pib

How to build your robot

www.pib.rocks/build

assembly instructions for:
NECK

Version: pro

You
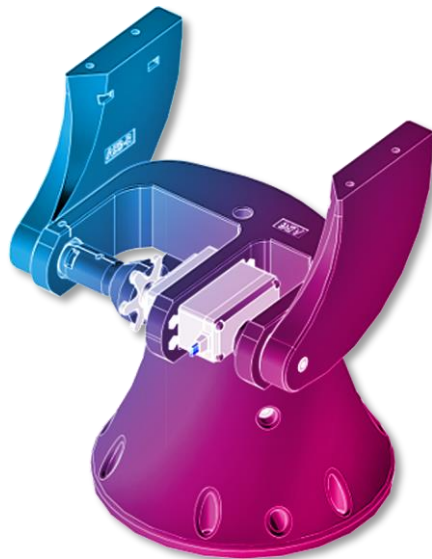**Print**
Build
Develop

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.

The default one is pro, the intermediate with 2 degrees of freedom. This tutorial describes how to build it.

Printable parts

Pib´s neck consists of **12 printable parts** and is assembled in **19 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: A50 instead of A50-Neck_housing.

Printable parts
A50-Neck_housing
A51-Bearing_holder_neck
A52-Motor_bracket_neck
A53-Vertical_shaft_neck
A54-Vertical_motor_connector_neck
A55-Cap_neck
A56-Top_part
A57-Horizontal_motor_connector_neck
A58-Horizontal_shaft_neck
A59-L-Side_arm_neck_left
A59-R-Side_arm_neck_right
A60_Horizontal_shaft_short_neck

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

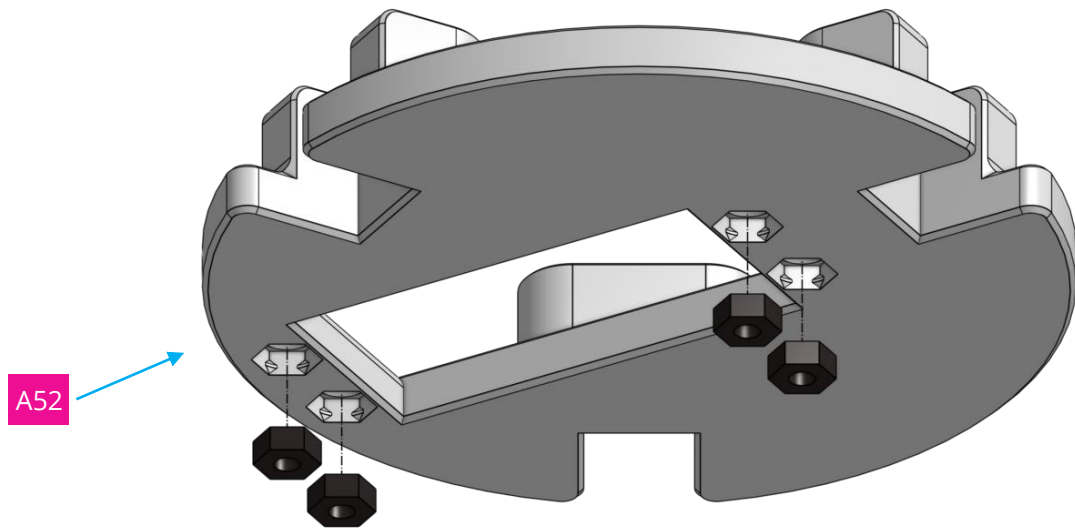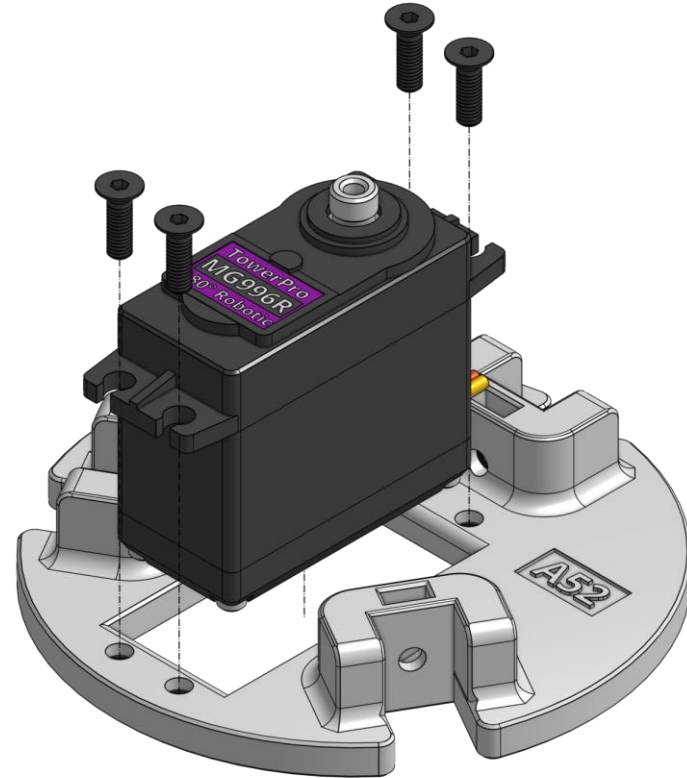| Non-printable parts |
| --- |
| 24 x **S01** M3 nuts |
| 8 x **S04** M3 10 mm screws |
| 20 x **S05** M3 12 mm screws |
| 2 x **S11** M3 30 mm screws |
| 1 x **S13** M3 40 mm screws |
| 4 x **M03** Ballbearings |
| 2 x **E07** MG996R servo |
| 2 x **M15** Nylon motor connector |

Step 1

Insert 4 x nuts in A50 in the shown spots.

A52

Step 2

Place one MG996R motor in A52 and use 4 x 10mm screws to fix it.

Step 3

Place 3 x nuts in the shown spots in A52.
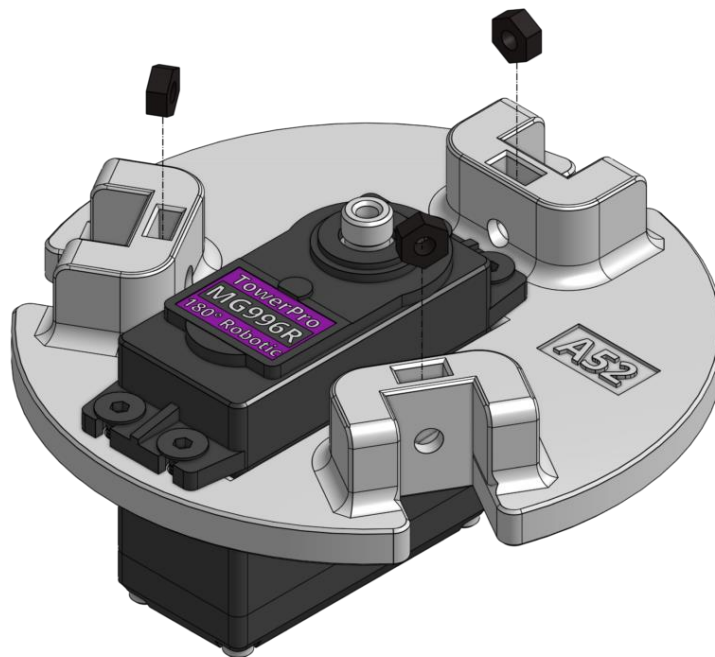
Step 4

