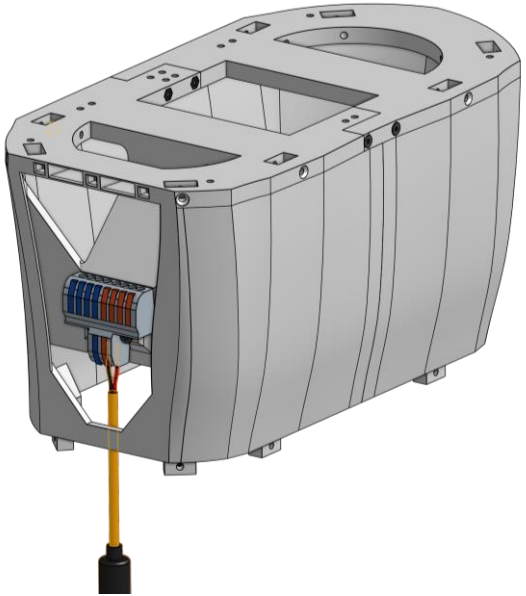


Step 7c

Strip the ends of powersupply output wire from step 4 and ensure the inside copper windings are naked.

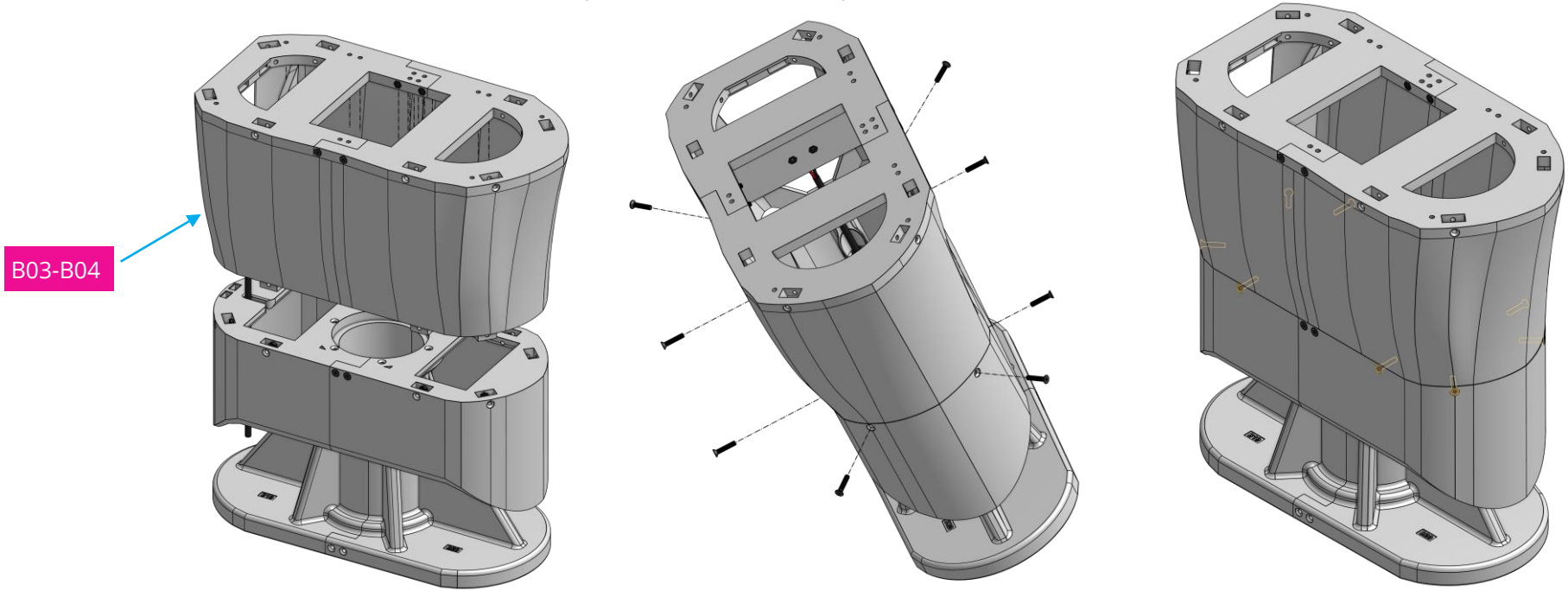
Pull the red and blue switches in E13, insert wires and then close them.





