How to build your robot

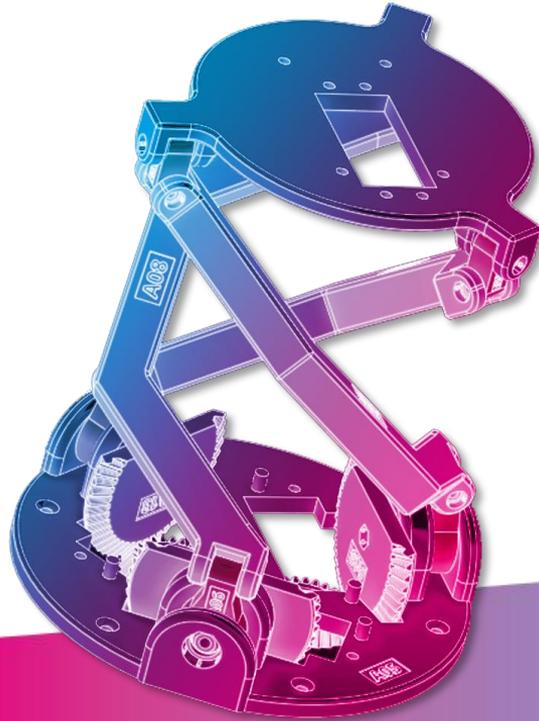www.pib.rocks/build

assembly instructions for:
NECK

Variant: ultimate

You
Print
Build
Develop

your own robot!

Neck variations of pib

Pib's neck has 3 variations:

- Rookie: simple with 1 degree of freedom (left and right movement)

- Pro: intermediate with 2 degrees of freedom (up and down + left and right movement)

- and **ultimate: advanced with 3 degrees of freedom.**

This tutorial describes how to build the variant ultimate.

pib. assembly instructions for: *NECK.ultimate*
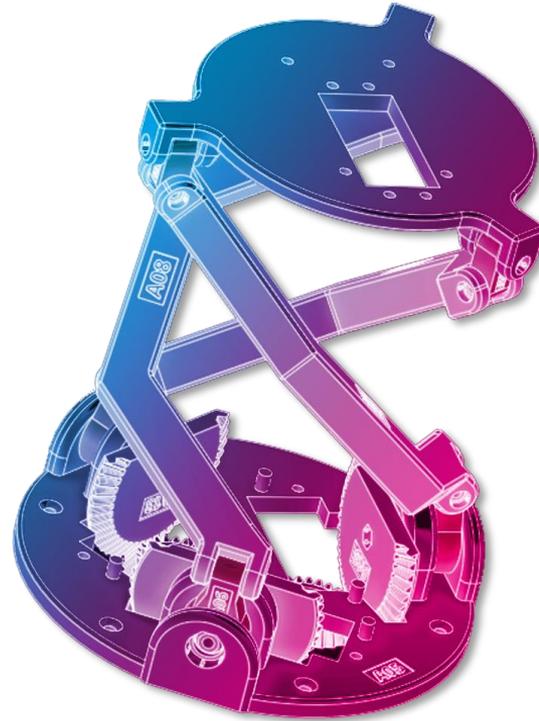
Printable parts

Pib´s neck consists of **20 printable parts** and is assembled in **11 steps.**

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

Please note: For better readability we use the abbreviations in the tutorial: A05 instead of A05-Neck_base.

Printable parts
A05-Neck_base
3 x **A06**-Neck_base_connector
3 x **A07**-Neck_servo_connector
3 x **A08**-Neck_arm
A09-Neck_head
3 x **A10**-Neck_head_connector
3 x **A12**-Neck_driving_bevel_gear
3 x **A13**-Neck_driven_bevel_gear

