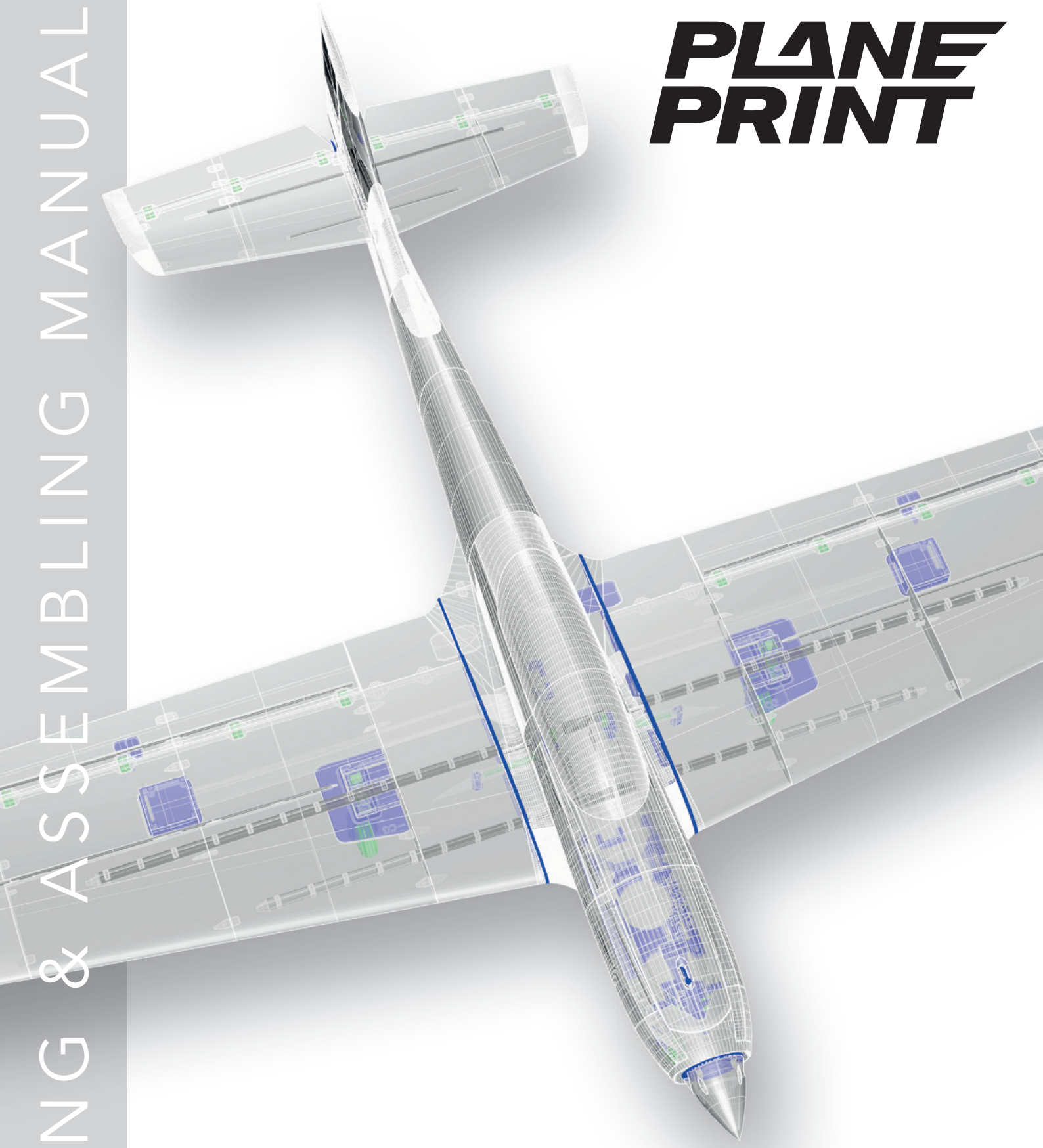
PRINTING & ASSEMBLING MANUAL

PLANE PRINT



PLANE PRINT **Fearless**

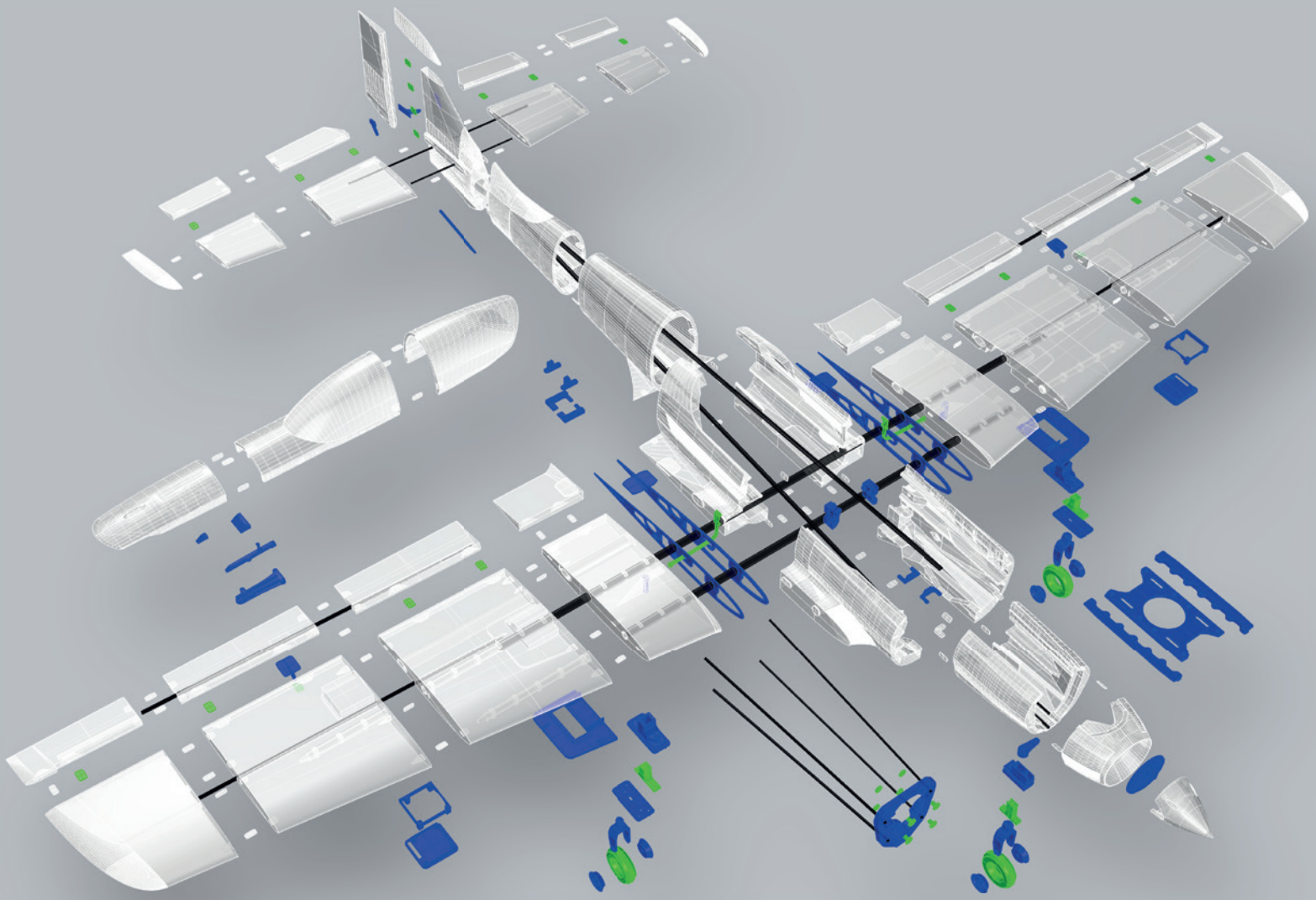
www.planeprint.com

the **ONLY** place where you can get original Planeprint STL files **legally!**

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PLANE PRINT Fearless



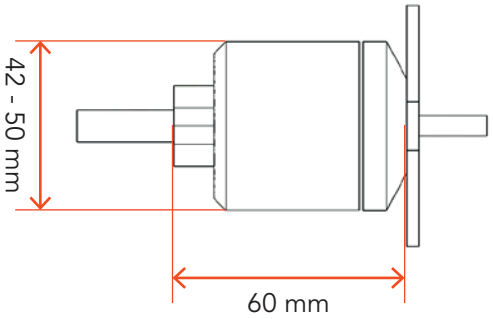
LW-PLA PLA TPU CARBON

RC Components

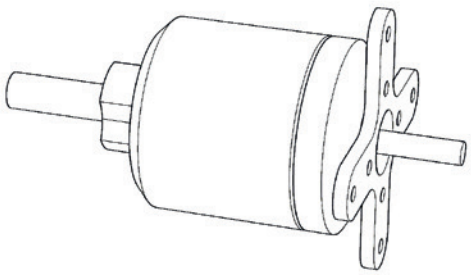
ENGINE **PROPDRIVE v2 4248 650KV/1295W Brushless Outrunner Motor** (HobbyKing)
or **SPITZ Brushless Motor C4250-07 720KV/1120W**
(This motor is a little bit shorter, you have to put a 3 mm (nut) between cross and motor mount)

or comparable motors.

The motor must be mounted at the rear, see picture:







PROP **APC-E 11x10**, also possible are 12x8, 12x9
Make sure that the props you use are suitable for the maximum speed of the motors (KVxVolt=speed)!

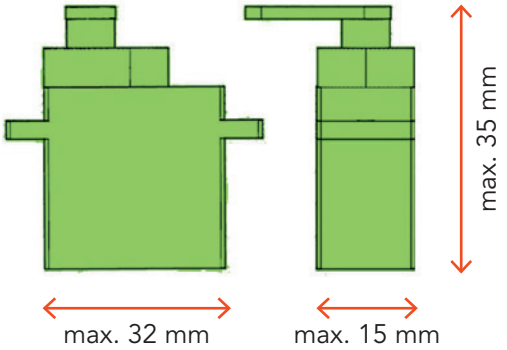
BEC-CONTROLLER **80 A** (must fit the engine!)

RECEIVER **5 Channel**

BATTERY **5S Lipo, 4000 – 5000 MaH**
(The battery should have a weight of 500 to 580 grams)

SERVOS **4 pieces** like **Corona DS-238MG Digital, Corona DT-236MG** or comparable
The servos should necessarily have metal gears and a torque of at least 2 to 4 Kg/cm!

Dimensions:



Required accessoires – basic equipment

- **LW-PLA (cannot be replaced by PLA!)**, ~1200 grams
- **PLA** or better **Tough PLA**, ~300 grams
- **TPU A95**, ~100 grams

- some tapping screws Ø2 mm → (simply search for: M2 flat head tapping screw assortment)
- Metal screw 3*6mm, 9 pieces
- Metal screw 3*20mm, 10 pieces
- Metal screw 3*35mm, 3 pieces (Wheels axles)
- Shims for Metal screw Ø3mm, 10 pieces
- CA super glue (liquid and liquid medium)
- CA activator
- Steel wire Ø1*1000mm or Ø1.5*1000mm, 3 pieces
- Steel wire Ø4*400mm, 1 piece (or you can use ready made landing gear legs)
- Carbon tube Ø12*1000mm, 2 pieces
- Carbon rod Ø3*1000mm, 2 pieces
- Carbon fiber strips (flat profile) 1*6*1000mm*, 2 pieces (Wings)
- Carbon fiber strips (flat profile) 1*6*1000mm*, 3 pieces (Fuselage) – can also be replaced by Ø3mm carbon rods.

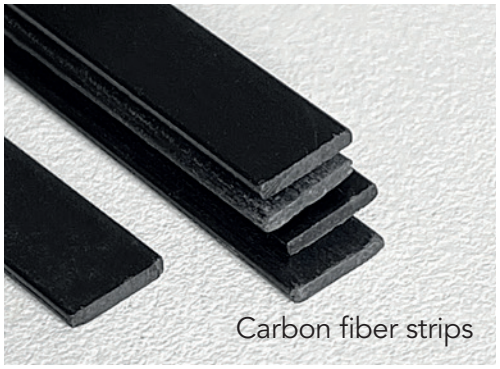
  * If you can't get such profiles you can also use two 0.5*6*1000, 1*5*1000 or hardwood strips.
- Rod connection, 5 pieces
- Adjusting collar Øoutside 8mm, Øinside 4mm, height 5mm, 10 pieces
- Servo extension cable 350mm, 2 pieces (or a soldered servo cable extension)
- Neodym-Super-Magnet 5x5x5mm, 4 pieces
- Self-adhesive Velcro tape





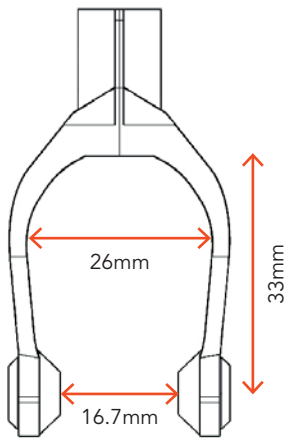
Tools

Cutter knife, Drill, small Philips screwdriver, Sandpaper,
Metal saw, Needle nose pliers

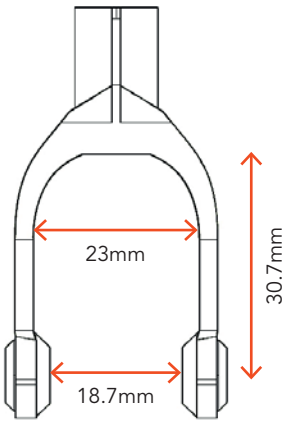


If you do not want to print the wheels,
you can buy matching ones.
Here are the dimensions of the wheel legs:

P1_Wheel leg 63x23_F.stl



P1_Wheel leg 58x18_F.stl



The development of a complex, airworthy RC flight model to express on any standard 3D printer is a very extensive process. **Therefore, we appeal to your fairness not to forward the STL data you have acquired to third parties.**

Thank you for your understanding and have fun with your PLANEPRINT MODEL!

Printing the parts – Printing profiles

This manual is constantly being improved and supplemented, we recommend downloading the **latest version** from our website **before building**.

You can find the description at www.planeprint.com/print

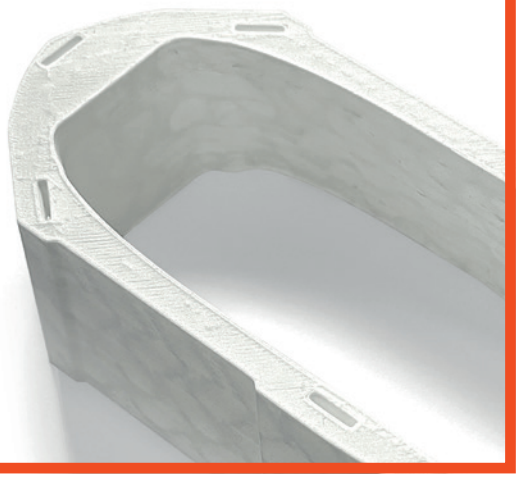
For this model you need the following profiles:

P1 P2 P4 P5

NOTE When printing the PLANEPRINT FEARLESS you should pay particular attention to a light weight of **each** individual part.

PROFILE P5_Gyroid

It is **essential for the necessary stability** of the **LW parts printed with PROFILE_5 are as stable as possible**. Please use a test part to check the strength by fracture tests. It must not break along the layer lines under any circumstances! Also note that the printing temperature for LW-PLA is as low as possible to obtain a wall thickness of 0.4 to 0.6 mm at a flow of 60 to 70 % (depending on brand).
Caution: at too high temperatures, LW-PLA becomes brittle and breaks more easily.



PROFILE P1_Fullbody PLA or Tough PLA

The following parts must be sliced with the PROFILE P1_Fullbody.
Please note the additional settings for the individual parts!

P1_Canopy lock_F.stl

MATERIAL PLA, Weight: ~ 8 g

ADDITIONAL SETTINGS

None required

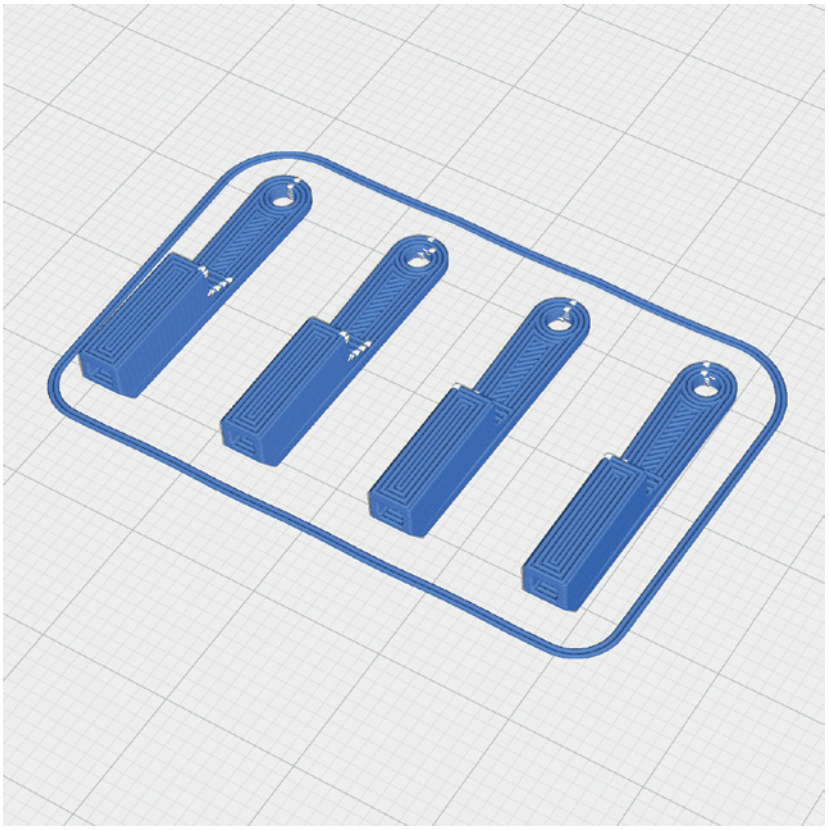


P1_Clips 1mm wire_F.stl

MATERIAL PLA, Weight: ~ 1 g

ADDITIONAL SETTINGS

None required



PROFILE P1_Fullbody PLA or Tough PLA

The following parts must be sliced with the PROFILE P1_Fullbody.
Please note the additional settings for the individual parts!

P1_Control horns_F.stl

MATERIAL PLA, Weight: ~ 5 g

ADDITIONAL SETTINGS

None required

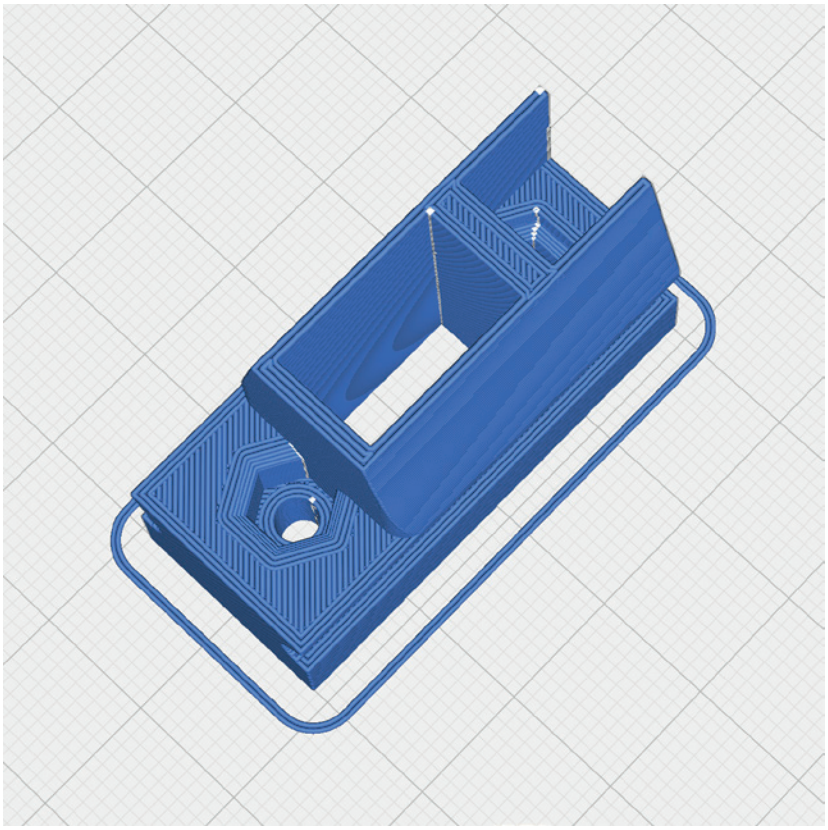


P1_Frontgear PLA part_F.stl

MATERIAL PLA, Weight: ~ 10 g

ADDITIONAL SETTINGS

None required



PROFILE P1_Fullbody PLA or Tough PLA

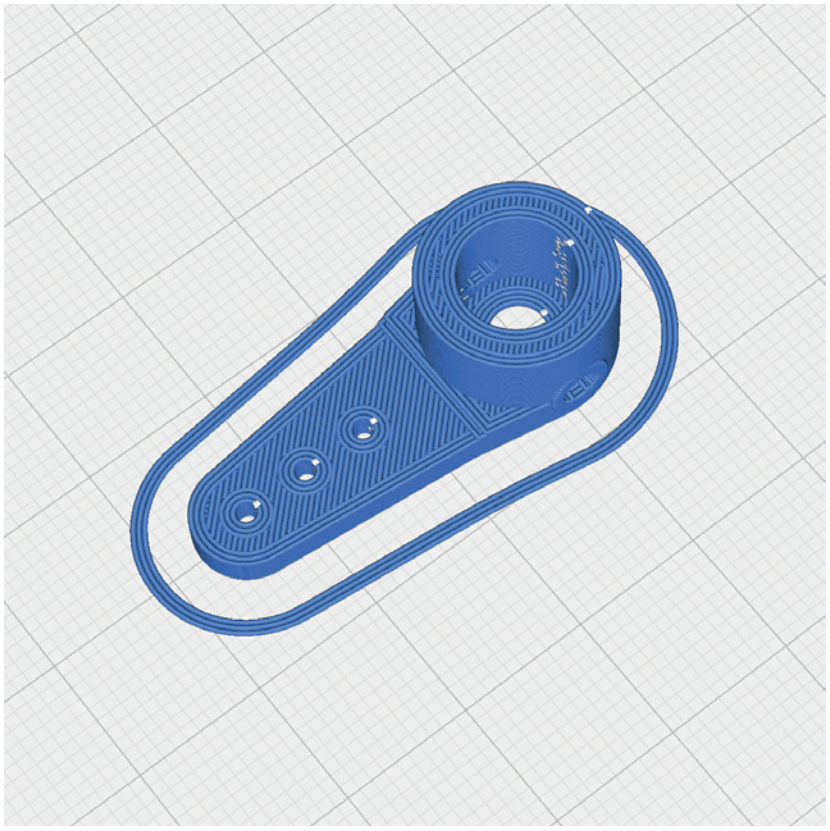
The following parts must be sliced with the PROFILE P1_Fullbody.
Please note the additional settings for the individual parts!

P1_Frontgear steering_F.stl

MATERIAL PLA, Weight: ~ 2 g

ADDITIONAL SETTINGS

None required

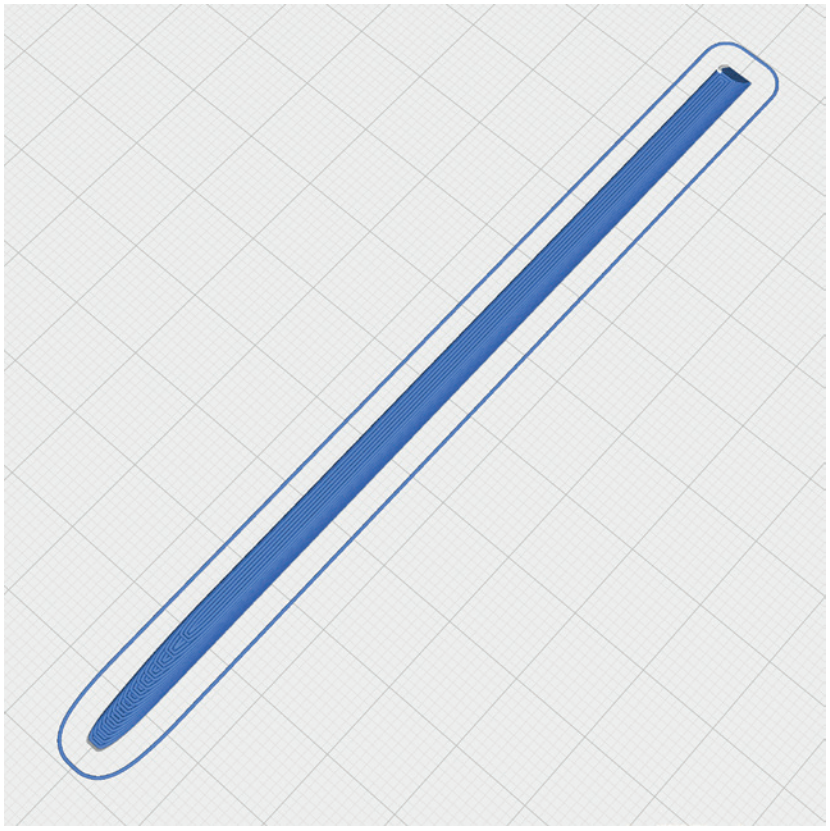


P1_Fuselage 6 Skid_F.stl

MATERIAL PLA, Weight: ~ 2 g

ADDITIONAL SETTINGS

None required



PROFILE P1_Fullbody PLA or Tough PLA

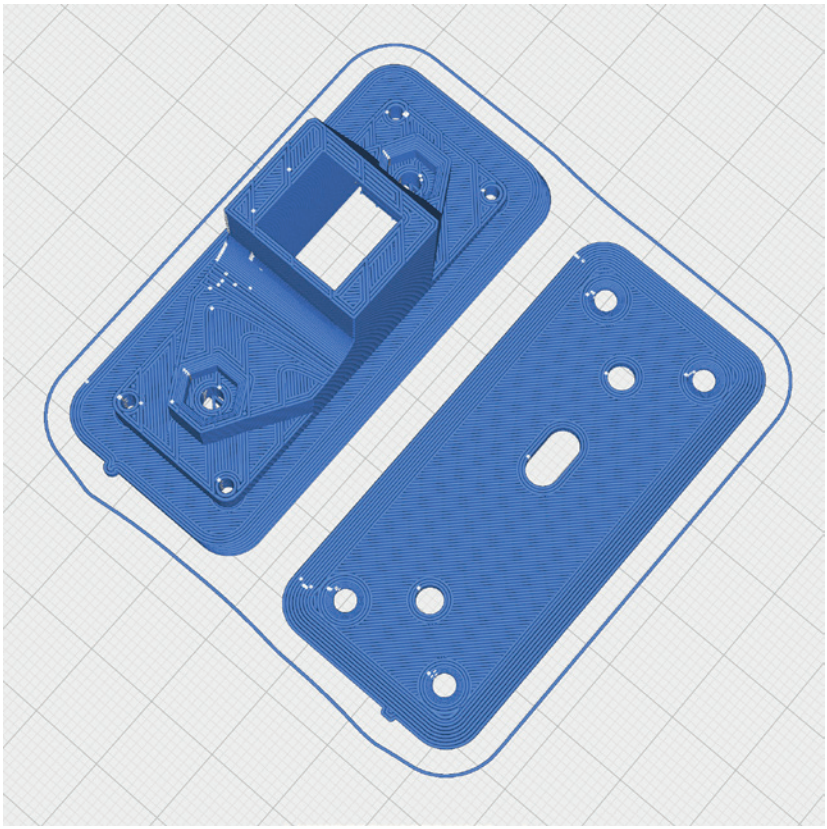
The following parts must be sliced with the PROFILE P1_Fullbody.
Please note the additional settings for the individual parts!