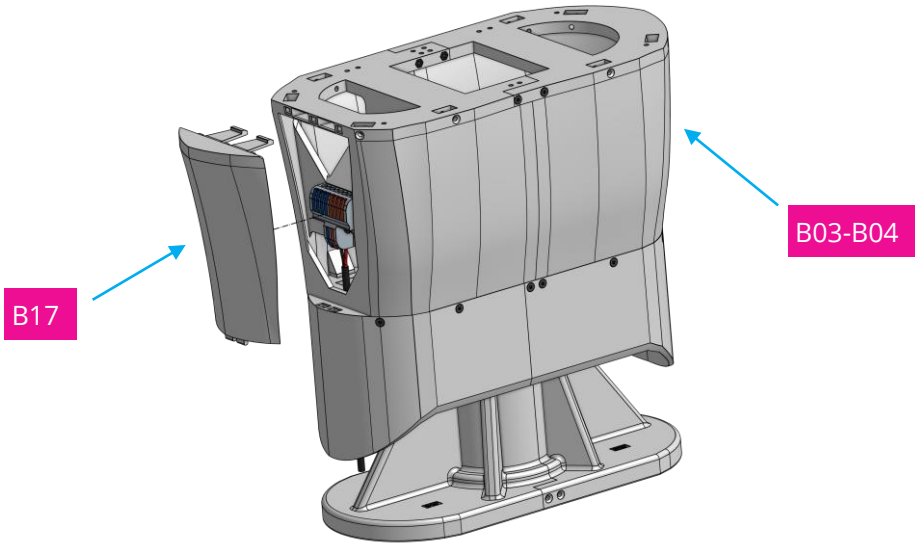
Step 8

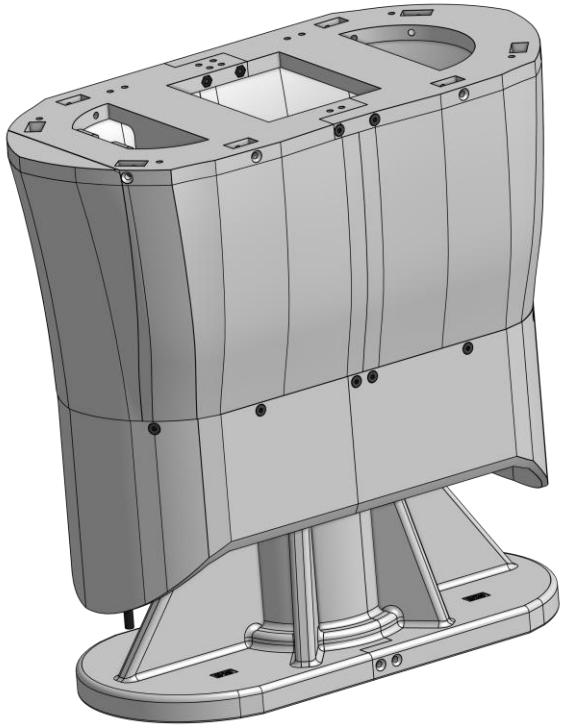
Use 8 x 16mm screws to fix the B03-B04 assembly to the former assembly.



Step 9

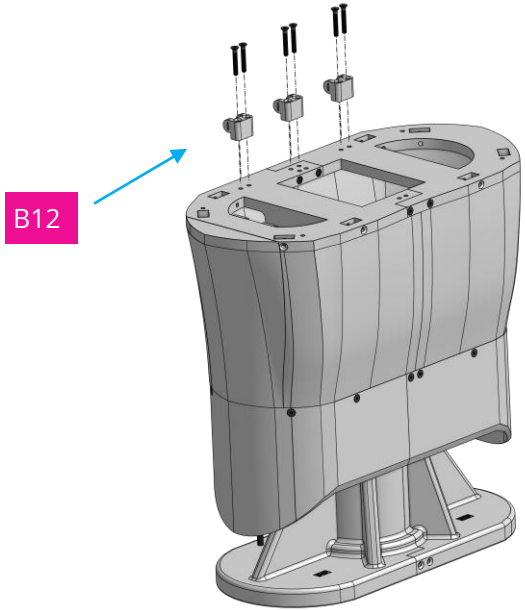
Enclose B04 with B17 (No screws needed due to snap fit mechanism).

