PRINTING & ASSEMBLING MANUAL

PLANE PRINT

PLANE PRINT JETWING

Modular high-performance EDF Jet or Glider

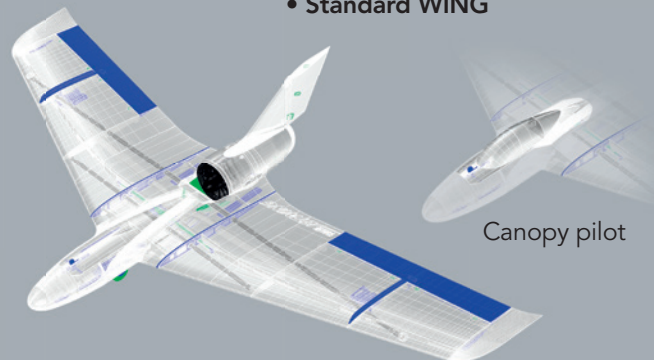**NOTE:** Slicing **only** works with CURA!

FAIR DATA USE

You can find the STL data at **www.planeprint.com**

Modular system – 4 kits, many possibilities …
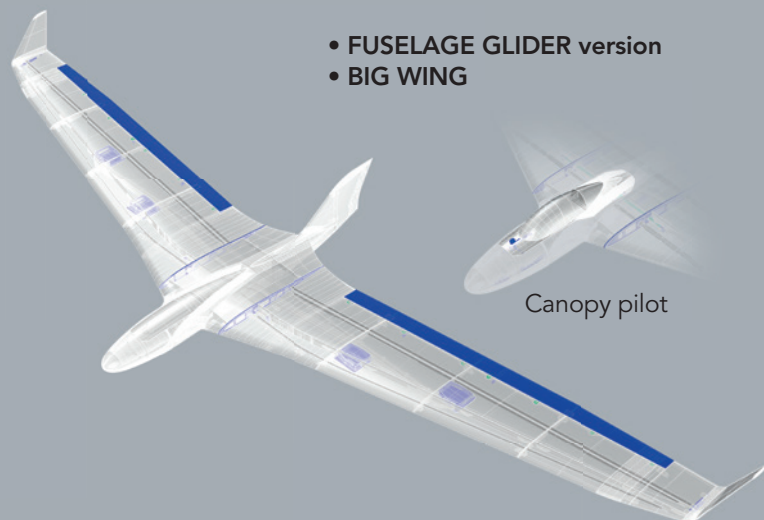
- **FUSELAGE GLIDER version**
- **Standard WING**

Canopy pilot
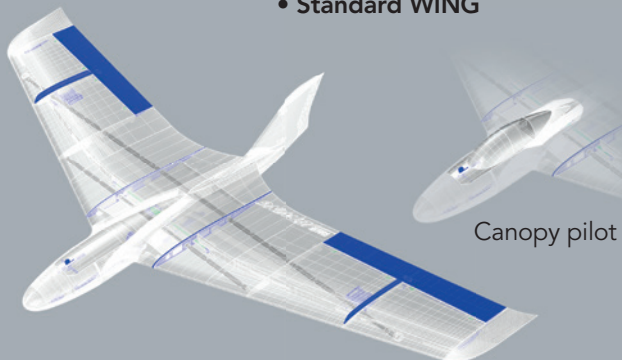
- **FUSELAGE EDF version**
- **Standard WING**

Canopy pilot

- **FUSELAGE EDF Rudder version**
- **Standard WING**

Canopy pilot
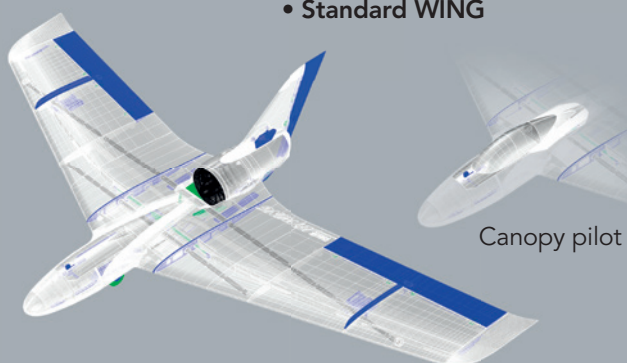
- **FUSELAGE GLIDER version**
- **BIG WING**

Canopy pilot

- **FUSELAGE EDF version**
- **BIG WING**

Canopy pilot
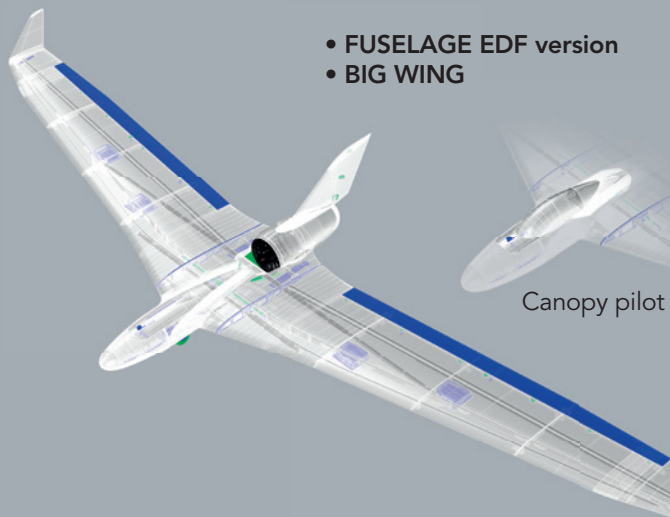
- **FUSELAGE EDF Rudder version**
- **BIG WING**

Canopy pilot
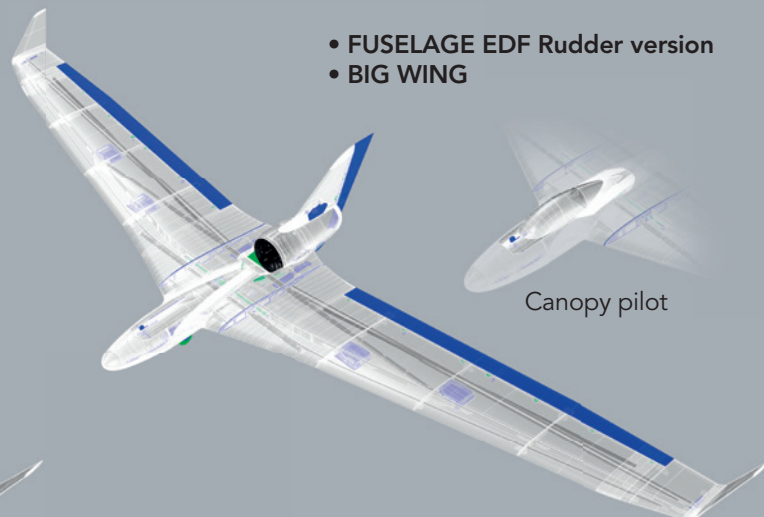
Required accessoires – basic equipment

- some tapping screws Ø2 mm
- CA super glue (liquid and liquid medium)
- CA activator
- Self-adhesive Velcro tape

(simply search for: M2 flat head tapping screw assortment)

Tools

Cutter knife, small Philips screwdriver, Sandpaper, Metal saw

Required accessoires – FUSELAGE EDF

- **LW-PLA (cannot be replaced by PLA!)**, ~200 grams
- **PLA** oder bether **Tough PLA**, ~70 grams
- **TPU A95**, ~20 grams
- Metal screw 3*20mm with self-locking nut, 1 piece
- Carbon tube Ø8*1000mm, Ø8*480mm, Ø8*340mm
- Rod connection, 1 piece (for Rudder version only)
- Velcro strap
- Carbon rod Ø2mm or Steel wire Ø1mm for Servo Linkage

Required accessoires – FUSELAGE GLIDER

- **LW-PLA (cannot be replaced by PLA!)**, ~200 grams
- **PLA** oder bether **Tough PLA**, ~40 grams
- Carbon tube Ø8*1000mm*, Ø8*480mm*, Ø8*340mm
* if you already have these tubes for FUSELAGE EDF, you can use them.
- Steel wire Ø1mm*200mm for Servo Linkage (for tow version only)

Required accessoires – Standard WING

- **LW-PLA (cannot be replaced by PLA!)**, ~320 grams
- **PLA** oder bether **Tough PLA**, ~90 grams
- **TPU A95**, ~10 grams
- Rod connection, 2 pieces
- Servo extension cable 400mm, 2 pieces (a soldered servo cable extension is better)
- Carbon rod or Steel wire for Servo Linkage

Required accessoires – BIG WING

- **LW-PLA (cannot be replaced by PLA!)**, ~500 grams
- **PLA** oder bether **Tough PLA**, ~120 grams
- **TPU A95**, ~10 grams
- Carbon tube Ø6*1000mm, 3 pieces
- Carbon fiber strips (flat profile) 1*6*1000mm*, 4 pieces
- Rod connection, 4 pieces
- Servo extension cable 400mm, 2 pieces and 600mm, 2 pieces (a soldered servo cable extension is better)
- Carbon rod or Steel wire for Servo Linkage

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

RC Components

ENGINE **4S EDF 70 MM** – FMS or Wemotec Mini Fan, Stream Fan (We use the FMS from Pichler)
ATTENTION: the drive should provide a maximum thrust of 1.8 Kg. If you want to use a 5S or 6S drive, be aware that the JETWING will be overpowered and fly accordingly carefully and dosed! Note: With some EDF the motor cables must be extended a little!

BEC-CONTROLLER suitable for your EDF **(Make sure to use sufficiently dimensioned plug connections!)**

RECEIVER 4 Channel (Standard WING), 6 Channel (BIG WING)

BATTERY 4S LiPo-Akku, 3000 - 4000 mAh (Maximum dimensions: 140*40*40 mm, ideal weight 390g) or a receiver battery for the GLIDER VERSION

SERVOS WINGS **2 pieces** like **Corona 939MG,** or equivalent (Standard WING)
The servos should definitely have metal gears and a torque of min. 2.5 kg/cm, for 5S or 6S drive 4 kg/cm!

4 pieces like **MASTER DS3010,** or equivalent
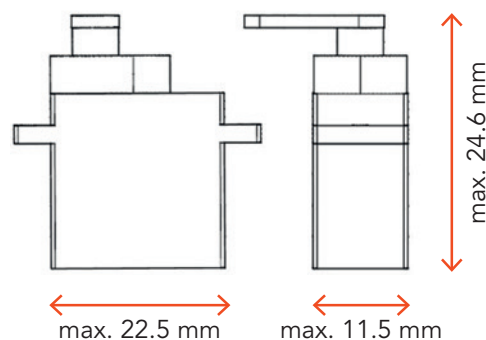(BIG WING or Standard WING (FREE TUNING PARTS version)

SERVO RUDDER **1 piece** like **Corona 939MG, 929MG** or equivalent

SERVO TOW COUPLING **1 piece** like **Corona 939MG, 929MG** or equivalent
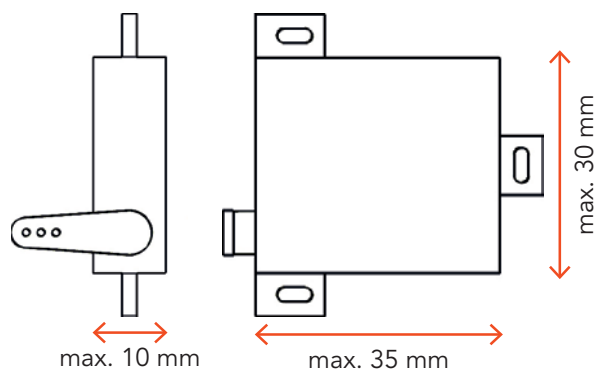
Maximum dimensions **Wing Servos**:

max. 30 mm
max. 29 mm
max. 13 mm
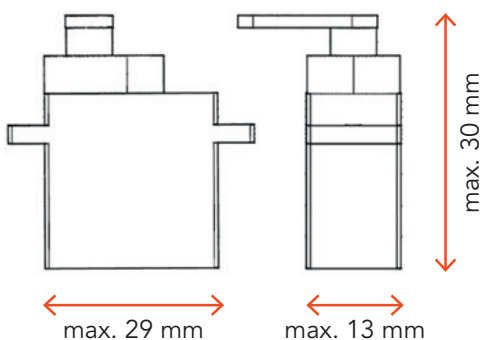
Maximum dimension **Rudder Servo**:

max. 24.6 mm
max. 22.5 mm
max. 11.5 mm

Maximum dimensions **Wing Servos**

BIG WING or **Standard WING**
(You find this Wing version in the FREE TUNING PARTS on our website):

max. 30 mm
max. 10 mm
max. 35 mm

Printing the parts – Printing profiles

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

For slicing all Planeprint models, these profiles have to be created in Cura:

PROFILE P1_fullbody
PROFILE P2_hollowbody
PROFILE P3_surface
PROFILE P4_flex
PROFILE P5_gyroid

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

Important for the 1-wall-print (P3, P5)!

In order to print airfoils of the lowest possible weight with high stability, it is necessary to print with only one wall line (Nozzle 0.4 mm). Decisive here is the adhesion between the layers! To achieve this, you must print at a much higher temperature than normal. As a **guideline**, 230° C is a good starting point. The parts-cooling fan should be set to 0% or a maximum of 20%. Since not every printer works the same, it may be necessary to make small adjustments to these settings.

Here we show you how to make adjustments from a standard CURA profile.
For this model we need only 3 (P1, P4, P5), easy to create profiles.

For the new PROFILE P5_gyroid it is essential to use **Cura Version 5 or later**, It will work with older versions, but the weight of the parts will be higher and the printing time longer.

It is **essential for the necessary stability** of the JETWING that 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 65%. **At too high temperatures, LW-PLA becomes brittle and breaks more easily.**

The development of a complex, airworthy RC flight model to express on any standard 3D printer is a very complex and extensive process. Therefore, we appeal to your fairness not to forward the STL data you have acquired to third parties. Our STL files are provided with indelible copyright watermarks that can be verified at any time.