Attach M15 to the motor, then place A54 on top and use 1 x 12mm screw to fix everything together.
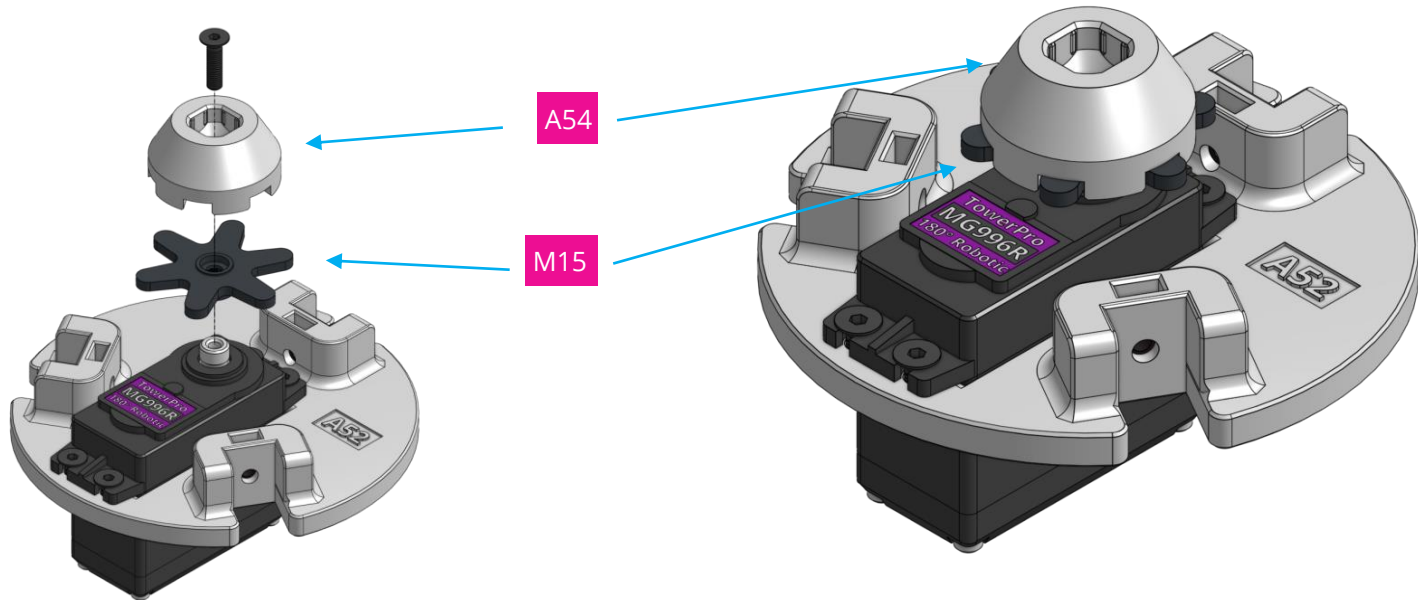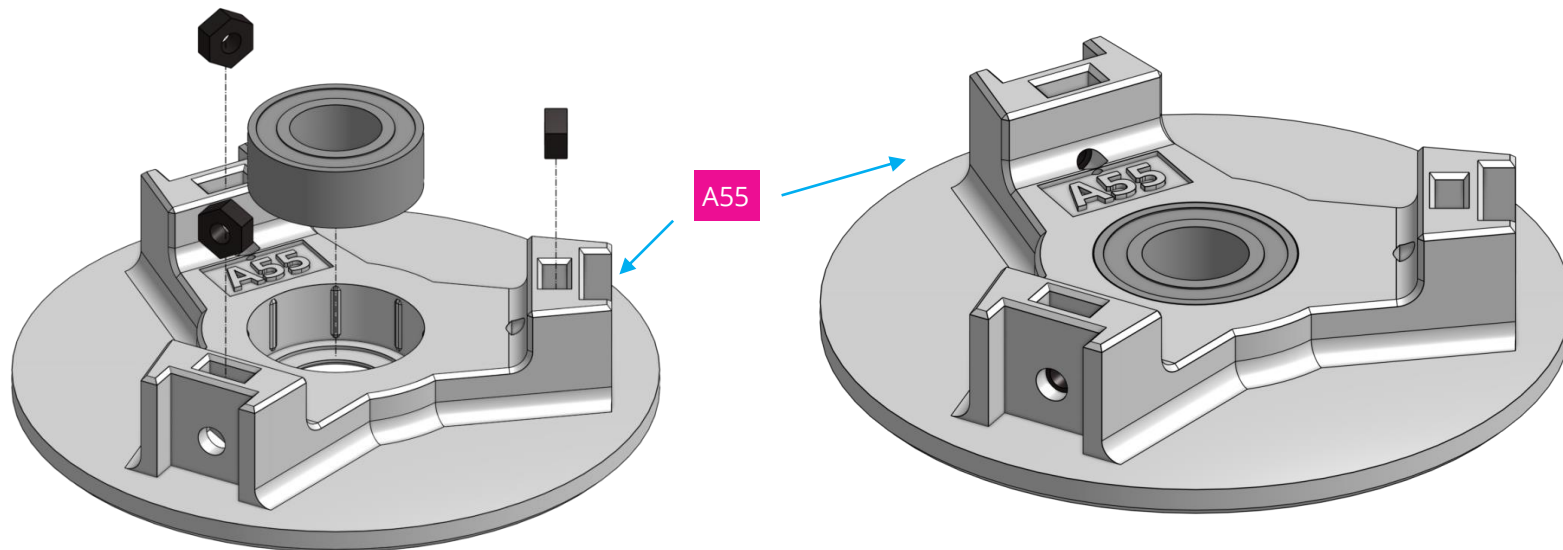
Step 5

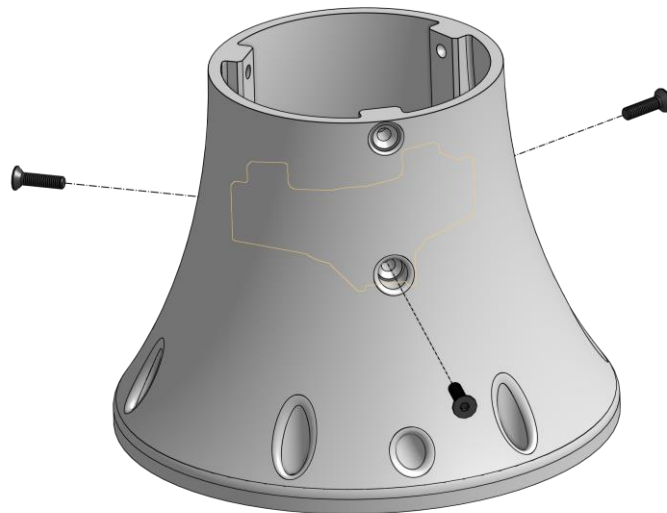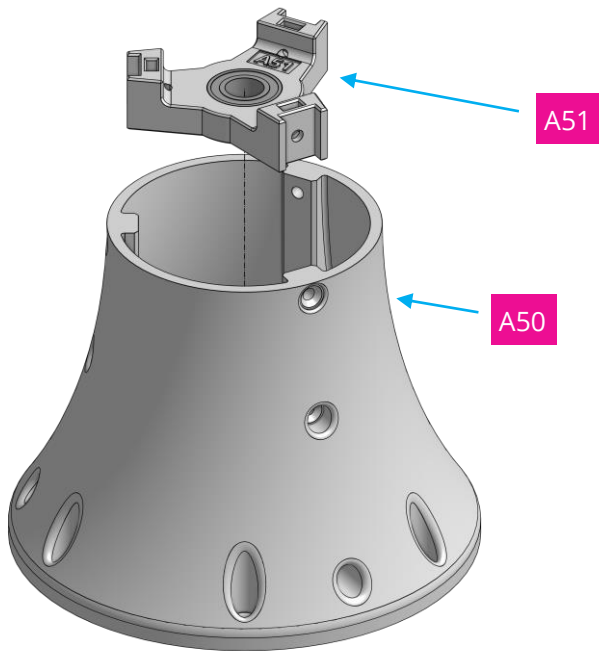Place 1 x M03 ballbearing and 3 x nuts in the shown spots of A51.