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

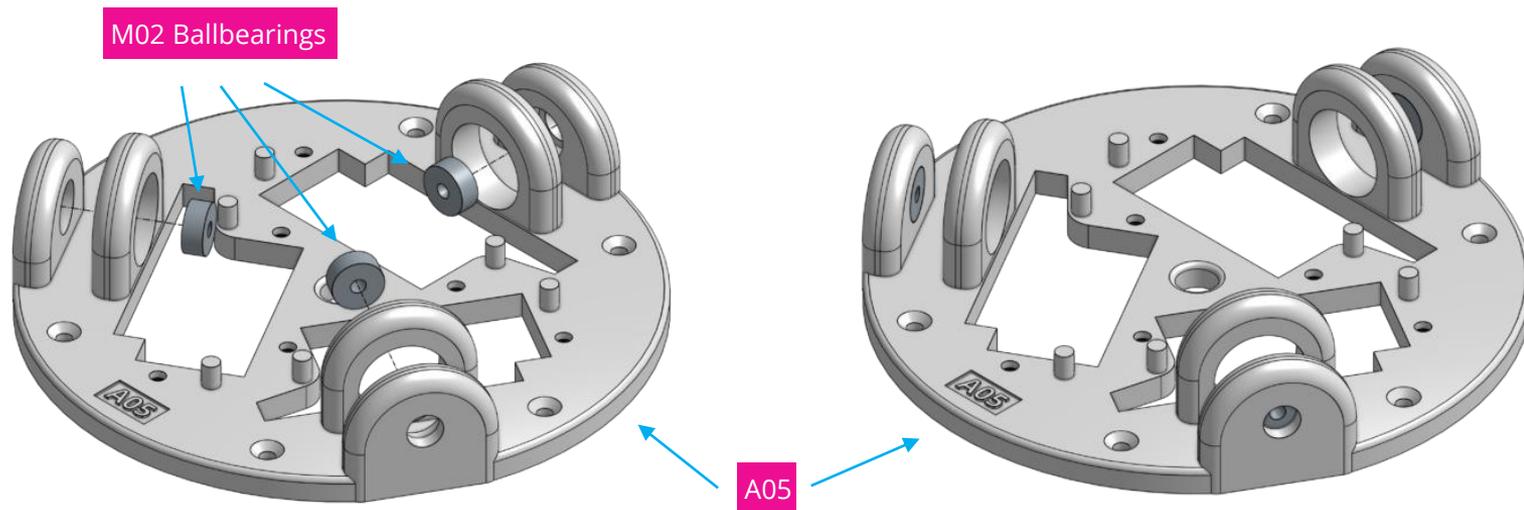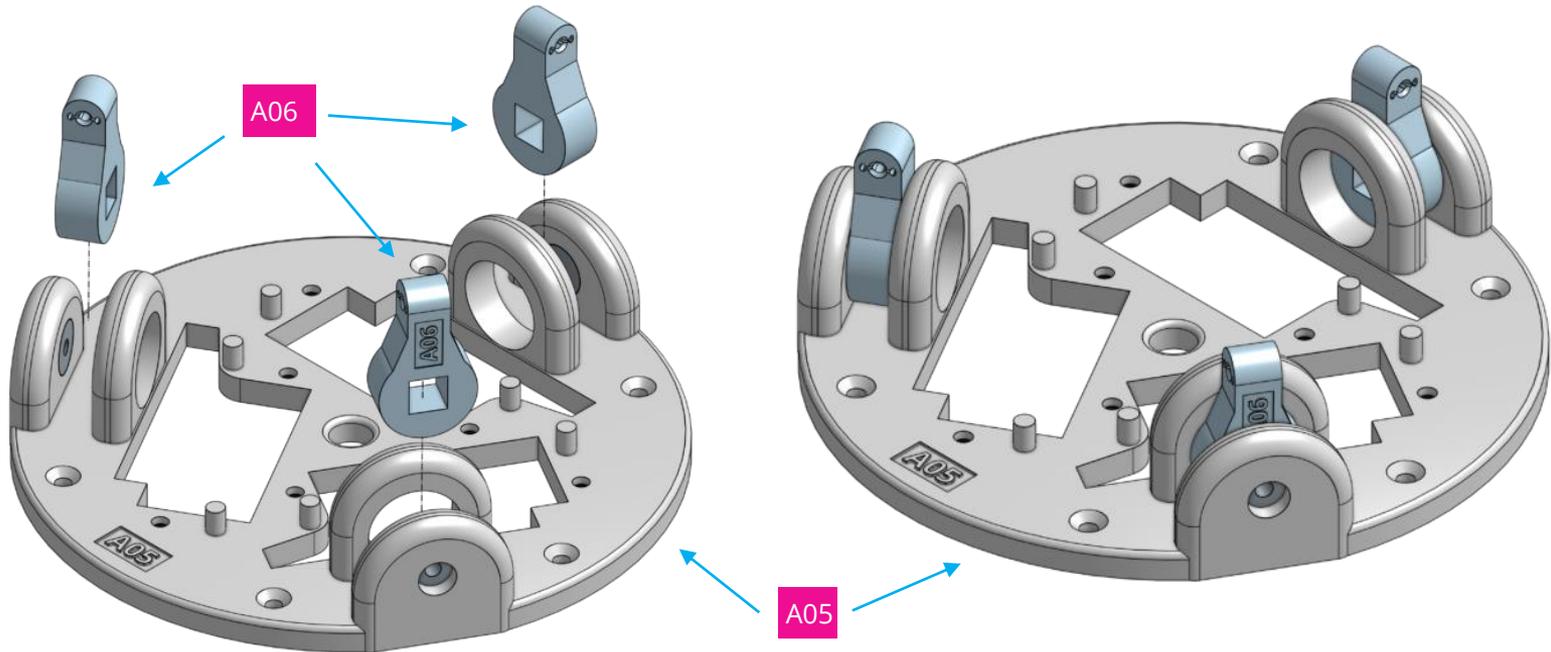| Non-printable parts |
| --- |
| 17 x **S01** M3 nuts |
| 6 x **S03** M3 8 mm screws |
| 7 x **S05** M3 12 mm screws |
| 4 x **S11** M3 30 mm screws |
| 9 x **M08** metal rods |
| 4 x **E07** MG996R servo |
| 18 x **M01** Ballbearings |
| 3 x **M02** Ballbearings |
| 3 x **M03** Ballbearings |

Step 1

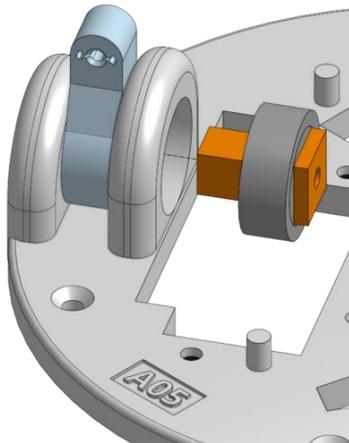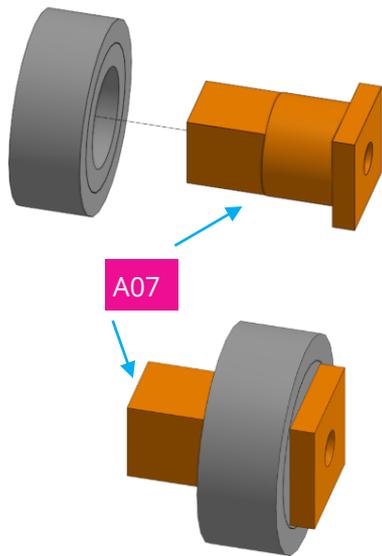Insert 3 x M02 Ballbearings into A05.