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

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
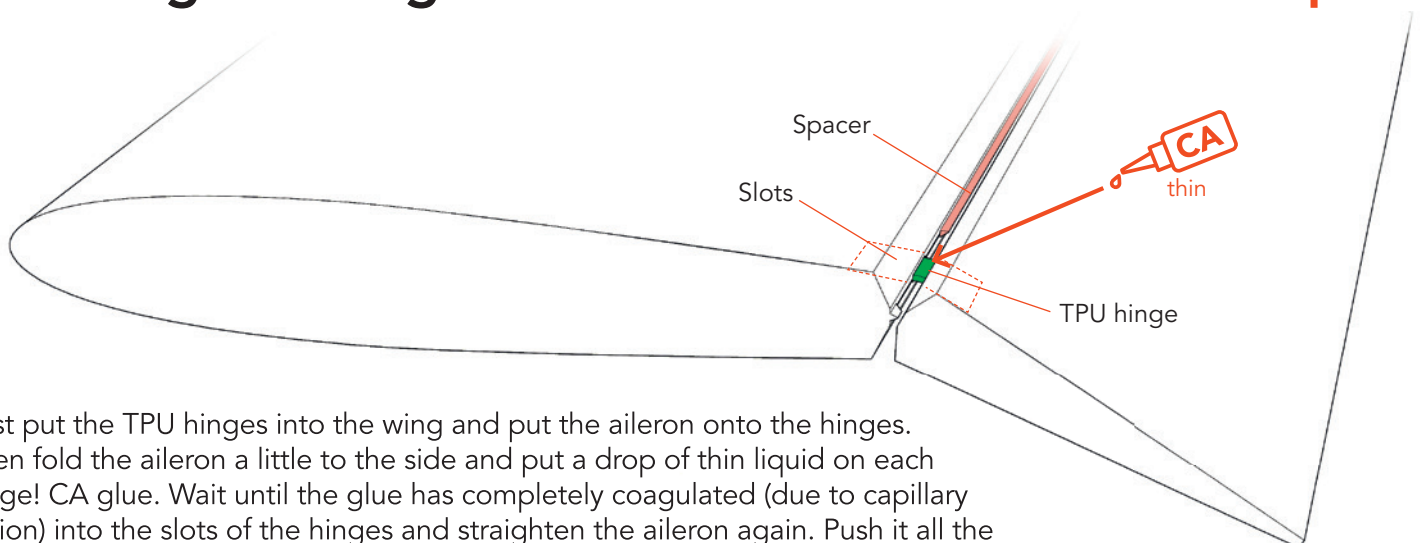
First put the TPU hinges into the wing and put the aileron onto the hinges. Then fold the aileron a little to the side and put a drop of thin liquid on each hinge! CA glue. Wait until the glue has completely coagulated (due to capillary action) into the slots of the hinges and straighten the aileron again. Push it all the way to the wing, printed spacers provide the correct distance. Now spray some activator spray on each hinge to cure the CA glue. Repeat on the other side of the hinges. **Do not use too much glue and test if each hinge holds well.**
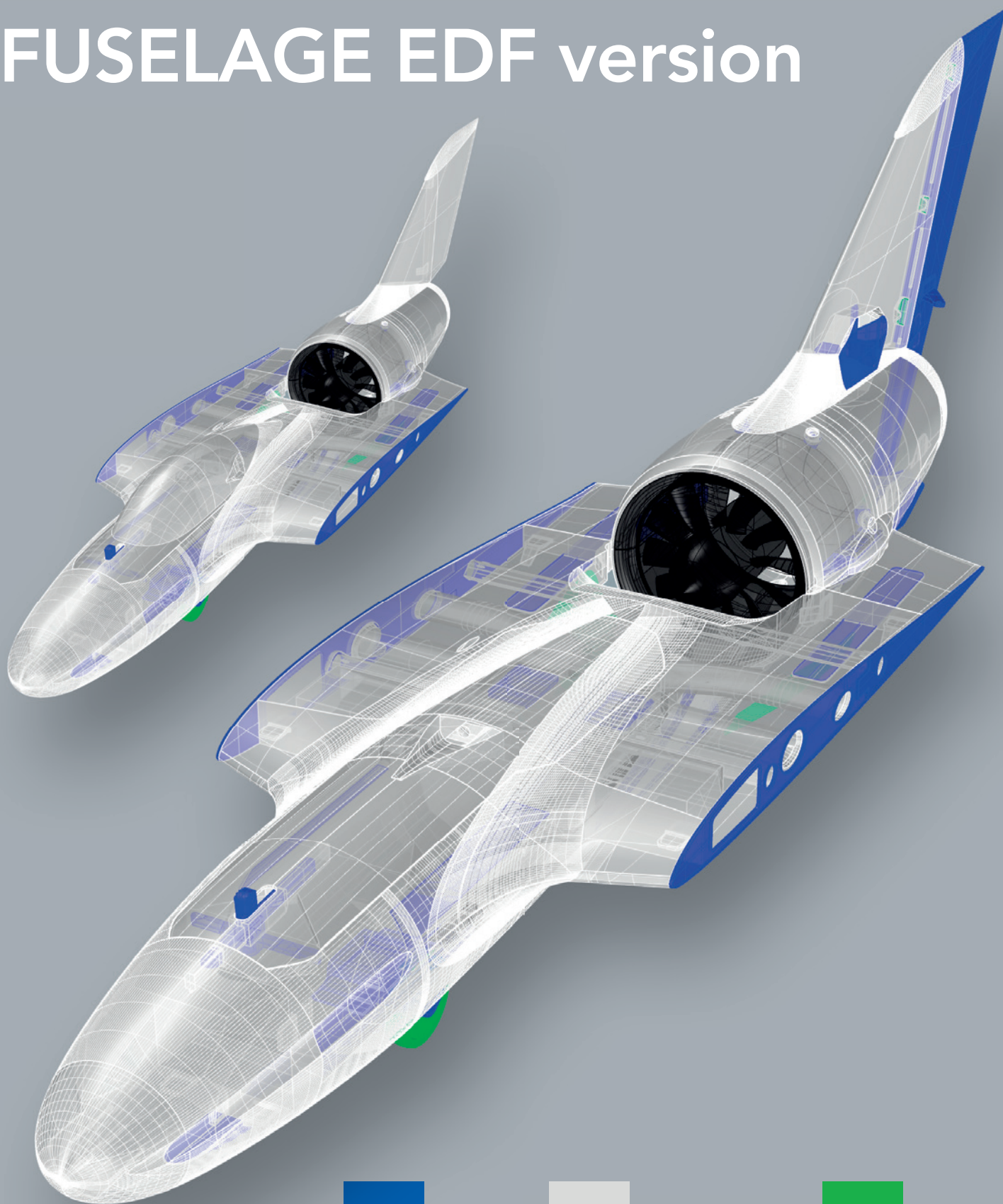
PLANE PRINT JETWING

FUSELAGE EDF version

- PLA
- LW-PLA
- TPU
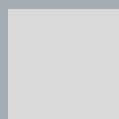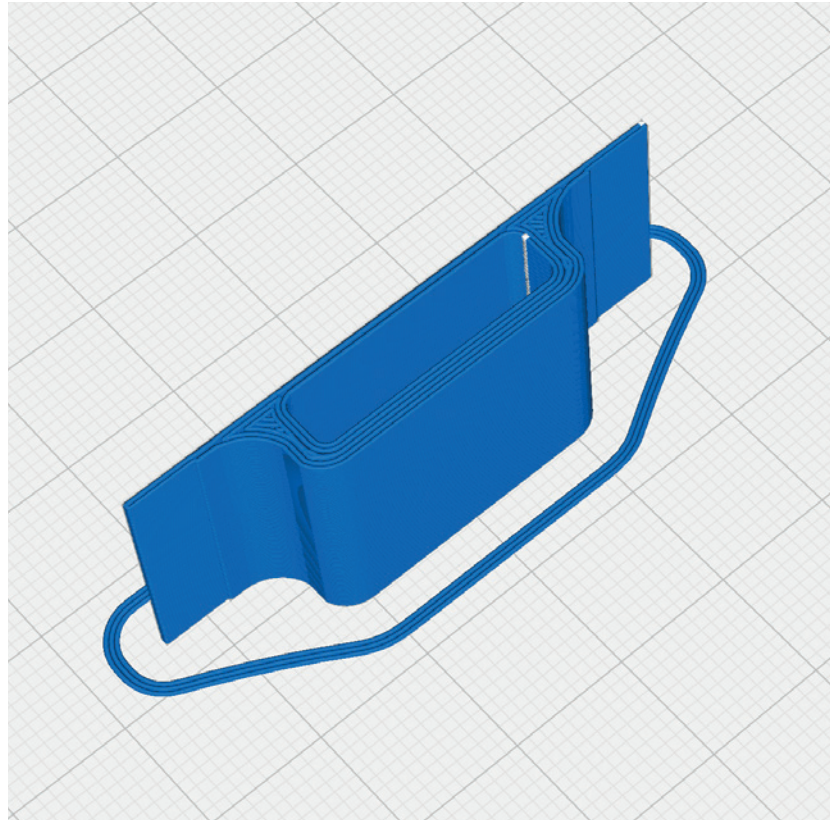
PROFILE P1_FULLBODY PLA or Tough PLA

The following parts must be sliced with the PROFILE P1_FULLBODY.
Please note the additional settings for the individual parts!