P1_Maingear PLA-L_F.stl and **P1_Maingear PLA-R_F.stl**

MATERIAL PLA, Weight: ~ 18 g

ADDITIONAL SETTINGS

- Generate Support: Checked
- Support Flow: 92 %

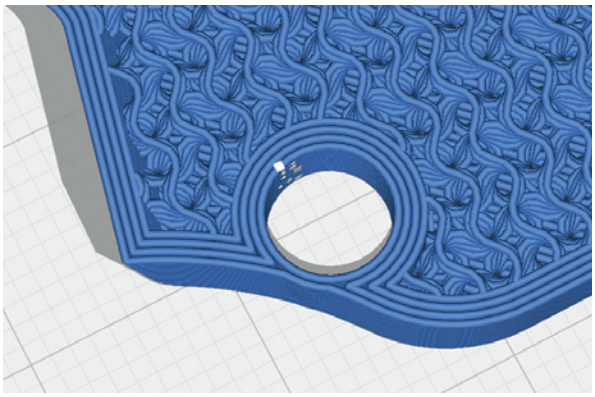


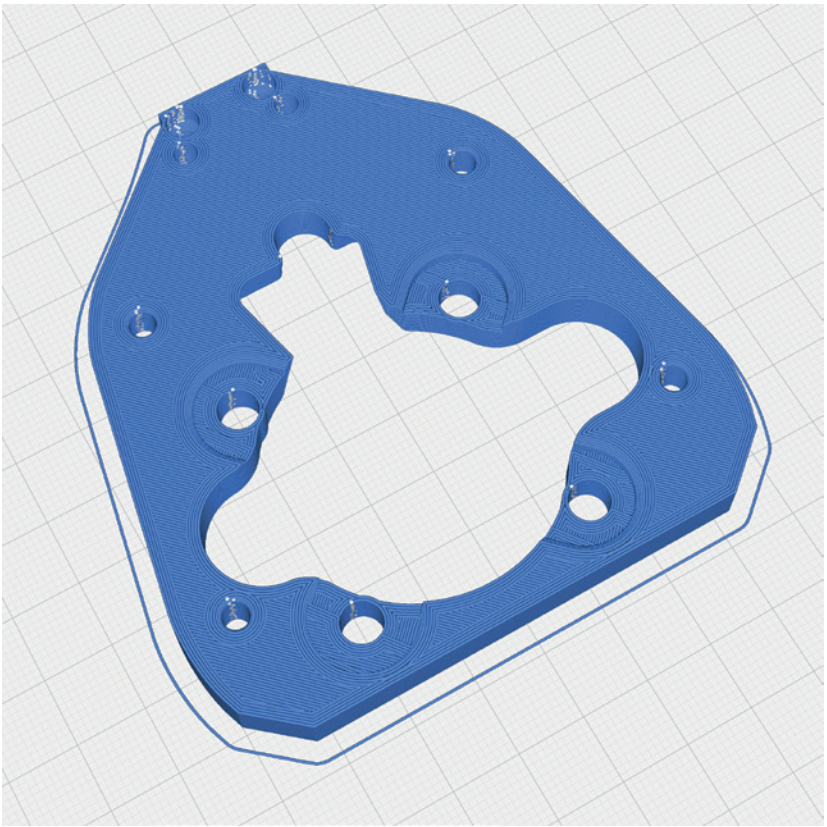
P1_Motormount_F.stl

MATERIAL PLA, Weight: ~ 22 g

ADDITIONAL SETTINGS

- Wall Line Count: 4
- Top Layers: 4
- Bottom Layers: 4
- Infill Density: 25 %
- Infill Pattern: Gyroid





PROFILE P1_Fullbody PLA or Tough PLA

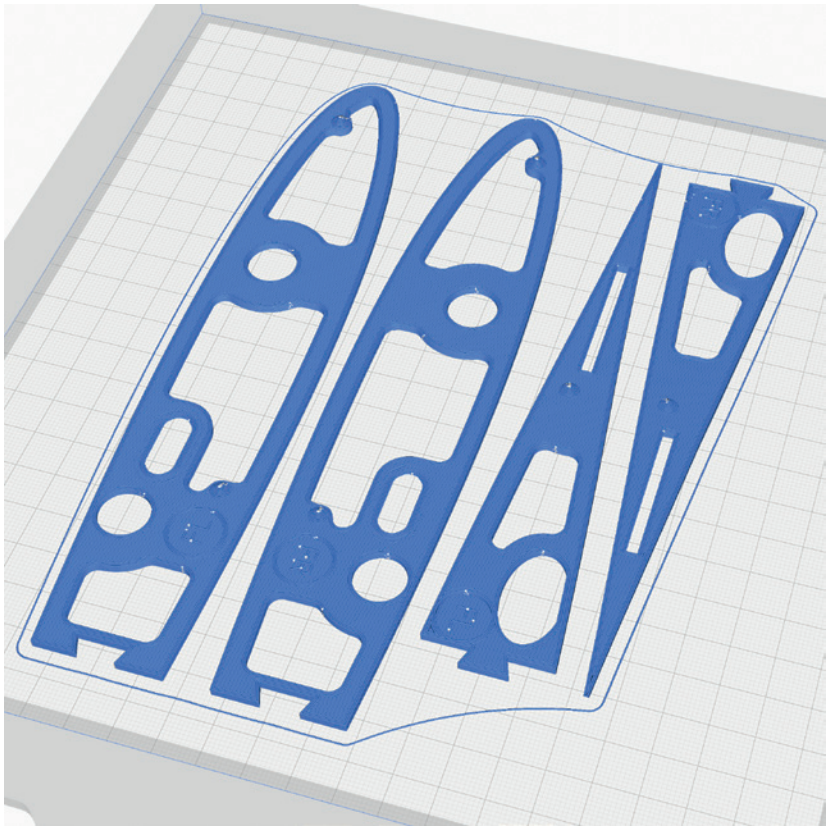
The following parts must be sliced with the PROFILE P1_Fullbody.
Please note the additional settings for the individual parts!

P1_Protectors fuselage_F.stl
P1_Protectors wing_F.stl

MATERIAL PLA, Weight: ~ 28/16 g

ADDITIONAL SETTINGS

None required



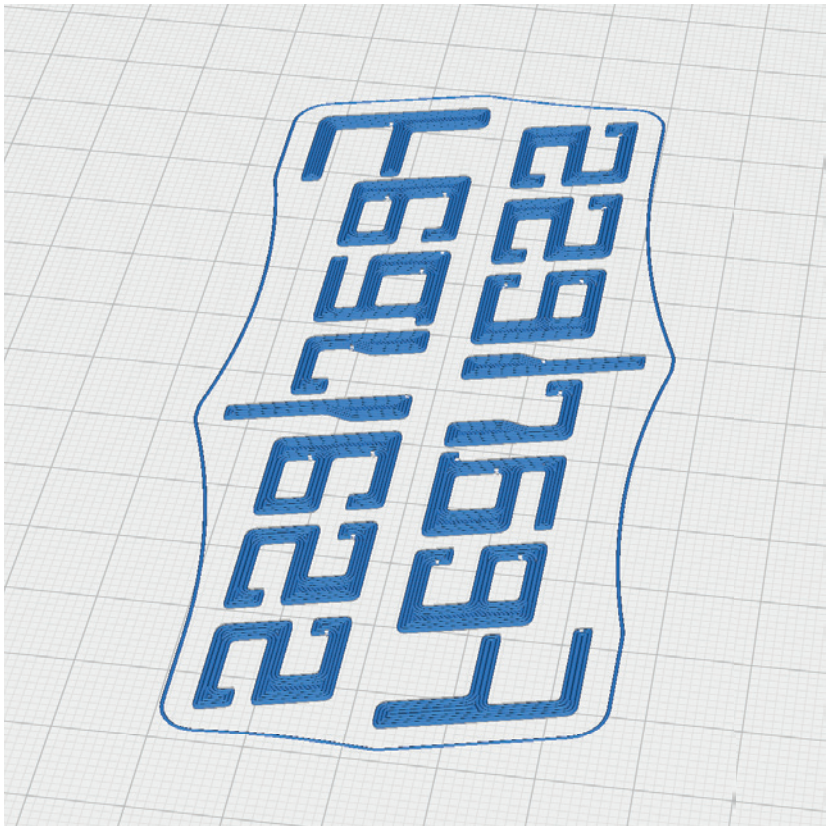
P1_Lettering_F.stl

MATERIAL PLA, Weight: ~ 1 g

ADDITIONAL SETTINGS

- Layer Height: 0.15
- Initial Layer Height: 0.15
- Wall Line Count: 6

Use the PLA color that you want the lettering on the plane to have later.



PROFILE P1_Fullbody PLA or Tough PLA

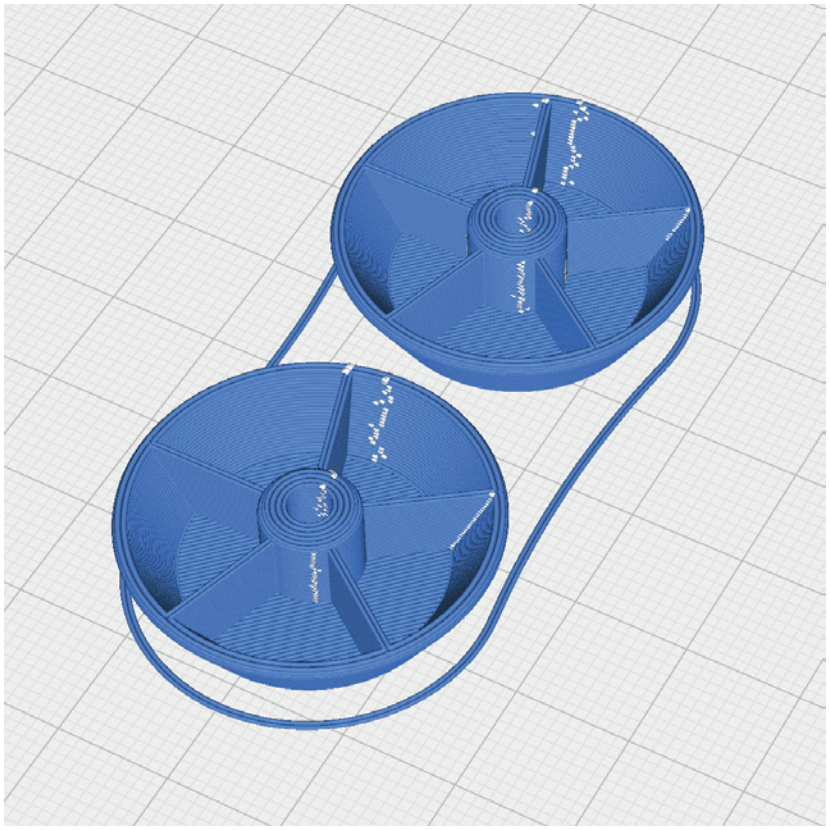
The following parts must be sliced with the PROFILE P1_Fullbody.
Please note the additional settings for the individual parts!

P1_Rims 58_F.stl

MATERIAL PLA, Weight: ~ 5 g

ADDITIONAL SETTINGS

- print this part three times



P1_Servobrackets fuselage_F.stl

MATERIAL PLA, Weight: ~ 7 g

ADDITIONAL SETTINGS

None required



PROFILE P1_Fullbody PLA or Tough PLA

The following parts must be sliced with the PROFILE P1_Fullbody.
Please note the additional settings for the individual parts!

P1_Servomount Aileron L_F.stl and
P1_Servomount Aileron R_F.stl

MATERIAL PLA, Weight: ~ 7 g

ADDITIONAL SETTINGS

None required

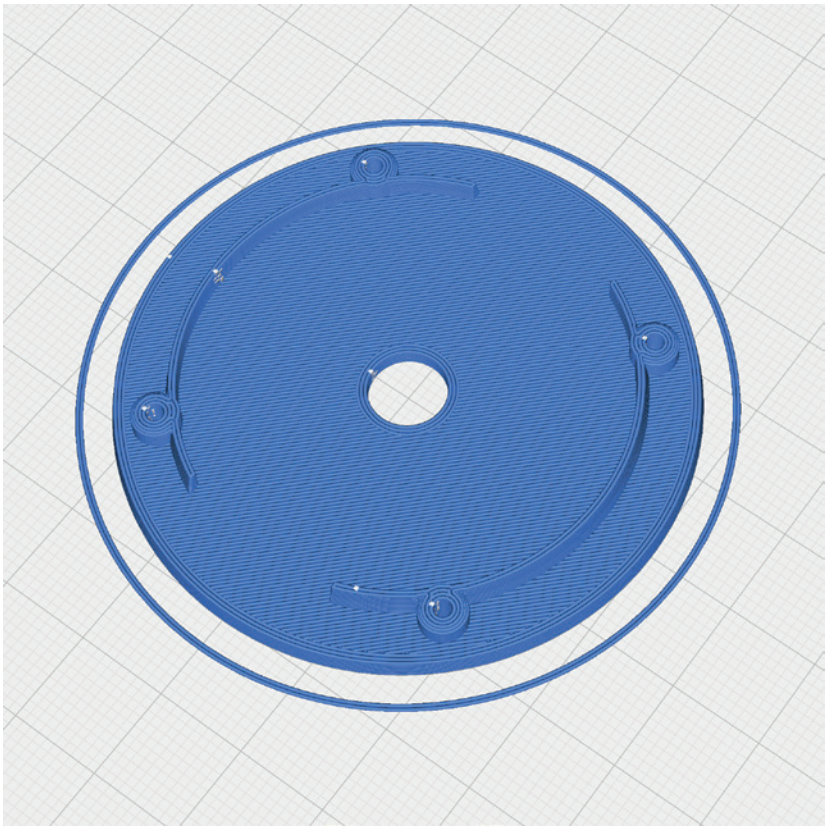


P1_Spinner plate_F.stl

MATERIAL PLA, Weight: ~ 8 g

ADDITIONAL SETTINGS

None required



PROFILE P1_Fullbody PLA or Tough PLA

The following parts must be sliced with the PROFILE P1_Fullbody.
Please note the additional settings for the individual parts!

P1_Wheel leg 58x18_F.stl or P1_Wheel leg 63x23_F.stl



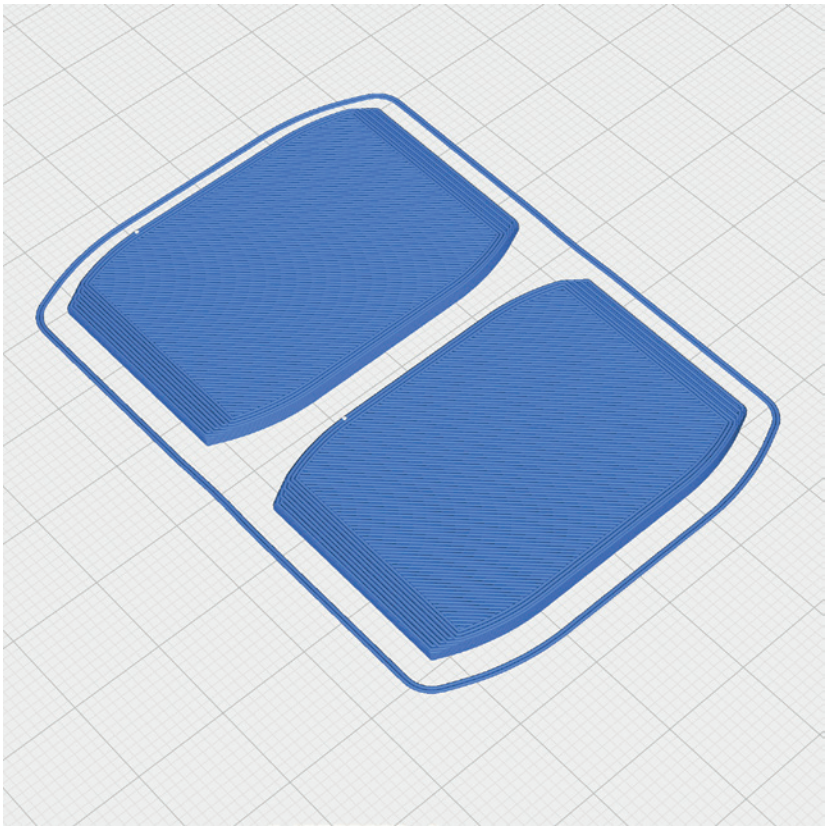
MATERIAL PLA, Weight: ~ 8 g

ADDITIONAL SETTINGS

None required

INFO These wheel legs are each available in two variants, with 3 or 4 mm bore.

P1_Wing plugging_F.stl



MATERIAL PLA, Weight: ~ 8 g

ADDITIONAL SETTINGS

None required

PROFILE P2_Hollowbody PLA or Tough PLA

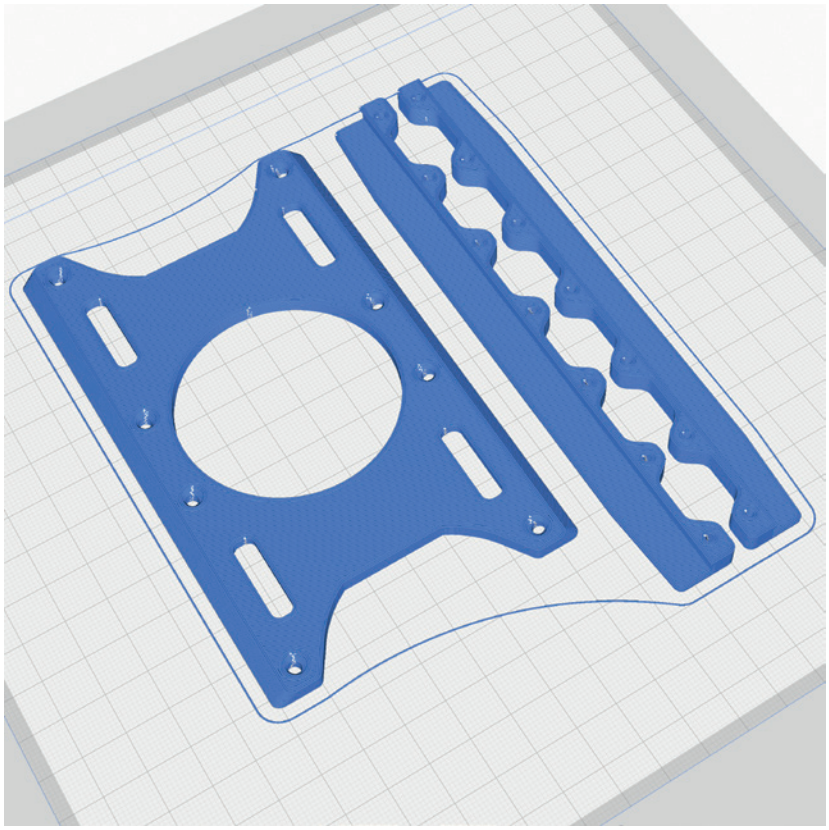
The following parts must be sliced with the PROFILE P2_Hollowbody.
Please note the additional settings for the individual parts!

P2_Batterymount_F.stl

MATERIAL PLA, Weight: ~ 23 g

ADDITIONAL SETTINGS

None required

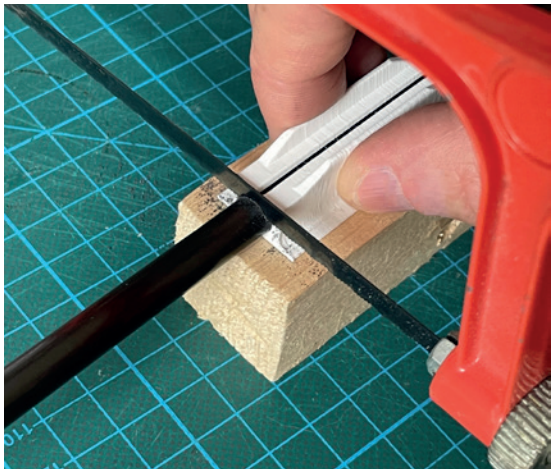


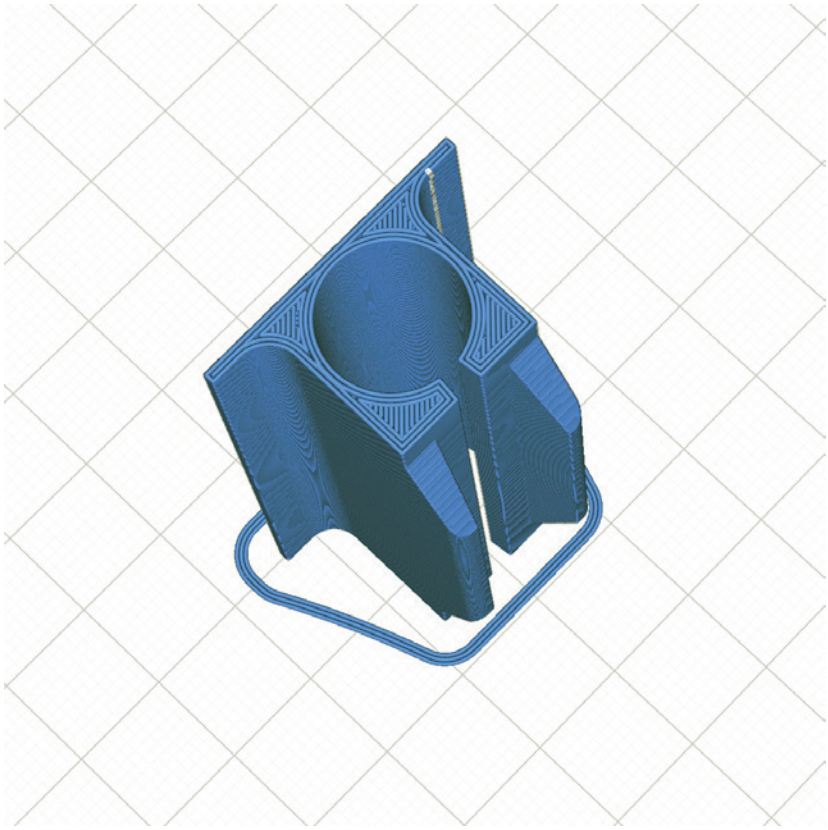
P2_Carbon tool 12mm.stl

MATERIAL PLA, Weight: ~ 10 g

ADDITIONAL SETTINGS

None required





PROFILE P2_Hollowbody PLA or Tough PLA

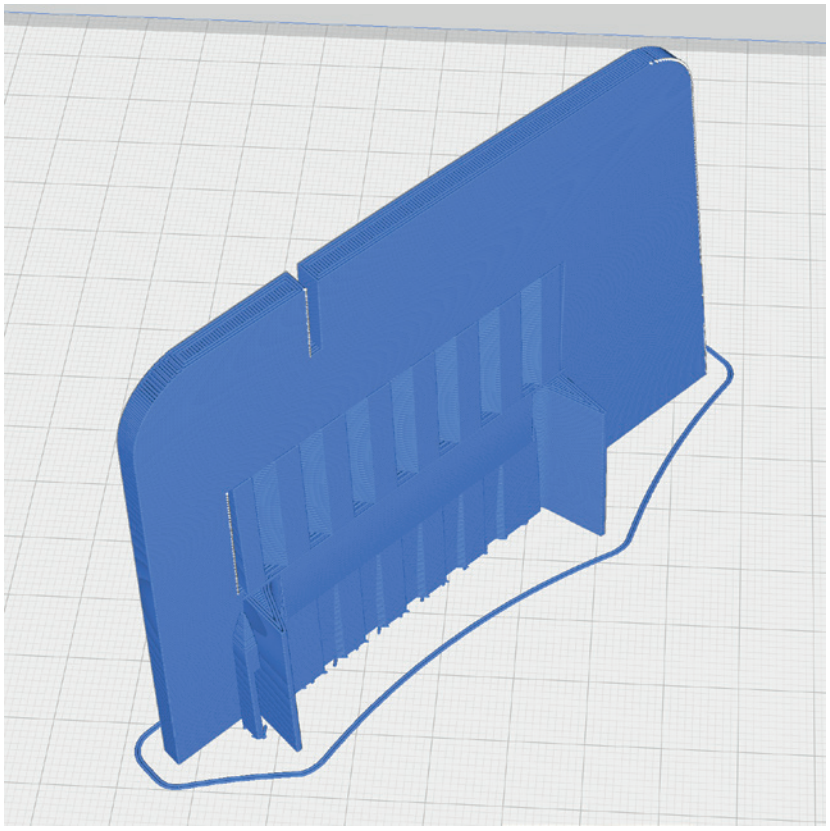
The following parts must be sliced with the PROFILE P2_Hollowbody.
Please note the additional settings for the individual parts!

P2_Maingear plate-L_F.stl and **P2_Maingear plate-R_F.stl**

MATERIAL PLA, Weight: ~ 19 g

ADDITIONAL SETTINGS

- Generate Support: Checked
- Support Flow: 92 %

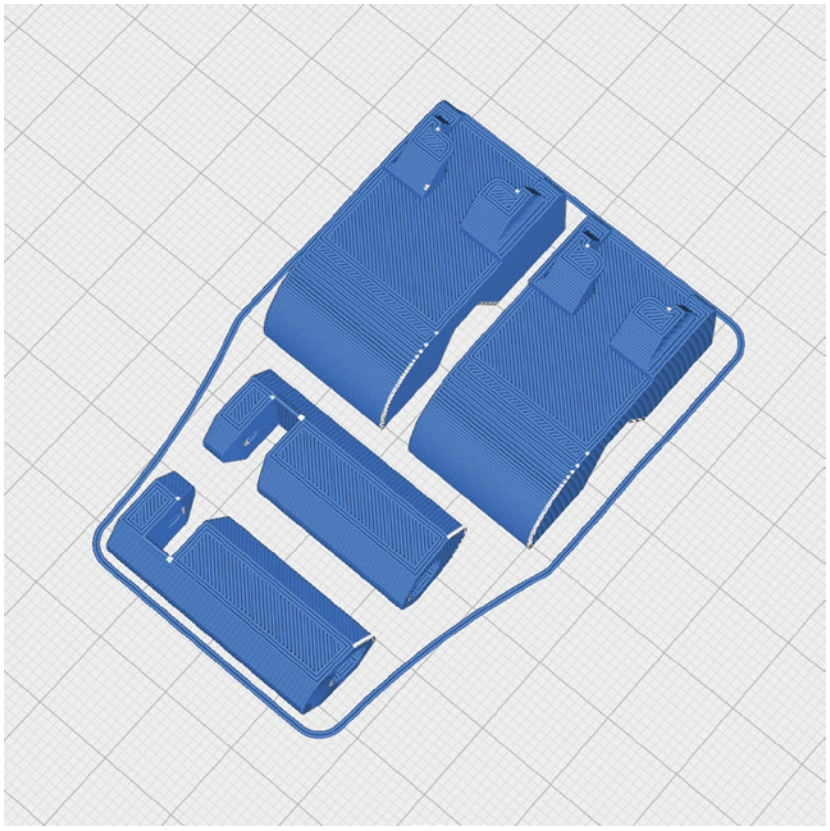


P2_Wingmount_F.stl

MATERIAL PLA, Weight: ~ 9 g

ADDITIONAL SETTINGS

- Top Layers: 3



PROFILE P4_Flex TPU A95

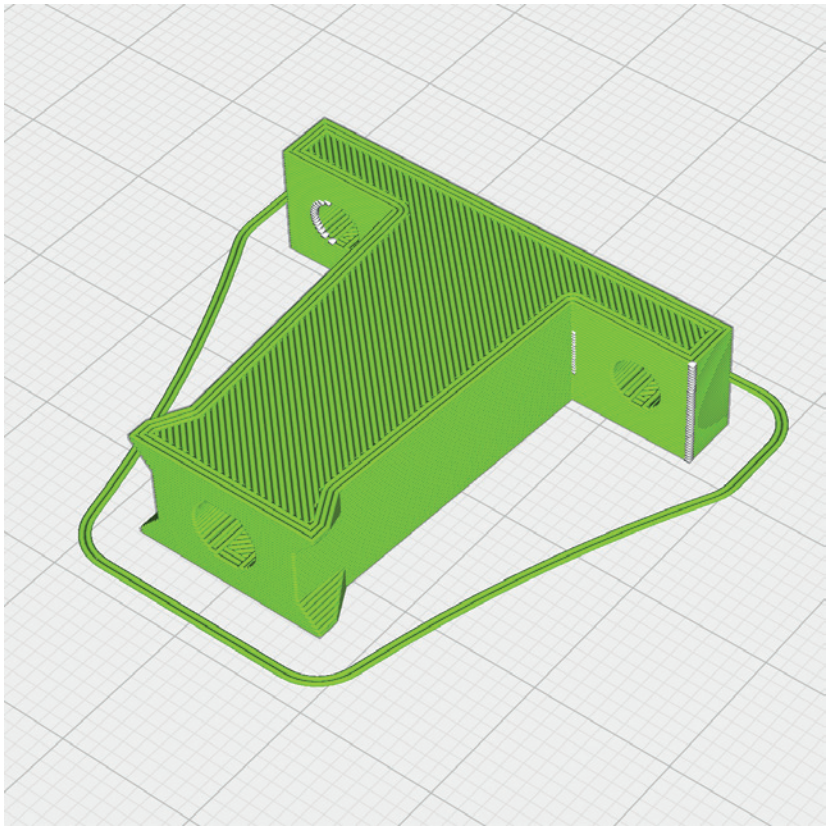
The following parts must be sliced with the PROFILE P4_Flex.
Please note the additional settings for the individual parts!