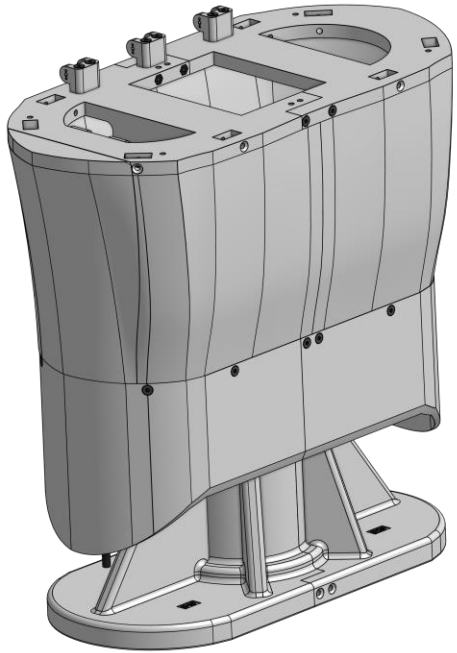




Step 10a

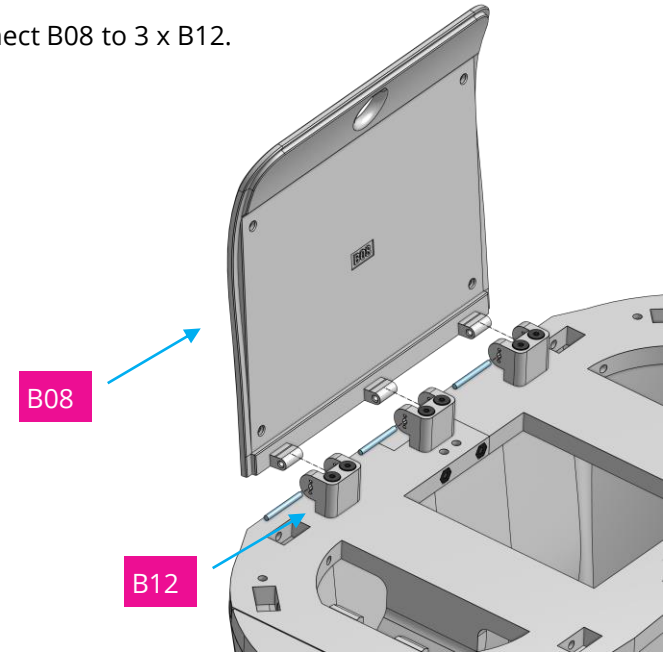
Connect 3 x B12 parts to ribcage assembly using 6 x 22mm screws.