Battery mount_p1_J.stl

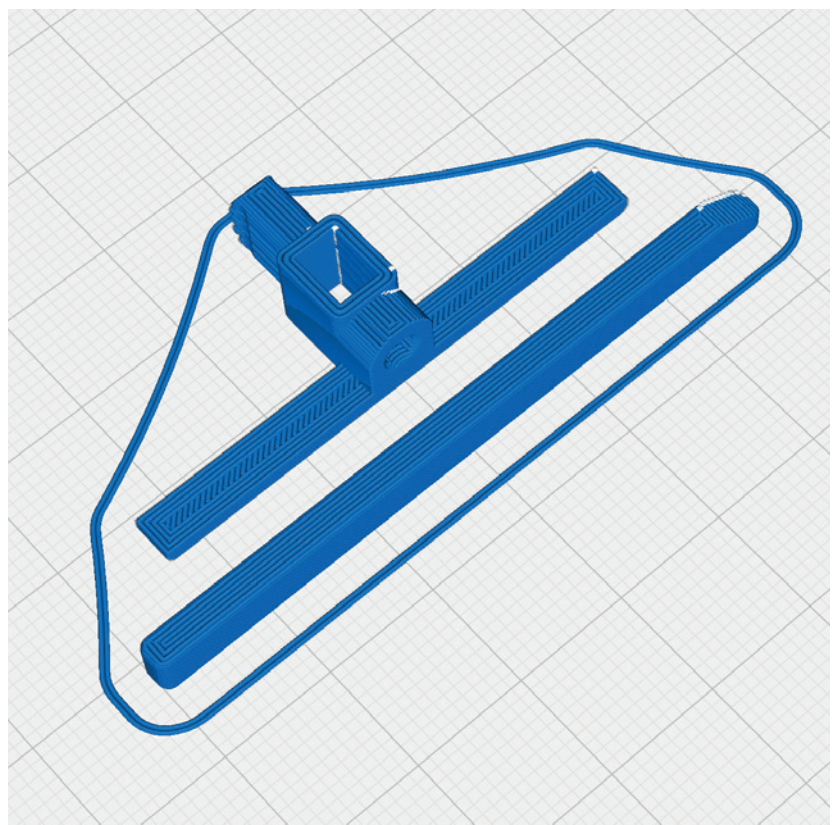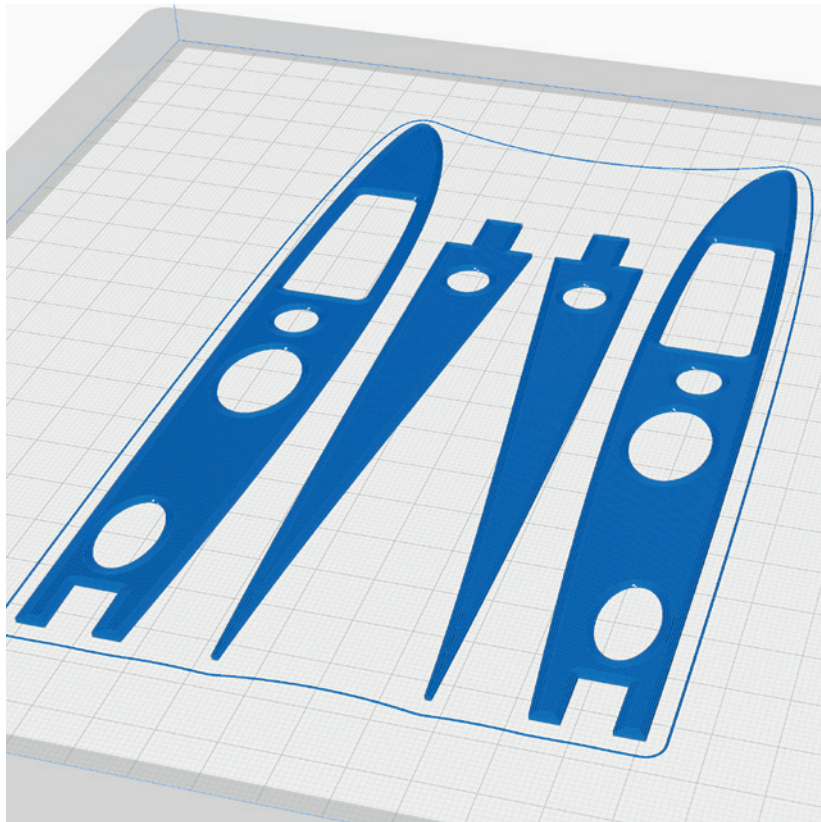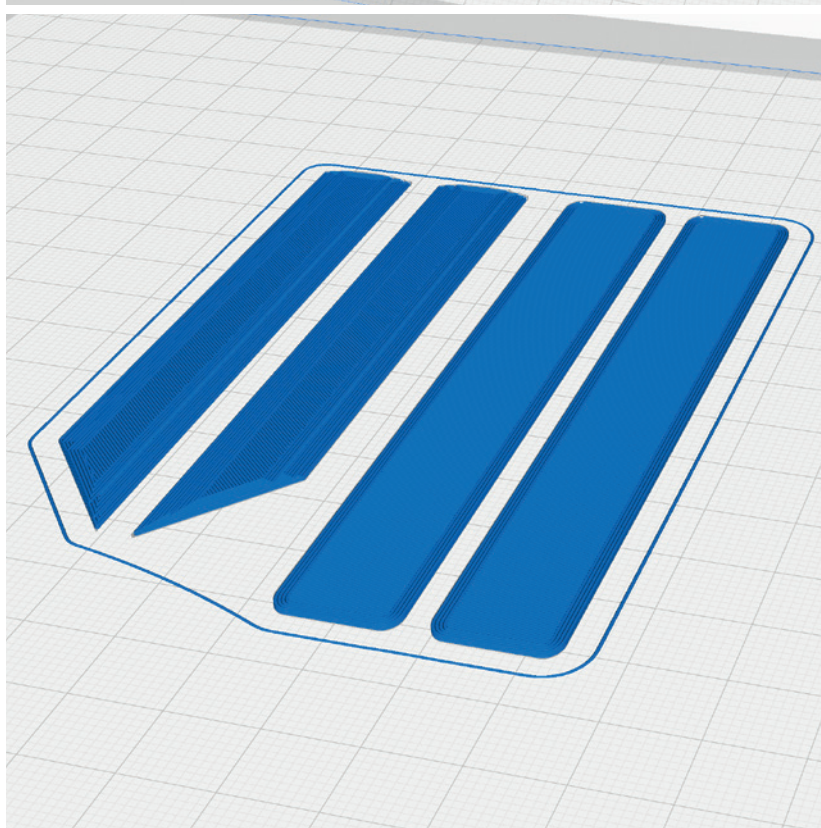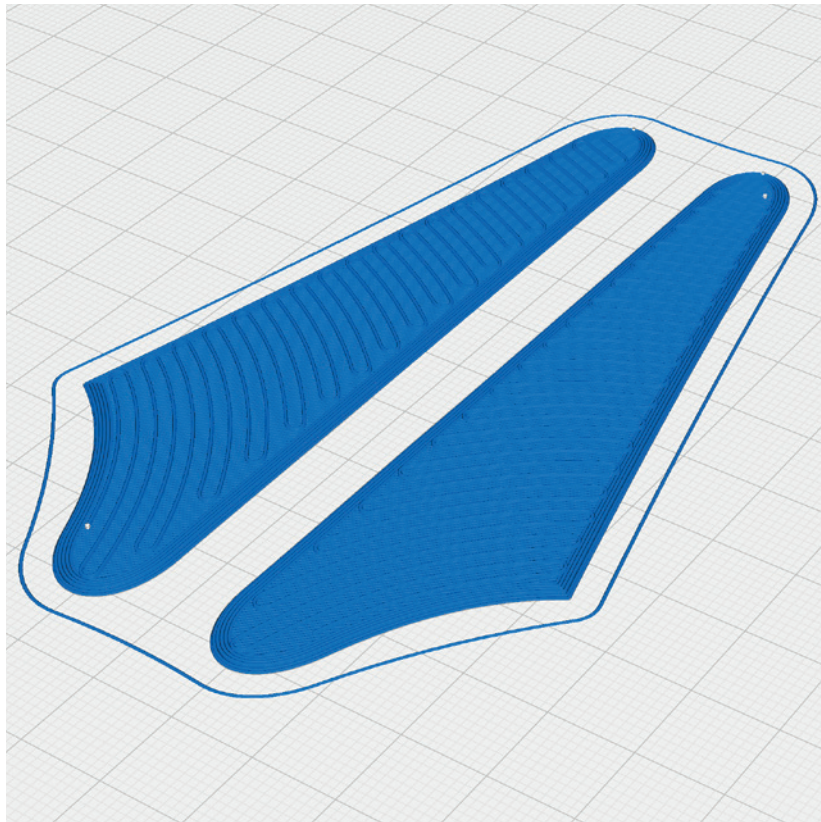**MATERIAL**   PLA, Weight: ~ 3 g

ADDITIONAL SETTINGS

None required

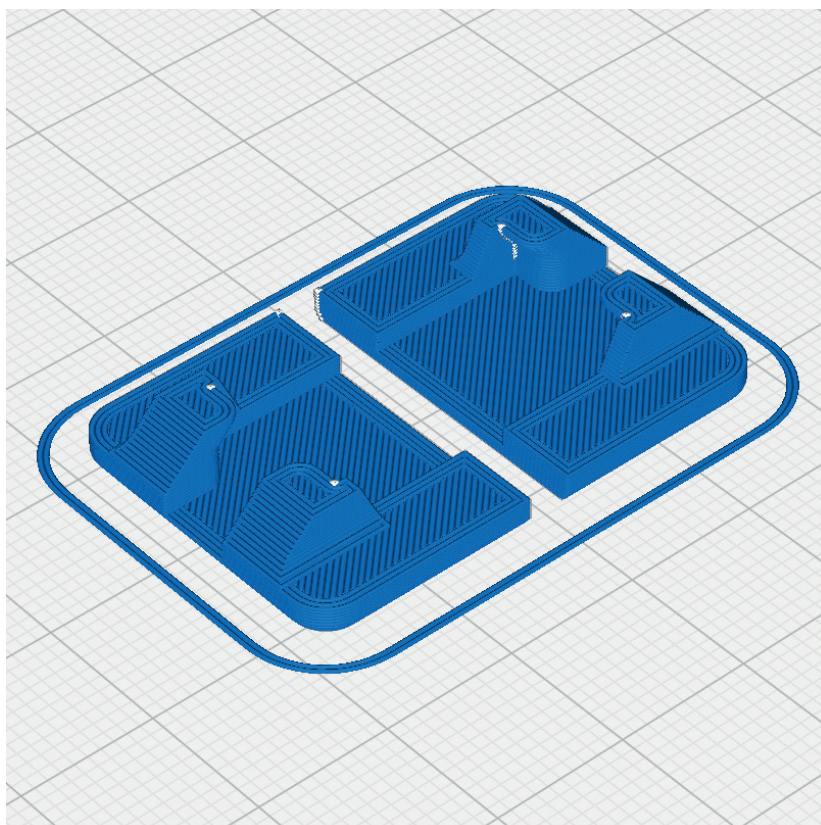
Canopy lock_p1_J.stl or
Canopy lock tapping screw_p1_J.stl

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.
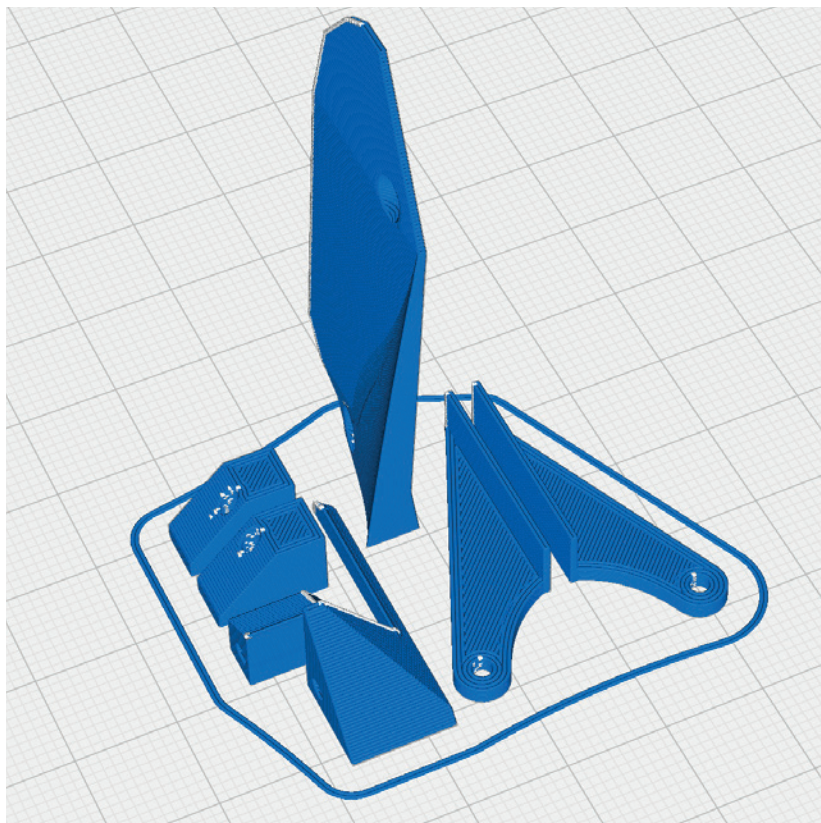**Please note the additional settings for the individual parts!**

Fuselage protector 1_p1_J.stl

MATERIAL   PLA, Weight: ~ 9 g

ADDITIONAL SETTINGS

None required

Fuselage protector 2_p1_J.stl

MATERIAL   PLA, Weight: ~ 5 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!

Handling surfaces_p1_J.stl

MATERIAL   PLA, Weight: ~ 4 g

ADDITIONAL SETTINGS

None required

Tension plate_p1_J.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!

Rudder Parts_p1_J.stl

MATERIAL   PLA, Weight: ~ 5 g

ADDITIONAL SETTINGS

None required

Print this STL if you want to build
the **rudder with vector function**
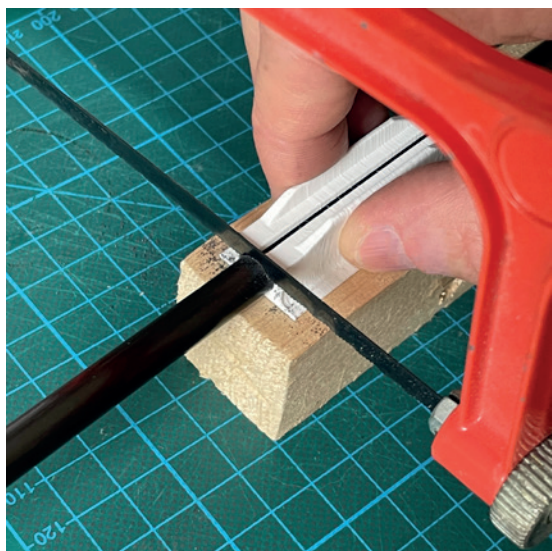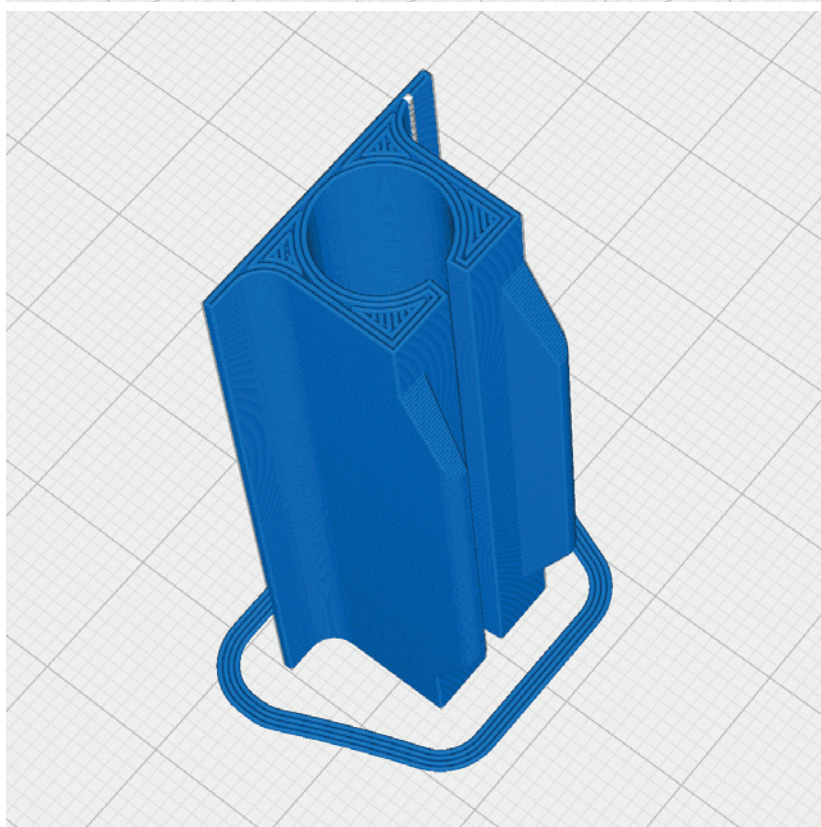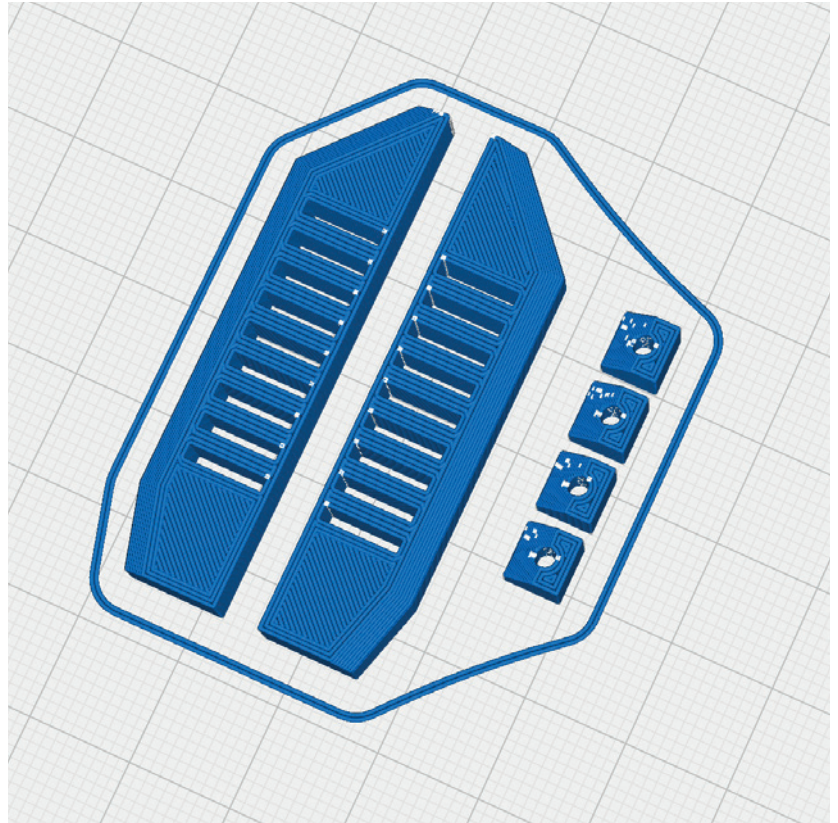(folder RUDDER VERSION).