P4_Frontgear TPU_F.stl

MATERIAL TPU ~ A95, Weight: ~ 5 g

ADDITIONAL SETTINGS

- Infill Density 100 %

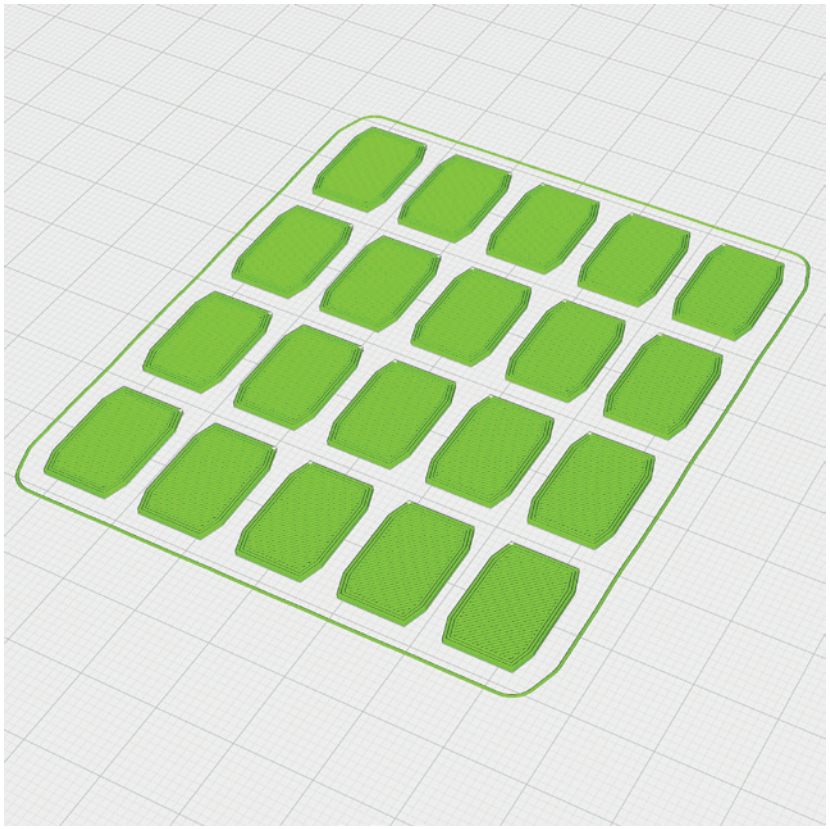


P4_Hinges_F.stl

MATERIAL TPU A95, Weight: ~ 3 g

ADDITIONAL SETTINGS

None required



PROFILE P4_Flex TPU A95

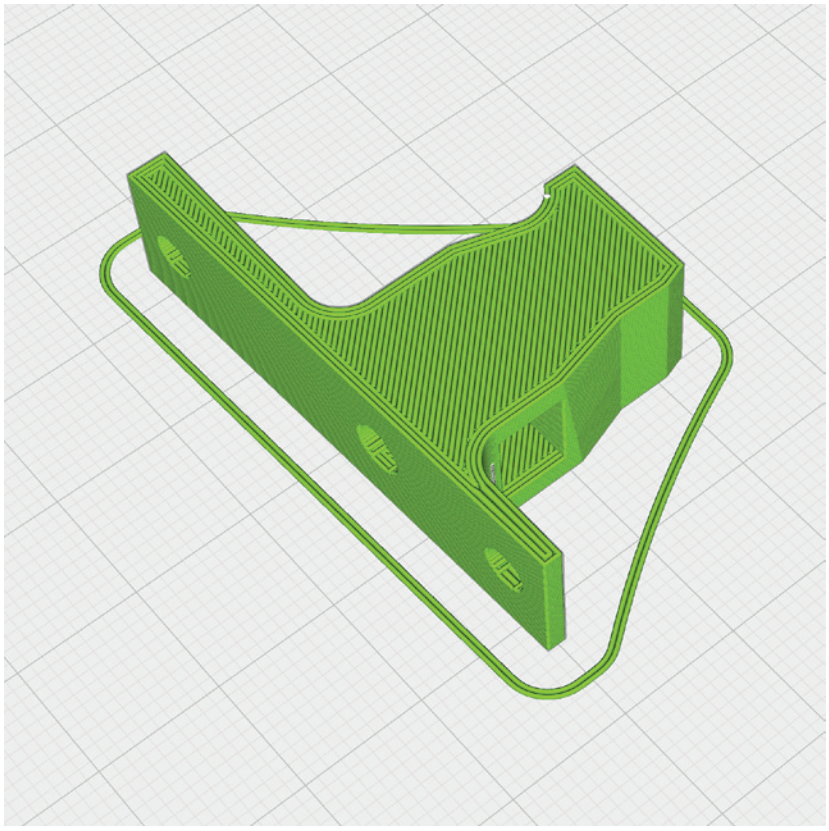
The following parts must be sliced with the PROFILE P4_Flex.
Please note the additional settings for the individual parts!

P4_Maingear TPU L_F.stl and **P4_Maingear TPU R_F.stl**

MATERIAL TPU ~ A95, Weight: ~ 5 g

ADDITIONAL SETTINGS

- Infill Density: 100 %

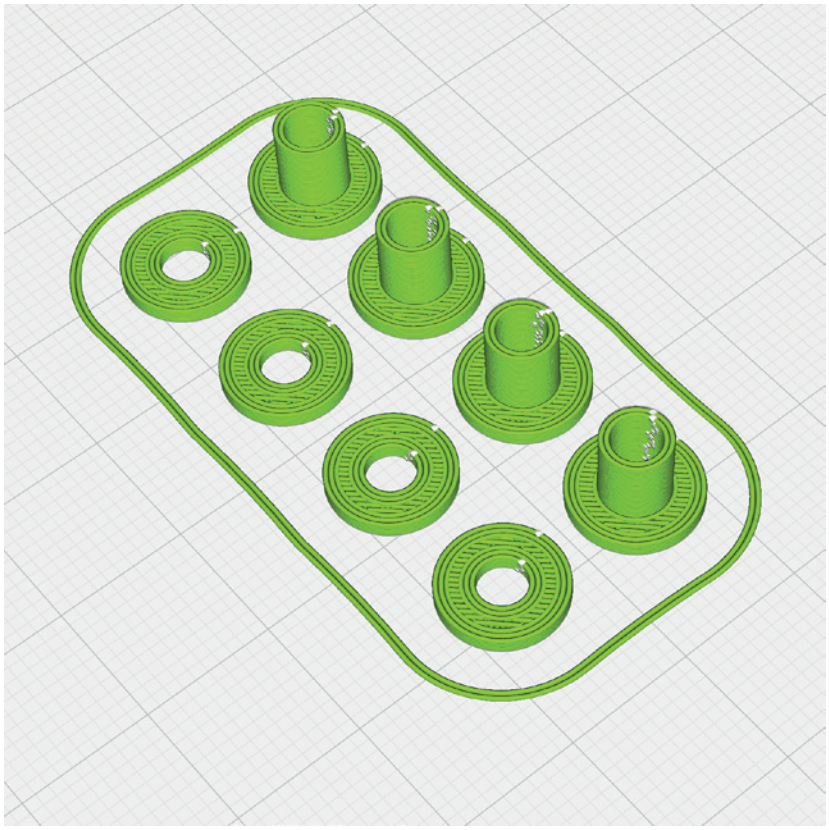


P4_Motormount TPU_F.stl

MATERIAL TPU A95, Weight: ~ 1 g

ADDITIONAL SETTINGS

None required



PROFILE P4_Flex TPU A95

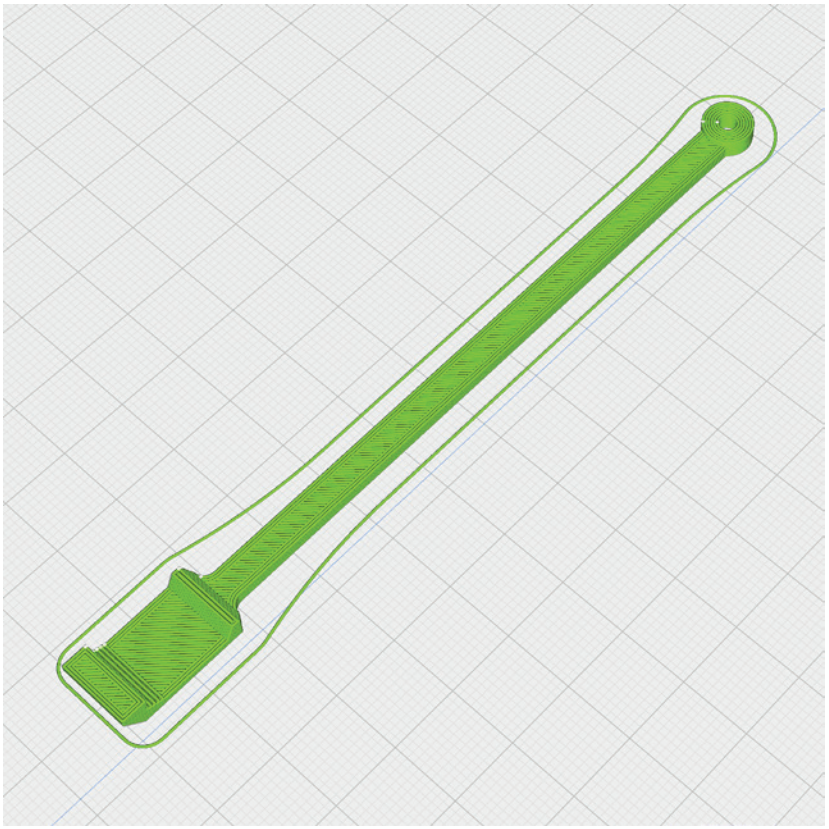
The following parts must be sliced with the PROFILE P4_Flex.
Please note the additional settings for the individual parts!

P4_Tension belt_F.stl

MATERIAL TPU ~ A95, Weight: ~ 2 g

ADDITIONAL SETTINGS

- Infill Density 100 %
- print this part twice



P4_Tire 58_F.stl

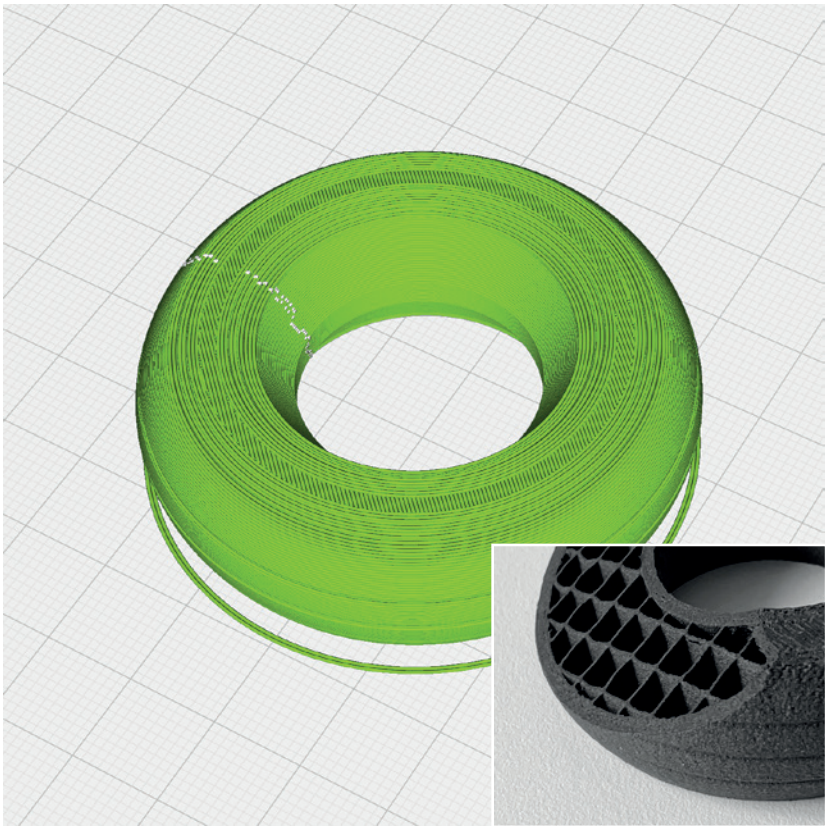
MATERIAL **LW-TPU varioShore Flow 70 %**

The suspension works best with Colorfabb's soft varioShore. Alternatively, it can also be printed with TPU A95.

ADDITIONAL SETTINGS

varioShore with Flow 70 %:
- Wall Line Count: 6
- Top Layers: 6
- Bottom Layers: 6
- Infill Density: 15 %
- Infill Pattern: Gyroid
- print this part three times

TPU A95:
- Wall Line Count: 3
- Top Layers: 3
- Infill Pattern: Gyroid



PROFILE P5_Gyroid Light-Weight LW-PLA!

The following parts must be sliced with the PROFILE P5_Gyroid. **Please note the additional settings for the individual parts! It is essential to print these parts with LW-PLA!**

Basic settings for LW-PLA: Please follow the instructions in our **WINGTEST AND CALIBRATION TOOL** on our website for correct adjustment!

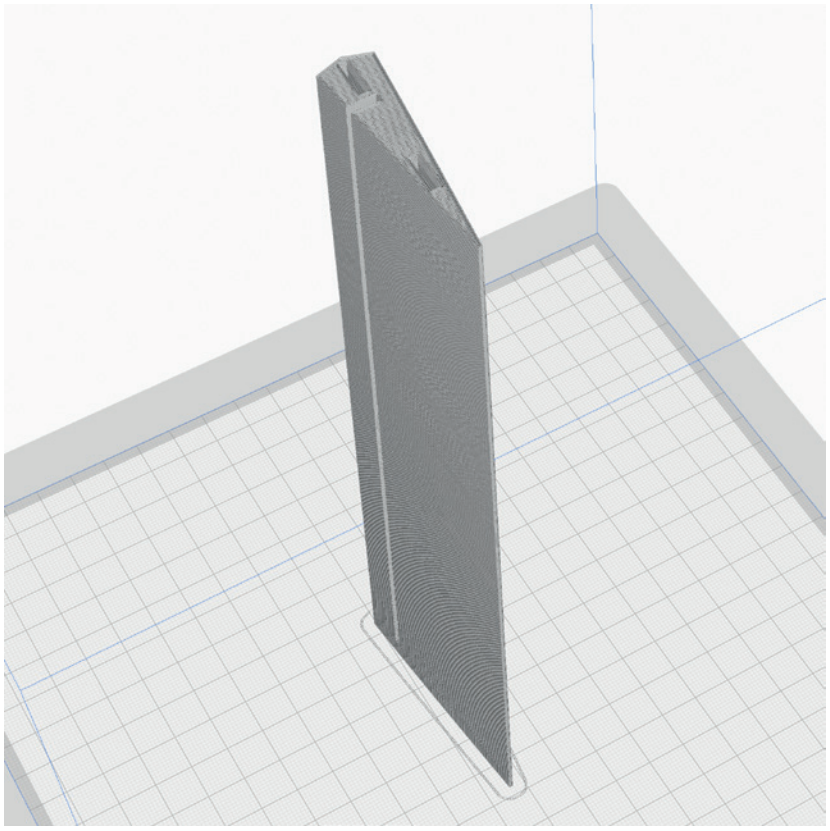
P5_Aileron 1-L_F.stl and **P5_Aileron 1-R_F.stl**

MATERIAL **LW-PLA**, ~ 14 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

- set Brim

TIP to ensure a nice and smooth printed surface in the upper areas, reduce the print speed by about 50%.



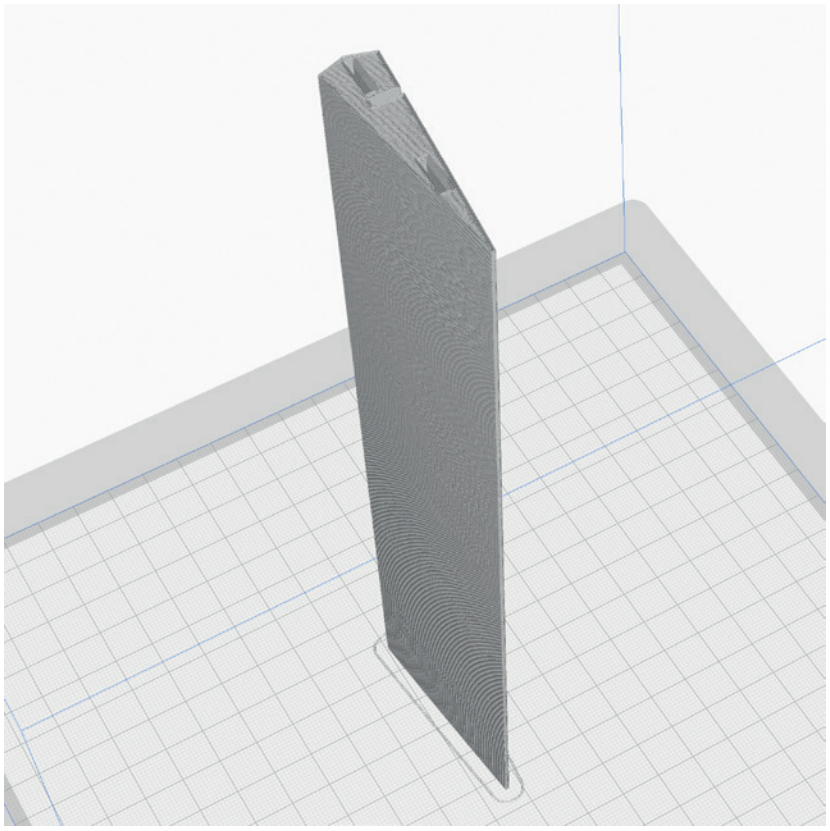
P5_Aileron 2-L_F.stl and **P5_Aileron 2-R_F.stl**

MATERIAL **LW-PLA**, ~ 12 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

- set Brim

TIP to ensure a nice and smooth printed surface in the upper areas, reduce the print speed by about 50%.



PROFILE P5_Gyroid Light-Weight LW-PLA!

The following parts must be sliced with the PROFILE P5_Gyroid. **Please note the additional settings for the individual parts! It is essential to print these parts with LW-PLA!**

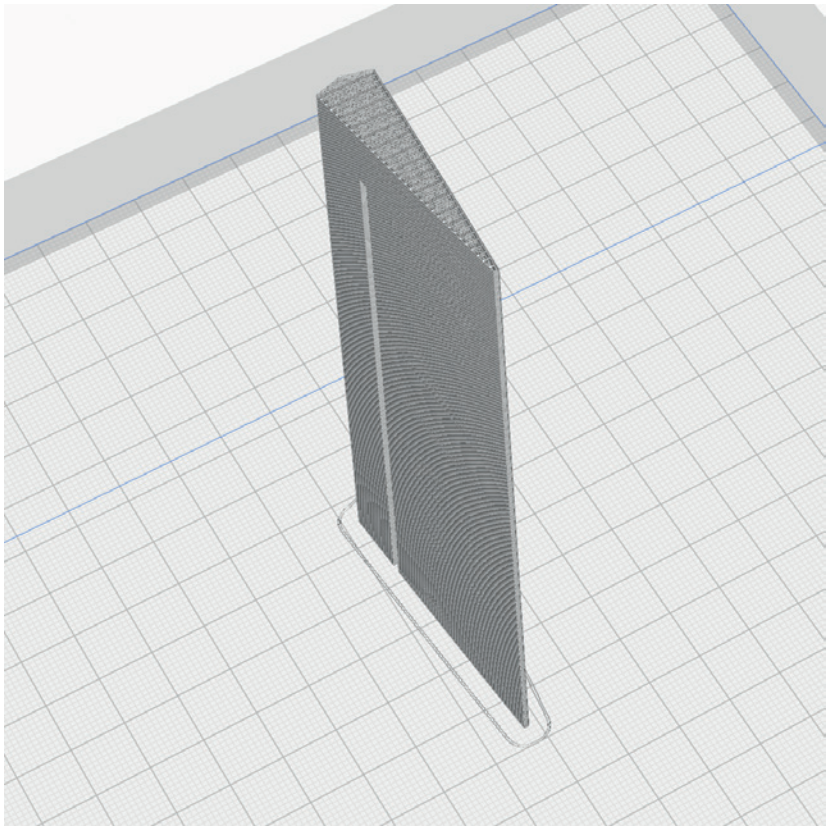
Basic settings for LW-PLA: Please follow the instructions in our **WINGTEST AND CALIBRATION TOOL** on our website for correct adjustment!

P5_Aileron 3-L_F.stl and P5_Aileron 3-R_F.stl

MATERIAL **LW-PLA**, ~ 6 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required

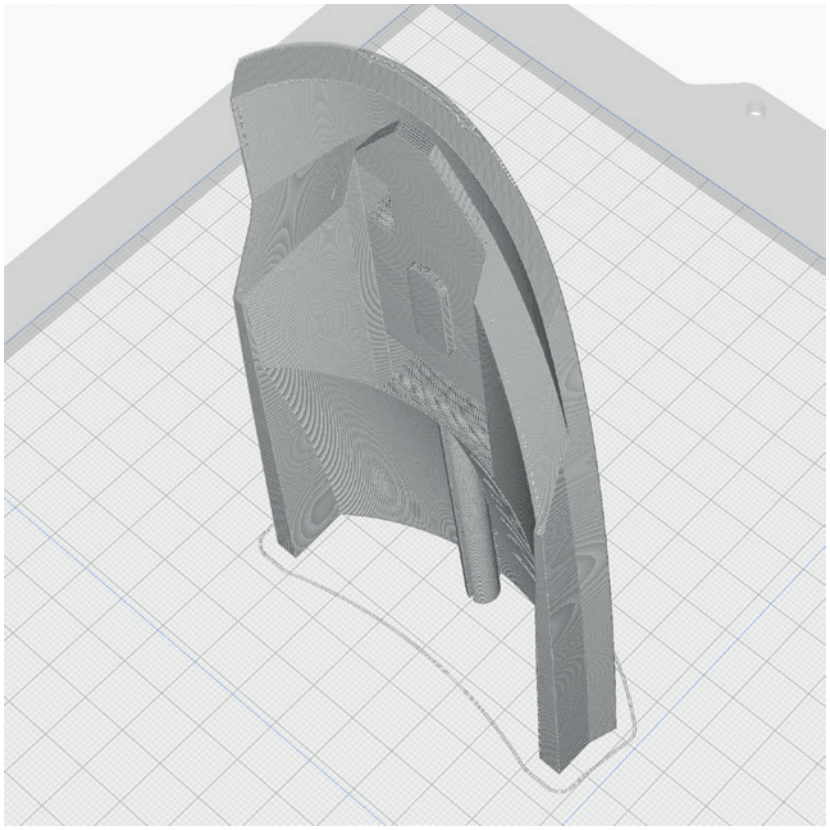


P5_Canopy 1_F.stl

MATERIAL **LW-PLA**, ~ 13 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required



PROFILE P5_Gyroid Light-Weight LW-PLA!

The following parts must be sliced with the PROFILE P5_Gyroid. **Please note the additional settings for the individual parts! It is essential to print these parts with LW-PLA!**

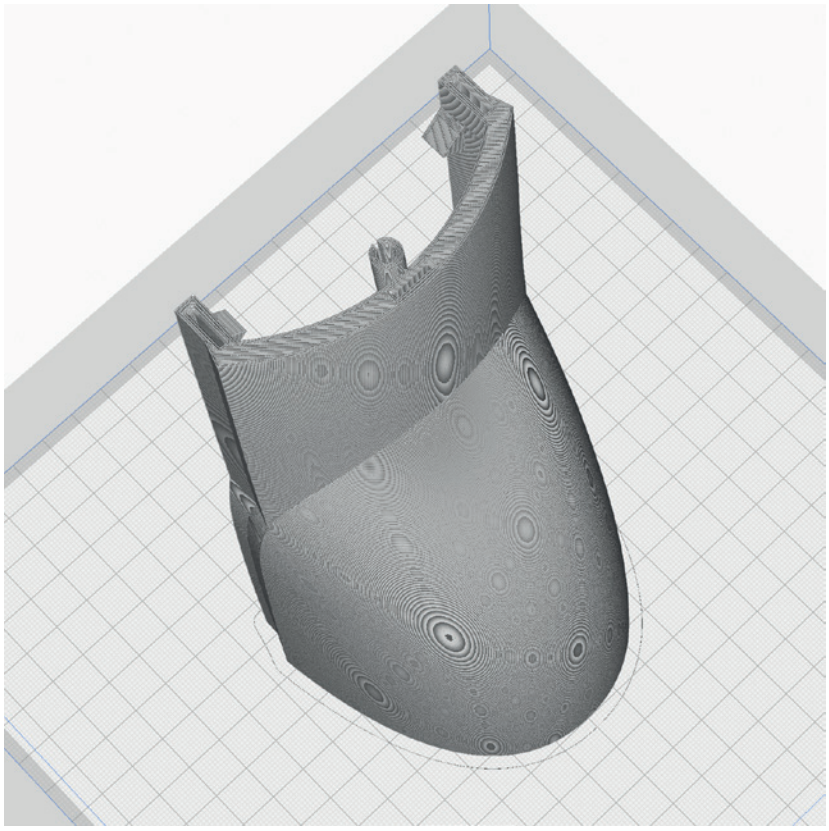
Basic settings for LW-PLA: Please follow the instructions in our **WINGTEST AND CALIBRATION TOOL** on our website for correct adjustment!

P5_Canopy 2_F.stl

MATERIAL **LW-PLA**, ~ 24 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required

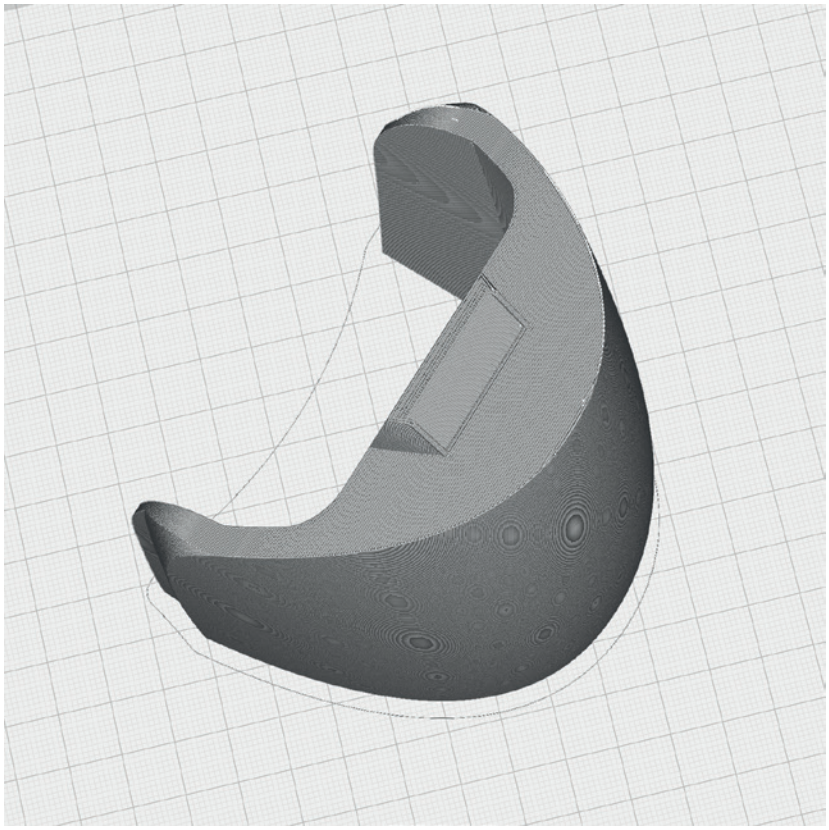


P5_Canopy 3_F.stl

MATERIAL **LW-PLA**, ~ 20 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required



PROFILE P5_Gyroid Light-Weight LW-PLA!

The following parts must be sliced with the PROFILE P5_Gyroid. **Please note the additional settings for the individual parts! It is essential to print these parts with LW-PLA!**

Basic settings for LW-PLA: Please follow the instructions in our **WINGTEST AND CALIBRATION TOOL** on our website for correct adjustment!

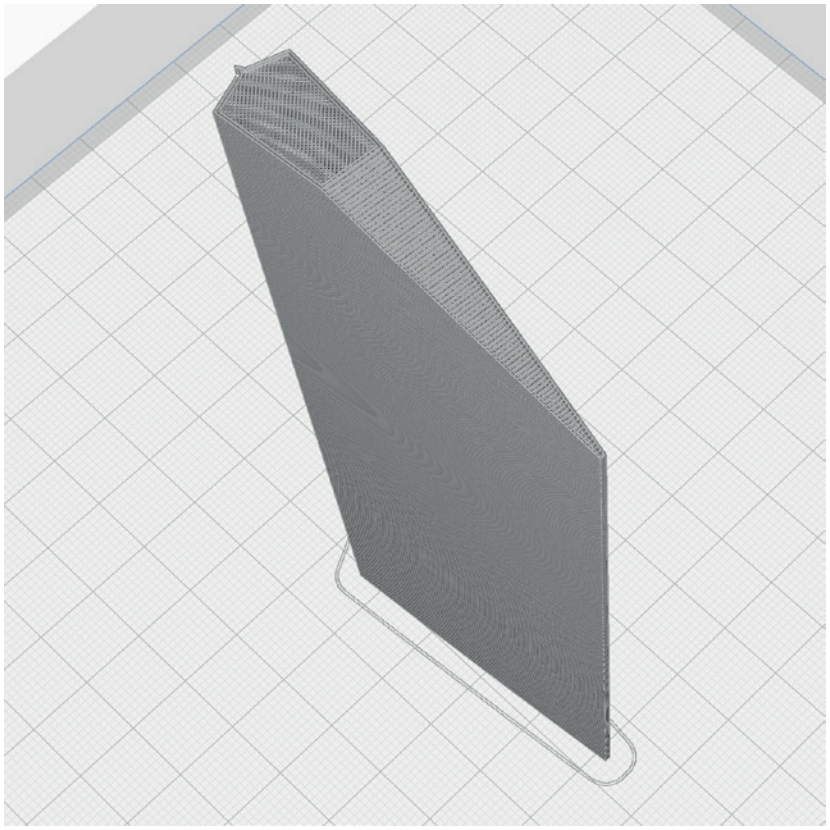
P5_Elevator 1-L_F.stl and P5_Elevator 1-R_F.stl

MATERIAL **LW-PLA**, ~ 7 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required

TIP to ensure a nice and smooth printed surface in the upper areas, reduce the print speed by about 50%.