A51
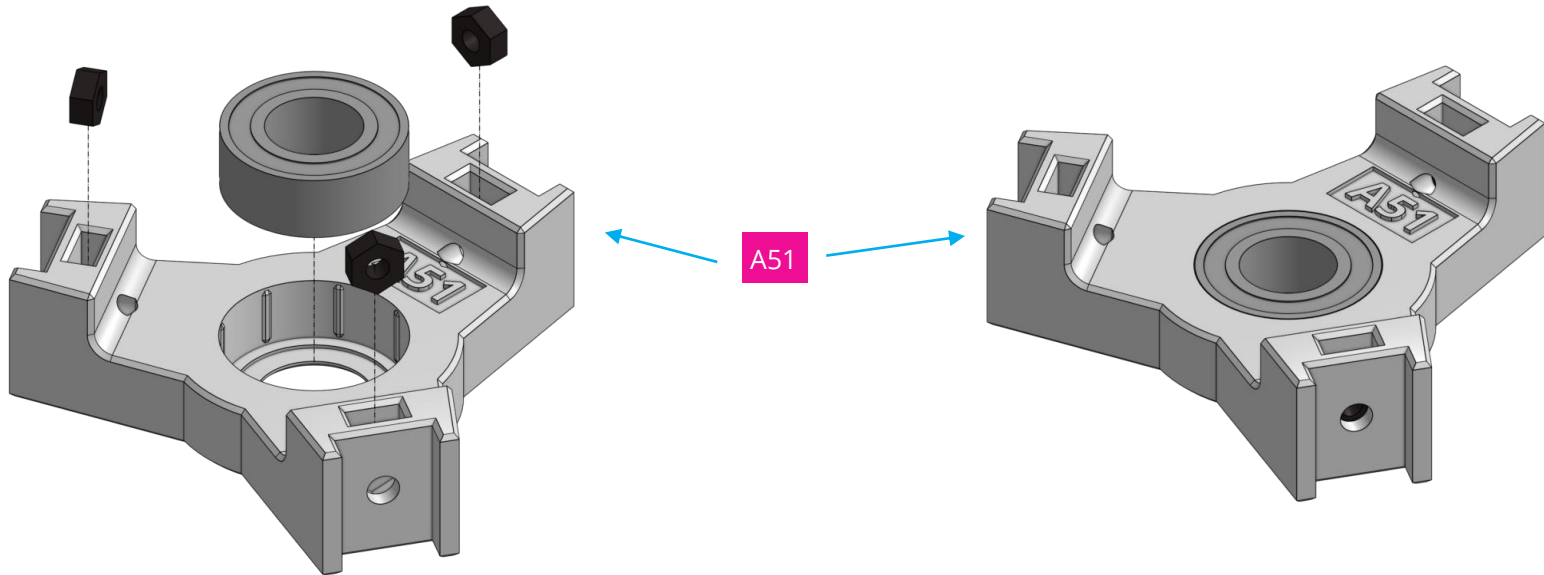
Step 6

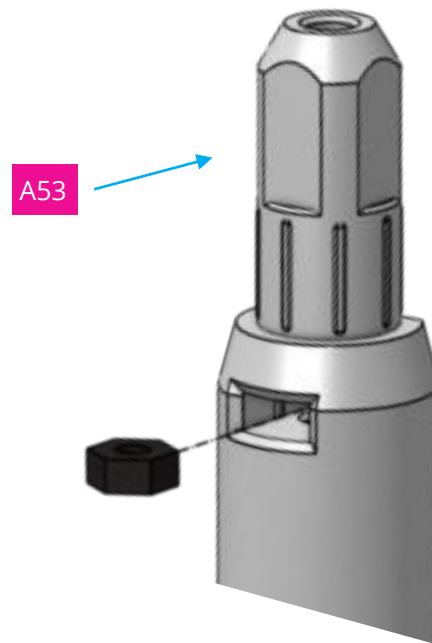Place 1 x M03 ballbearing and 3 x nuts in the shown spots of A55.