M02 Ballbearings

A05

Step 2a

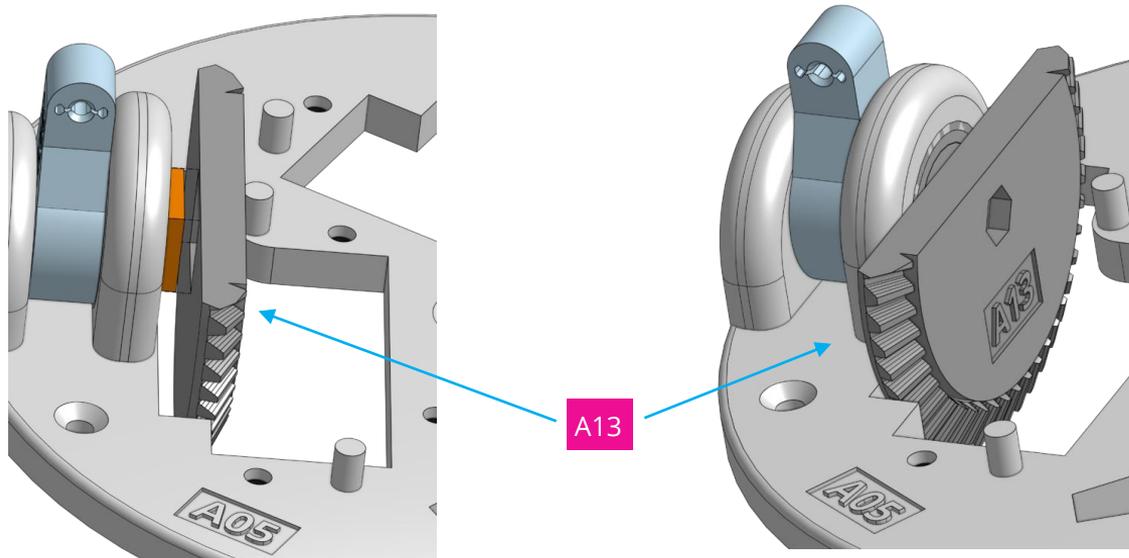Place 2 x A06 in the shown spots in A05.

Step 2b

Place A07 into M03 ballbearing and repeat this step twice more. Insert the assembled parts into the shown spots of A05-A06.
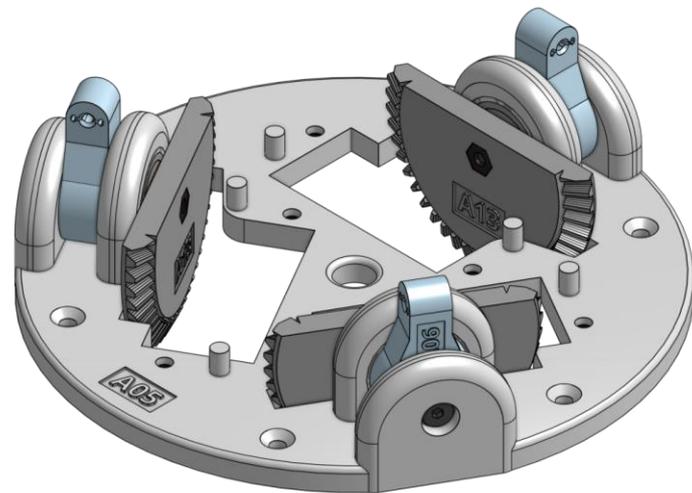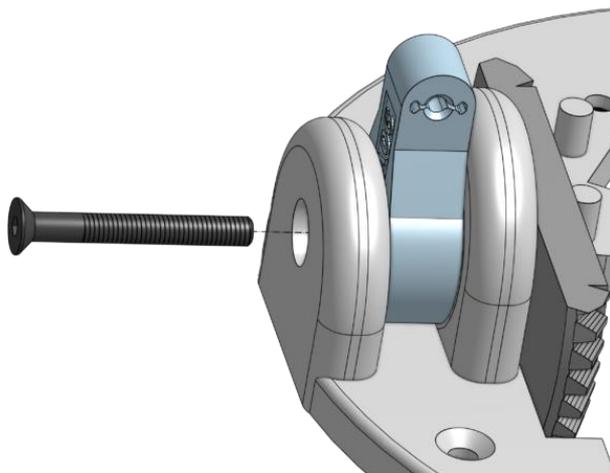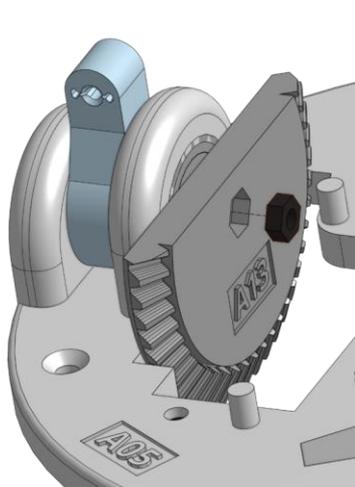