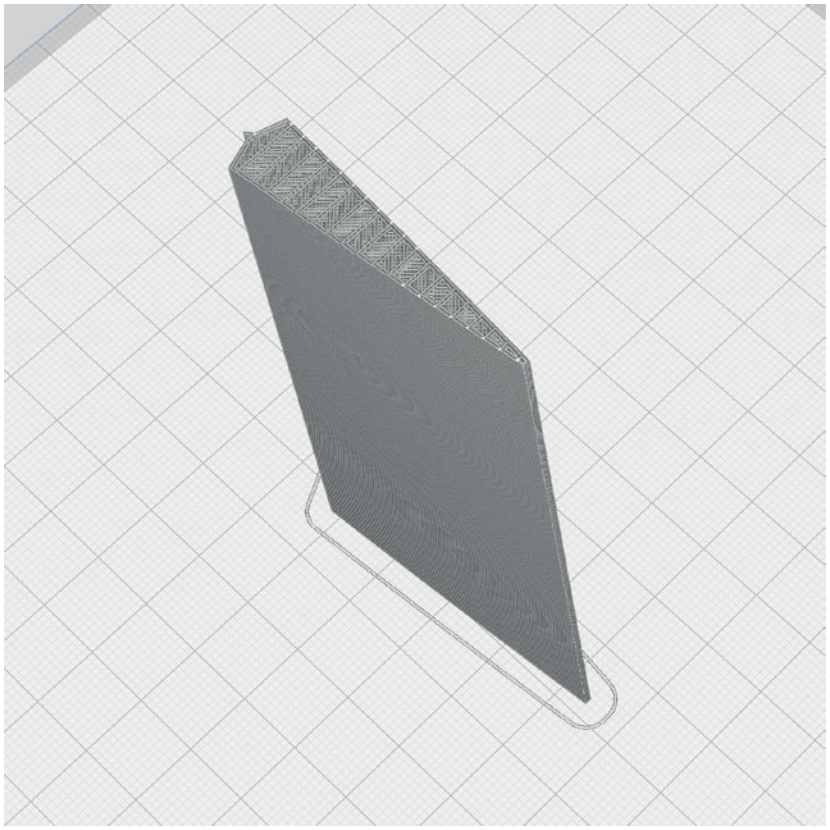
P5_Elevator 2-L_F.stl and P5_Elevator 2-R_F.stl

MATERIAL **LW-PLA**, ~ 5 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required

TIP to ensure a nice and smooth printed surface in the upper areas, reduce the print speed by about 50%.



PROFILE P5_Gyroid Light-Weight LW-PLA!

The following parts must be sliced with the PROFILE P5_Gyroid. **Please note the additional settings for the individual parts! It is essential to print these parts with LW-PLA!**

Basic settings for LW-PLA: Please follow the instructions in our **WINGTEST AND CALIBRATION TOOL** on our website for correct adjustment!

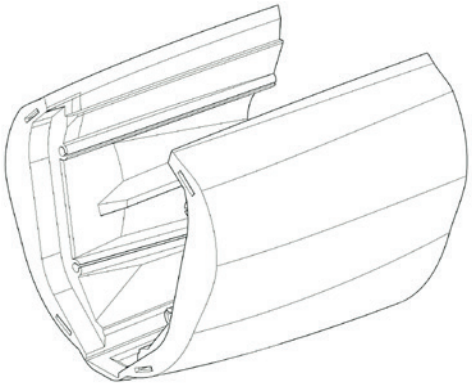
P5_Fuselage 1_F.stl

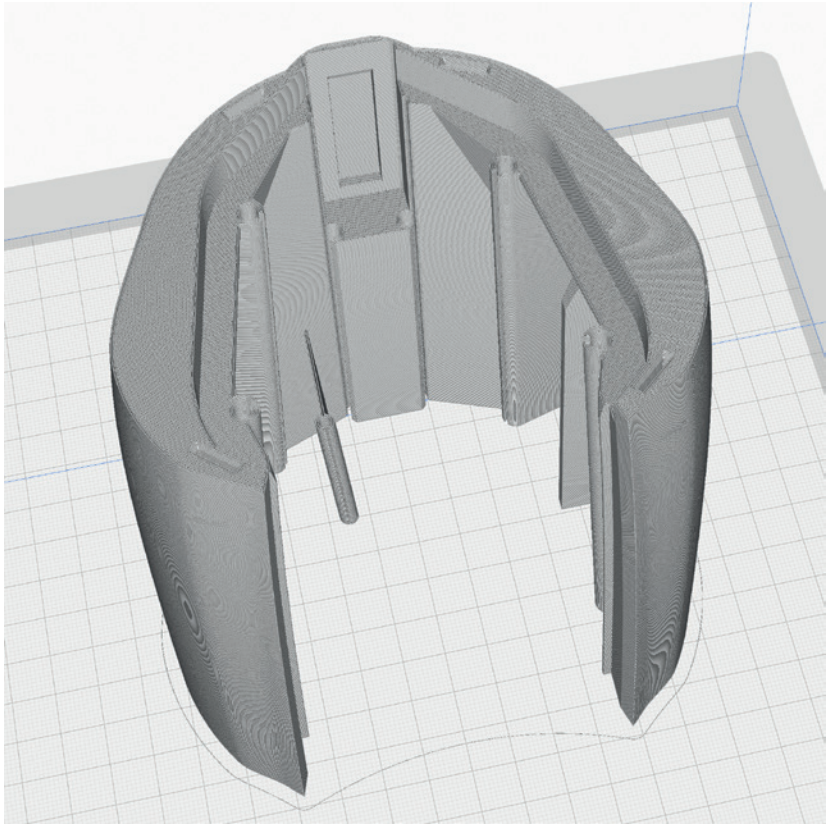
MATERIAL **LW-PLA**, ~ 46 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required

TIP in the „EXTRA FILES" folder there is a variant without the FEARLESS logo.



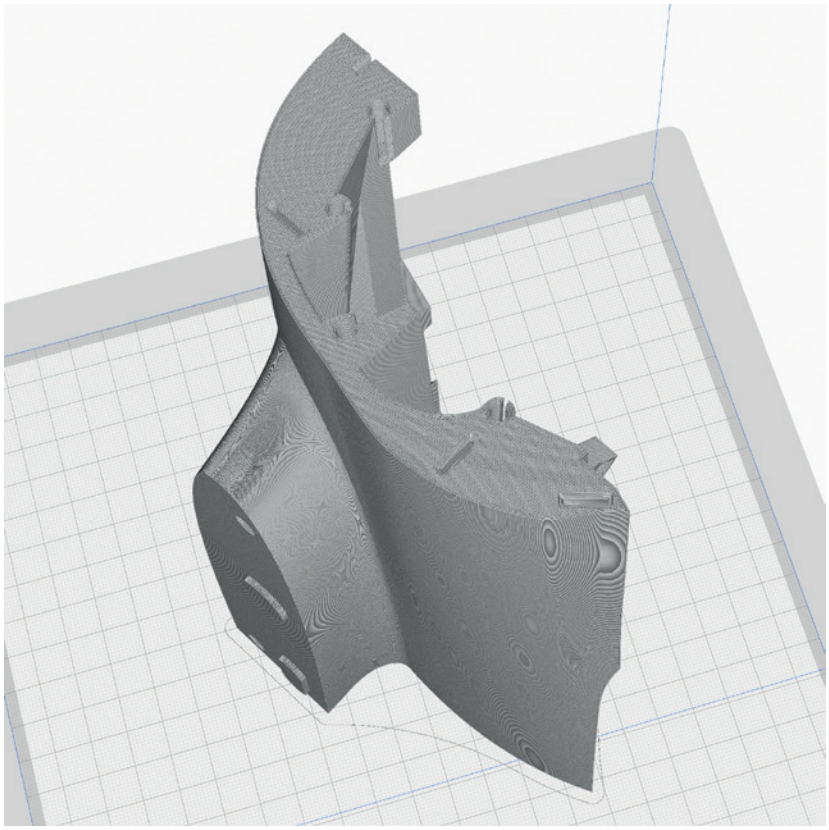


P5_Fuselage 2-L_F.stl and P5_Fuselage 2-R_F.stl

MATERIAL **LW-PLA**, ~ 47 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required



PROFILE P5_Gyroid Light-Weight LW-PLA!

The following parts must be sliced with the PROFILE P5_Gyroid. **Please note the additional settings for the individual parts! It is essential to print these parts with LW-PLA!**

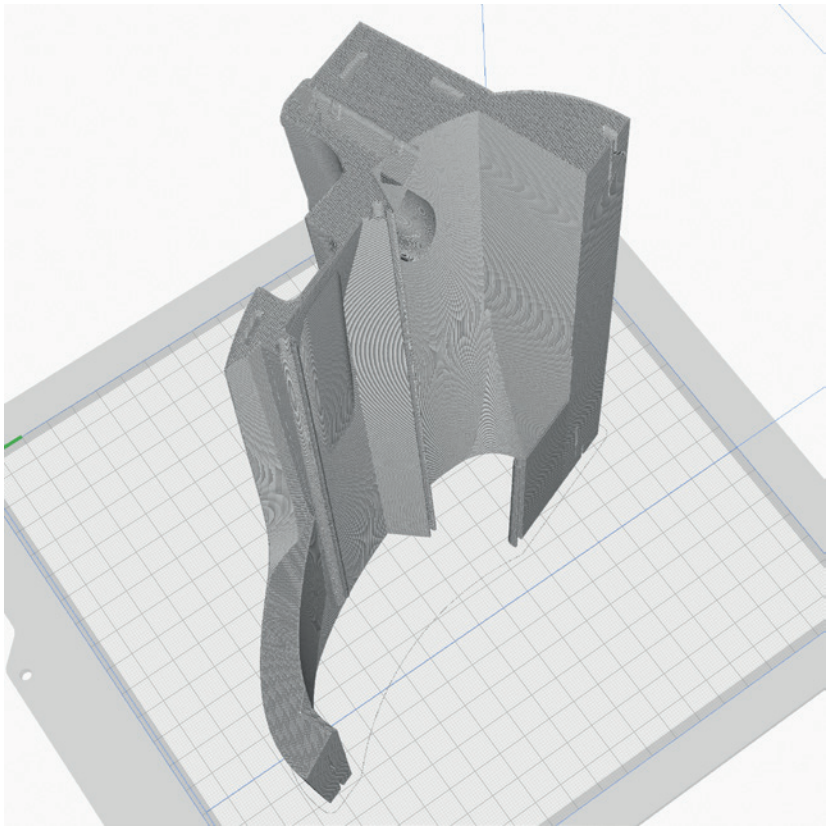
Basic settings for LW-PLA: Please follow the instructions in our **WINGTEST AND CALIBRATION TOOL** on our website for correct adjustment!

P5_Fuselage 3-L_F.stl and P5_Fuselage 3-R_F.stl

MATERIAL **LW-PLA**, ~ 48 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required

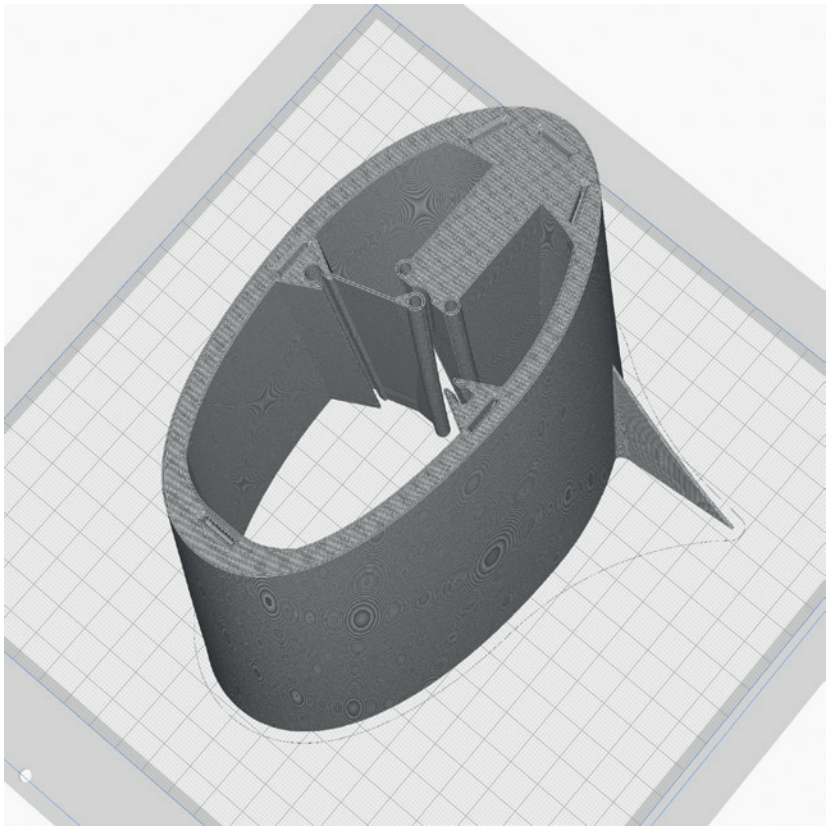


P5_Fuselage 4_F.stl

MATERIAL **LW-PLA**, ~ 71 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required



PROFILE P5_Gyroid Light-Weight LW-PLA!

The following parts must be sliced with the PROFILE P5_Gyroid. **Please note the additional settings for the individual parts! It is essential to print these parts with LW-PLA!**

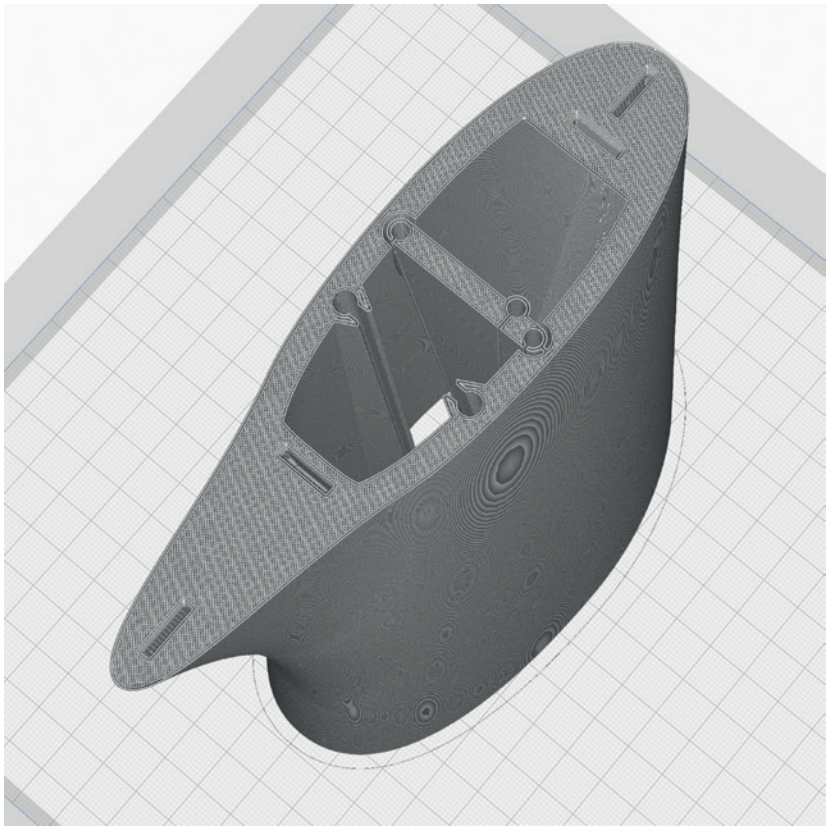
Basic settings for LW-PLA: Please follow the instructions in our **WINGTEST AND CALIBRATION TOOL** on our website for correct adjustment!

P5_Fuselage 5_F.stl

MATERIAL **LW-PLA**, ~ 49 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required

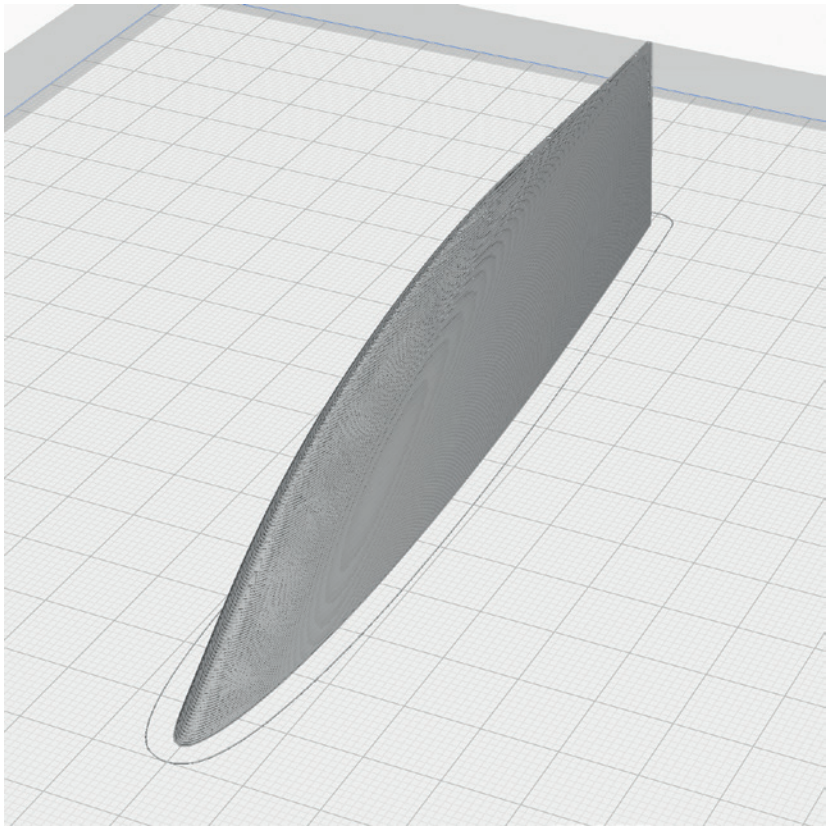


P5_Fuselage 6 top_F.stl

MATERIAL **LW-PLA**, ~ 4 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required



PROFILE P5_Gyroid Light-Weight LW-PLA!

The following parts must be sliced with the PROFILE P5_Gyroid. **Please note the additional settings for the individual parts! It is essential to print these parts with LW-PLA!**

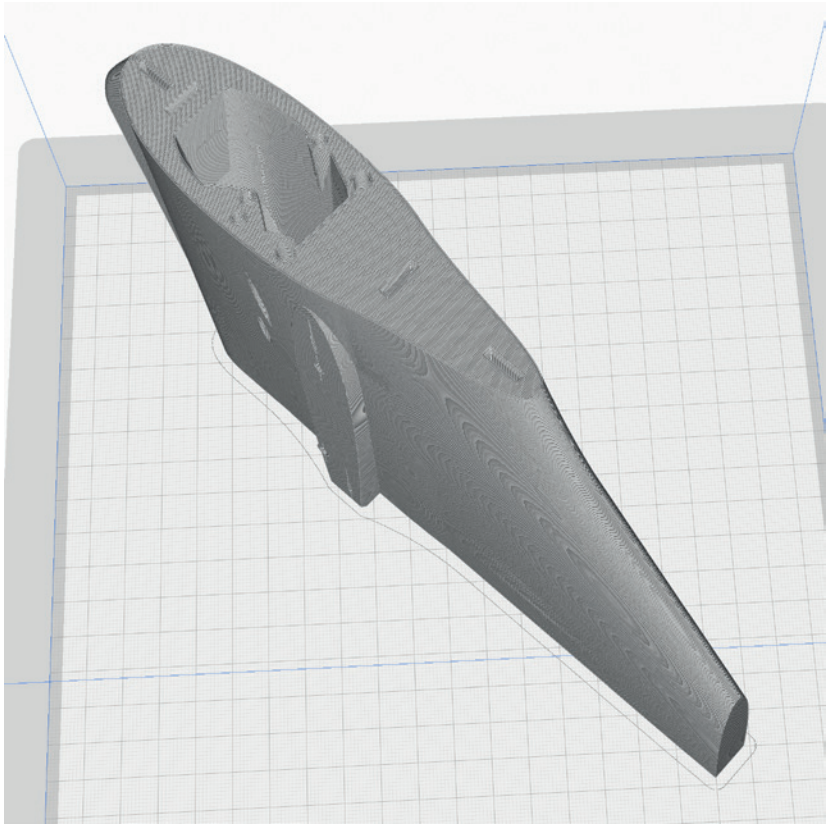
Basic settings for LW-PLA: Please follow the instructions in our **WINGTEST AND CALIBRATION TOOL** on our website for correct adjustment!

P5_Fuselage 6_F.stl

MATERIAL **LW-PLA**, ~ 41 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

- Z Seam Position: Back Left

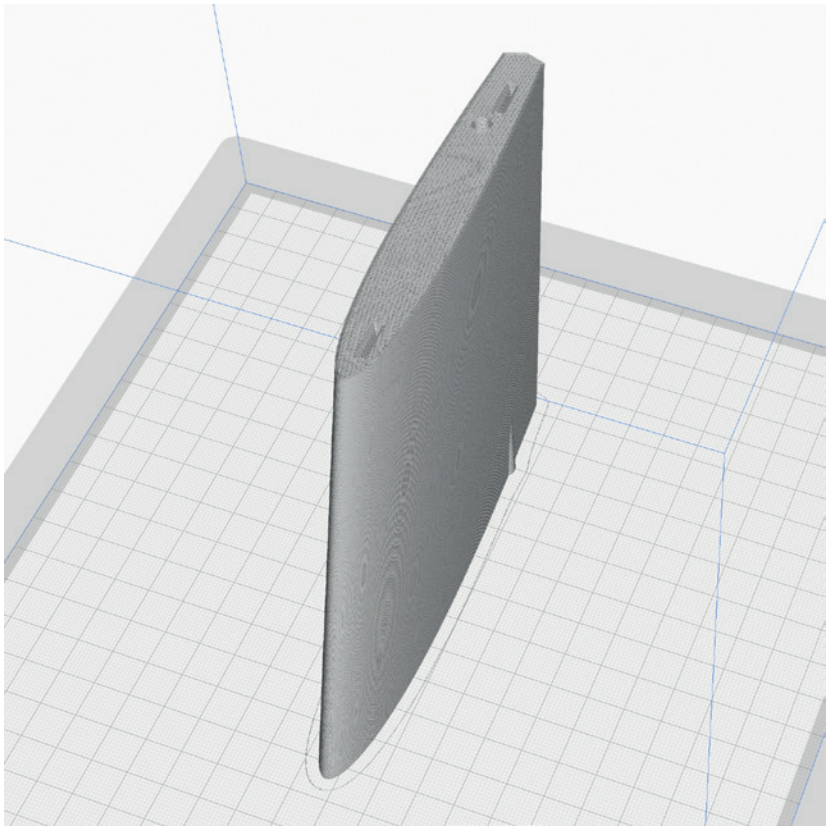


P5_HS 1-L_F.stl and P5_HS 1-R_F.stl

MATERIAL **LW-PLA**, ~ 22 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required



PROFILE P5_Gyroid Light-Weight LW-PLA!

The following parts must be sliced with the PROFILE P5_Gyroid. **Please note the additional settings for the individual parts! It is essential to print these parts with LW-PLA!**

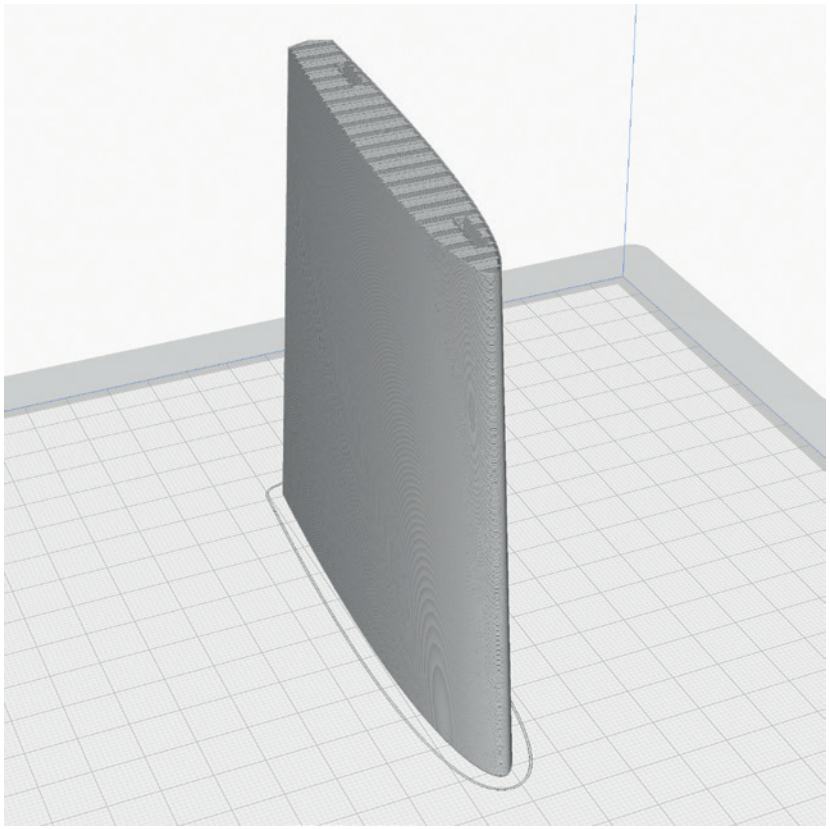
Basic settings for LW-PLA: Please follow the instructions in our **WINGTEST AND CALIBRATION TOOL** on our website for correct adjustment!

P5_HS 2-L_F.stl and P5_HS 2-R_F.stl

MATERIAL **LW-PLA**, ~ 12 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required

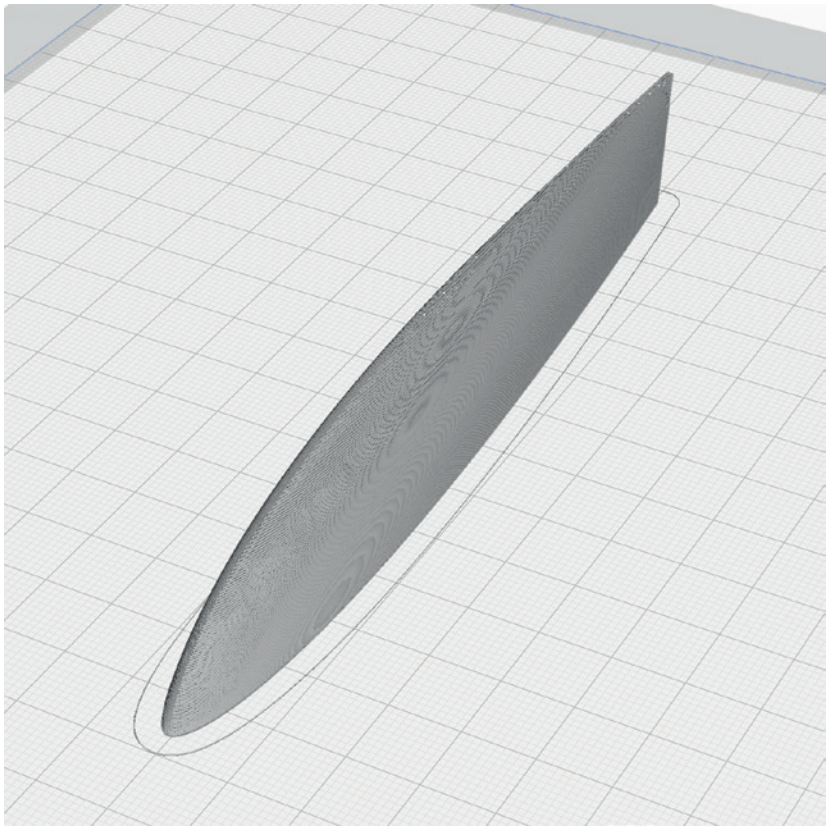


P5_HS-tip-L_F.stl and P5_HS-tip-R_F.stl

MATERIAL **LW-PLA**, ~ 4 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required



PROFILE P5_Gyroid Light-Weight LW-PLA!