A55

Step 7

Slide A51 Assembly from step 5 into A50 from the top till it reaches the middle, then fix it with 3 x 12mm screws.
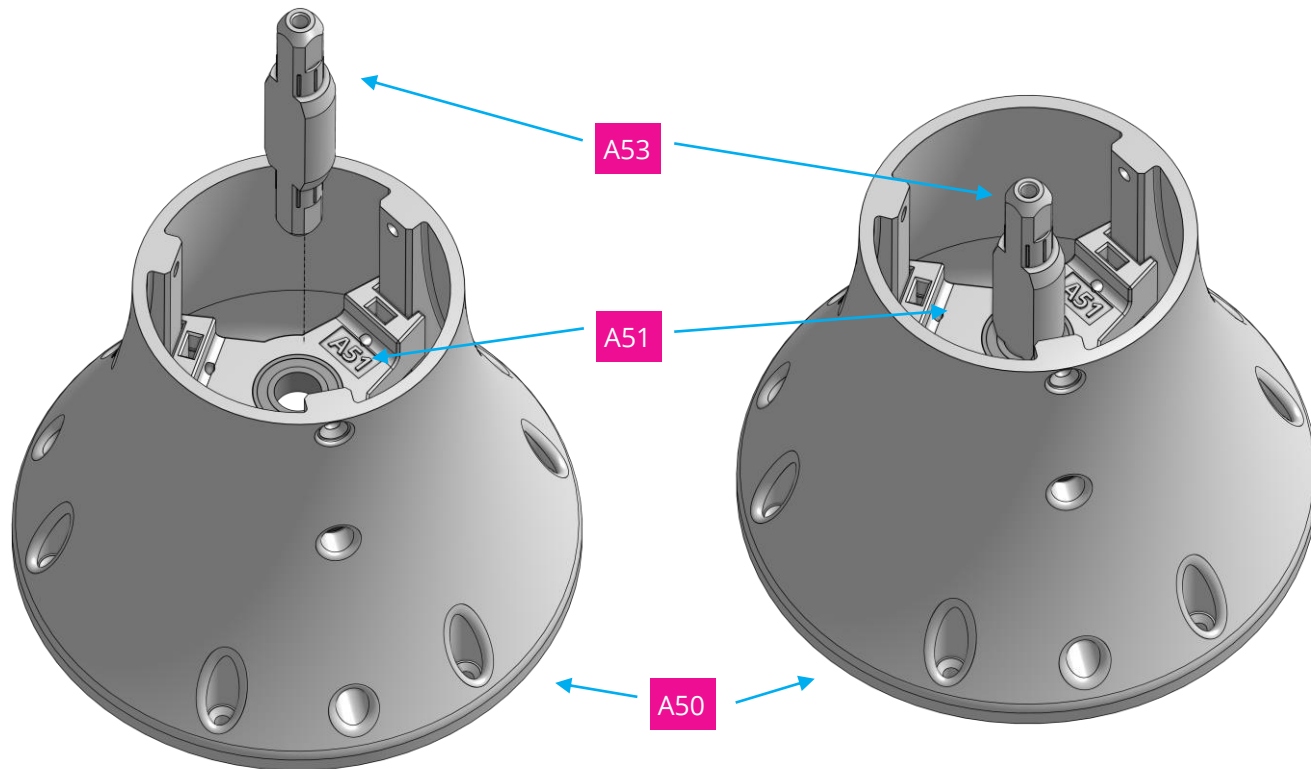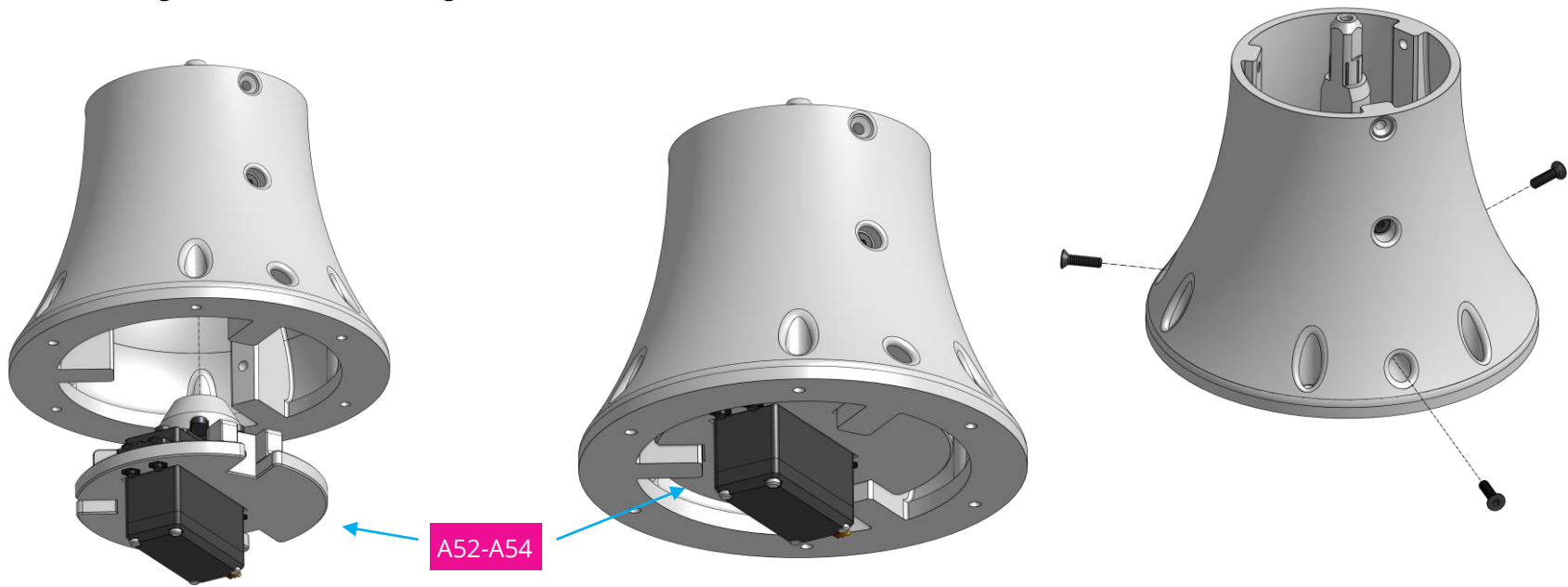

A51

A50

Step 8a

Insert 1 x nut into A53.
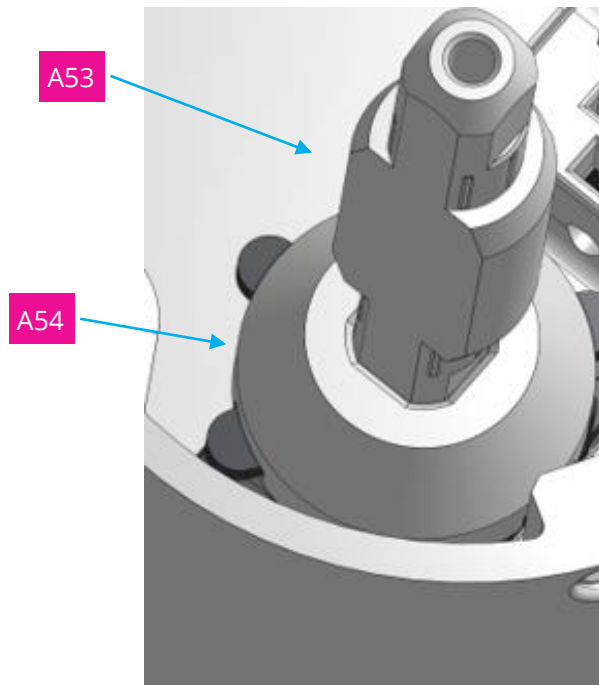
A53

Step 8b

Insert A53 through A51.

A53

A51

A50

Step 9

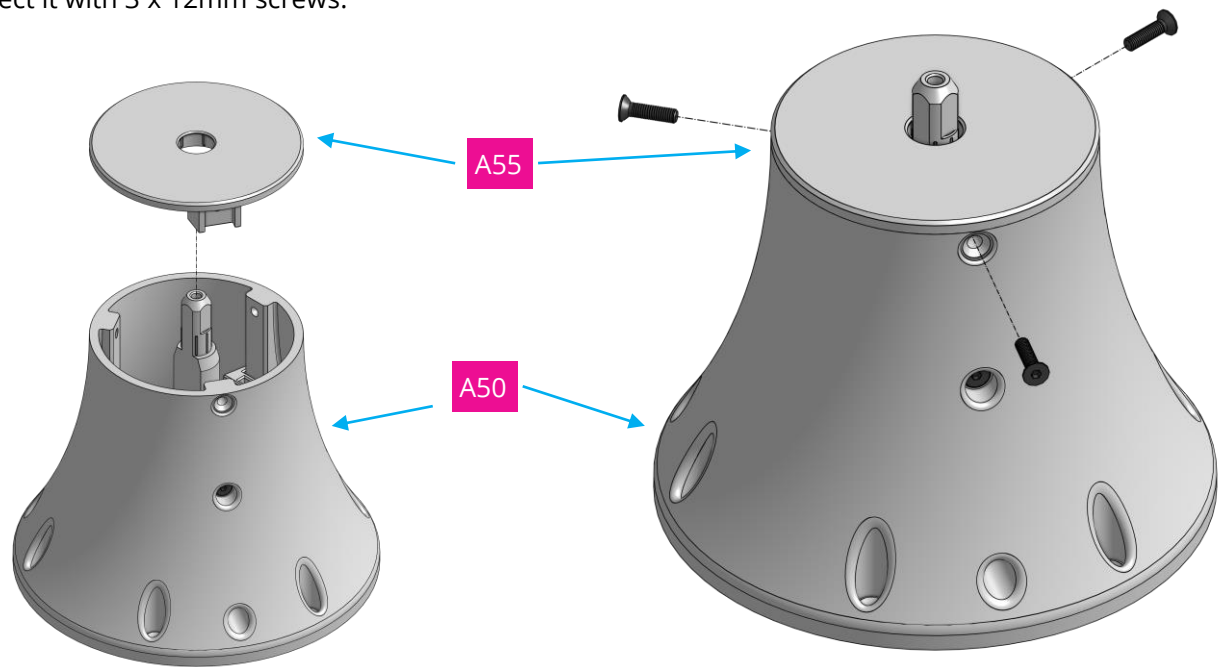Insert A52-A54 through A51 and fasten it using 3 x 12mm screws.