A07
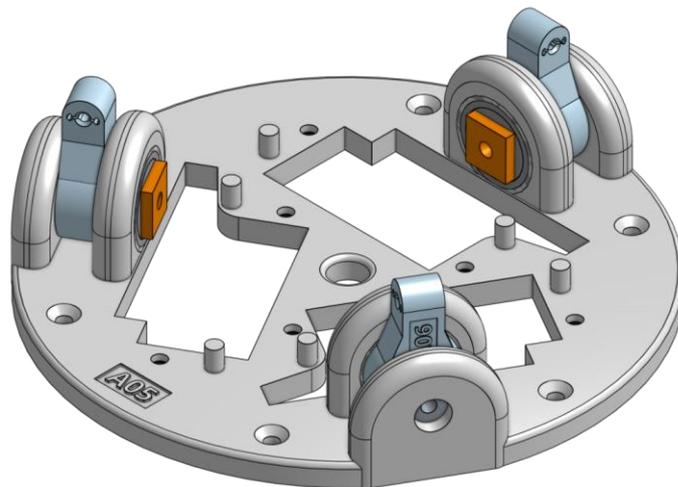
Step 3a

Connect A13 to A07 in the shown orientation using 1 x nut and 1 x 30 mm screw. Repeat this step two more times.
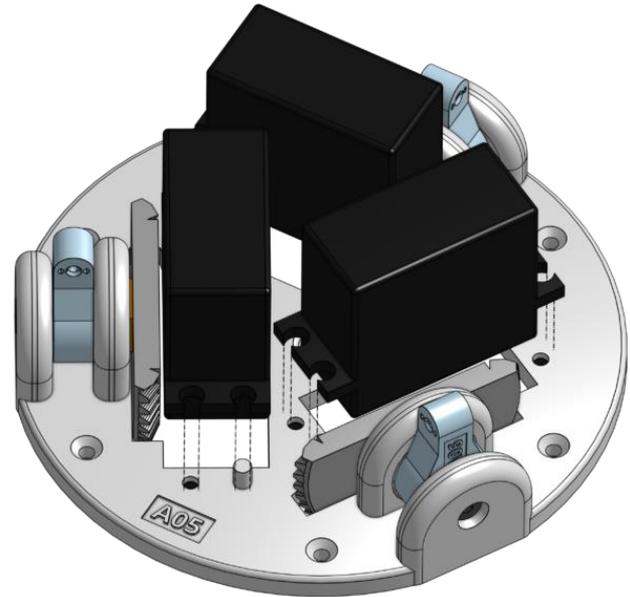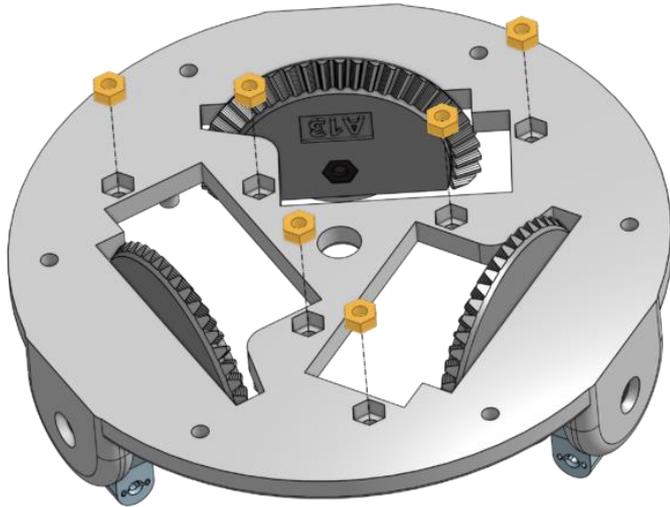

A13

Step 3b

Connect A13 to A07 in the shown orientation using 1 x nut and 1 x 30 mm screw. Repeat this step two more times.