Carbon tool_p1_J.stl

MATERIAL   PLA, Weight: ~ 6 g

ADDITIONAL SETTINGS

None required

PROFILE P2_HOLLOWBODY PLA or Tough PLA

The following parts must be sliced with the PROFILE P2_HOLLOWBODY.
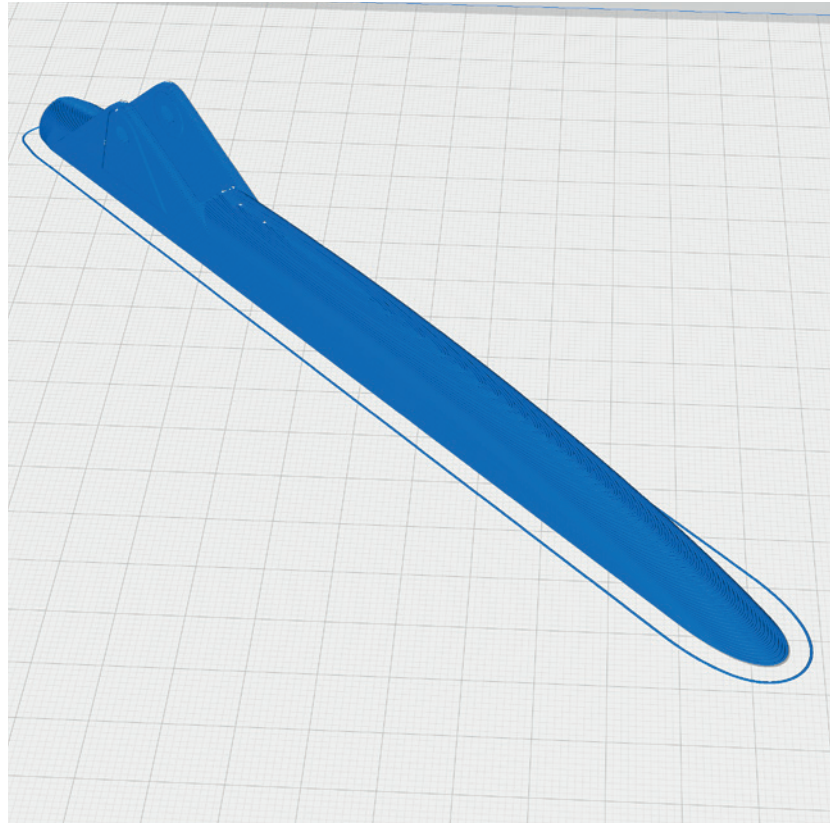**Please note the additional settings for the individual parts!**

EDF-parts FMS_p2_J.stl
EDF-parts Wemotec_p2_J.stl

MATERIAL   PLA, Weight: ~ 6 g

ADDITIONAL SETTINGS

None required

Skid wheel back_p2_J.stl

MATERIAL   PLA, Weight: ~ 3 g

ADDITIONAL SETTINGS

None required

If you want to build the version
without wheels, take instead the STL
Skid Glider back_p2_J.stl

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!

Skid wheel front_p2_J.stl

MATERIAL   PLA, Weight: ~ 9 g

ADDITIONAL SETTINGS

• Wall Line Count: 3

If you want to build the version
without wheels, take instead the STL
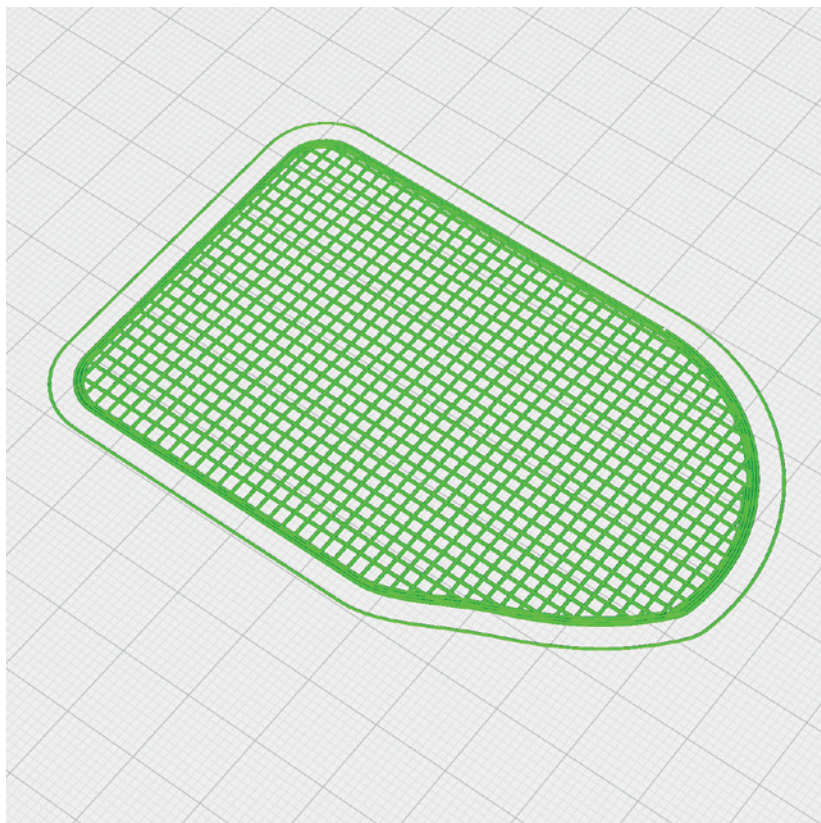Skid Glider front_p2_J.stl

PROFILE P3_SURFACE TPU

The following parts must be sliced with the PROFILE P3_SURFACE (1-wall-print).
Please note the additional settings for the individual parts!

TPU-Mesh left_p3_J.stl
TPU-Mesh right_p3_J.stl

MATERIAL   TPU ~ A95, Weight: ~ 2 g

ADDITIONAL SETTINGS

None required

PROFILE P4_FLEX
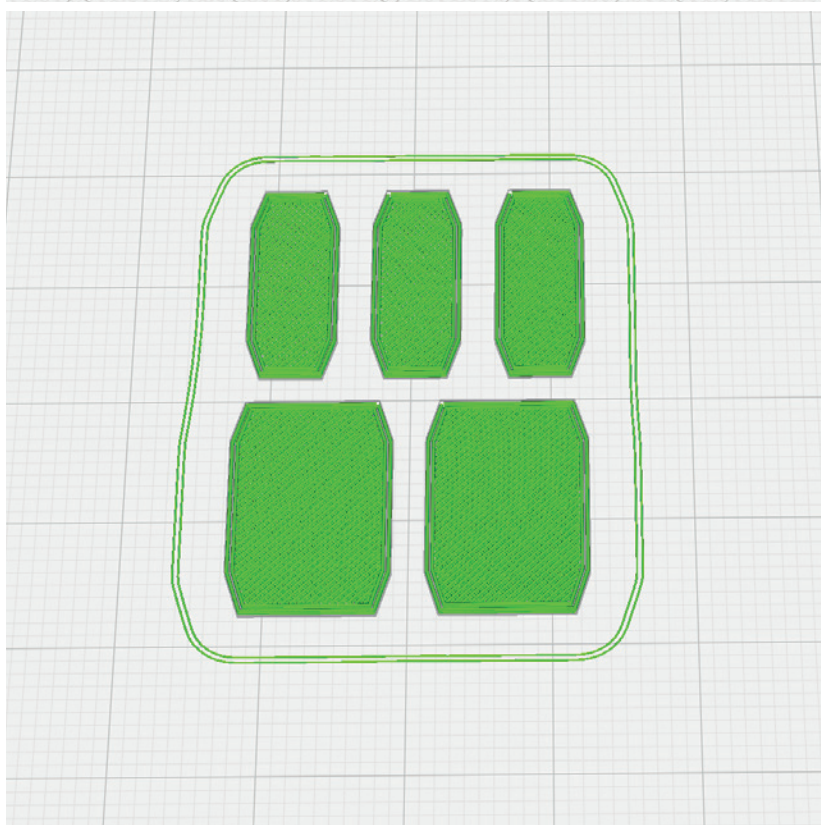# TPU A95

Hinges rudder_p4_J.stl

MATERIAL   TPU ~ A95, Weight: ~ 2 g

ADDITIONAL SETTINGS

None required

Print this STL if you want to build
the **rudder with vector function**
(folder RUDDER VERSION).

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!

Wheel back_p4_J.stl

MATERIAL   TPU A95, Weight: ~ 2 g

ADDITIONAL SETTINGS

• Infill Density 100 %

Wheel front_p4_J.stl

MATERIAL   TPU A95, Weight: ~ 4 g

ADDITIONAL SETTINGS

• Infill Density 100 %

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!
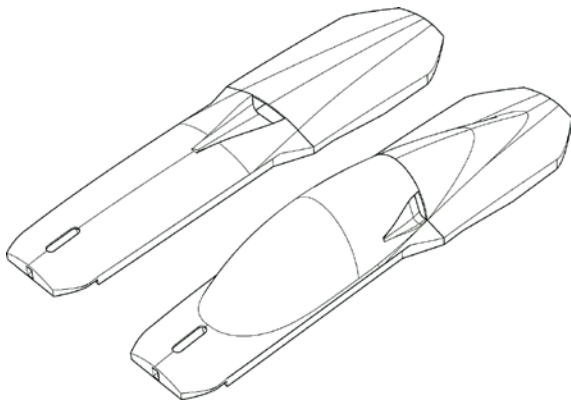
Canopy 1_p5_J.stl or
Canopy pilot 1_p5_J.stl

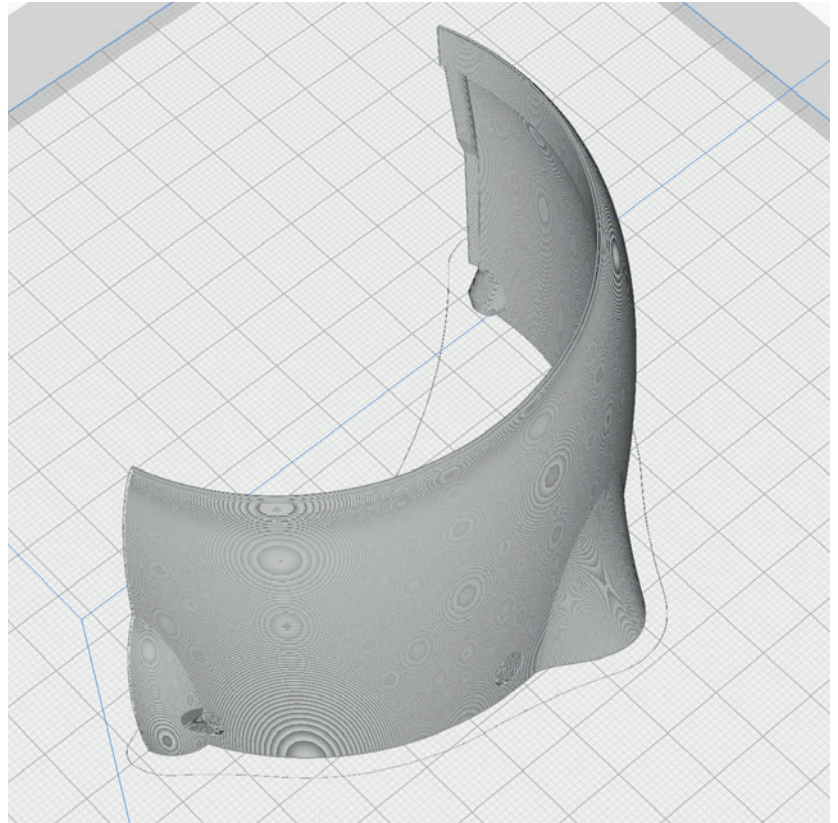**MATERIAL**   LW-PLA, ~ 11 g*

*Weighed (approximate guideline)