A52-A54

Step 9 – note

Align A53 with A54 to be connected in a "flush" way (A51 hidden).
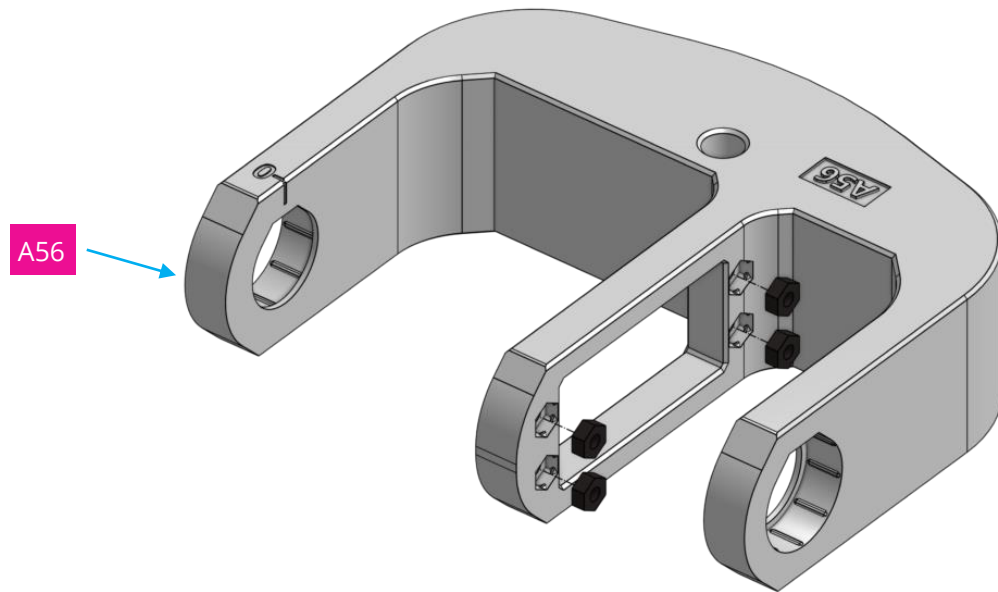
Step 10

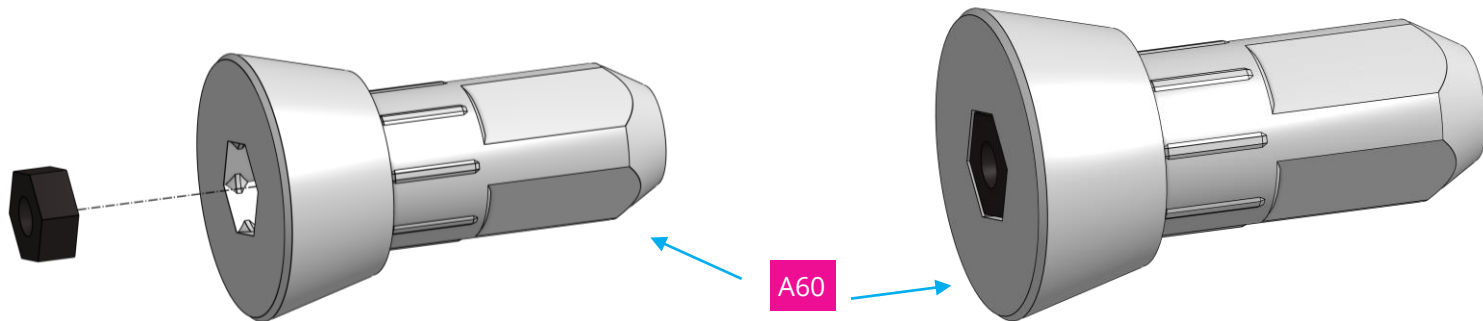Insert A55 into A50 and connect it with 3 x 12mm screws.
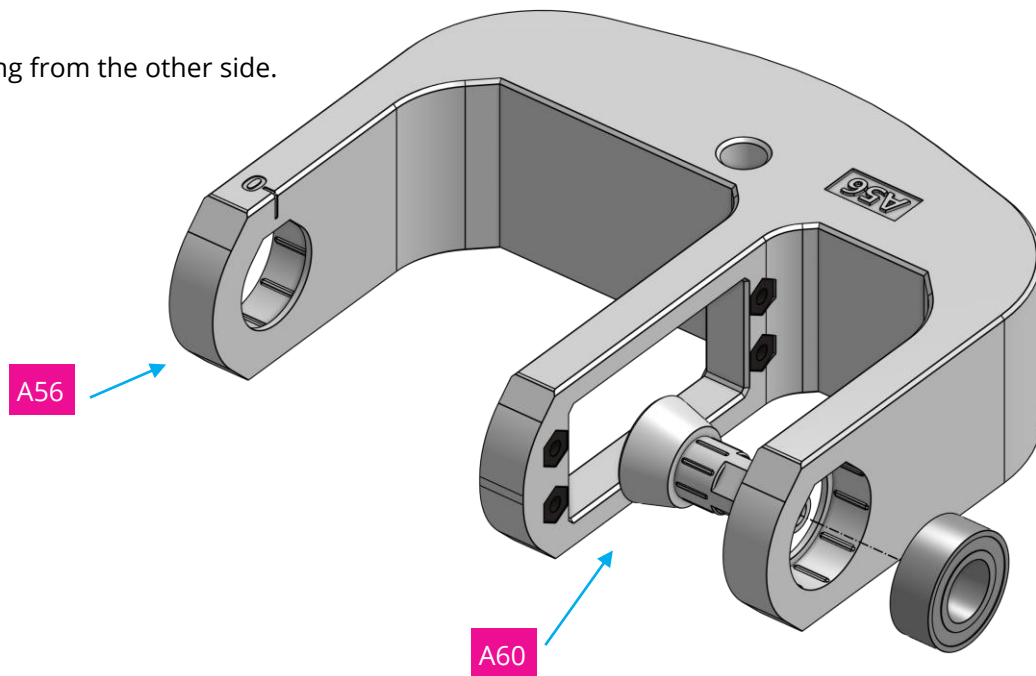
Step 11