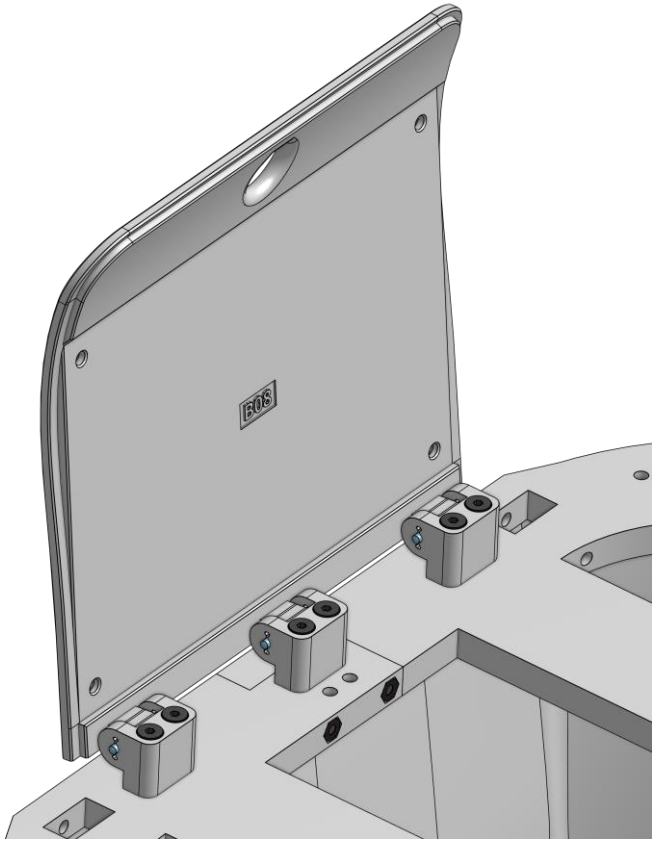




Step 10b

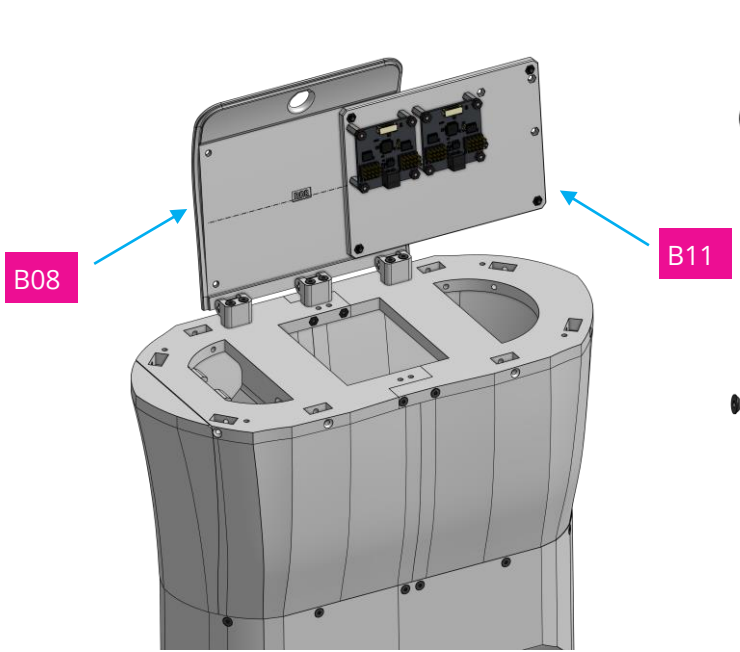
Use 3 x M08 rods to connect B08 to 3 x B12.

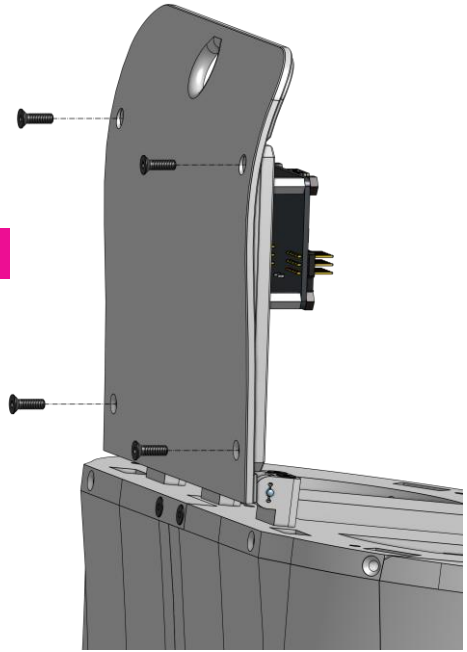


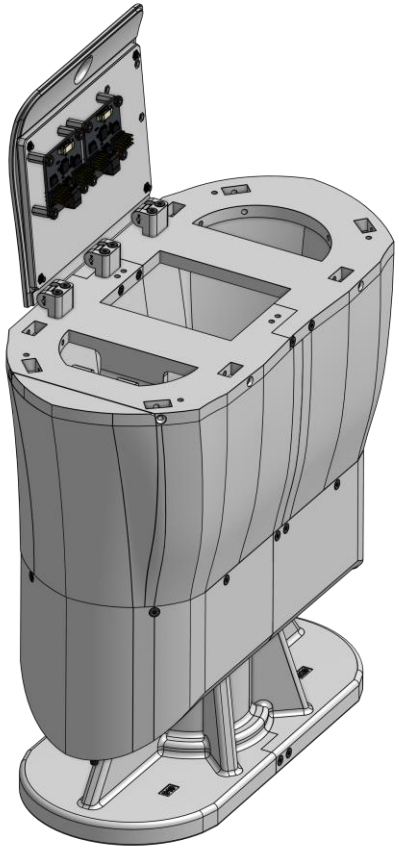


Step 10c

Connect the electronics base B11 assembled in „hand with motor tutorial“ to B08 using 4 x 10mm screws.