ADDITIONAL SETTINGS
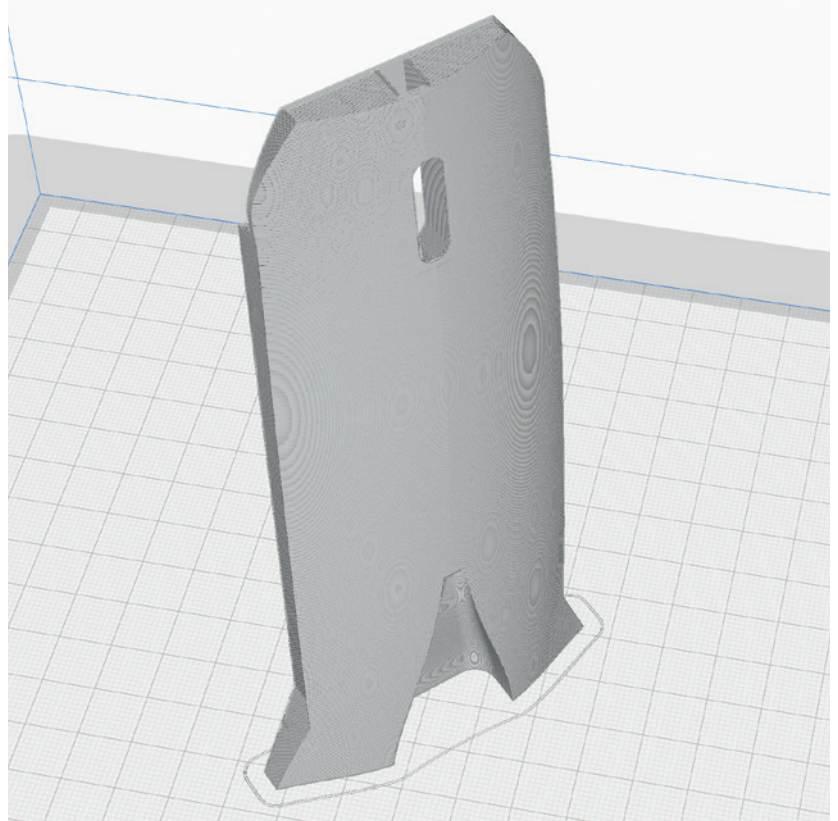
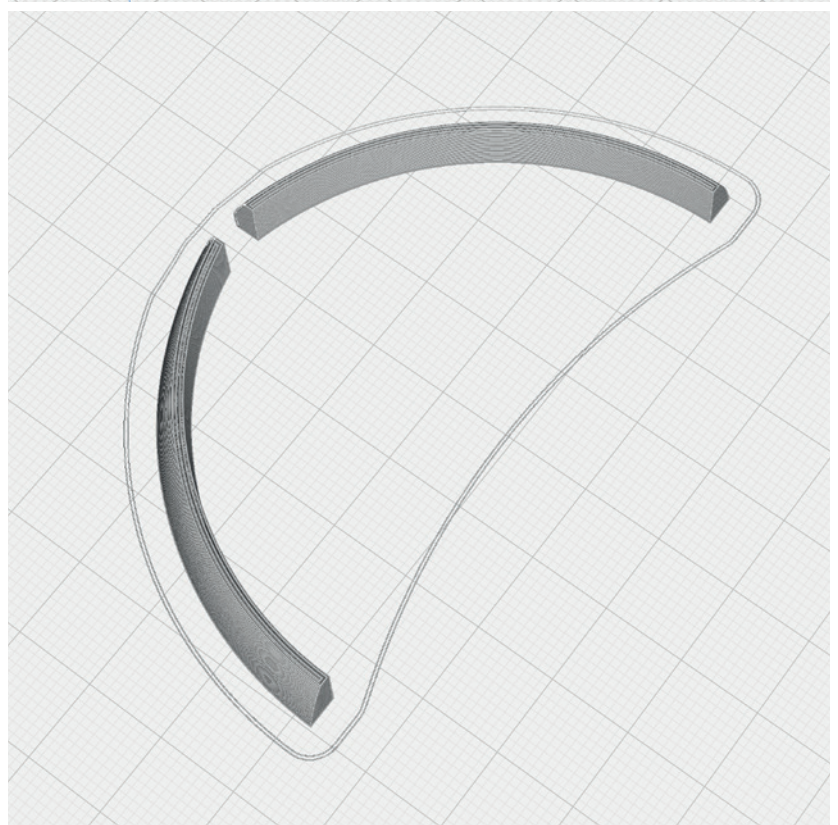None required

Canopy 2_p5_J.stl or
Canopy pilot 2_p5_J.stl

MATERIAL   LW-PLA, ~ 9 g*

*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required
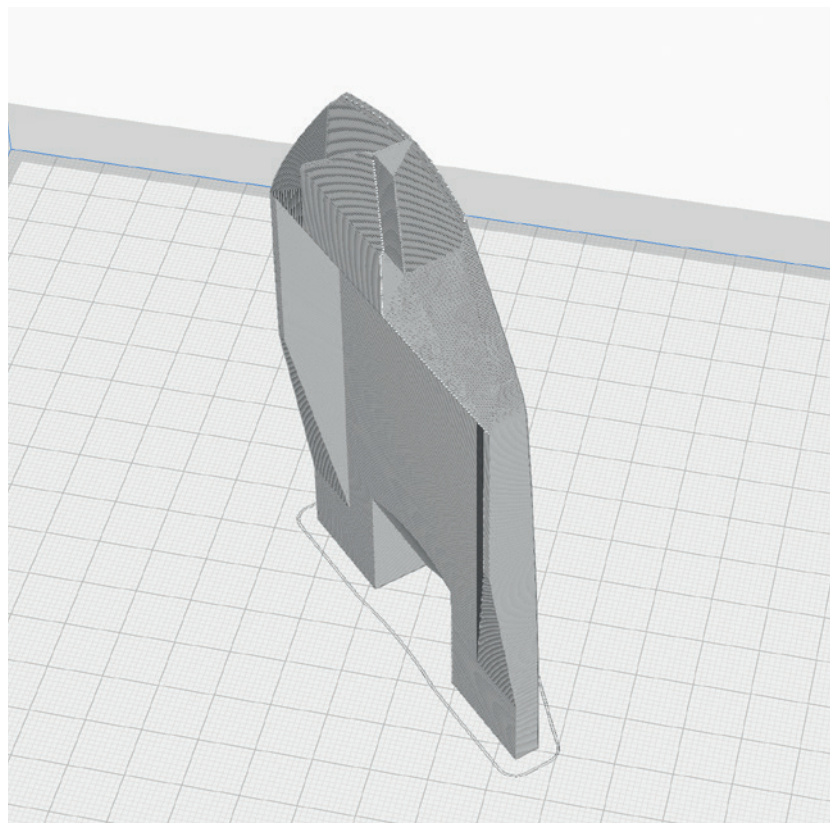
PROFILE P5_GYROID Light-Weight LW-PLA!

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!
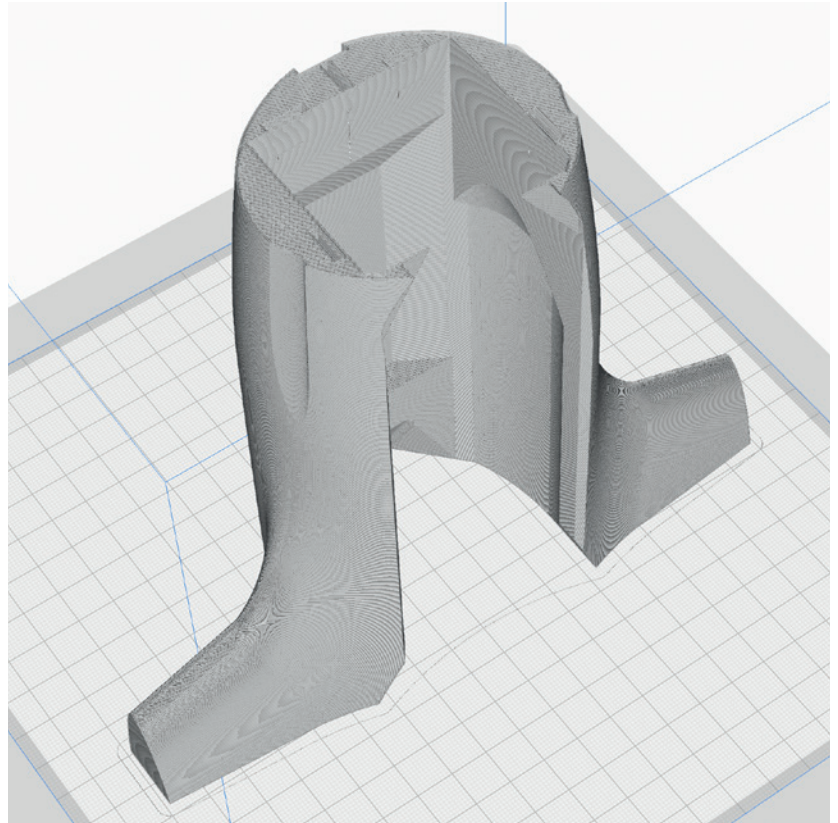
EDF-Cover FMS 1_p5_J.stl or EDF-Cover Wemotec_p5_J.stl

MATERIAL   LW-PLA, ~ 8 g*

*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required

EDF-Cover FMS 2_p5_J.stl

MATERIAL   LW-PLA, ~ 1 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!

Fuselage 1_p5_J.stl

MATERIAL LW-PLA, ~ 33 g*

*Weighed (approximate guideline)

ADDITIONAL SETTINGS
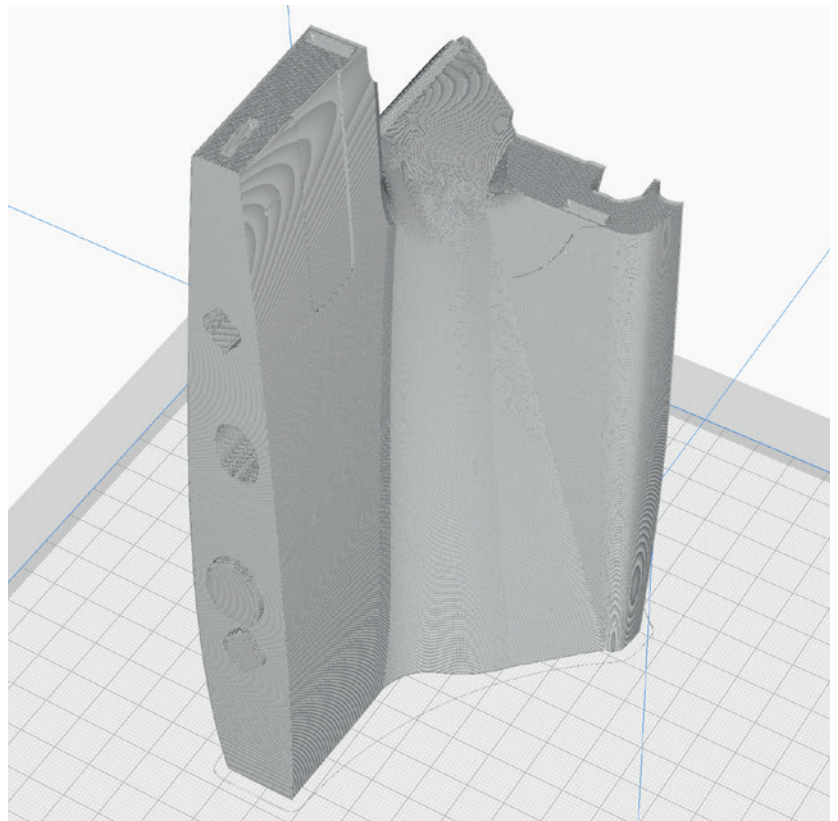
None required

Fuselage 2 left_p5_J.stl
Fuselage 2 right_p5_J.stl

MATERIAL LW-PLA, ~ 35 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!
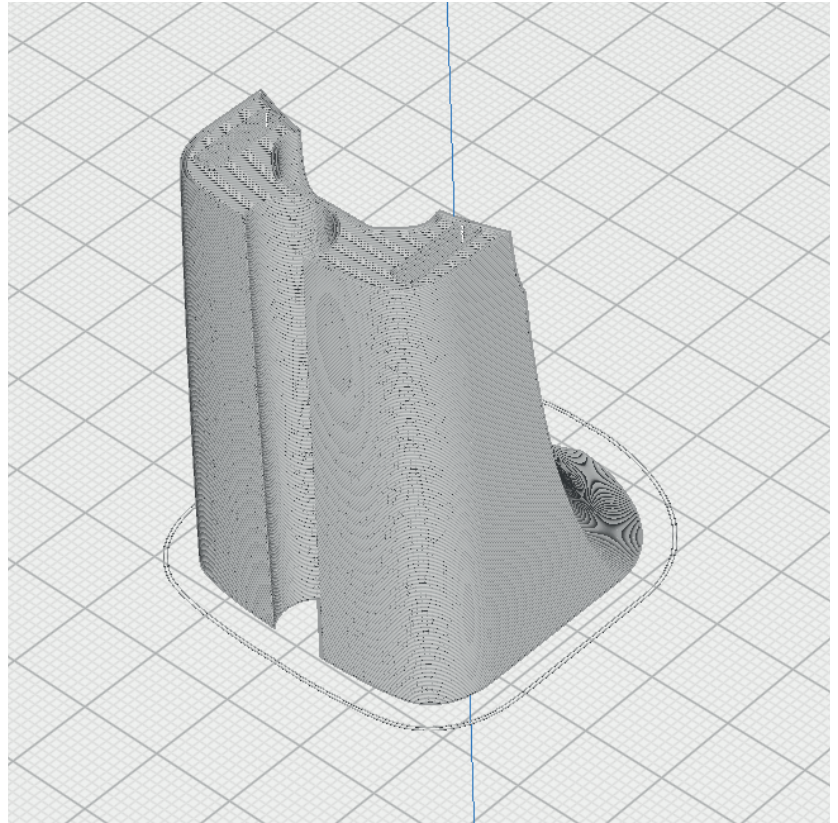
Fuselage 2 part_p5_J.stl