Attach 4 x nuts in A56.
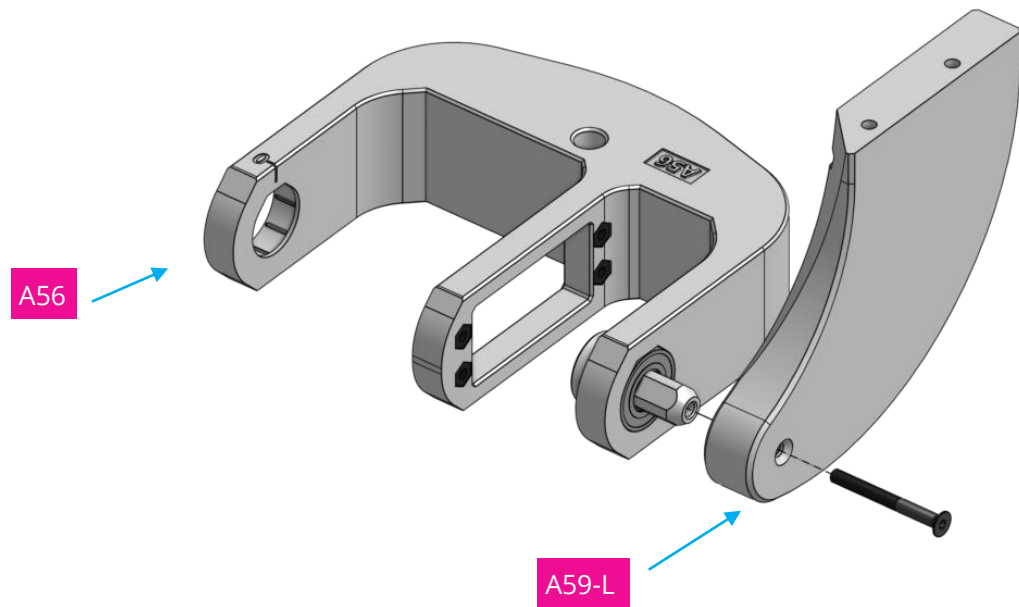
A56

Step 12a

Place 1 x nut A60.

A60

Step 12b

Insert A60 into A56 and put 1 x M03 ballbearing from the other side.
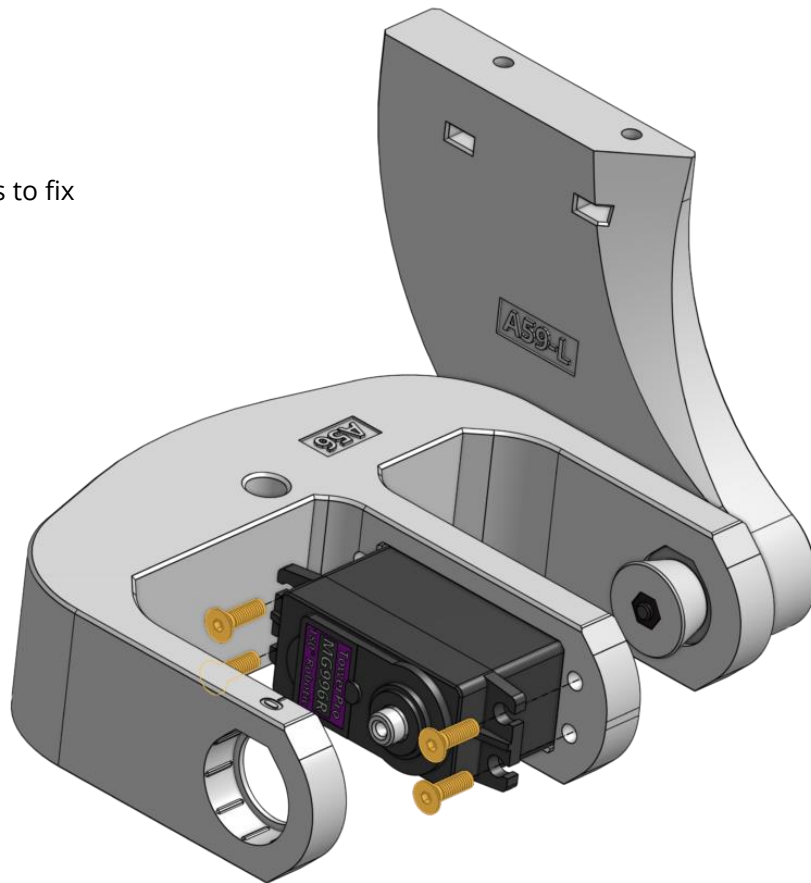
A56

A60

Step 12c

Connect A59-L with A56 using 1 x 30mm screw.

A56

A59-L

Step 13

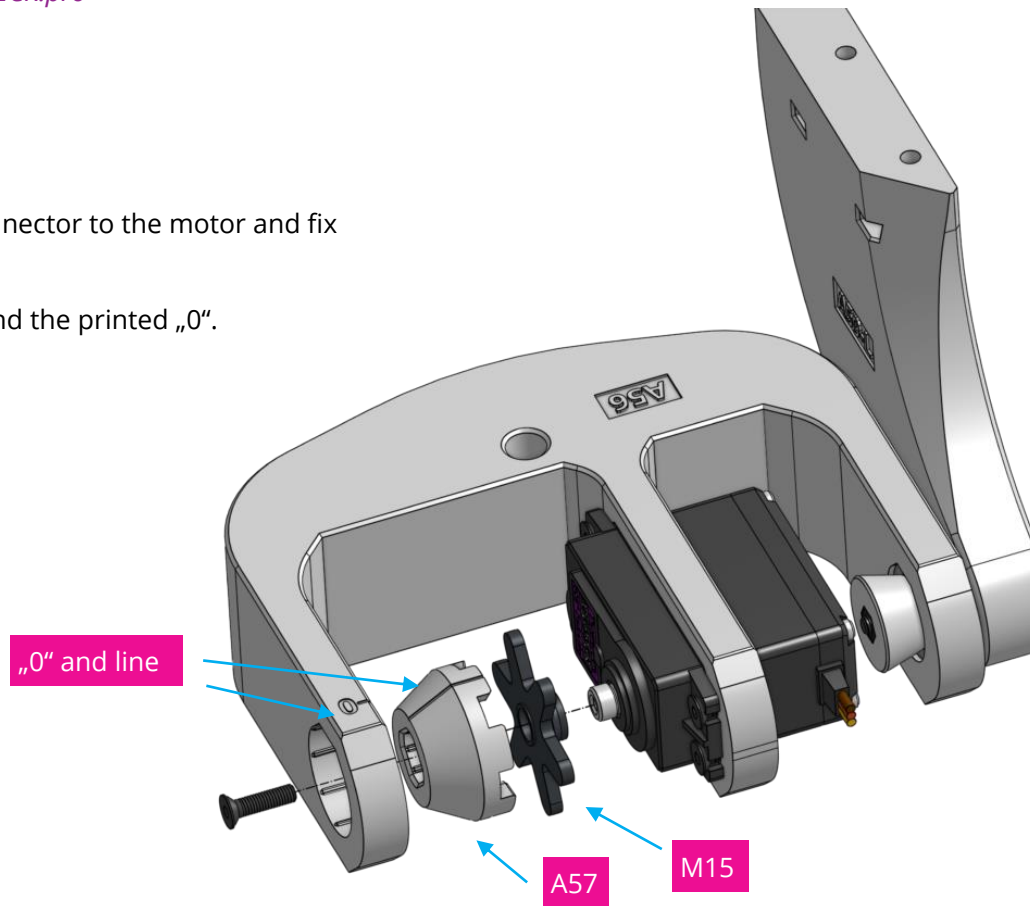Insert MG996R motor in the shown spot and use 4 x 10mm screws to fix onto A56.