The following parts must be sliced with the PROFILE P5_Gyroid. **Please note the additional settings for the individual parts! It is essential to print these parts with LW-PLA!**

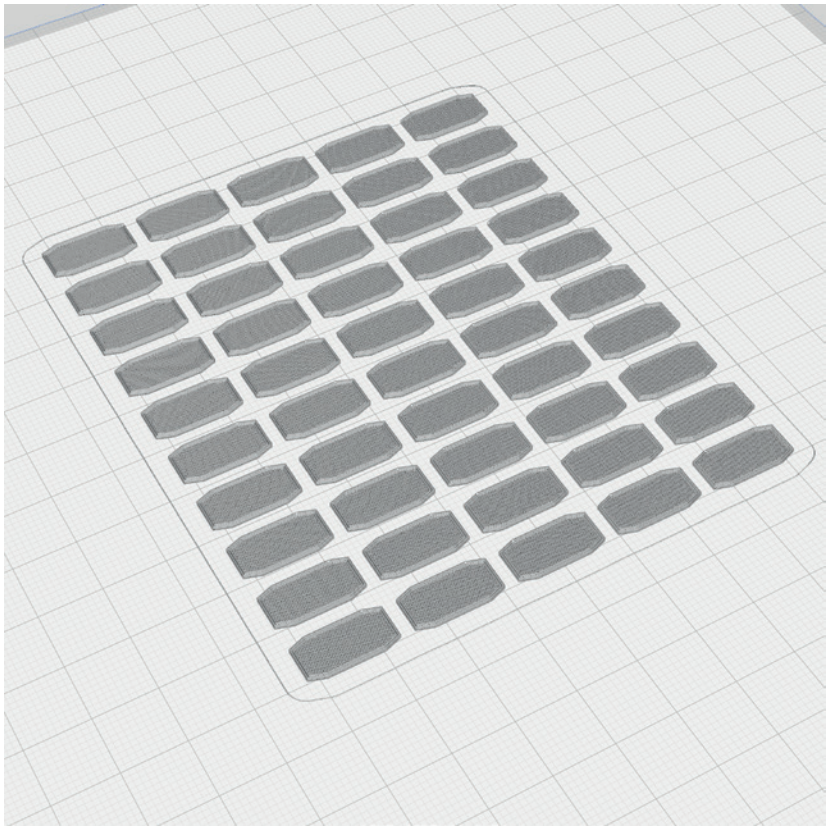
Basic settings for LW-PLA: Please follow the instructions in our **WINGTEST AND CALIBRATION TOOL** on our website for correct adjustment!

P5_Interconnects50_F.stl

MATERIAL **LW-PLA**, ~ 3 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

- print this part twice

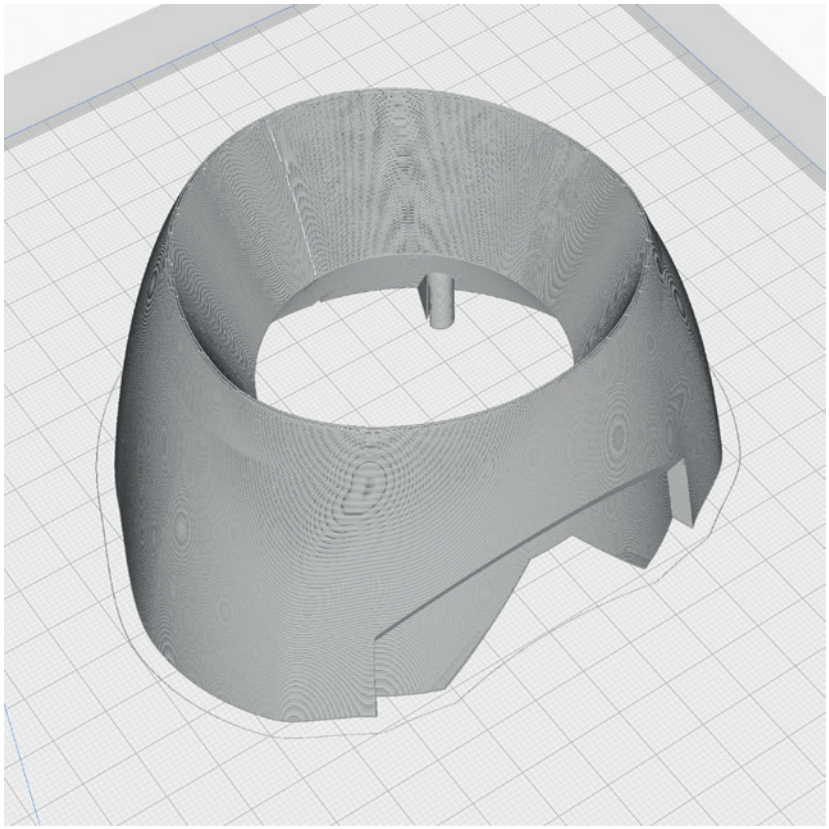


P5_Nose_F.stl

MATERIAL **LW-PLA**, ~ 20 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required



PROFILE P5_Gyroid Light-Weight LW-PLA!

The following parts must be sliced with the PROFILE P5_Gyroid. **Please note the additional settings for the individual parts! It is essential to print these parts with LW-PLA!**

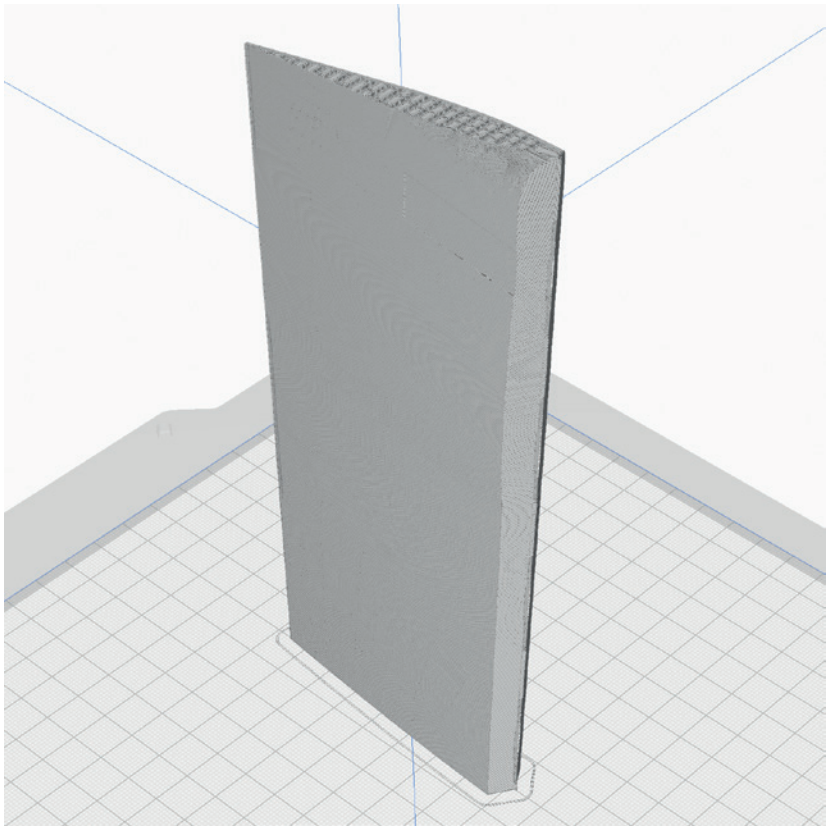
Basic settings for LW-PLA: Please follow the instructions in our **WINGTEST AND CALIBRATION TOOL** on our website for correct adjustment!

P5_Rudder_F.stl

MATERIAL **LW-PLA**, ~ 15 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required

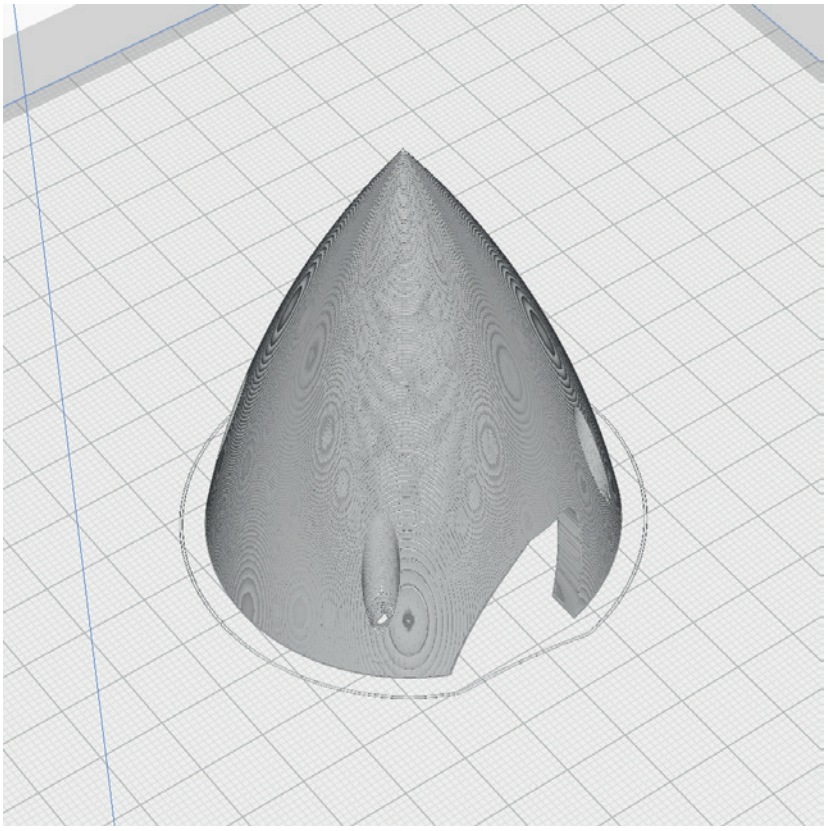


P5_Spinner_F.stl

MATERIAL **LW-PLA**, ~ 8 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

- Infill Density: 12 %



PROFILE P5_Gyroid Light-Weight LW-PLA!

The following parts must be sliced with the PROFILE P5_Gyroid. **Please note the additional settings for the individual parts! It is essential to print these parts with LW-PLA!**

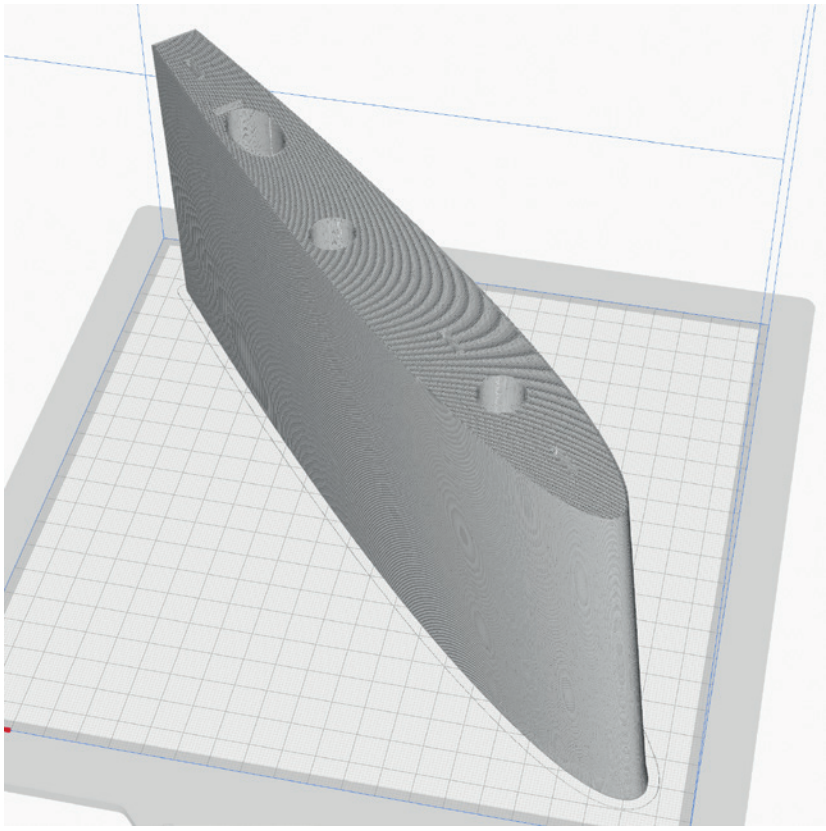
Basic settings for LW-PLA: Please follow the instructions in our **WINGTEST AND CALIBRATION TOOL** on our website for correct adjustment!

P5_Wing 1A-L_F.stl and **P5_Wing 1A-R_F.stl**

MATERIAL **LW-PLA**, ~ 57 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

- Z Seam Position:
  L: Back Left/R: Back Right

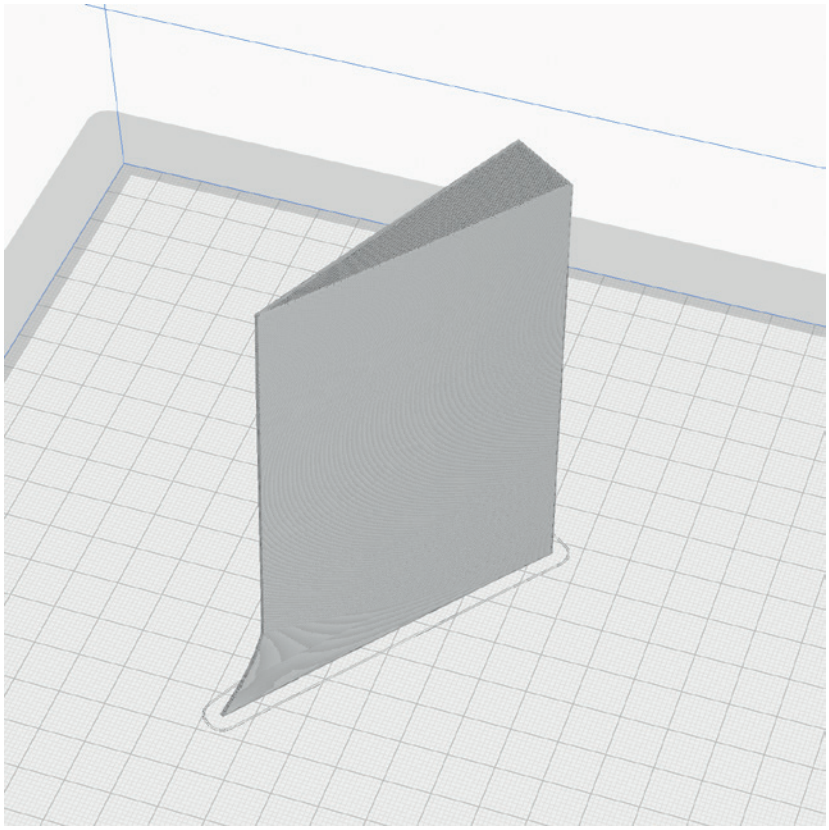


P5_Wing 1B-L_F.stl and **P5_Wing 1B-R_F.stl**

MATERIAL **LW-PLA**, ~ 9 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required



PROFILE P5_Gyroid Light-Weight LW-PLA!

The following parts must be sliced with the PROFILE P5_Gyroid. **Please note the additional settings for the individual parts! It is essential to print these parts with LW-PLA!**

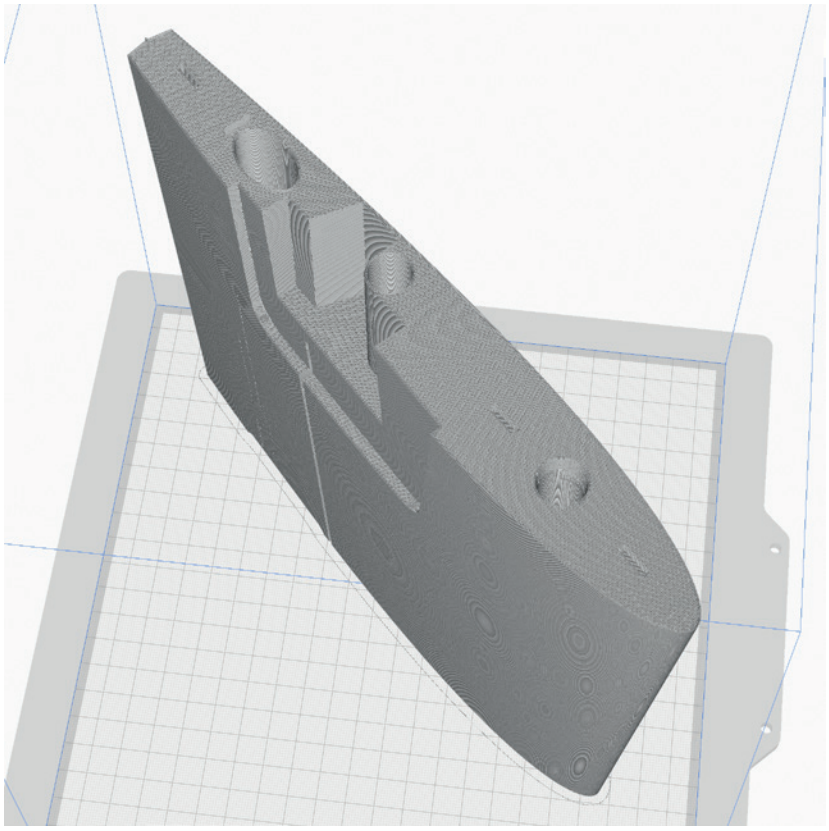
Basic settings for LW-PLA: Please follow the instructions in our **WINGTEST AND CALIBRATION TOOL** on our website for correct adjustment!

P5_Wing 2-L_F.stl and **P5_Wing 2-R_F.stl**

MATERIAL **LW-PLA**, ~ 83 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

- Z Seam Position:
  L: Back Left/R: Back Right

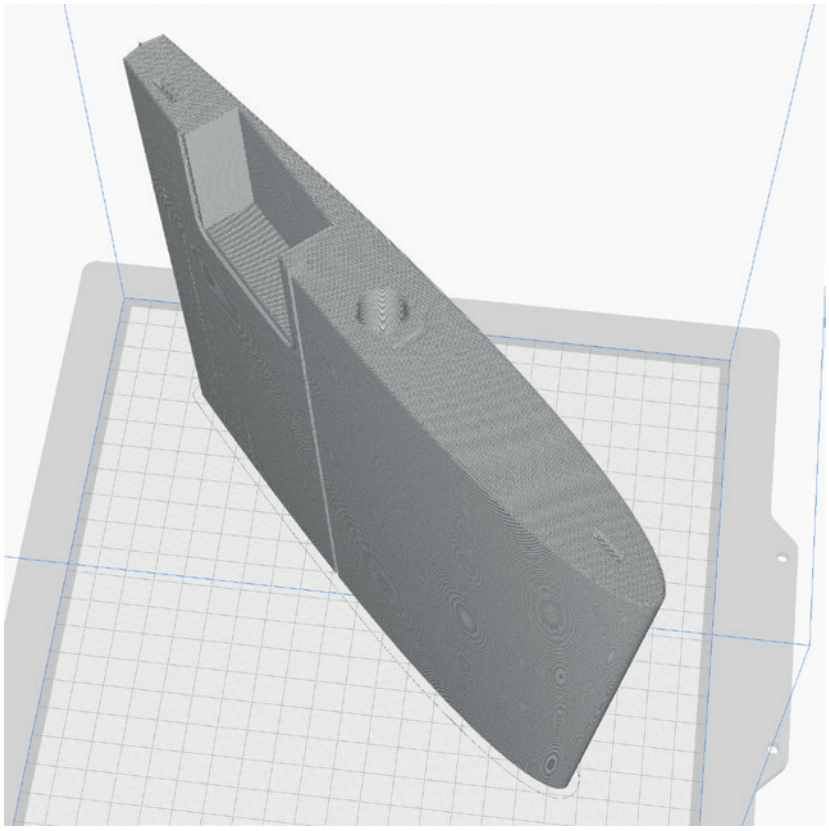


P5_Wing 3-L_F.stl and **P5_Wing 3-R_F.stl**

MATERIAL **LW-PLA**, ~ 64 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

- Z Seam Position:
  L: Back Left/R: Back Right



PROFILE P5_Gyroid Light-Weight LW-PLA!

The following parts must be sliced with the PROFILE P5_Gyroid. **Please note the additional settings for the individual parts! It is essential to print these parts with LW-PLA!**

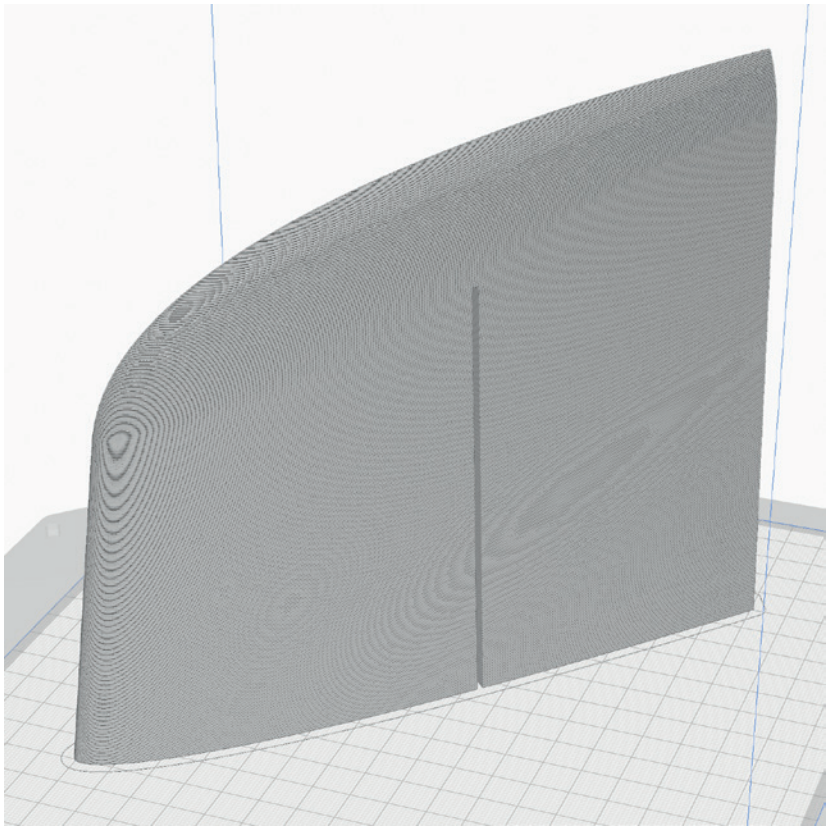
Basic settings for LW-PLA: Please follow the instructions in our **WINGTEST AND CALIBRATION TOOL** on our website for correct adjustment!

P5_Wing 4A-L_F.stl and **P5_Wing 4A-R_F.stl**

MATERIAL **LW-PLA**, ~ 35 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

- Z Seam Position:
  L: Back Right/R: Back Left

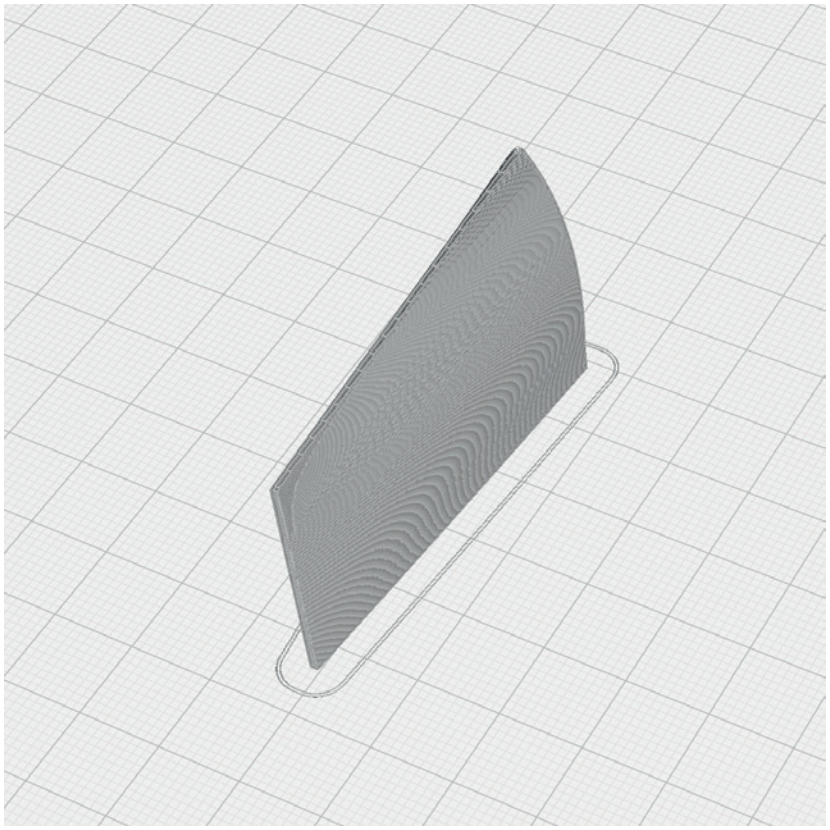


P5_Wing 4B-L_F.stl and **P5_Wing 4B-R_F.stl**

MATERIAL **LW-PLA**, ~ 2 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required



Basic Information:

Gluing the parts printed with PROFILE P5

STEP 1 As a first step, it is important to **roughen and smooth the adhesive surfaces** with sandpaper.

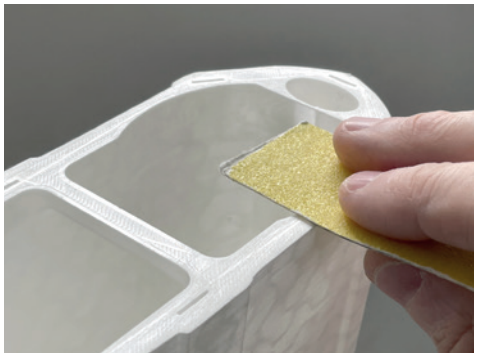
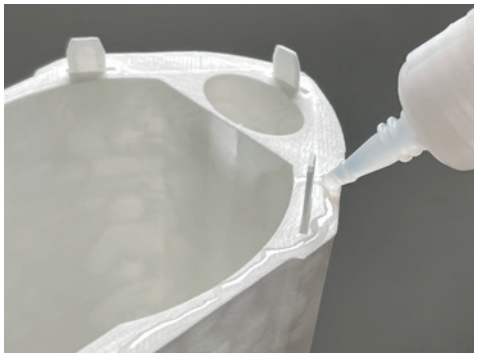
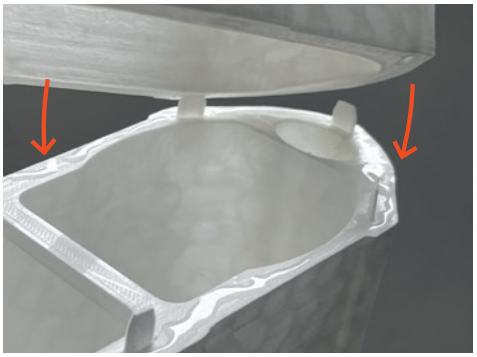
STEP 2 Insert the **interconnects into the slots** provided on one side.

STEP 3 Apply **a lot of glue** to the side with the interconnects. It is important that there is glue everywhere, especially on the outside and inside of the wall surfaces, in order to achieve a perfect connection. The interconnects only serve to align the parts to each other. It is better **not** to apply glue here, otherwise it can happen that the glue suddenly hardens while the parts are being put together and stops the process.

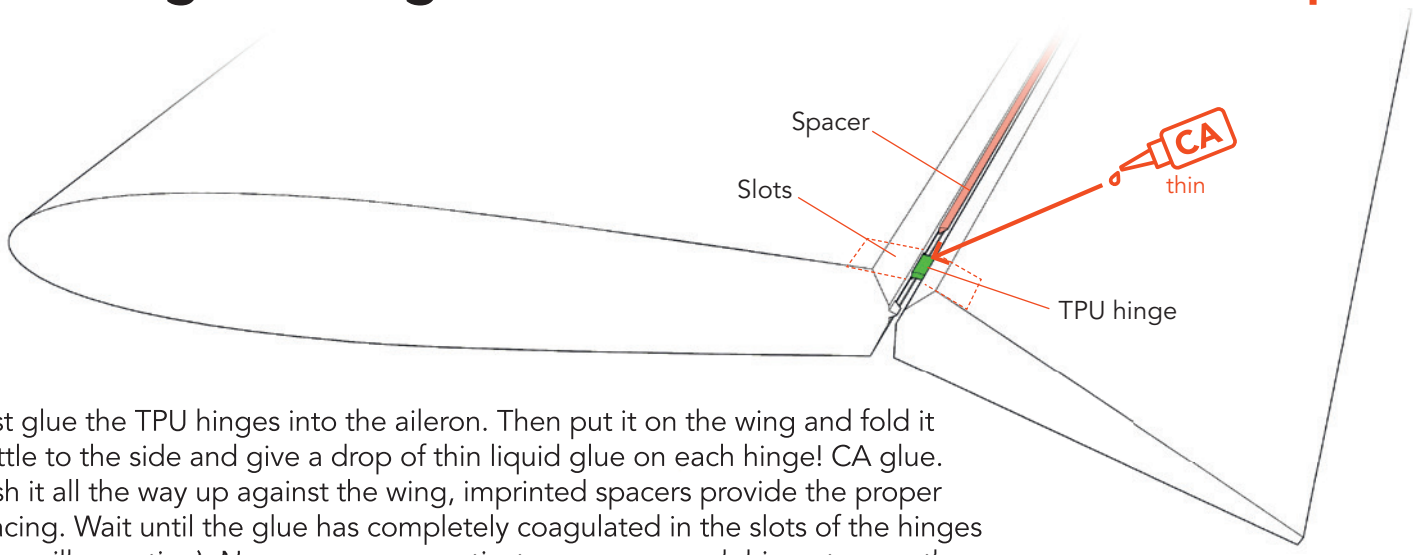
Use medium viscosity CA glue, thinner glue would run down the parts too easily.

After assembly, **align the two parts exactly** and wipe off the excess CA glue from the surface with a cloth. Now spray with activator spray along the gluing surface and carefully press the parts together.

STEP 4 Clean the glued areas slightly with a **sharp-bladed** cutter.