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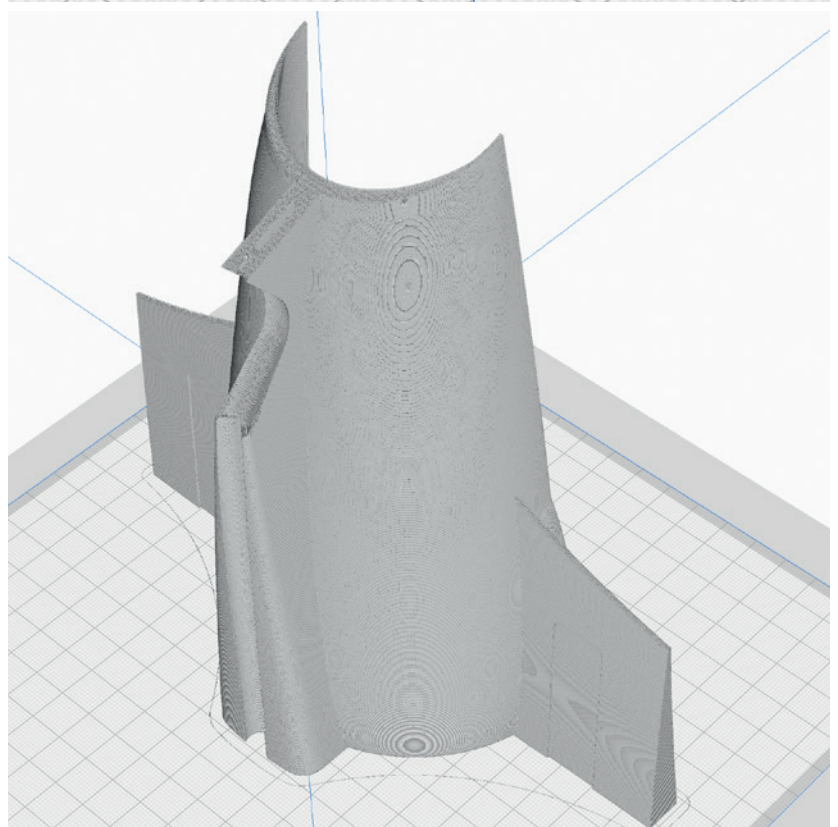
ADDITIONAL SETTINGS

None required

Fuselage 3_p5_J.stl

MATERIAL LW-PLA, ~ 28 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!
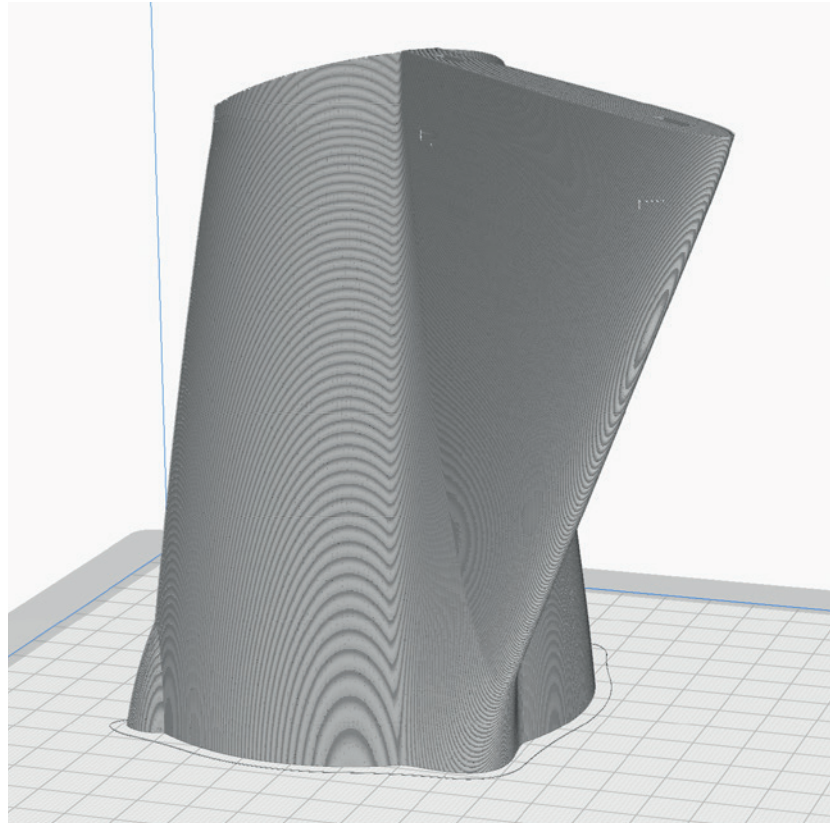
Fuselage 4 Part1_p5_J.stl

MATERIAL LW-PLA, ~ 24 g*

*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required

This version is **without** rudder. If you want to build the rudder with vector function use the STL in the folder RUDDER VERSION.
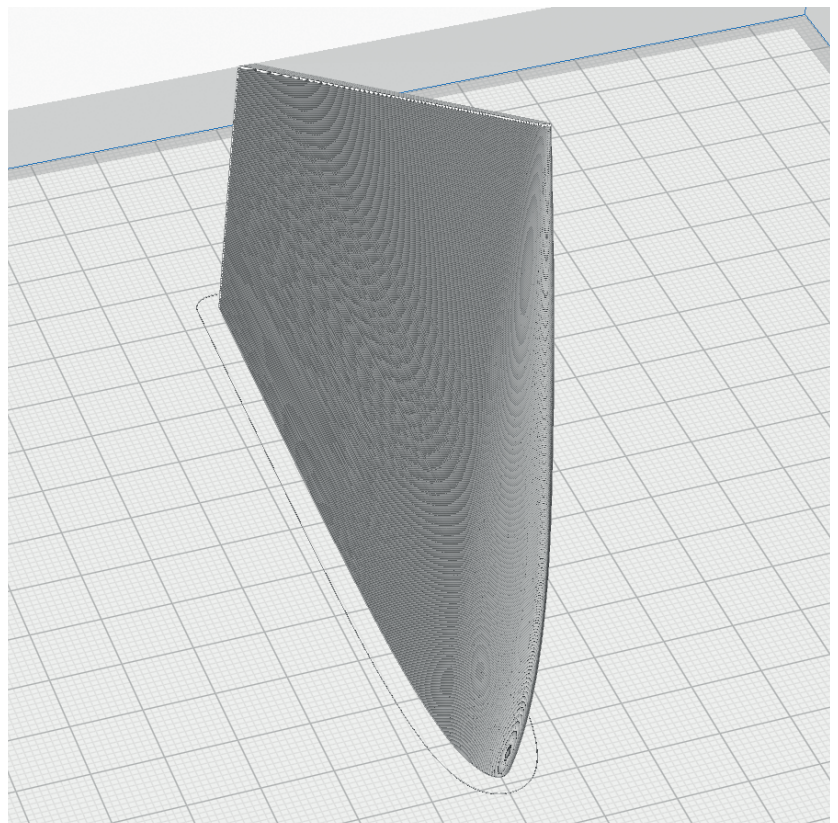

Fuselage 4 part2_p5_J.stl

MATERIAL LW-PLA, ~ 8 g*

*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required

This version is **without** rudder. If you want to build the rudder with vector function use the STL in the folder RUDDER VERSION.

PROFILE P5_GYROID Light-Weight LW-PLA/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!
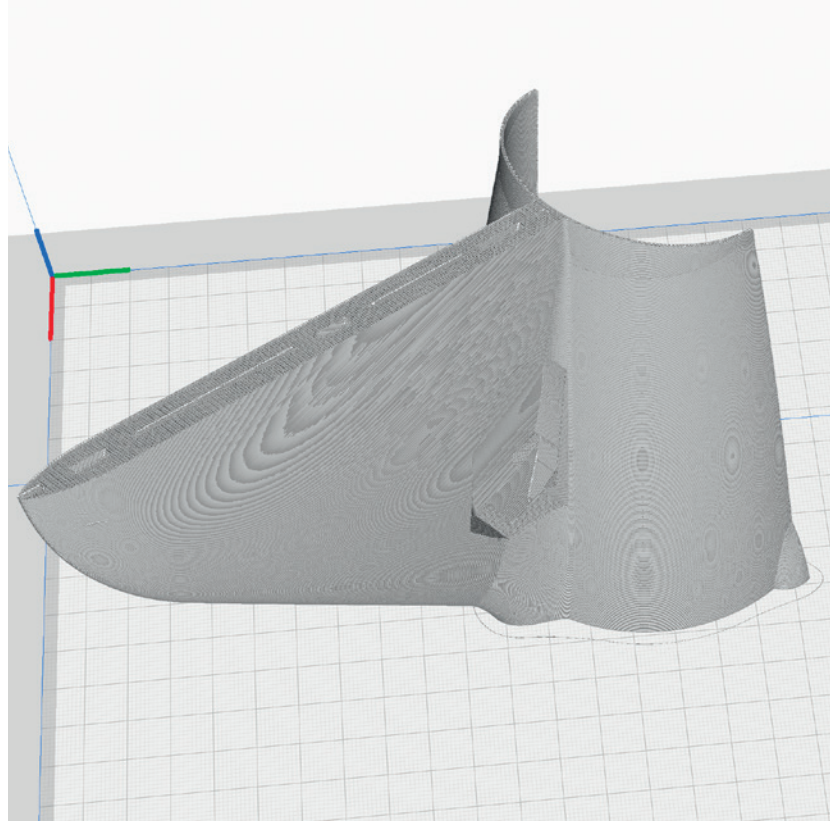
Fuselage 4 Rudder_p5_J.stl

`MATERIAL` **LW-PLA**, ~ 26 g*

*Weighed (approximate guideline)

`ADDITIONAL SETTINGS`

None required

Print this STL if you want to build the **rudder with vector function** (folder RUDDER VERSION).
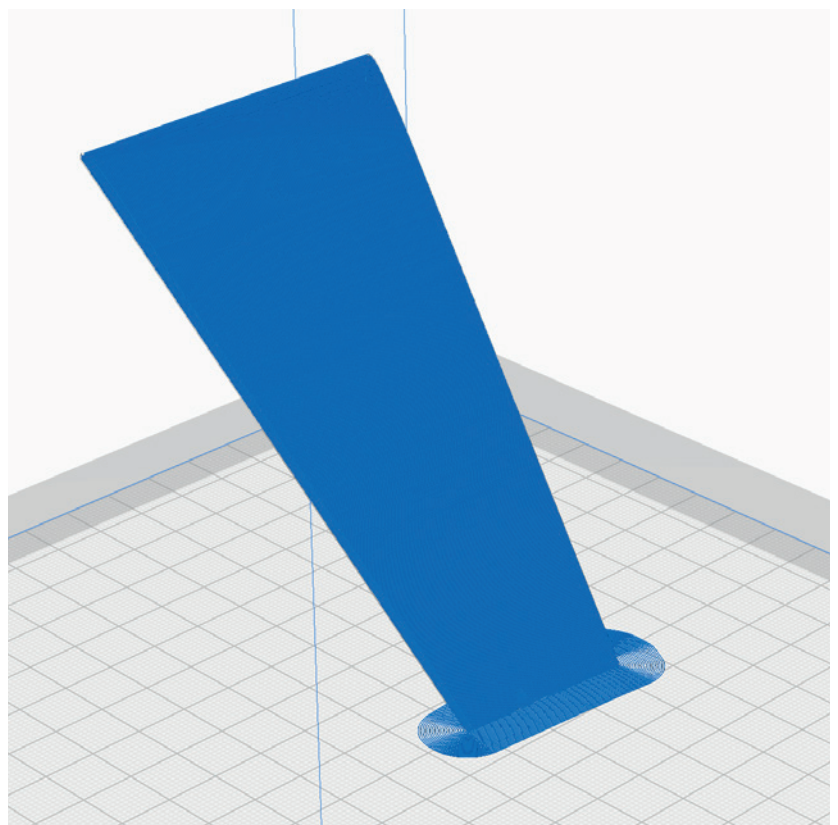

Rudder 1_p5PLA_J.stl

`MATERIAL` **PLA**, ~ 10 g*

*Weighed (approximate guideline)

`ADDITIONAL SETTINGS`

These parts must be printed with normal or Tough PLA.

• Flow 100 %
• set Brim
• Retract settings for normal PLA

Print this STL if you want to build the **rudder with vector function** (folder RUDDER VERSION).

PROFILE P5_GYROID Light-Weight LW-PLA/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!

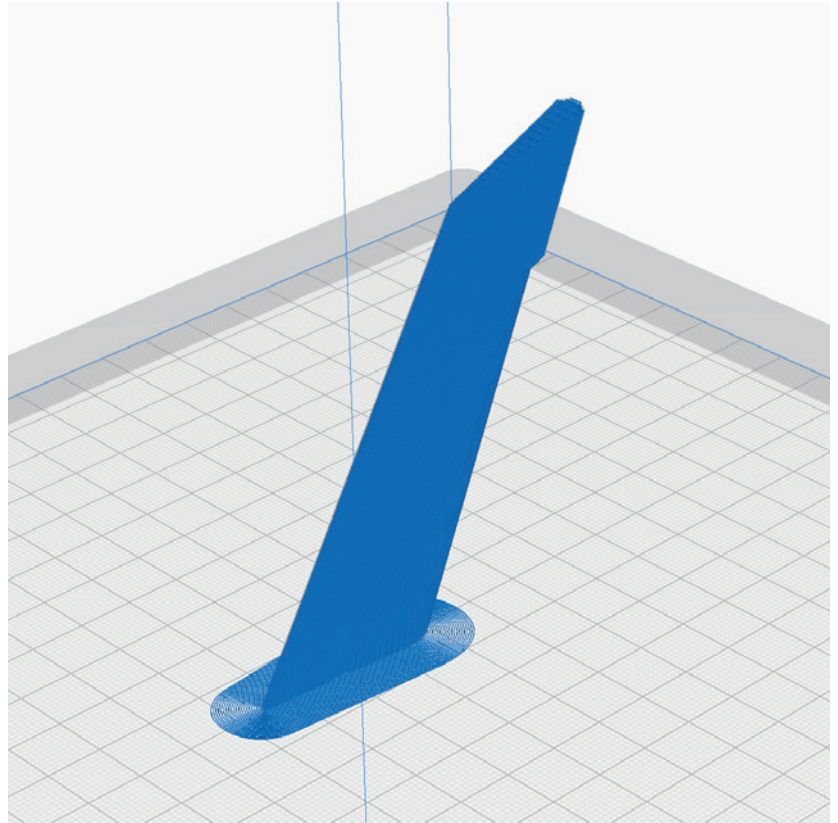## Rudder 2_p5PLA_J.stl

MATERIAL   PLA, ~ 4 g*

*Weighed (approximate guideline)

ADDITIONAL SETTINGS

These parts must be printed with normal or Tough PLA.