Step 14

Connect A57 and 1 x M15 Nylon motor connector to the motor and fix them using 1 x 12 mm screw.
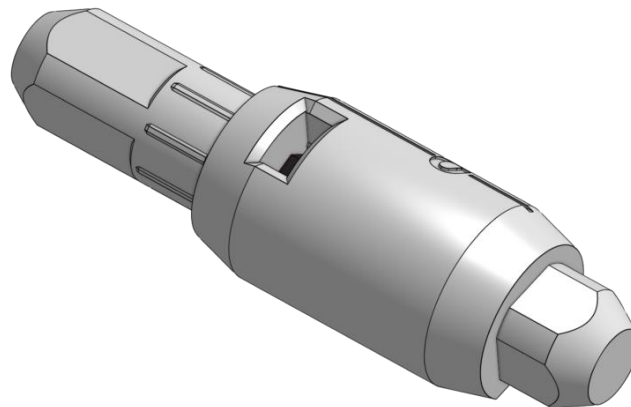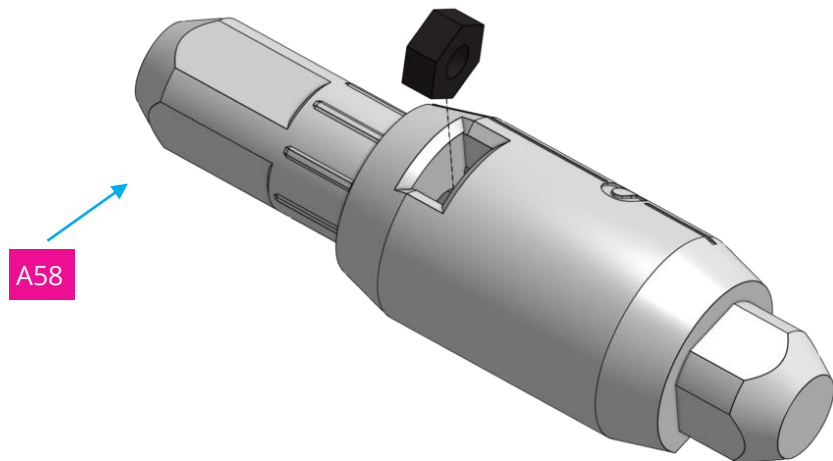
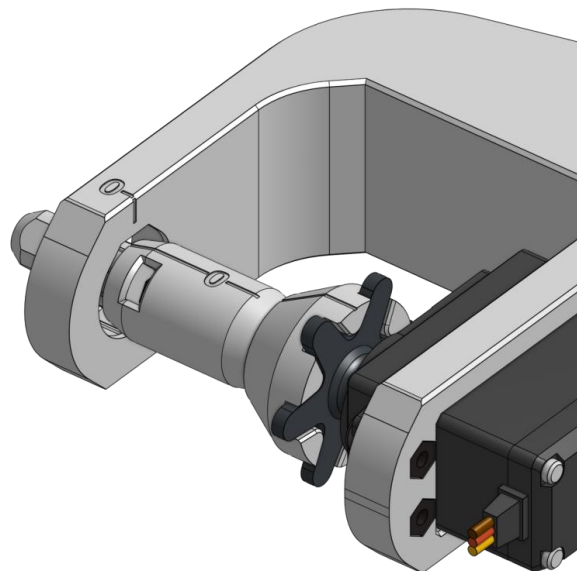Make sure to line up the highlighted line and the printed „0".

„0" and line
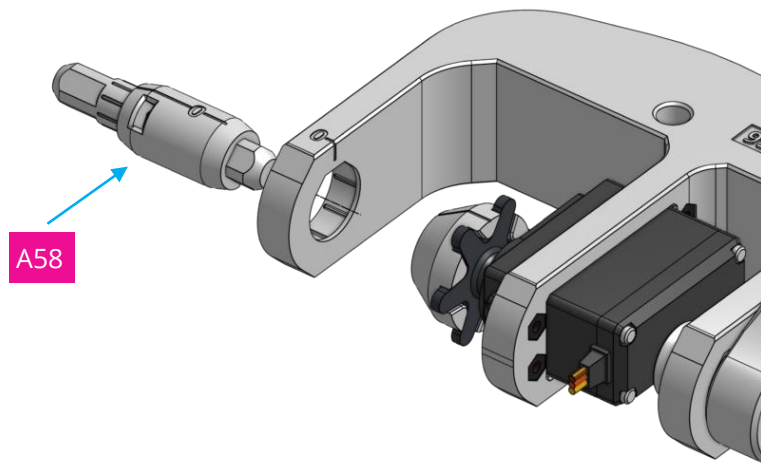
A57

M15

26

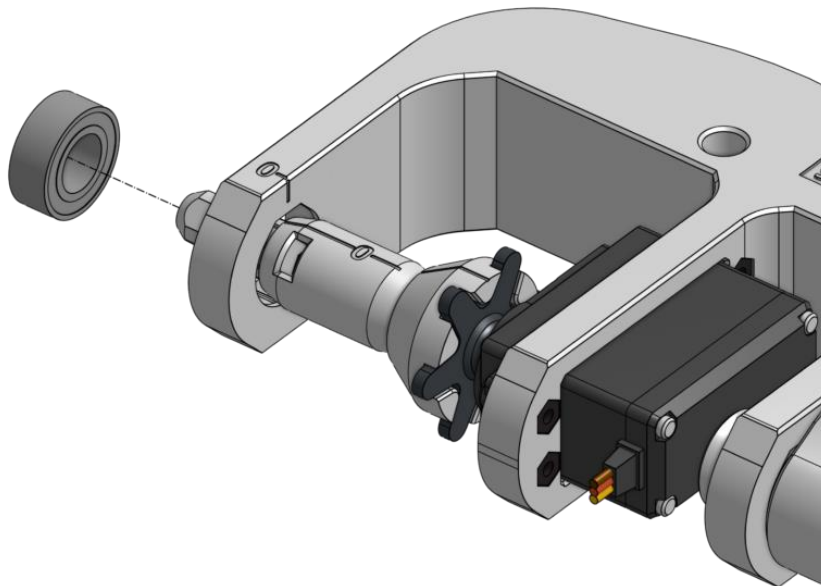## Step 15a

Insert 1 x nut into A58.