Step 4a

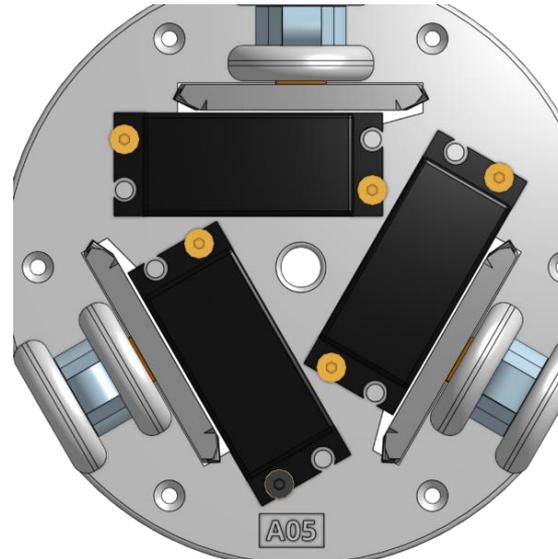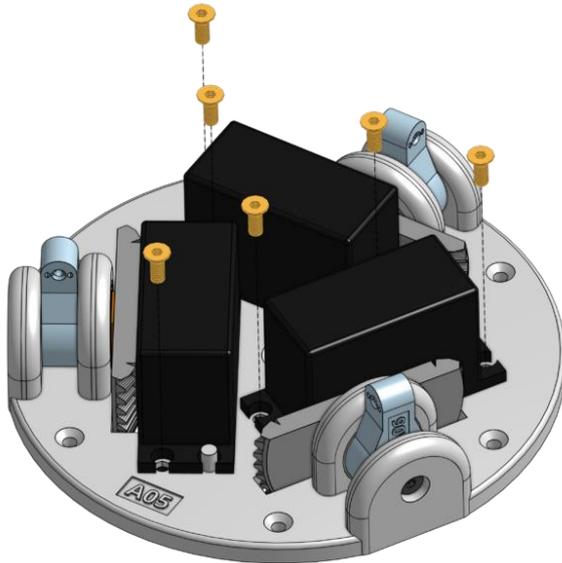Place 6 x nuts and 6 x E07 servos in the shown spots and fix them by using 6 x 8mm screws.
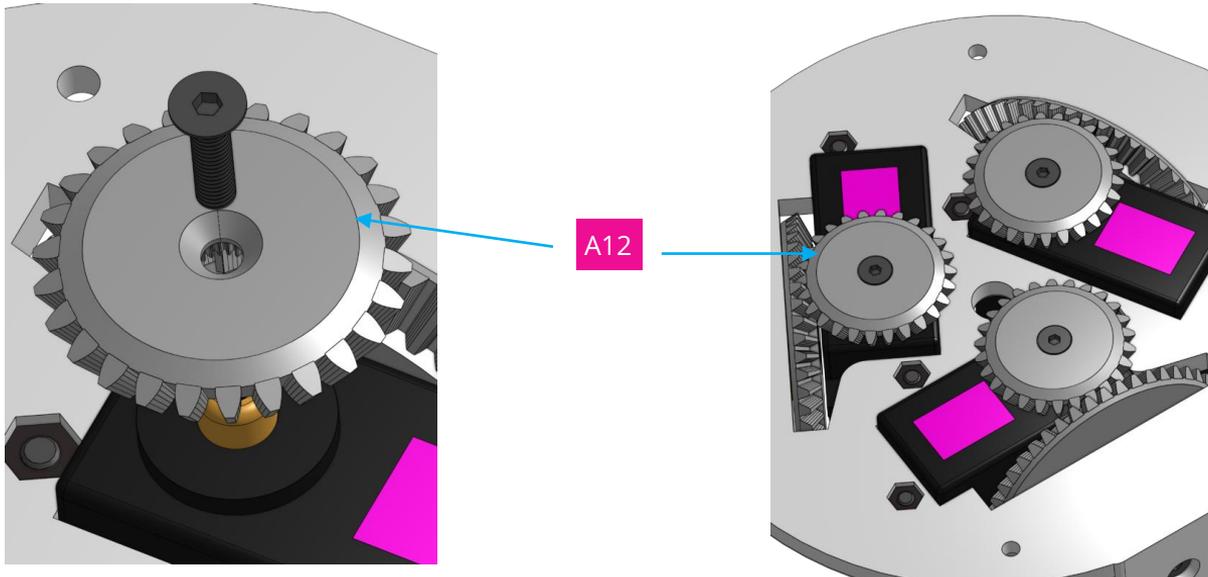
Step 4b

Place 6 x nuts and 6 x E07 servos in the shown spots and fix them by using 6 x 8mm screws.
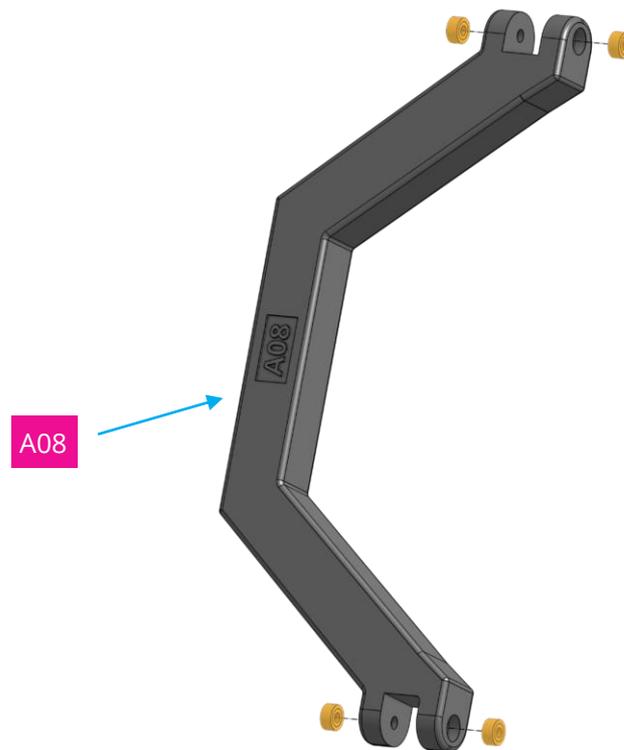
Step 5