• Flow 100 %
• set Brim
• Retract settings for normal PLA

Print this STL if you want to build the **rudder with vector function** (folder RUDDER VERSION).
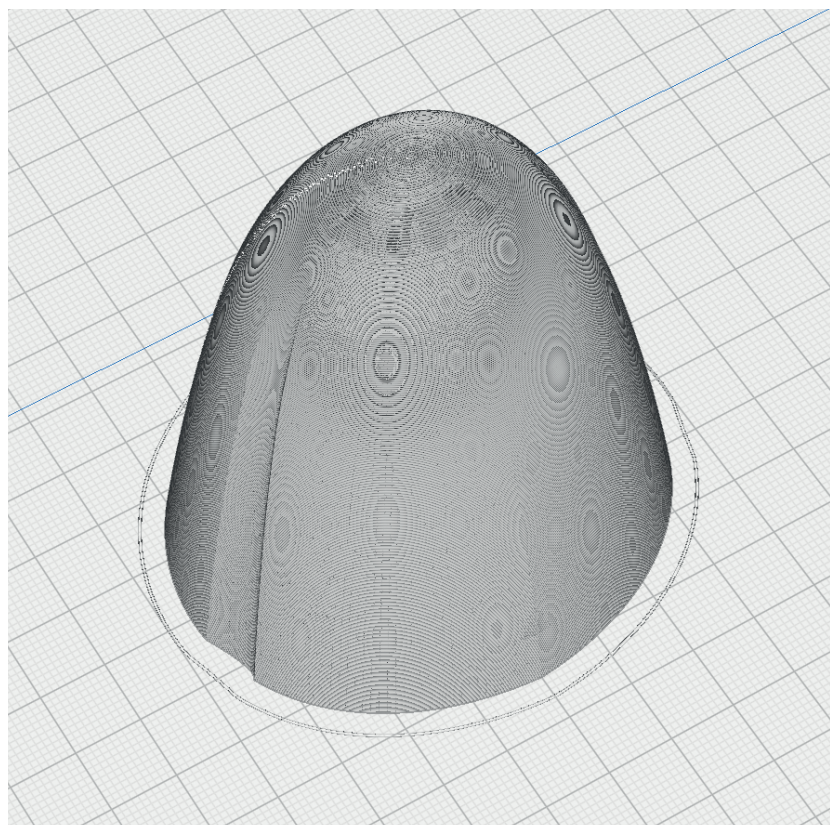

Nose_p5_J.stl

MATERIAL   LW-PLA, ~ 12 g*

*Weighed (approximate guideline)

ADDITIONAL SETTINGS

• set Brim

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!
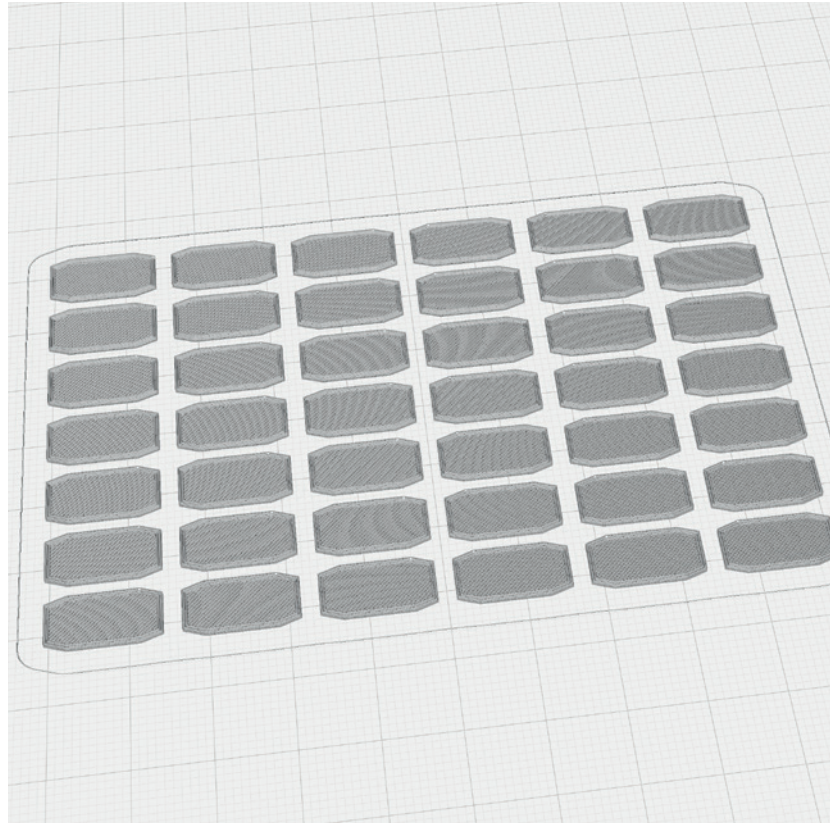
Interconnects_p1_J.stl

MATERIAL **LW-PLA**, ~ 2 g*

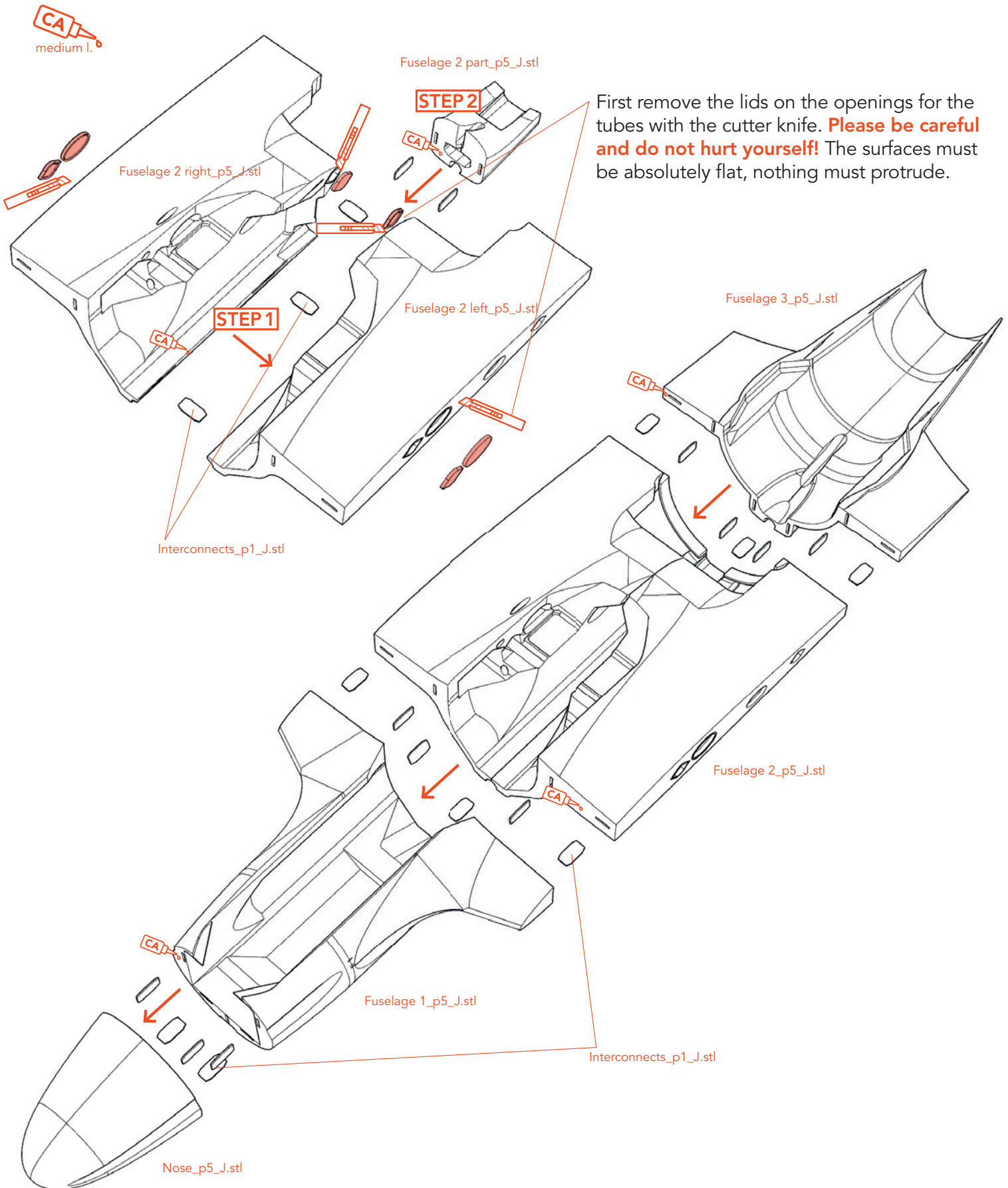*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required

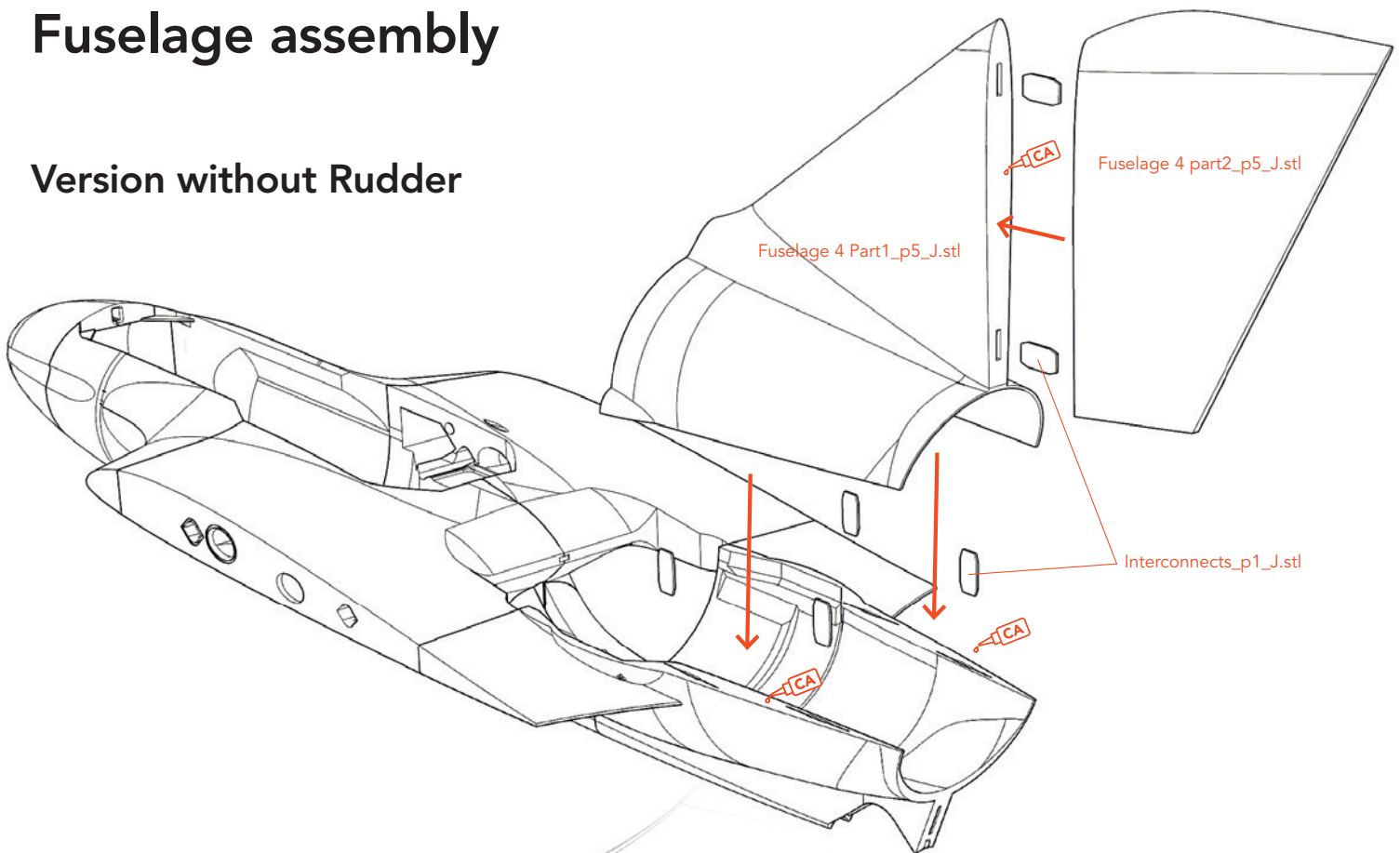You can also print the interconnects with PROFILE_1.