A58

Step 15b

Then insert A58 into the previous assembly and make sure the lines align with „0".
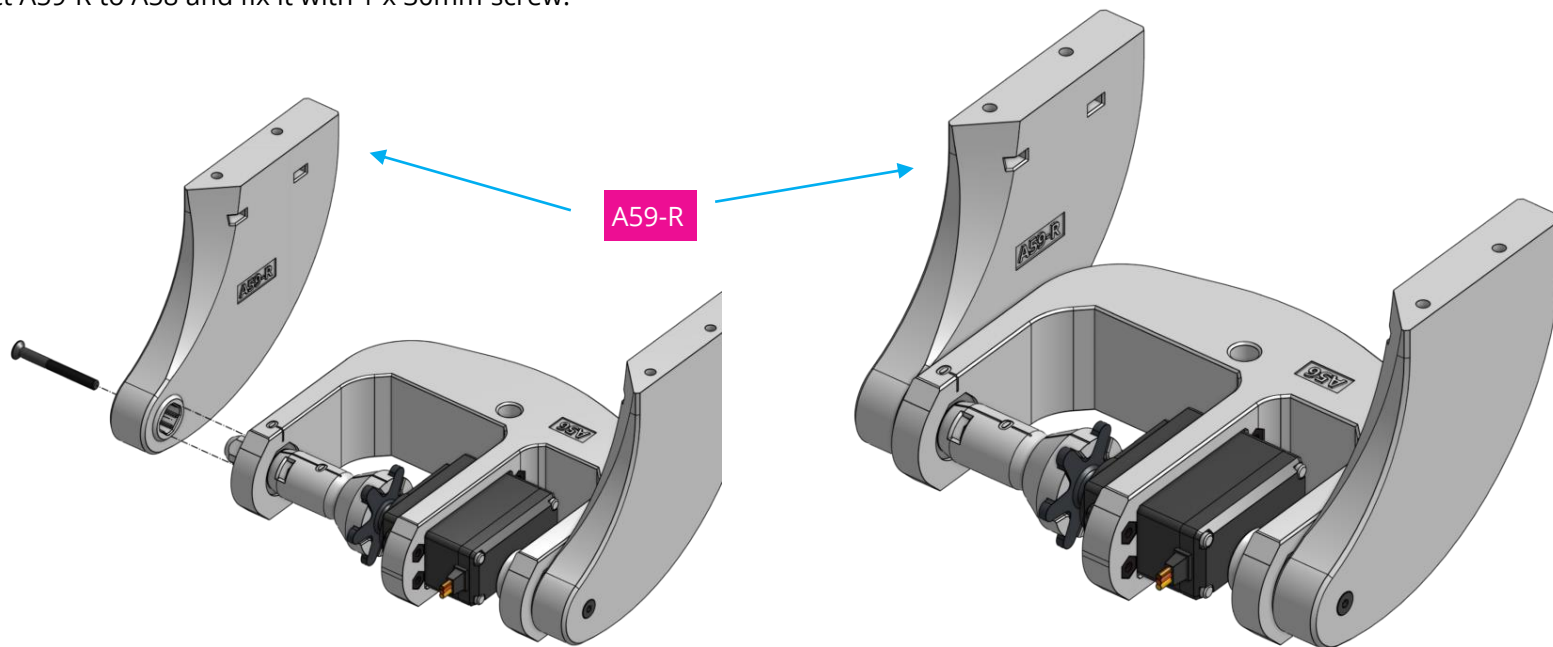

A58

Step 16

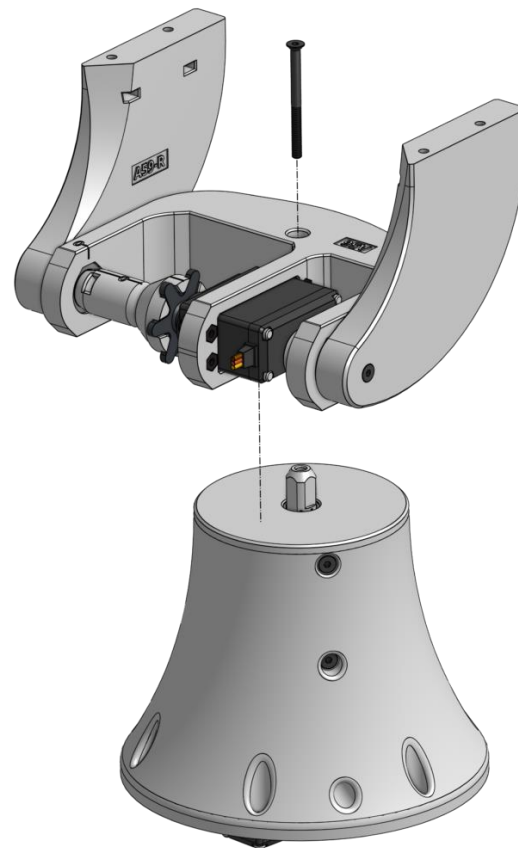Insert 1 x M03 ballbearing onto A58.

Step 17

Connect A59-R to A58 and fix it with 1 x 30mm screw.
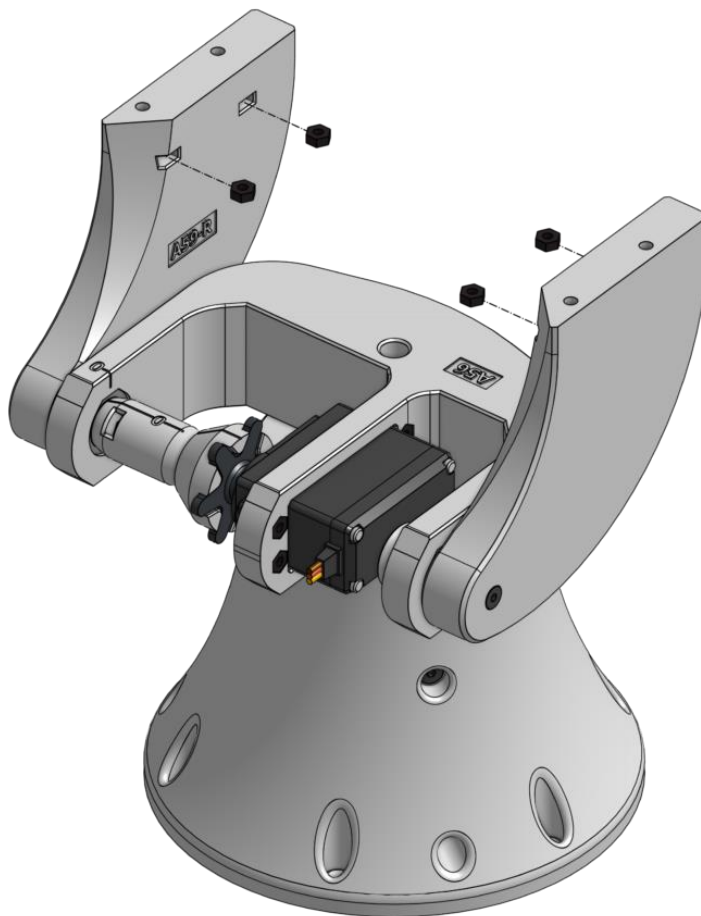

A59-R

Step 18

Connect the previous assembly to the assembly from before using 1 x 40mm screw.
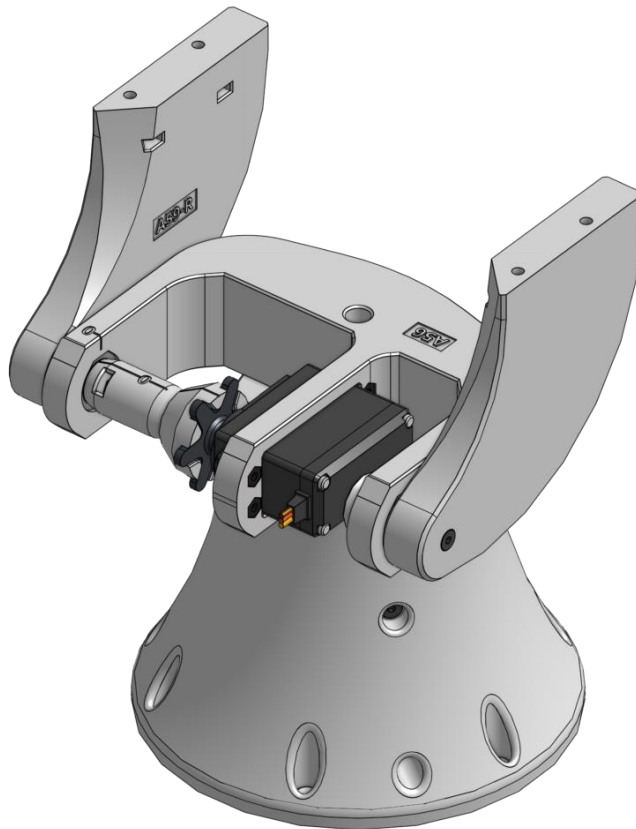
Step 19

Place 4 x nuts in the shown spots of A59-R and A59-L.

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.