Connect A12 to E07 servo using 1 x 12 mm screw while meshing the gears´ teeth together with smooth interaction. Repeat this step 2 more times.
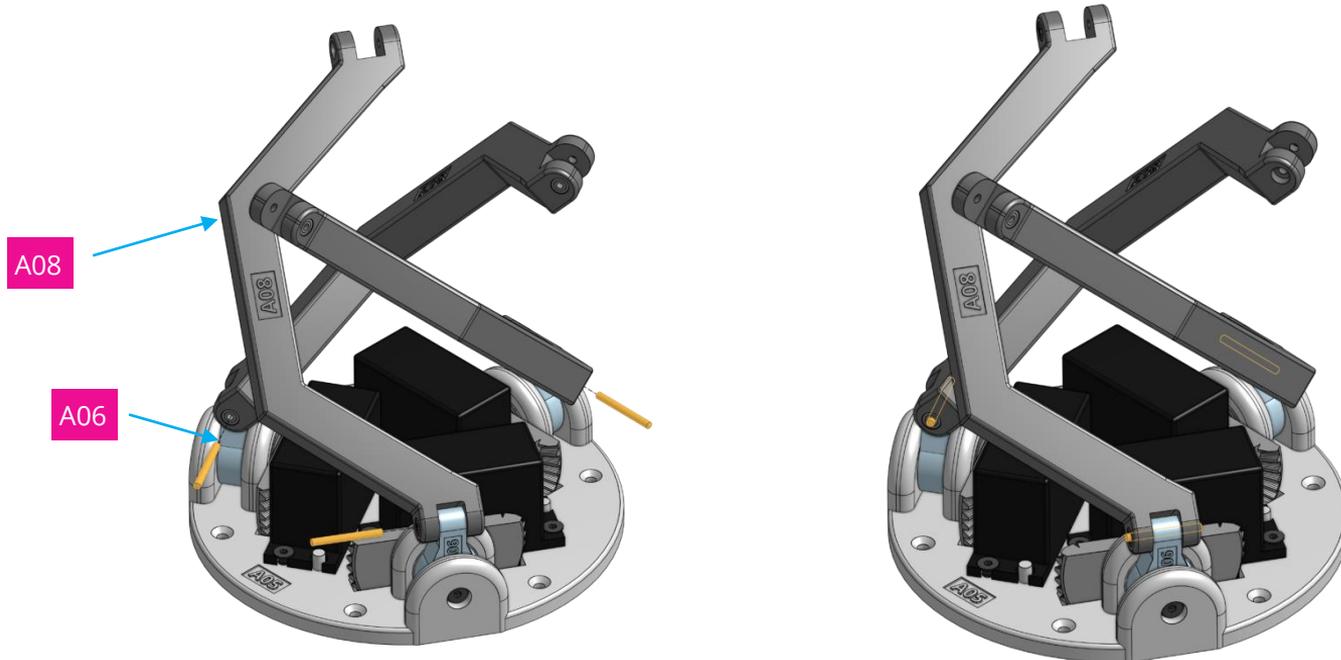

A12

Step 6

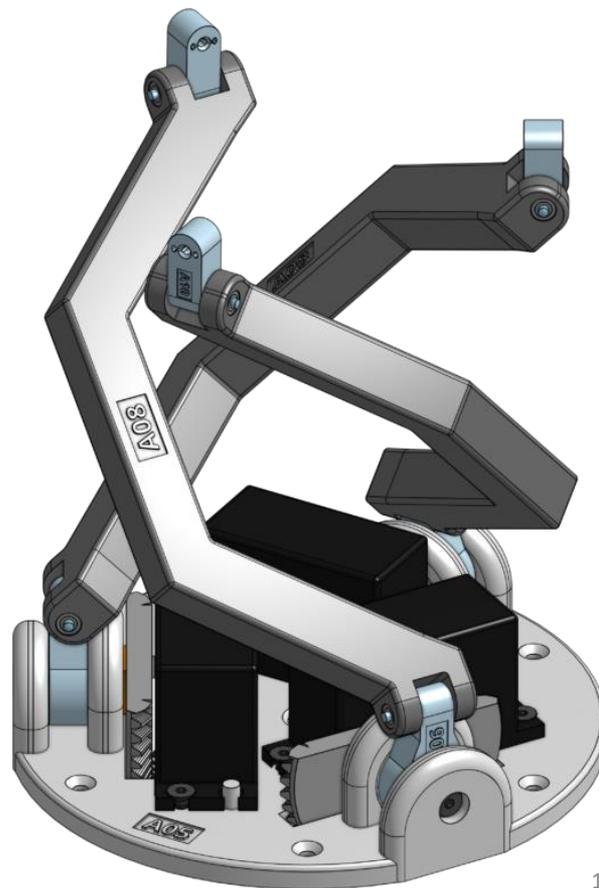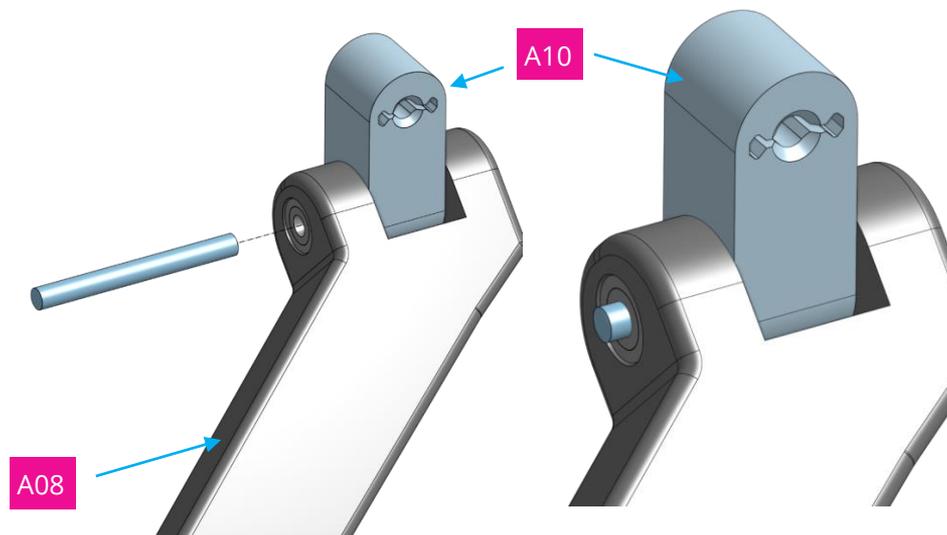Place 4 x M01 ballbearings in the shown spots in A08, and repeat this step 2 more times.