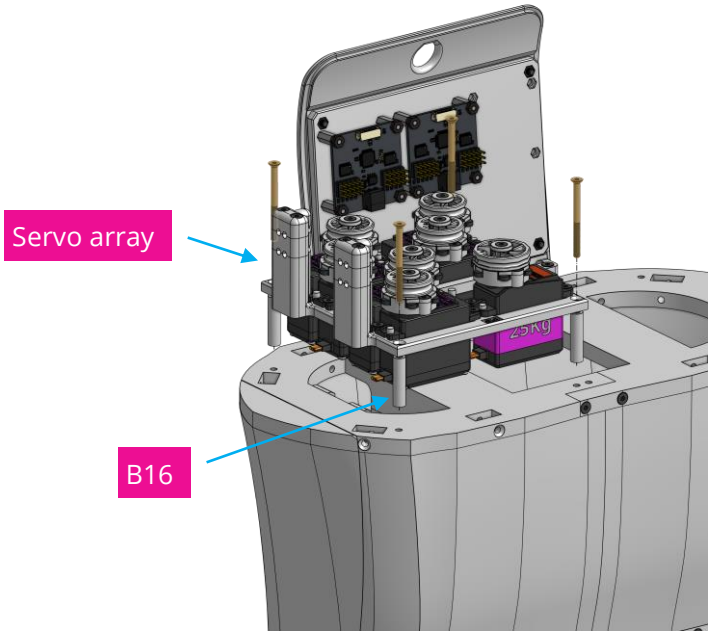


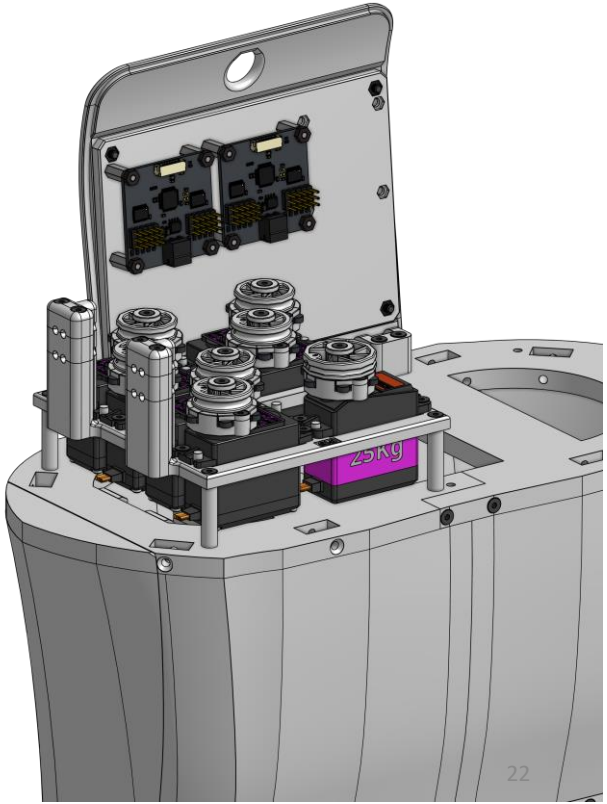




Step 11

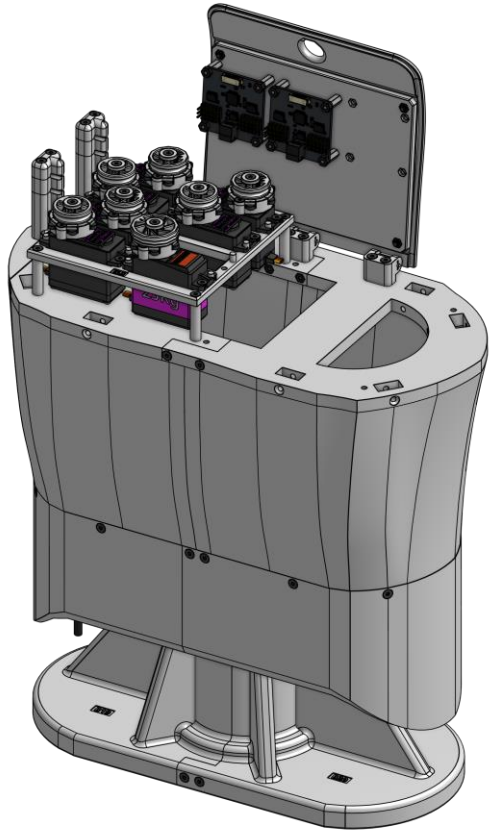
Use 4 x B16s and 4 x 40 mm screws to fix servo array from „Hand and motor tutorial“.





Congratulations

You did a great job, pib´s upper body (ripcage) is assembled!



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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