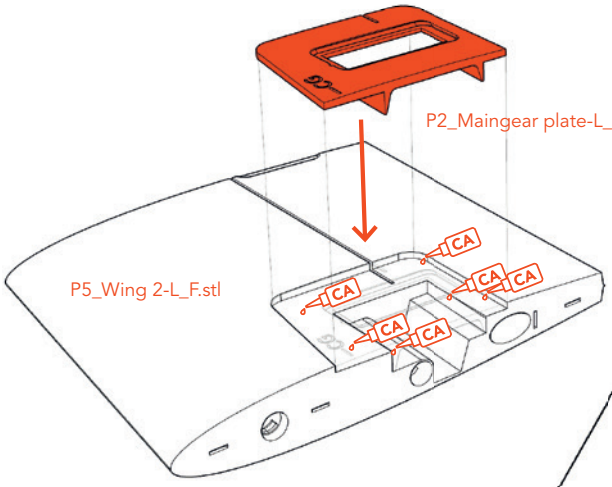
Installing the hinges – rudder/elevator/ailerons/flaps



First glue the TPU hinges into the aileron. Then put it on the wing and fold it a little to the side and give a drop of thin liquid glue on each hinge! CA glue. Push it all the way up against the wing, imprinted spacers provide the proper spacing. Wait until the glue has completely coagulated in the slots of the hinges (by capillary action). Now spray some activator spray on each hinge to cure the CA glue. Repeat the process on the other side of the hinges. **Do not use too much glue and test if each hinge holds well.**

Wings assembly

First glue the Maingear plate in wing 2. **Spread the CA glue over the entire surface to create a stable connection!**



Assemble the wing and the aileron separately and then add the aileron to the wing.



Follow the instructions **„Installing the hinges“** on page 33.

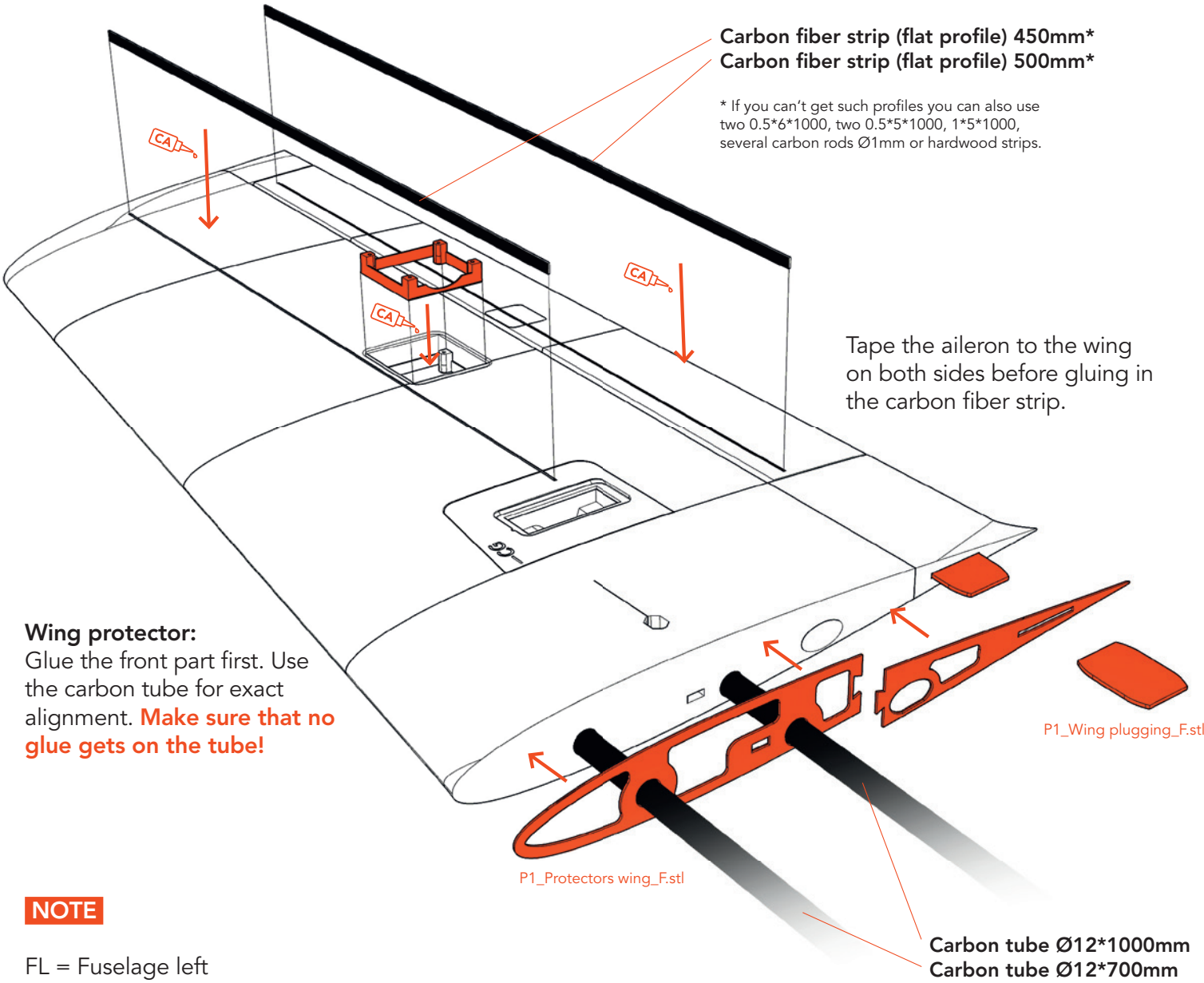
Wings assembly

Shorten and insert the carbon strips first into the gaps on the wing. Make sure that they do not protrude above the surface of the wing, if they are a little lower, that's okay. Then apply a generous amount of **thin CA glue along the entire length**. The glue spreads through the capillary effect and bonds the strips to the wing over a large area. **The carbon strips should be degreased and roughened with sandpaper!**

If you don't have carbon strips or similar materials available, print the STL Spar_p1_F.stl from PLA or better Tough PLA several times and glue it as described.



thin liquid



Carbon fiber strip (flat profile) 450mm*
Carbon fiber strip (flat profile) 500mm*

* If you can't get such profiles you can also use two 0.5*6*1000, two 0.5*5*1000, 1*5*1000, several carbon rods Ø1mm or hardwood strips.

Tape the aileron to the wing on both sides before gluing in the carbon fiber strip.

Wing protector:
Glue the front part first. Use the carbon tube for exact alignment. **Make sure that no glue gets on the tube!**

P1_Wing plugging_F.stl

P1_Protectors wing_F.stl

Carbon tube Ø12*1000mm
Carbon tube Ø12*700mm
(Do not glue!)

NOTE

FL = Fuselage left
FR = Fuselage right
WL = Wing left
WR = Wing right

The inscription is the side of the adhesive surface!

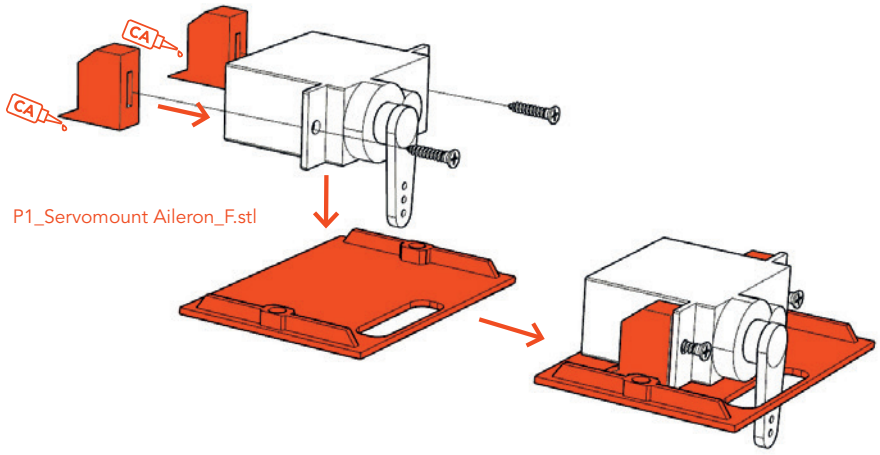
Aileron Servo

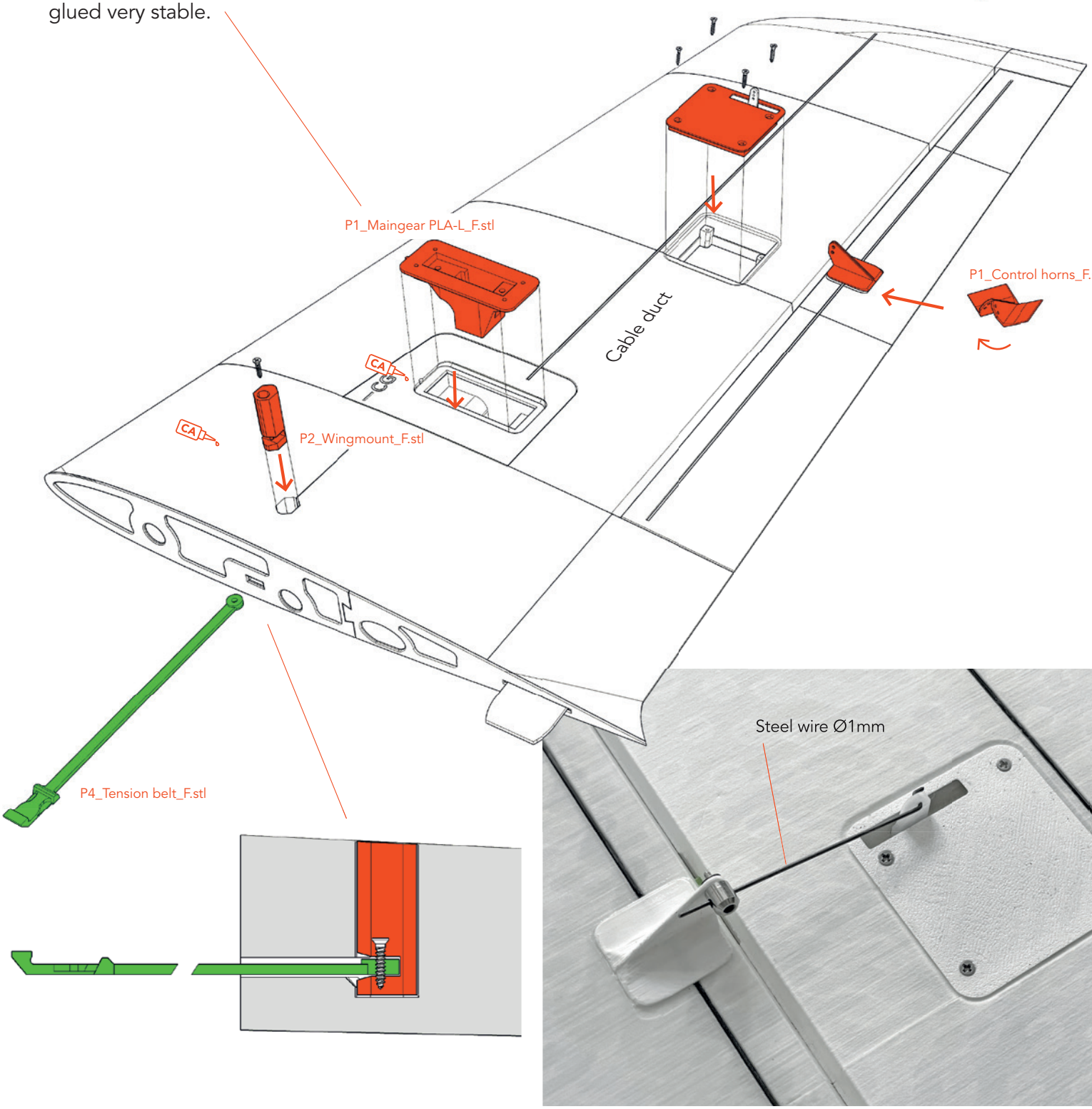
Assemble the parts as shown here.

Align the servo so that the lever protrudes exactly in the center of the slot.

Tighten the servo cover with four tapping screws.

The part **Maingear PLA** must be glued very stable.

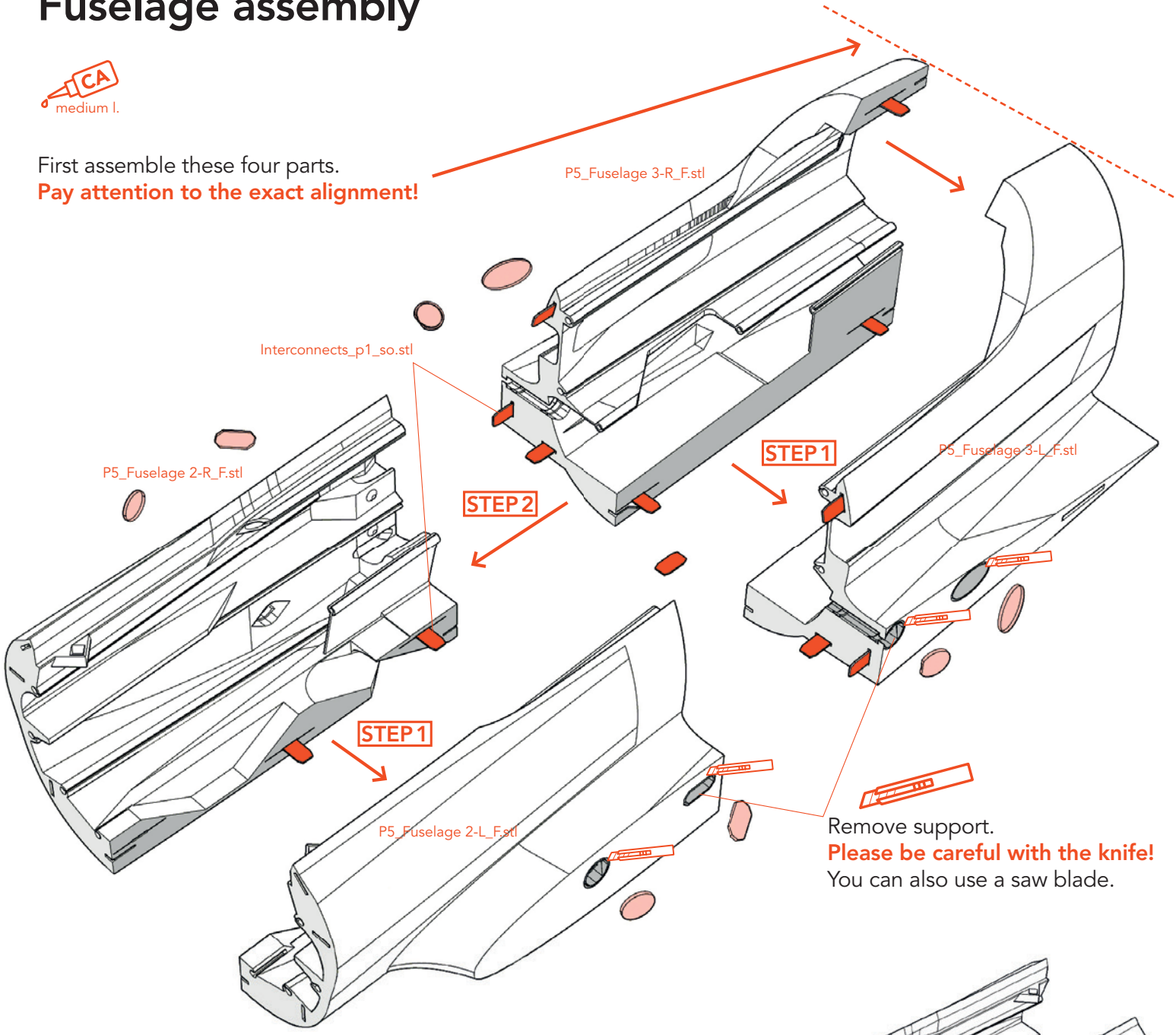




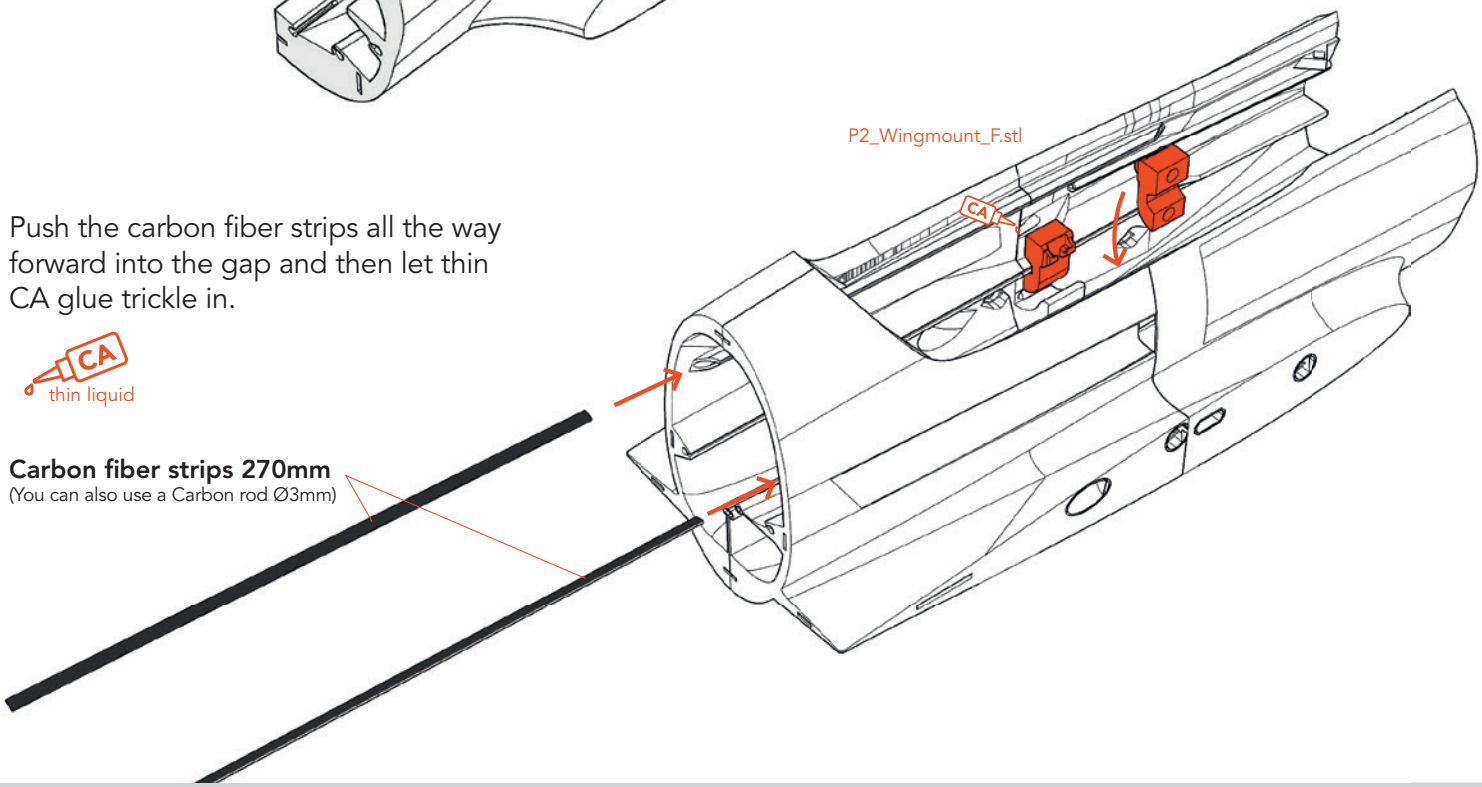
Fuselage assembly

CA
medium l.

First assemble these four parts.
Pay attention to the exact alignment!



Remove support.
Please be careful with the knife!
You can also use a saw blade.

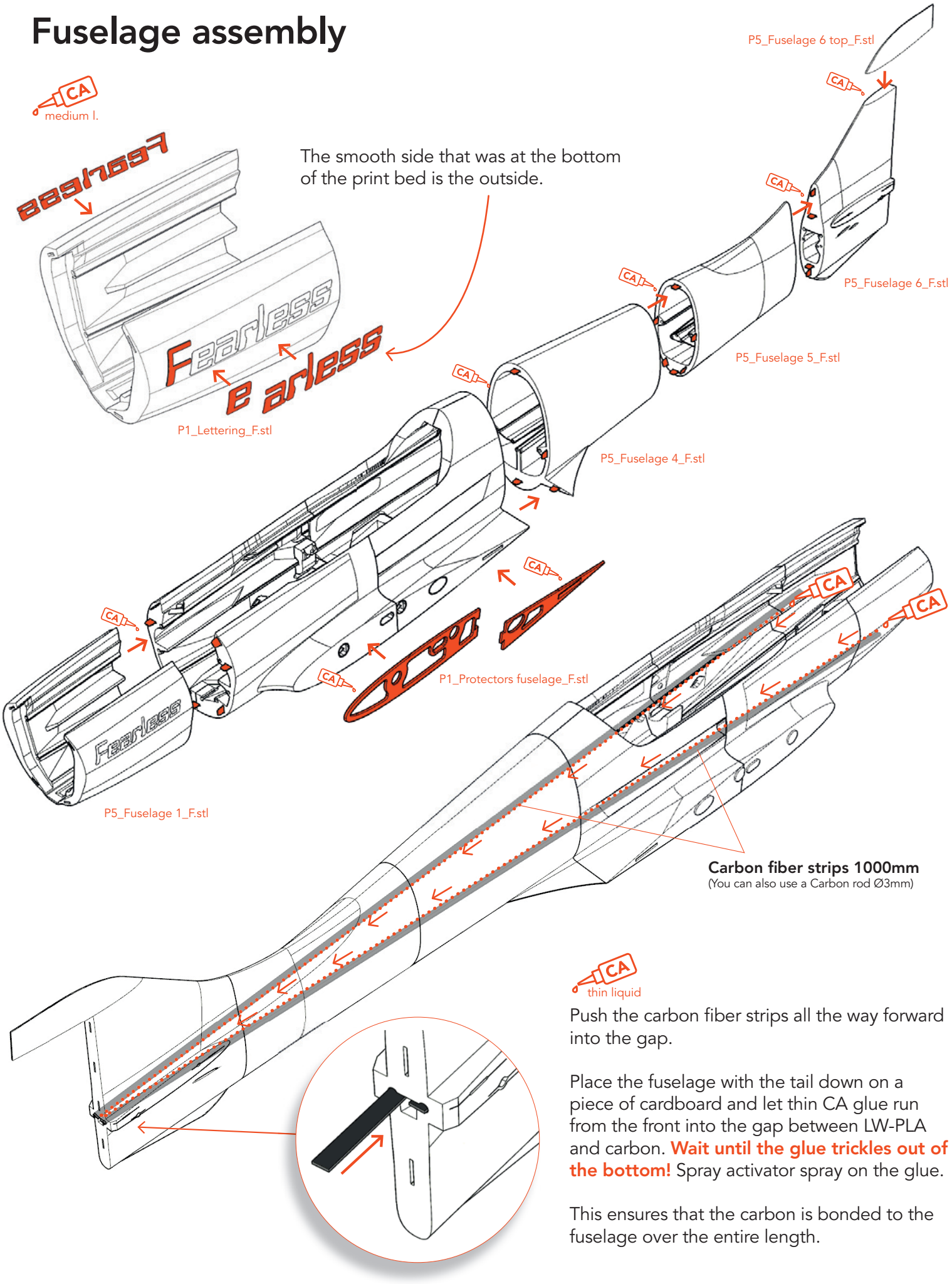


Push the carbon fiber strips all the way forward into the gap and then let thin CA glue trickle in.

CA
thin liquid

Carbon fiber strips 270mm
(You can also use a Carbon rod Ø3mm)

Fuselage assembly

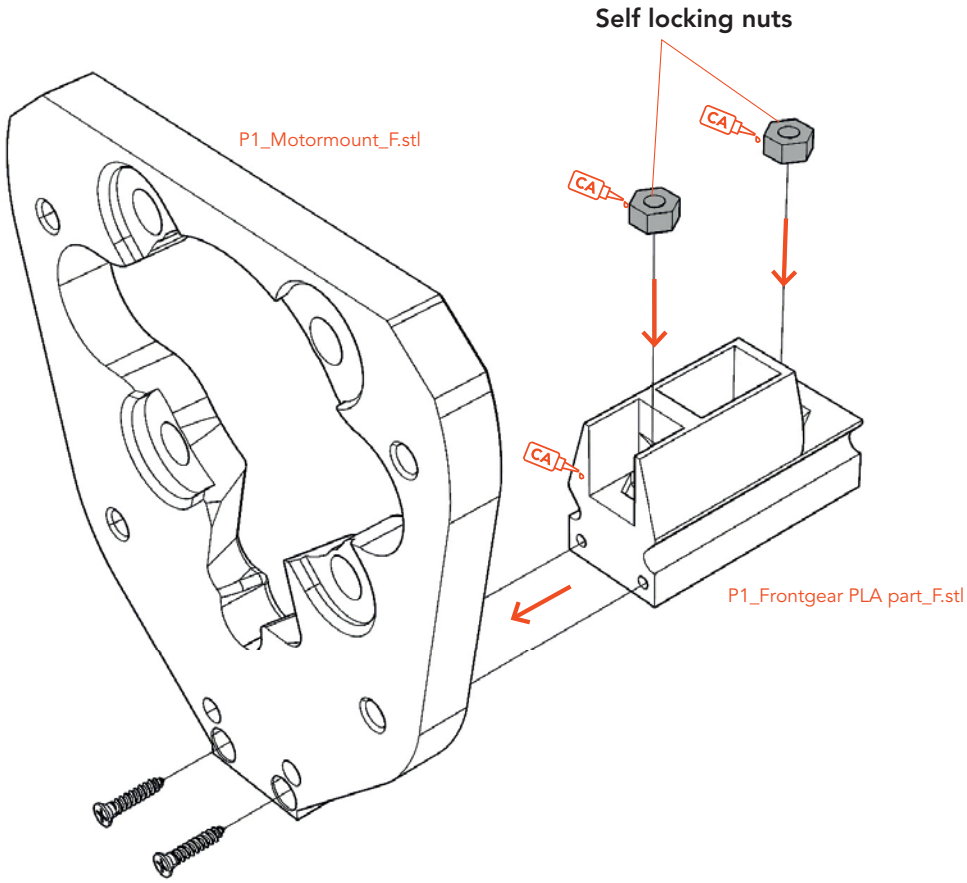


Push the carbon fiber strips all the way forward into the gap.

Place the fuselage with the tail down on a piece of cardboard and let thin CA glue run from the front into the gap between LW-PLA and carbon. **Wait until the glue trickles out of the bottom!** Spray activator spray on the glue.

This ensures that the carbon is bonded to the fuselage over the entire length.

Motor mount

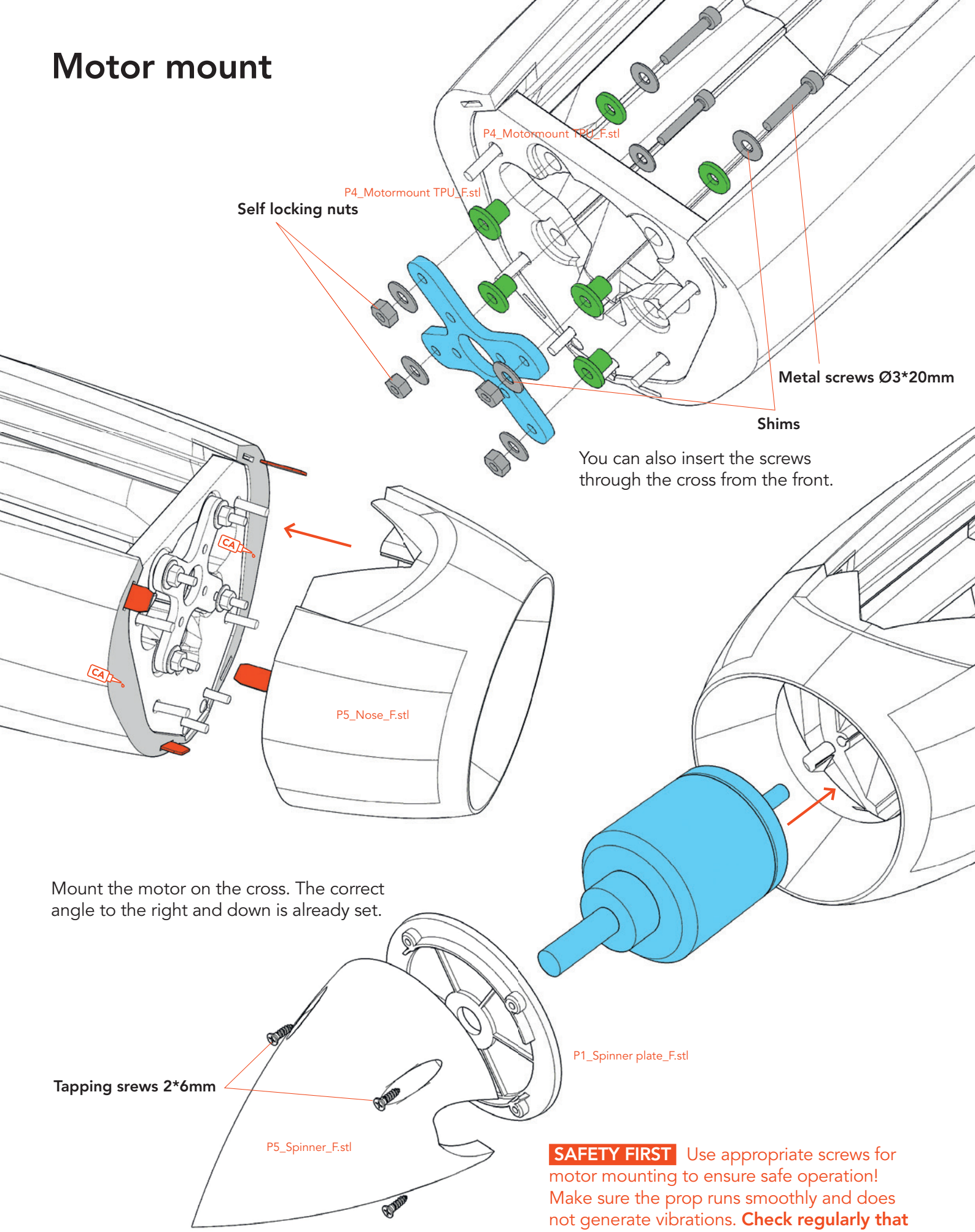


Insert the motor mount into the fuselage and the carbon rods into the slots as shown in the picture. Then glue everything well with thin CA glue. Due to the capillary effect, the glue runs along the entire rods and the motor mount. **This connection must be absolutely stable!**



Remove support.
Please be careful with the knife!