A08

Step 7

Connect the 3 x A08 to the 3 x A06 using 3 x metal rods while maintaining the shown orientation.
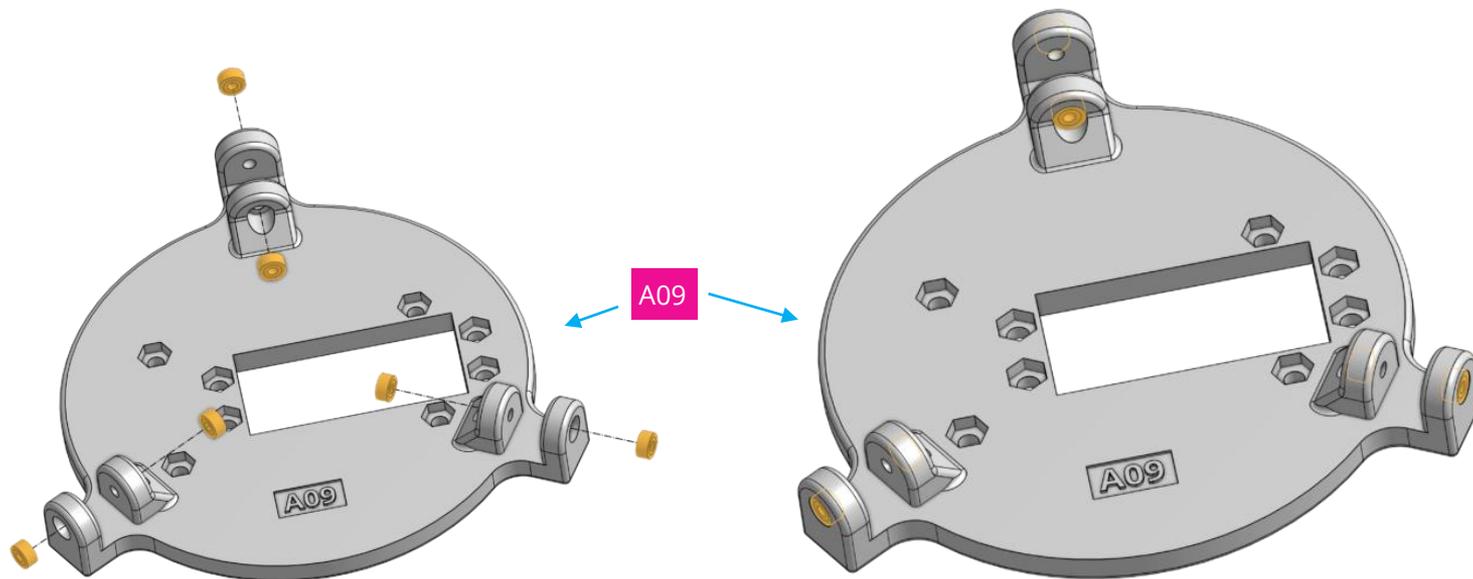

A08

A06

Step 8

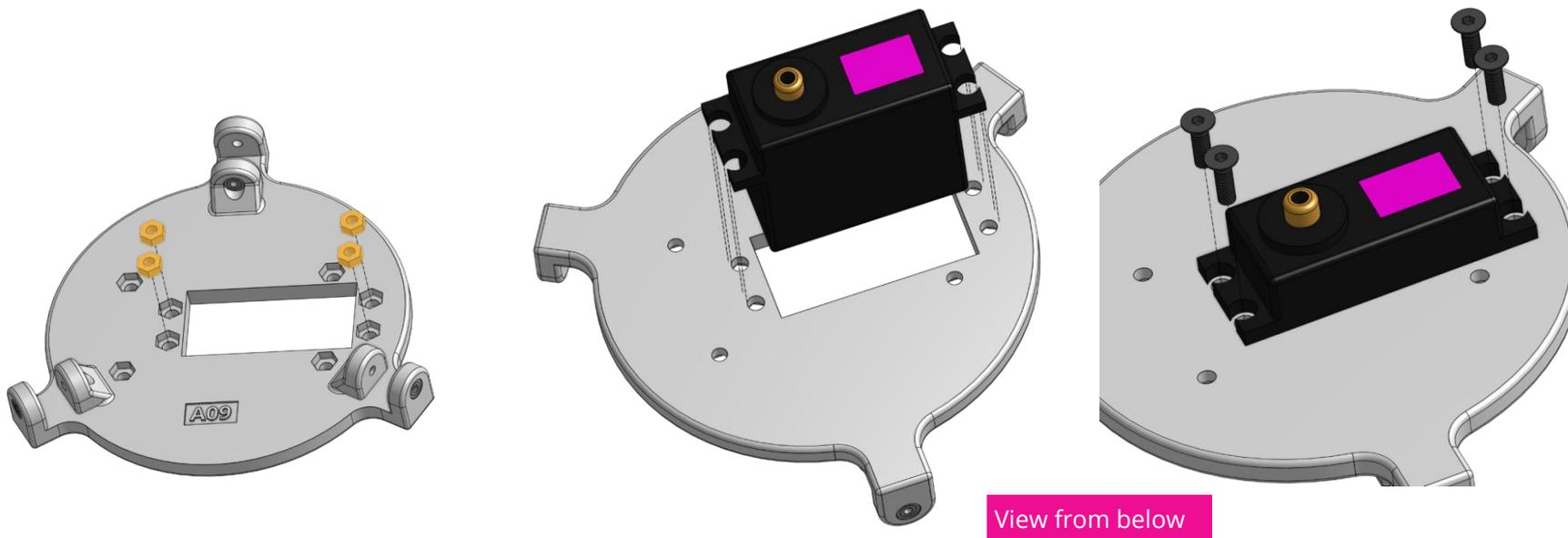Connect 3 x A10 to the tops of A08 using 3 x metal rods.

Step 9

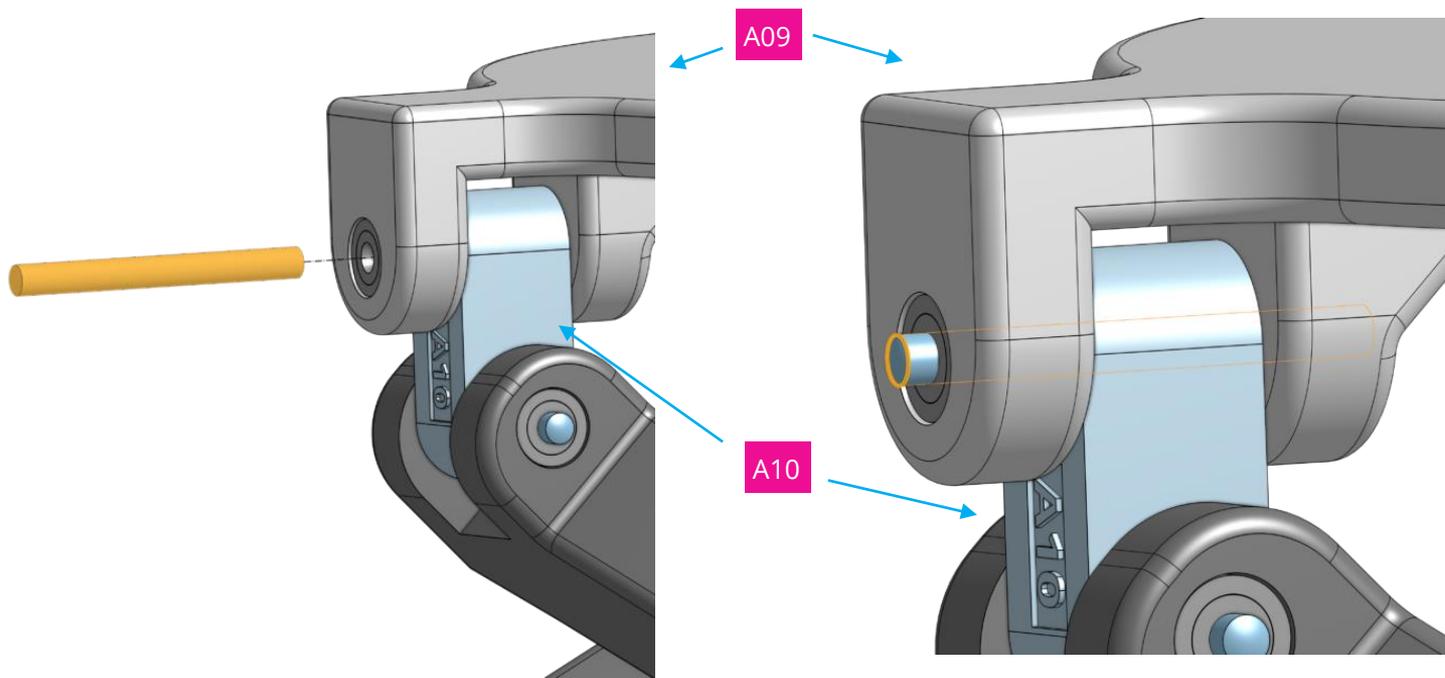Place 6 x M01 ballbearings in the shown spots in A09.

Step 10

Place 4 x nuts in A09 in the shown spots. Put an E07 servo from below and fix it with 4 x 12 mm screw on the bottom side.
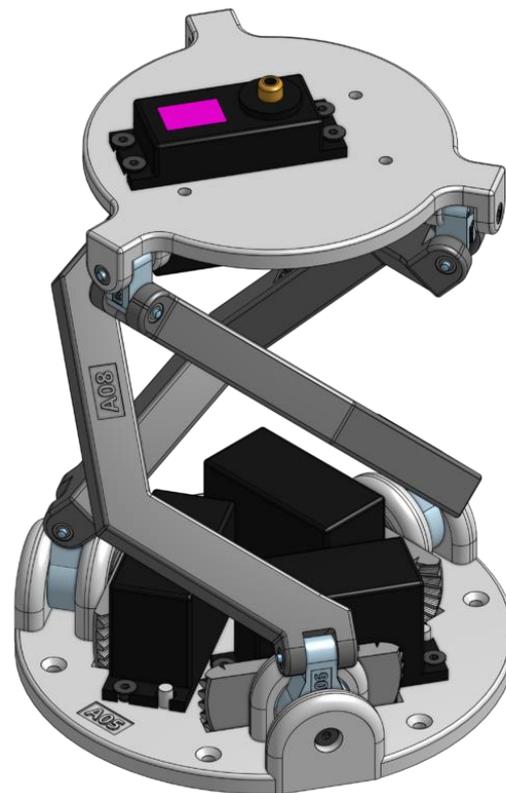

View from below

Step 11

Connect A09 to A10 using 3 x metal rods.

A09

A10

Congratulations

You did a great job, the neck 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
Send us an email.

discord.com/invite/GRdpyeDu7P
Join us on Discord.

shop.pib.rocks
Order non-printable parts for pib.