Motor mount



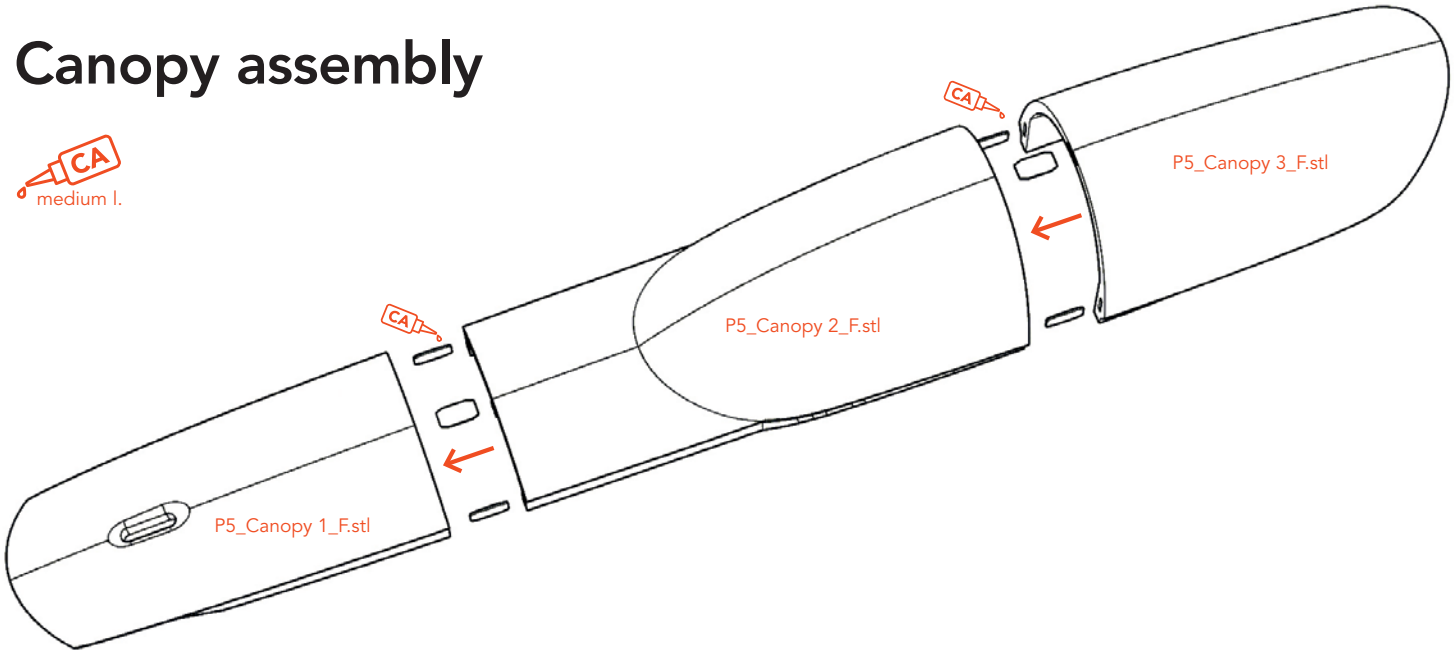
You can also insert the screws through the cross from the front.

Mount the motor on the cross. The correct angle to the right and down is already set.

SAFETY FIRST Use appropriate screws for motor mounting to ensure safe operation! Make sure the prop runs smoothly and does not generate vibrations. **Check regularly that the motor mounting is absolutely tight!**

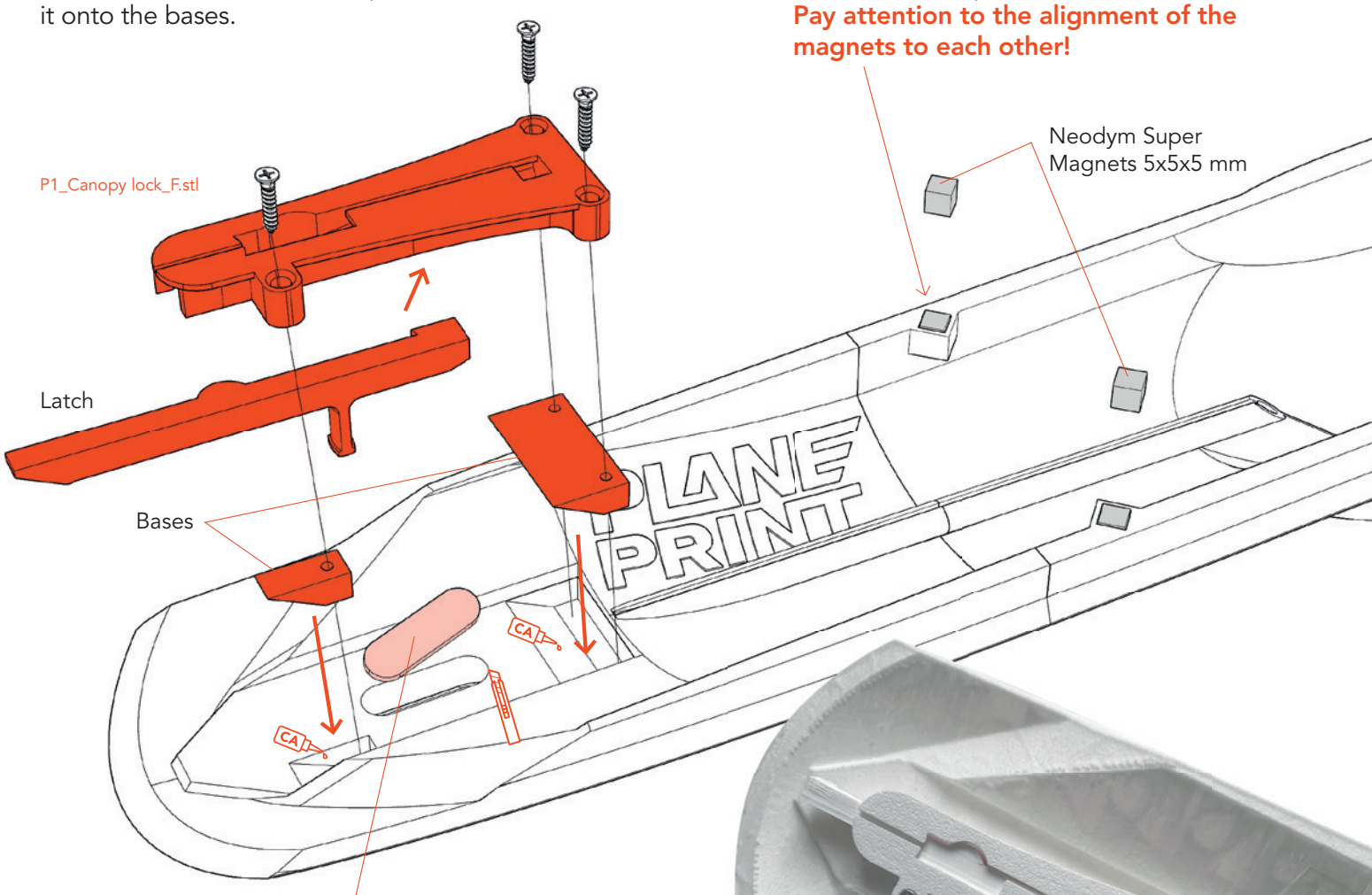
Canopy assembly

CA
medium I.

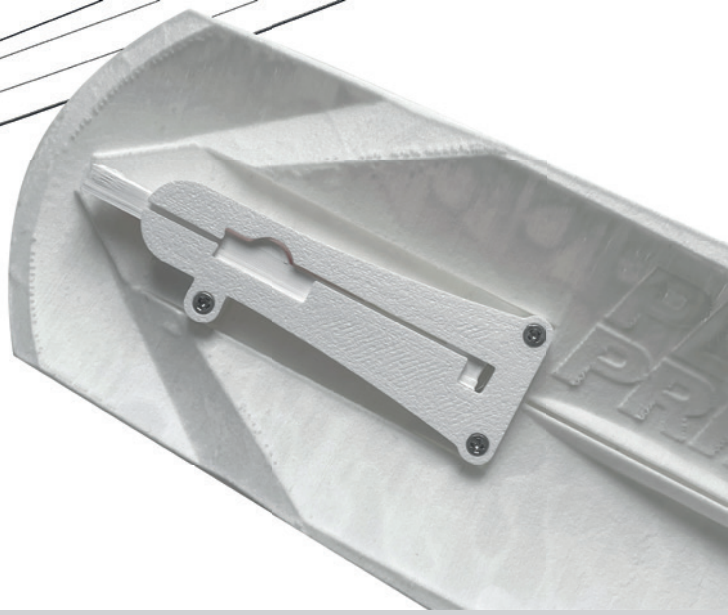


Glue the bases into the recesses in Canopy 1. Insert the latch into the Canopy lock and screw it onto the bases.

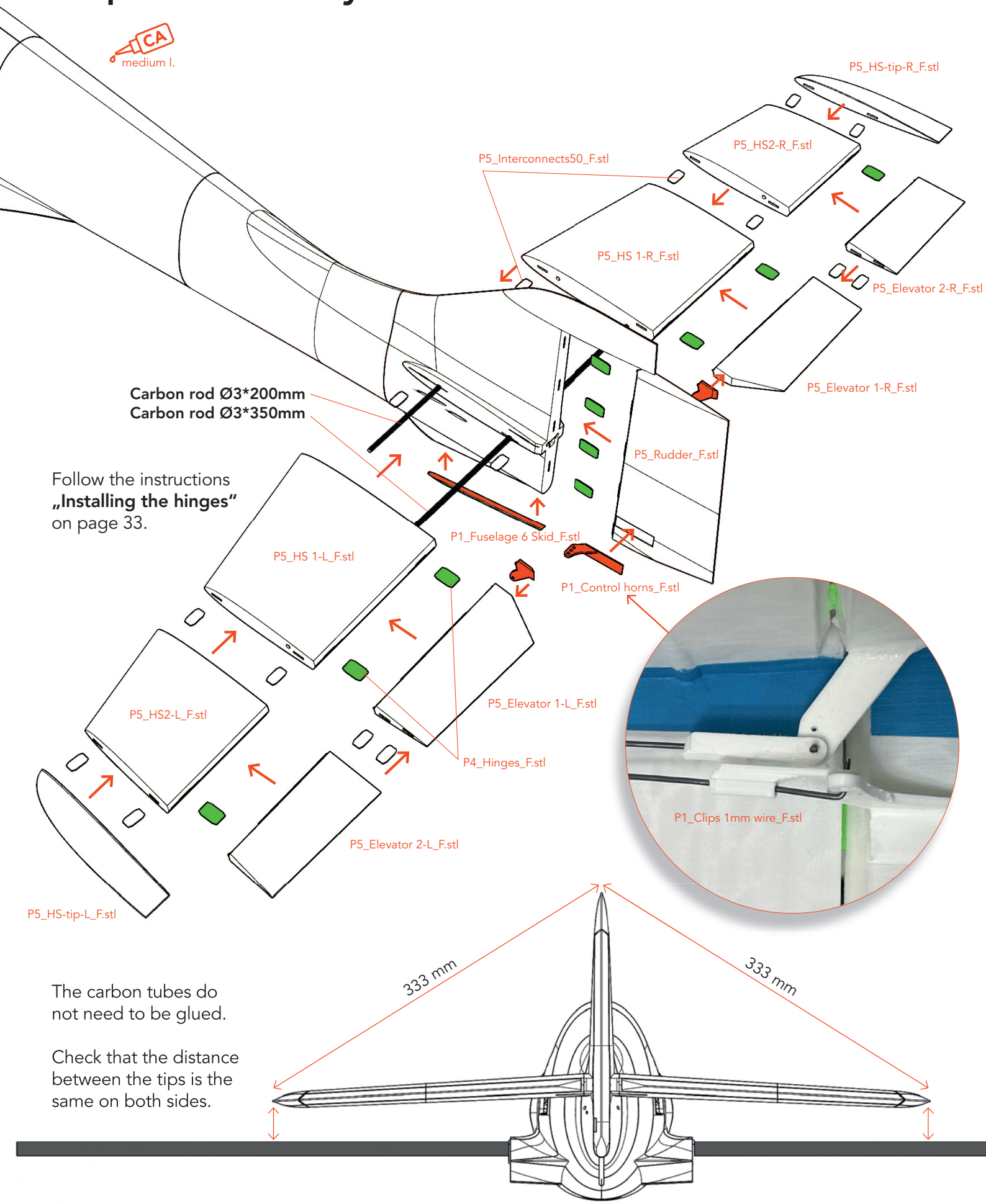
Glue the four magnets into the gaps and the counterparts into the fuselage. **Pay attention to the alignment of the magnets to each other!**



Remove support.
Please be careful with the knife!



Tailplane assembly

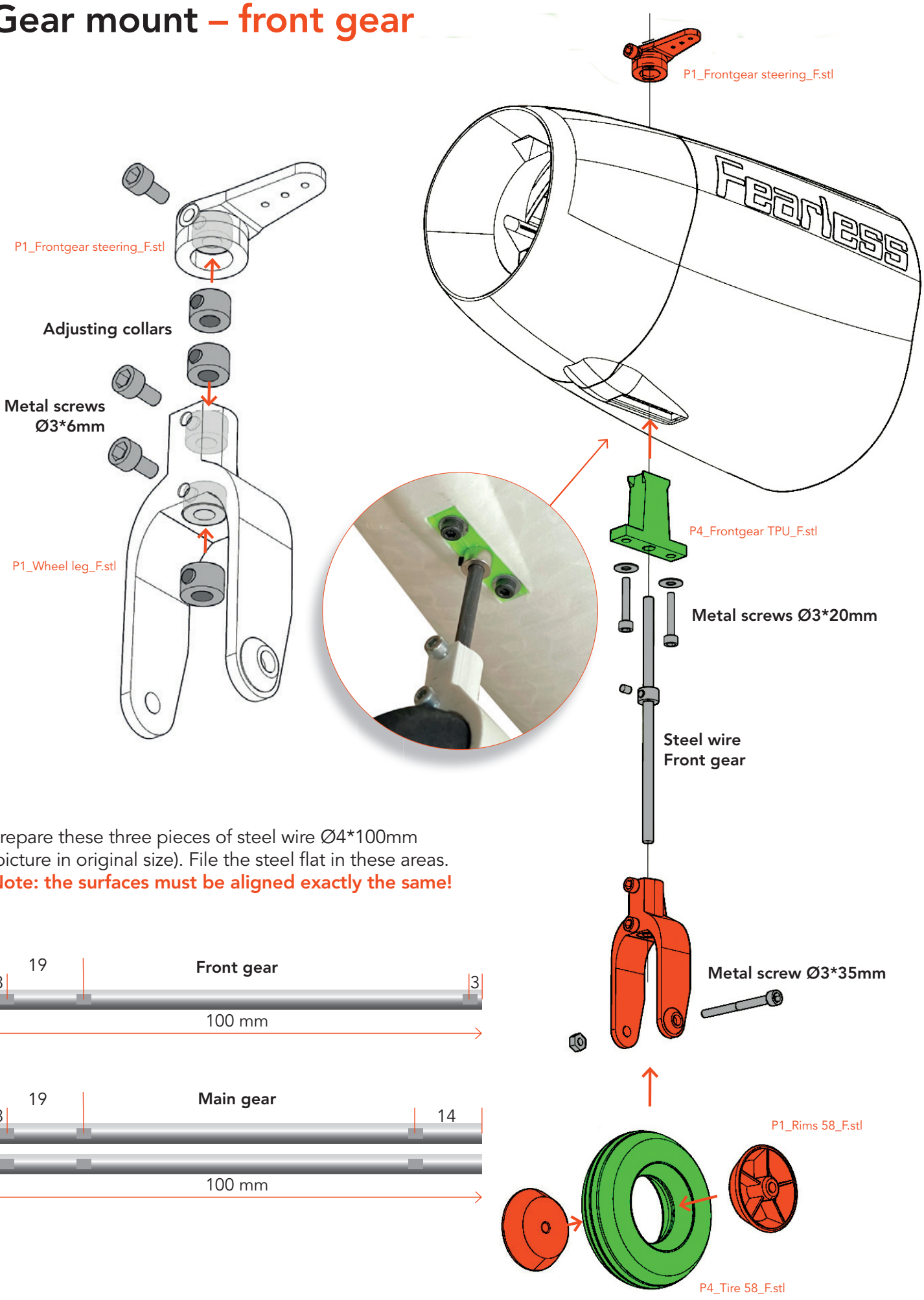


Follow the instructions **„Installing the hinges"** on page 33.

The carbon tubes do not need to be glued.

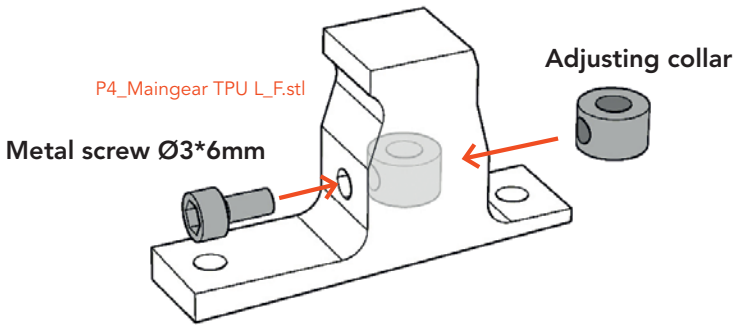
Check that the distance between the tips is the same on both sides.

Gear mount – front gear



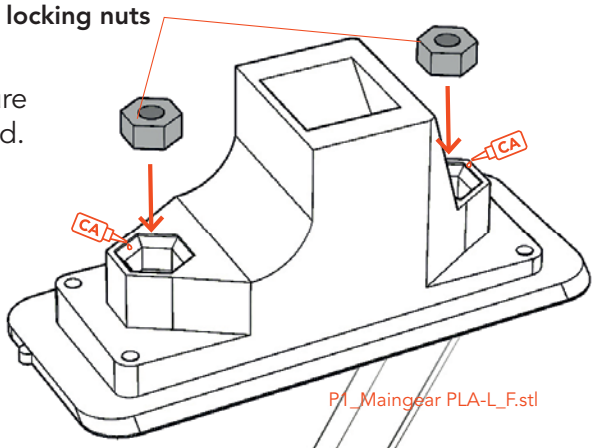
Prepare these three pieces of steel wire Ø4*100mm (picture in original size). File the steel flat in these areas.
Note: the surfaces must be aligned exactly the same!

Gear mount – Main gear



Self locking nuts

Tape the nuts well and make sure that no glue gets into the thread.

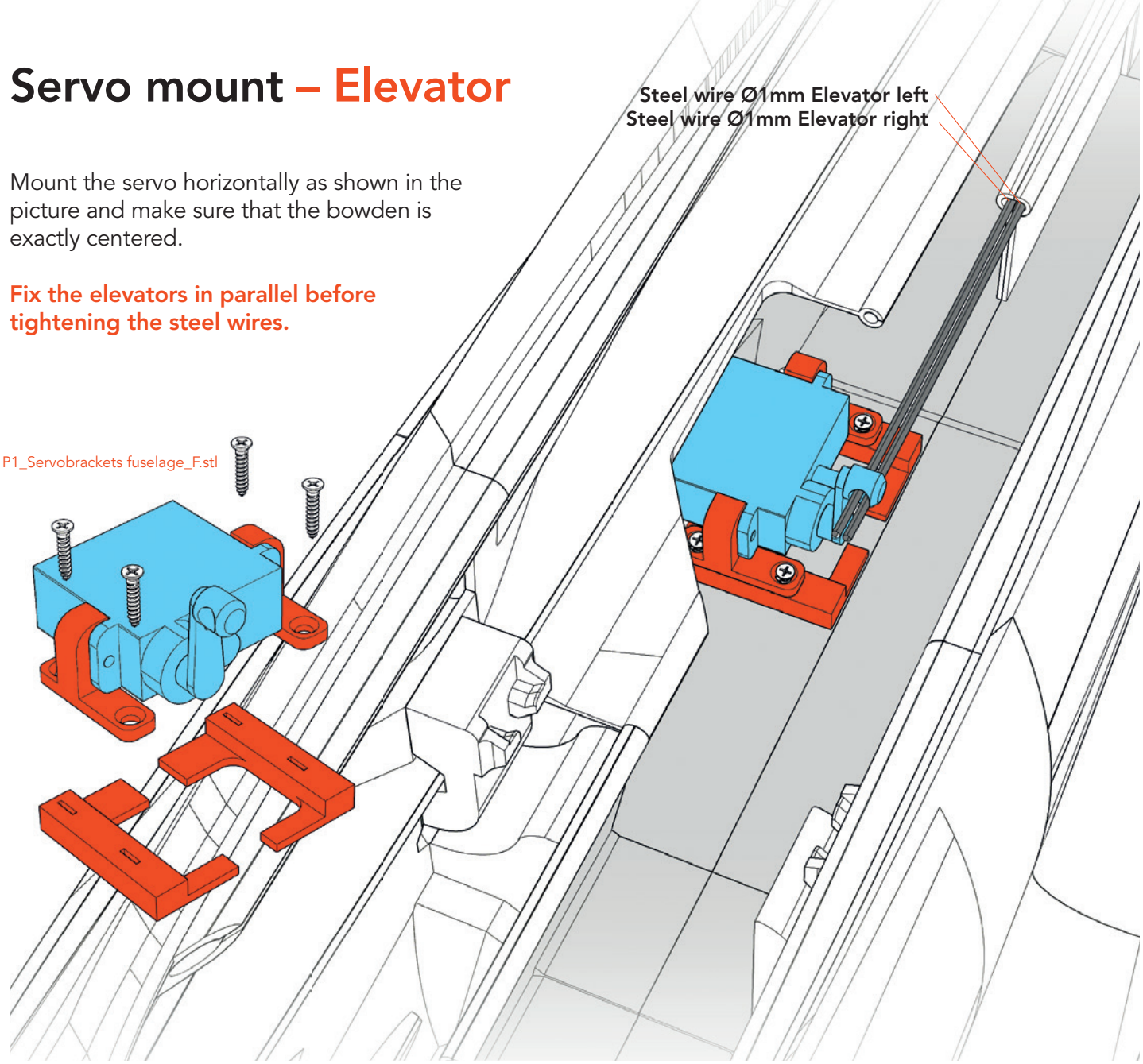


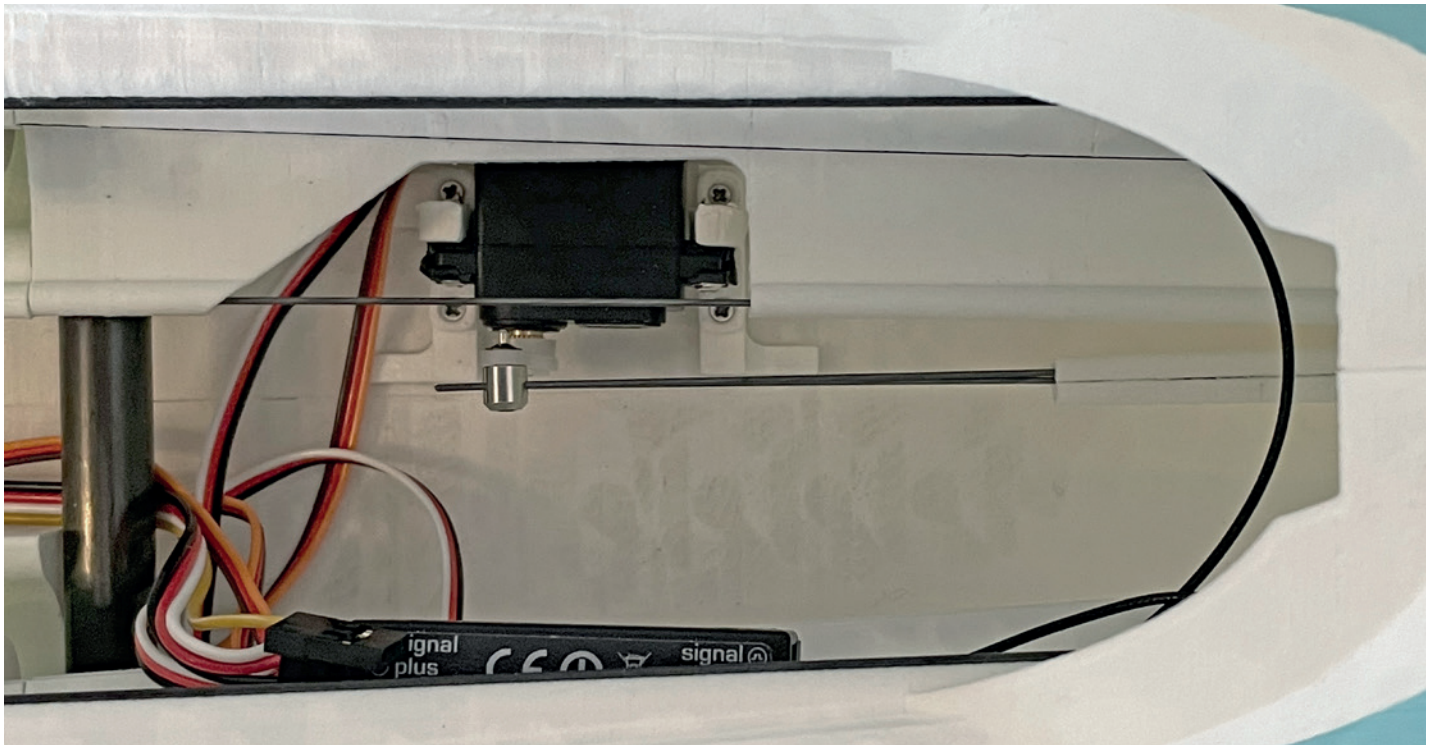
Glue the PLA part well into the wing and screw the gear tight.

Servo mount – Elevator

Mount the servo horizontally as shown in the picture and make sure that the bowden is exactly centered.

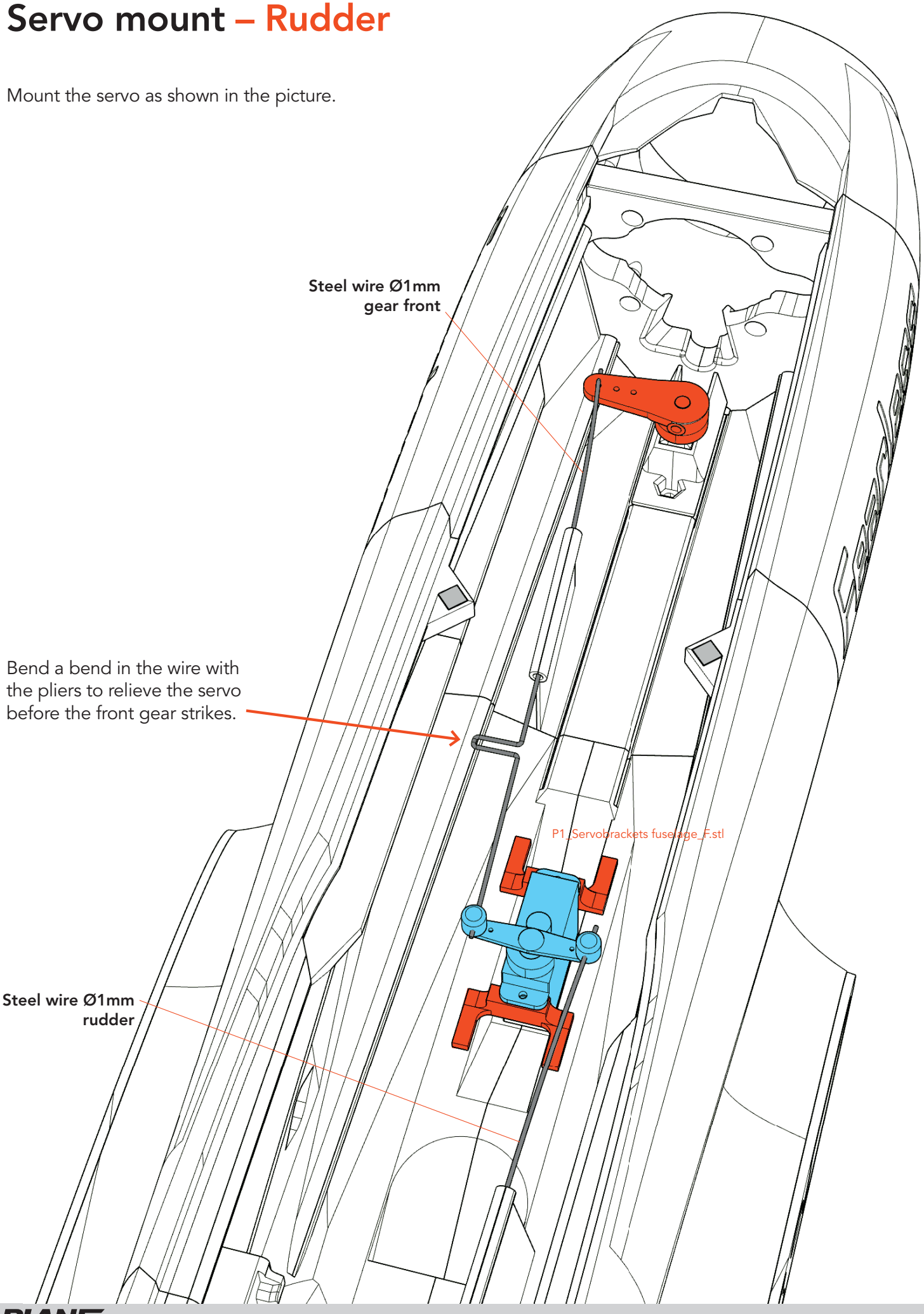
Fix the elevators in parallel before tightening the steel wires.





Servo mount – Rudder

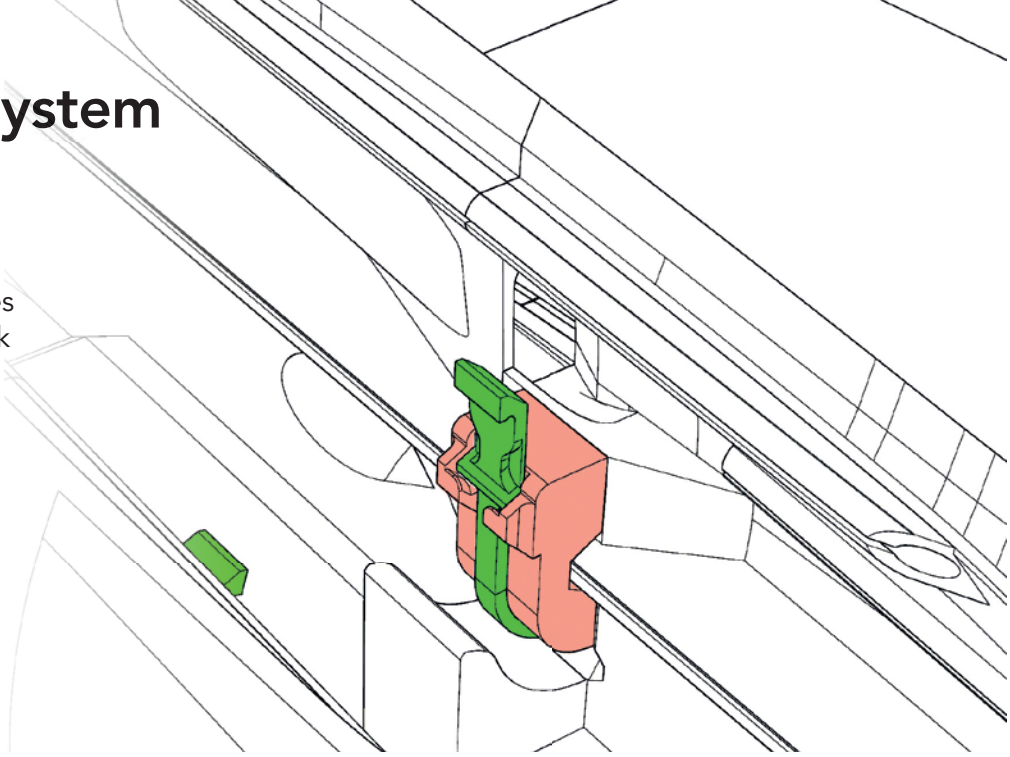
Mount the servo as shown in the picture.



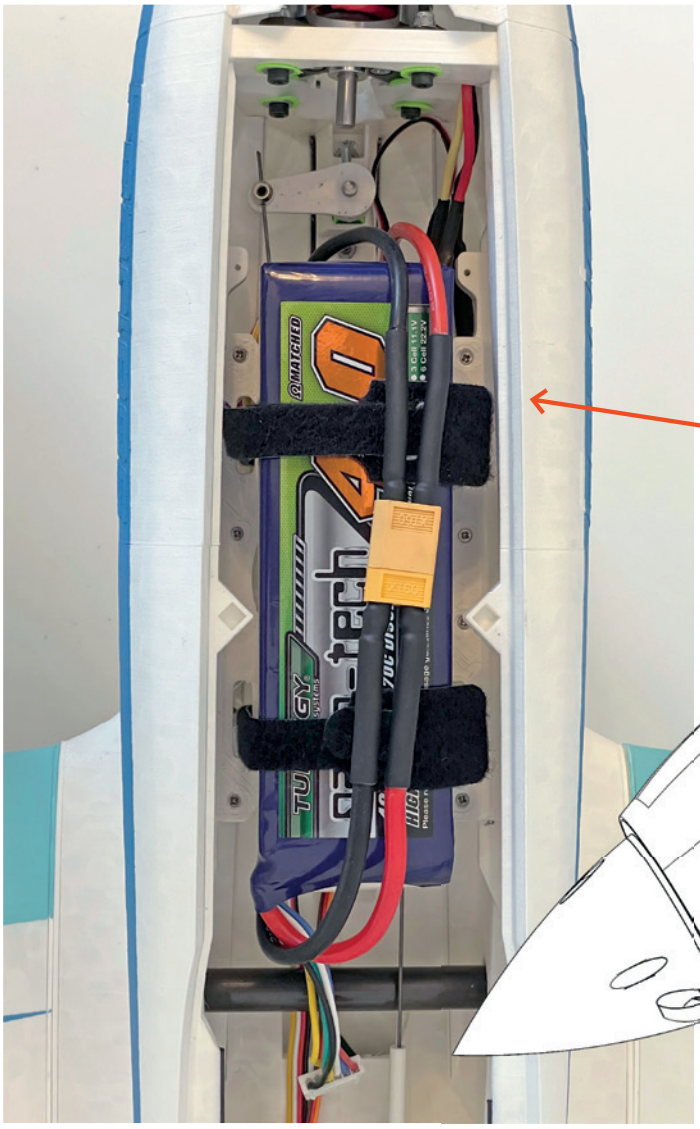
Wing mounting system

To secure the wings, pull the handles of the tension belts inward and hook them into the PLA holders.

The tension belts should normally be relaxed so that they do not overstretch.

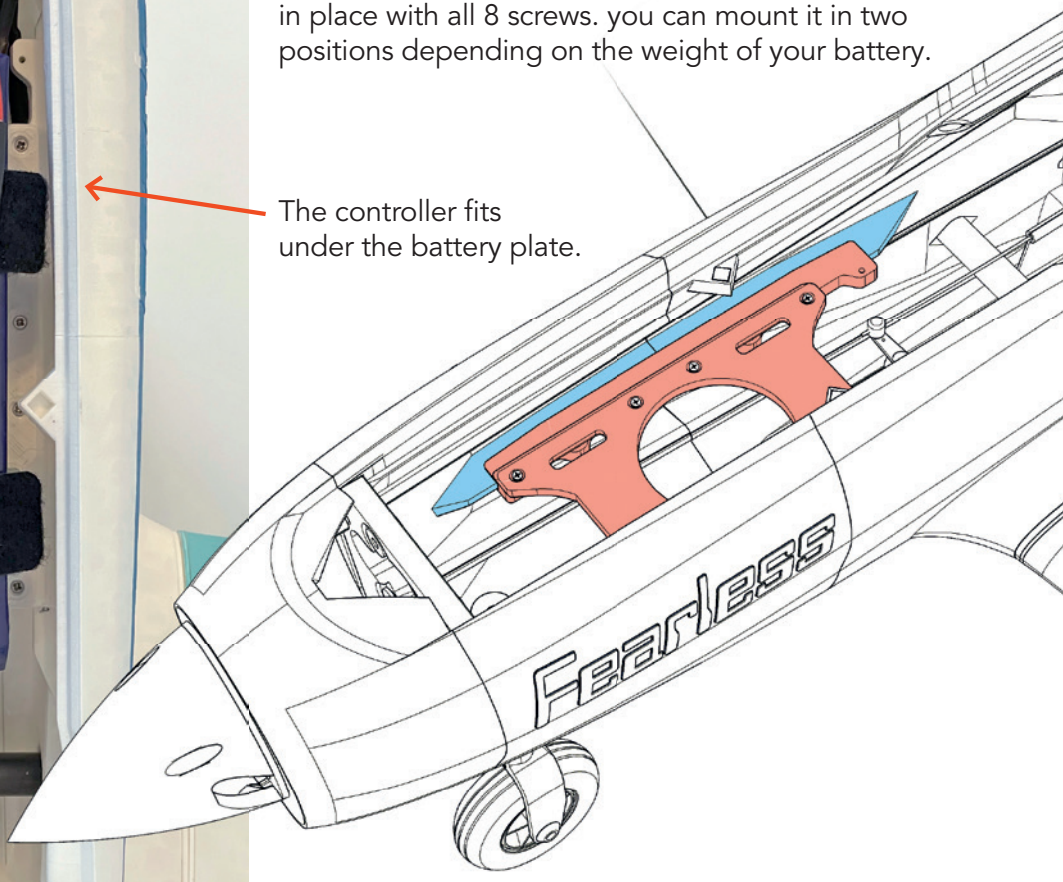


Battery mount



Screw the battery mount together with the holders with 2 screws each and glue them into the fuselage (marked blue) as shown in the picture. Remove the battery mount again and let thin CA glue run into all edges of the holders, these must be very well connected to the fuselage! Then screw the plate back in place with all 8 screws. you can mount it in two positions depending on the weight of your battery.

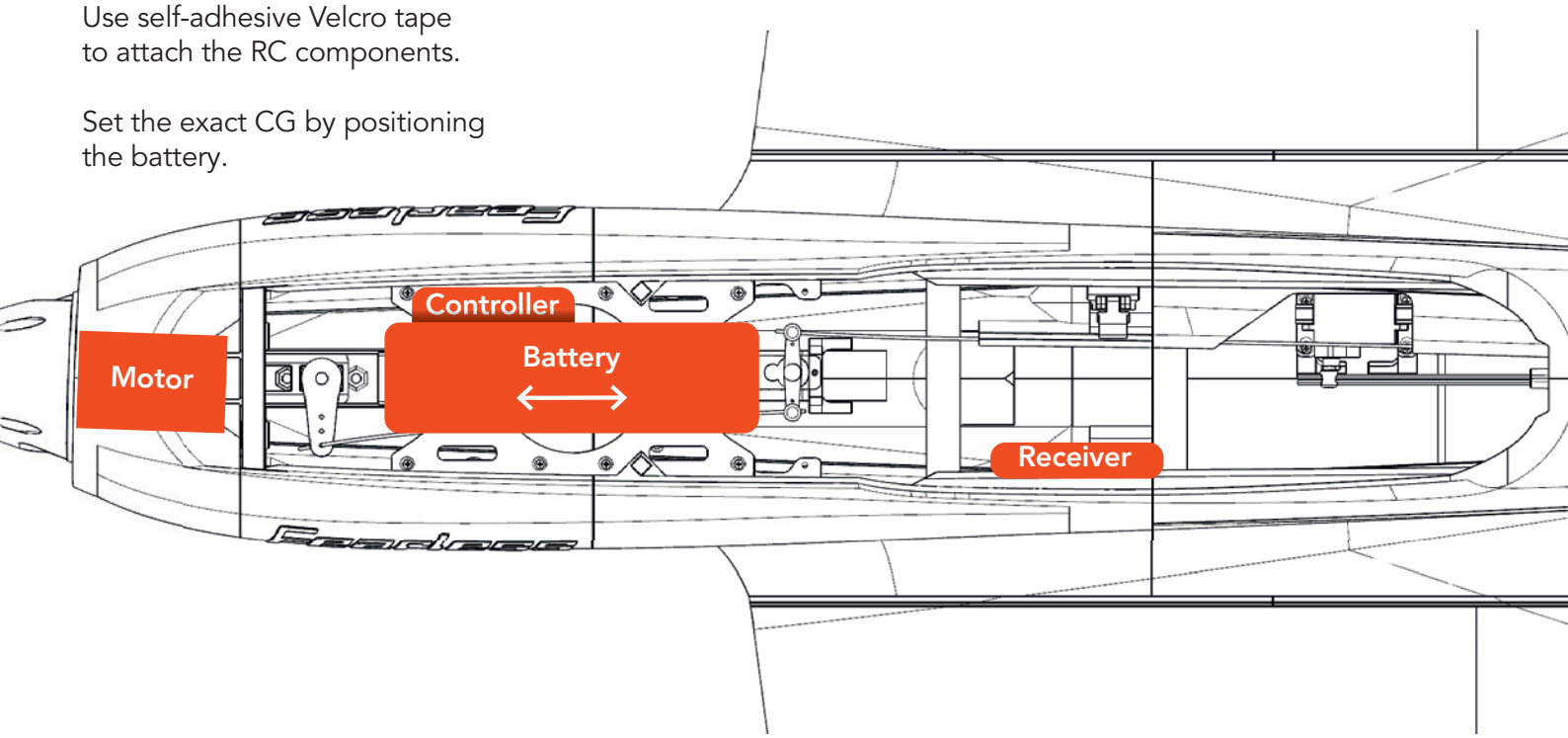
The controller fits under the battery plate.



RC components

Use self-adhesive Velcro tape
to attach the RC components.

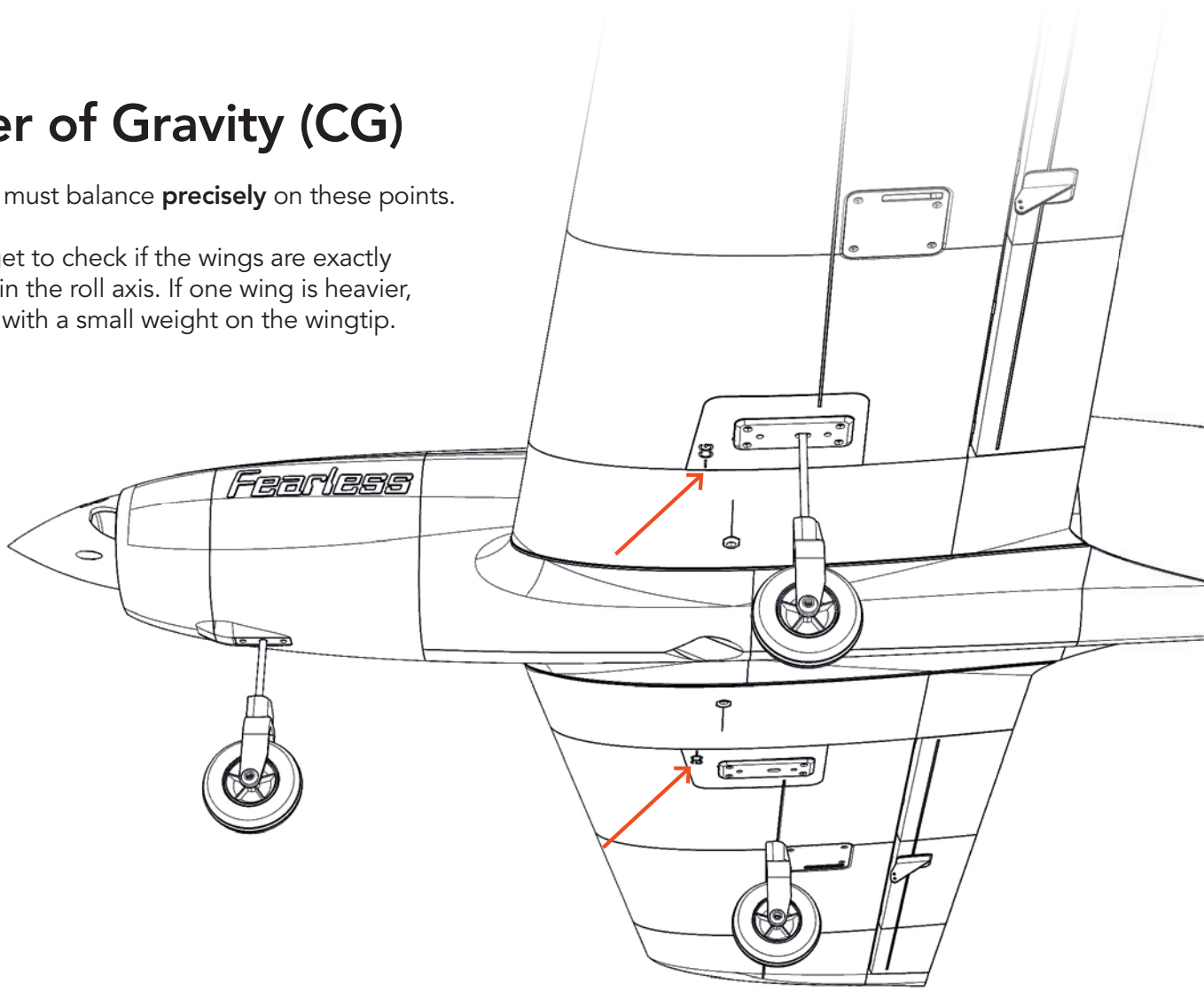
Set the exact CG by positioning
the battery.



Center of Gravity (CG)

The aircraft must balance **precisely** on these points.

Do not forget to check if the wings are exactly
in ballance in the roll axis. If one wing is heavier,
correct this with a small weight on the wingtip.



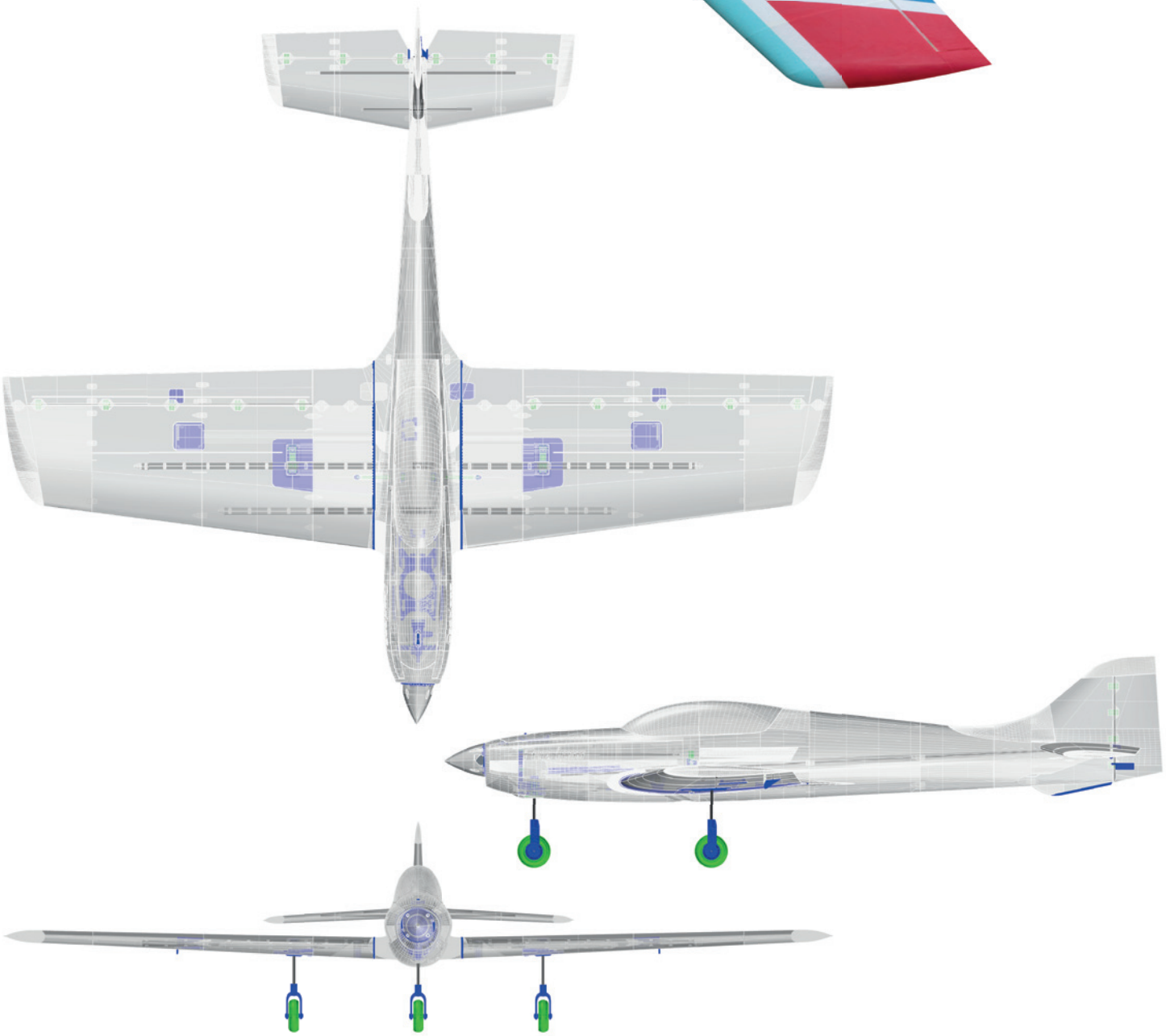
Technical specifications

WINGSPAN 1500 mm/59 inches

LENGTH 1300 mm/51 inches

WEIGHT 2700 to 3100 grams



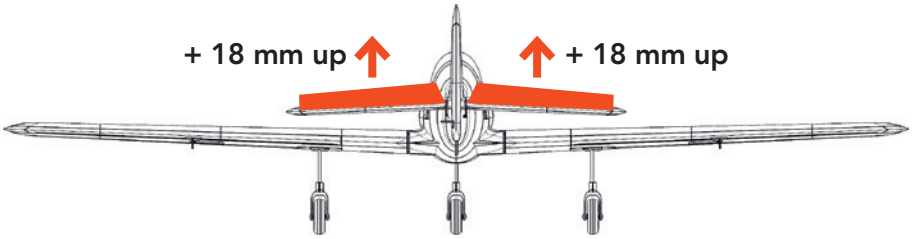


Settings for flying

When checking the control directions, **look at the aircraft from behind.**

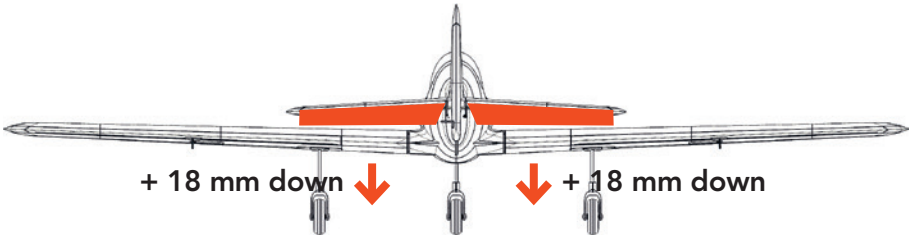
Elevator up



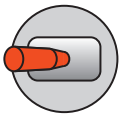


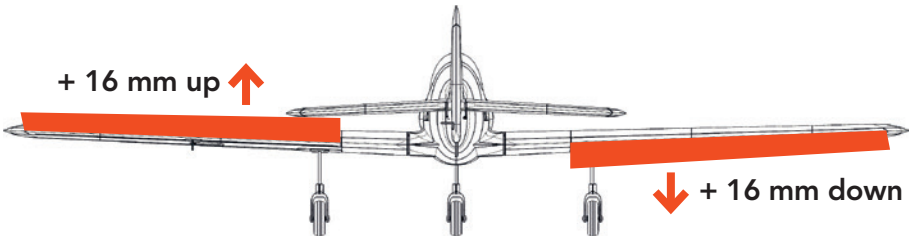
Elevator down



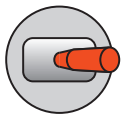


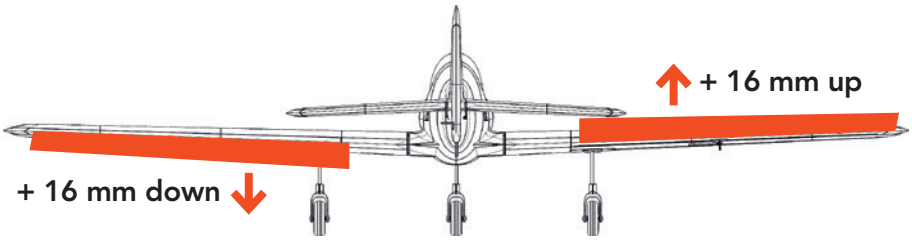
Aileron left



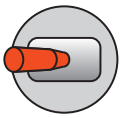


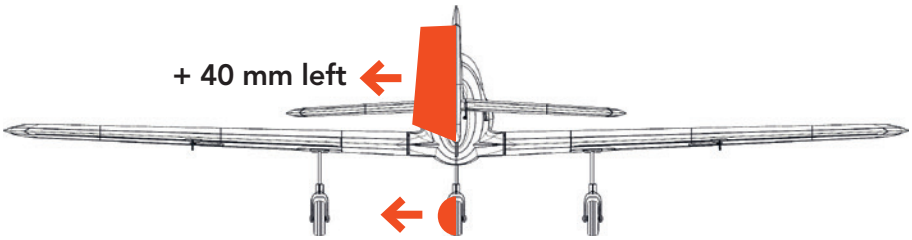
Aileron right



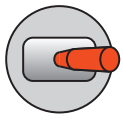


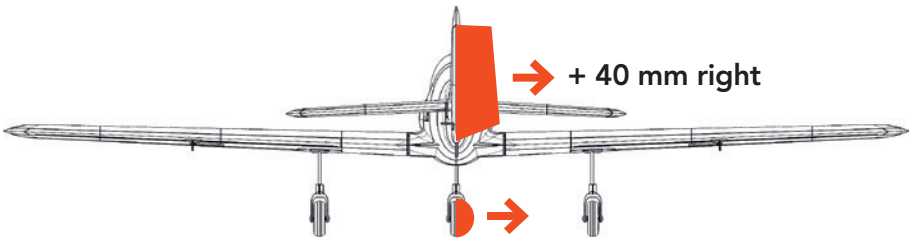
Rudder left





Rudder right



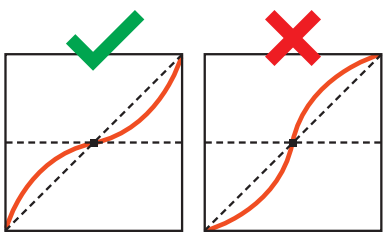


Expo setting

ELEVATOR 30 %

AILERON 30 %

RUDDER 20 %



(for some remote controls a minus has to be in front of the number)

AGE RECOMMENDATION 14+

NOT FOR CHILDREN UNDER 14 YEARS.
THIS IS NOT A TOY!

The STL data (or data processed from it, such as G codes) must never be passed on to third parties!

The purchase of the STL does not authorize the production of models for third parties.

By using the download data, an RC model airplane, called „model" for short, can be manufactured using a 3D printer. As a user of this model, only you are responsible for safe operation that does not endanger you or others, or that does not damage the model or property of others.

PLANEPRINT.com assumes no responsibility for damage to persons and property caused by pressure, transport or use of the product. Filaments, printing supplies, hardware or consumables that can not be used after faulty 3D printing will not be replaced by PLANEPRINT.com in any way.

When operating, always keep a safe distance from your model in all directions to avoid collisions and injuries.

This model is controlled by a radio signal. Radio signals can be disturbed from outside without being able to influence it. Interference can lead to a temporary loss of control.

Always operate your model on open terrains, far from cars, traffic and people.

Always follow the instructions and warnings for this product and any optional accessories (servos, receivers, motors, propellers, chargers, rechargeable batteries, etc.) carefully.

Keep all chemicals, small parts and electrical components out of the reach of children.

Avoid water contact with all components that are not specially designed and protected. Moisture damages the electronics.

Never take an item of the model or accessory in your mouth as this can lead to severe injuries or even death.

Never operate your model with low batteries in the transmitter or model.

Always keep the model in view and under control.
Use only fully charged batteries.

Always keep the transmitter switched on when the model is switched on.

Always remove the battery before disassembling the model.

Keep moving parts clean and dry at all times.

Always allow the parts to cool before touching them.

Always remove the battery after use.

Make sure that the Failsafe is properly set before the flight.

Never operate the model with damaged wiring.

Never touch moving parts.

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