ASSEMBLING MANUAL FUSELAGE EDF

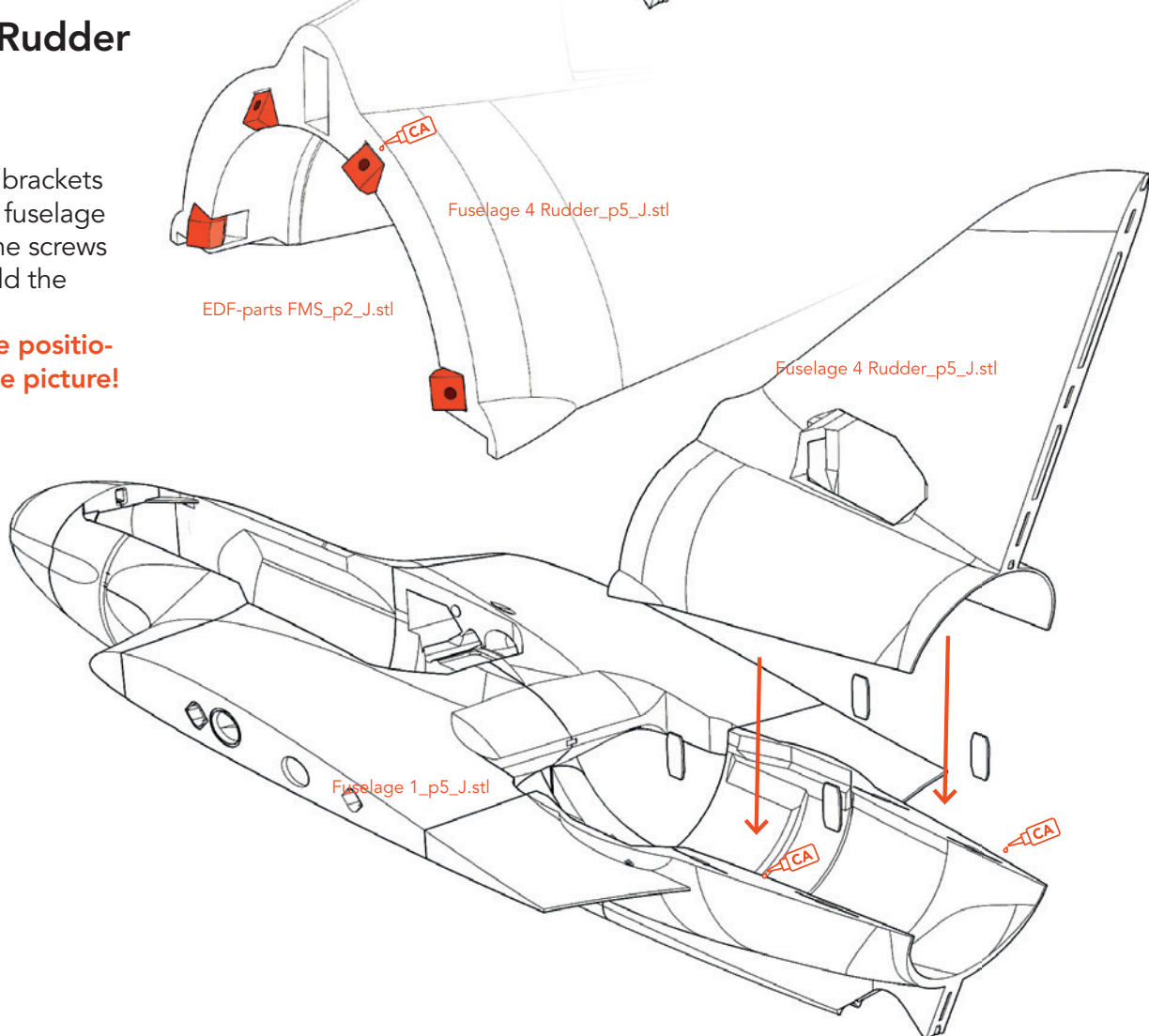Follow the instructions „Glueing the parts" on page 6.

CA
medium l.

Fuselage 2 part_p5_J.stl

STEP 2

CA

First remove the lids on the openings for the tubes with the cutter knife. **Please be careful and do not hurt yourself!** The surfaces must be absolutely flat, nothing must protrude.

Fuselage 2 right_p5_J.stl

CA

STEP 1

Fuselage 2 left_p5_J.stl

Fuselage 3_p5_J.stl

CA

Interconnects_p1_J.stl

Fuselage 2_p5_J.stl

CA

Fuselage 1_p5_J.stl

CA

Interconnects_p1_J.stl

Nose_p5_J.stl

Fuselage assembly

Version without Rudder

Fuselage 4 part2_p5_J.stl

Fuselage 4 Part1_p5_J.stl

CA

Interconnects_p1_J.stl

CA

CA

Version with Rudder

Before you glue the brackets for the EDF cover in fuselage 4, you should turn the screws in and out again (hold the brackets with pliers).
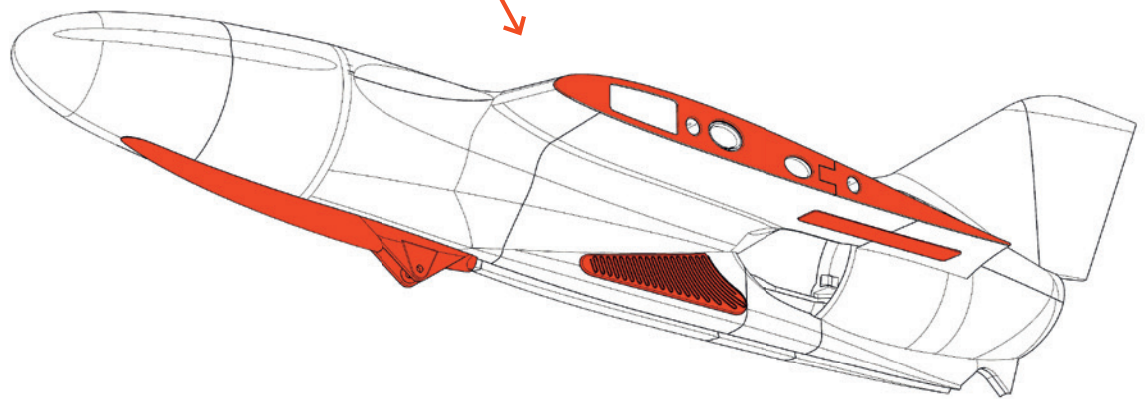**Pay attention to the positioning as shown in the picture!**

CA

Fuselage 4 Rudder_p5_J.stl

EDF-parts FMS_p2_J.stl

Fuselage 4 Rudder_p5_J.stl

Fuselage 1_p5_J.stl

CA

CA

Carbon tube Ø8*480mm

Fuselage protector 1_p1_J.stl

Handling surfaces_p1_J.stl

CA

CA

CA

CA

Skid wheel front_p2_J.stl

Skid Glider front_p2_J.stl

Fuselage protector 2_p1_J.stl
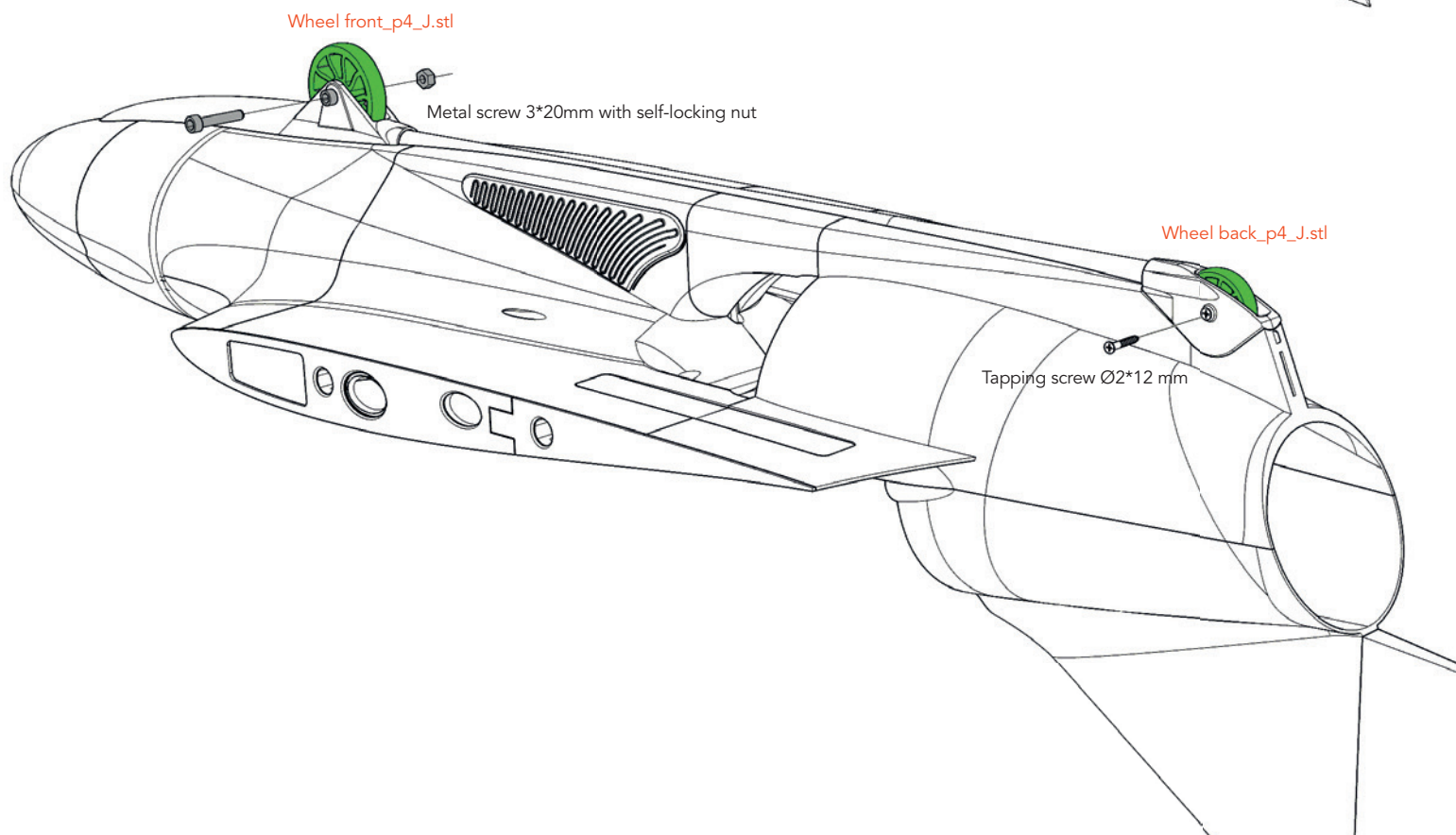
Tension plate_p1_J.stl

Fuselage protector 2_p1_J.stl

Gear assembly

Carbon tube Ø8*340mm

Skid wheel back_p2_J.stl

Skid Glider back_p2_J.stl

CA thin
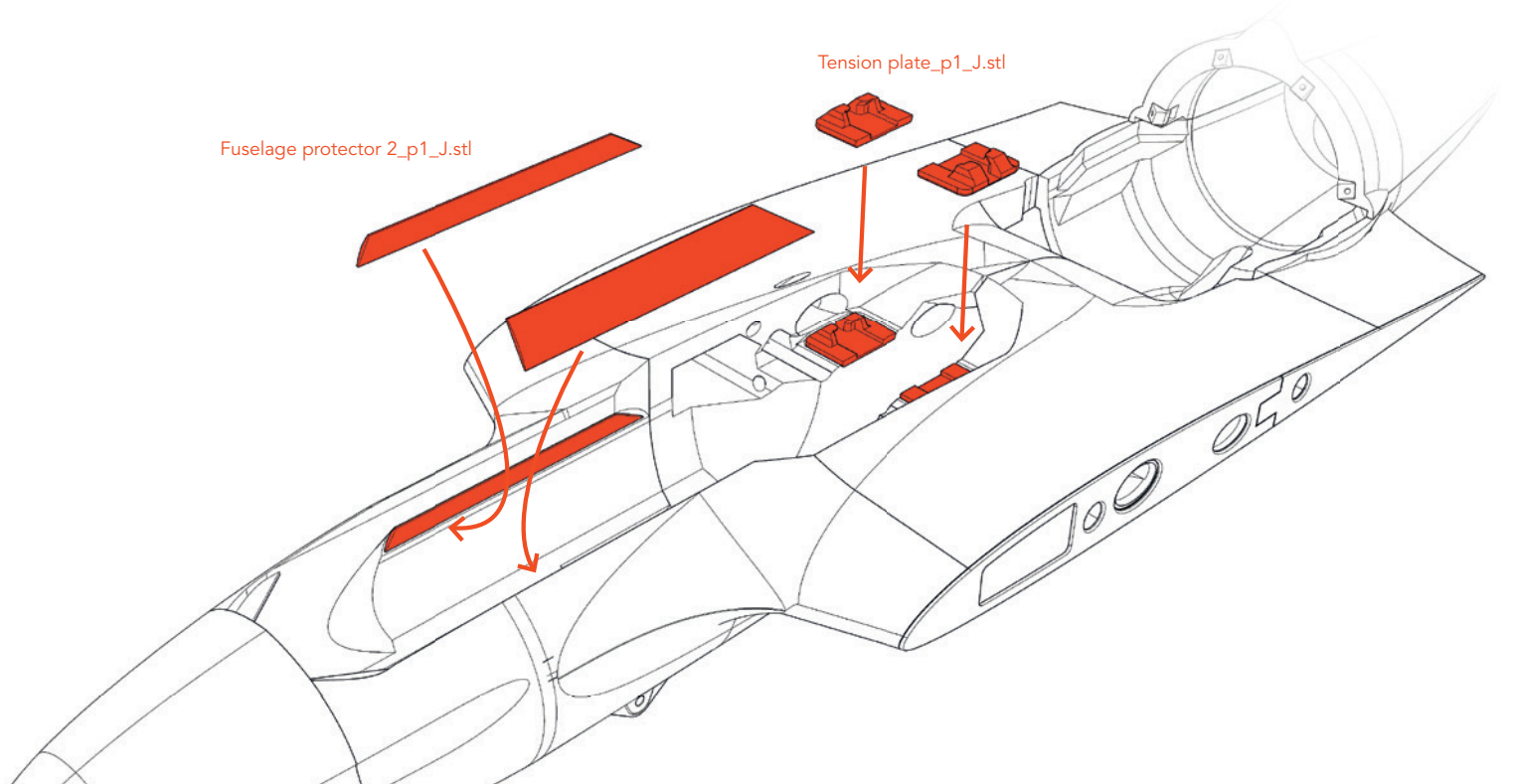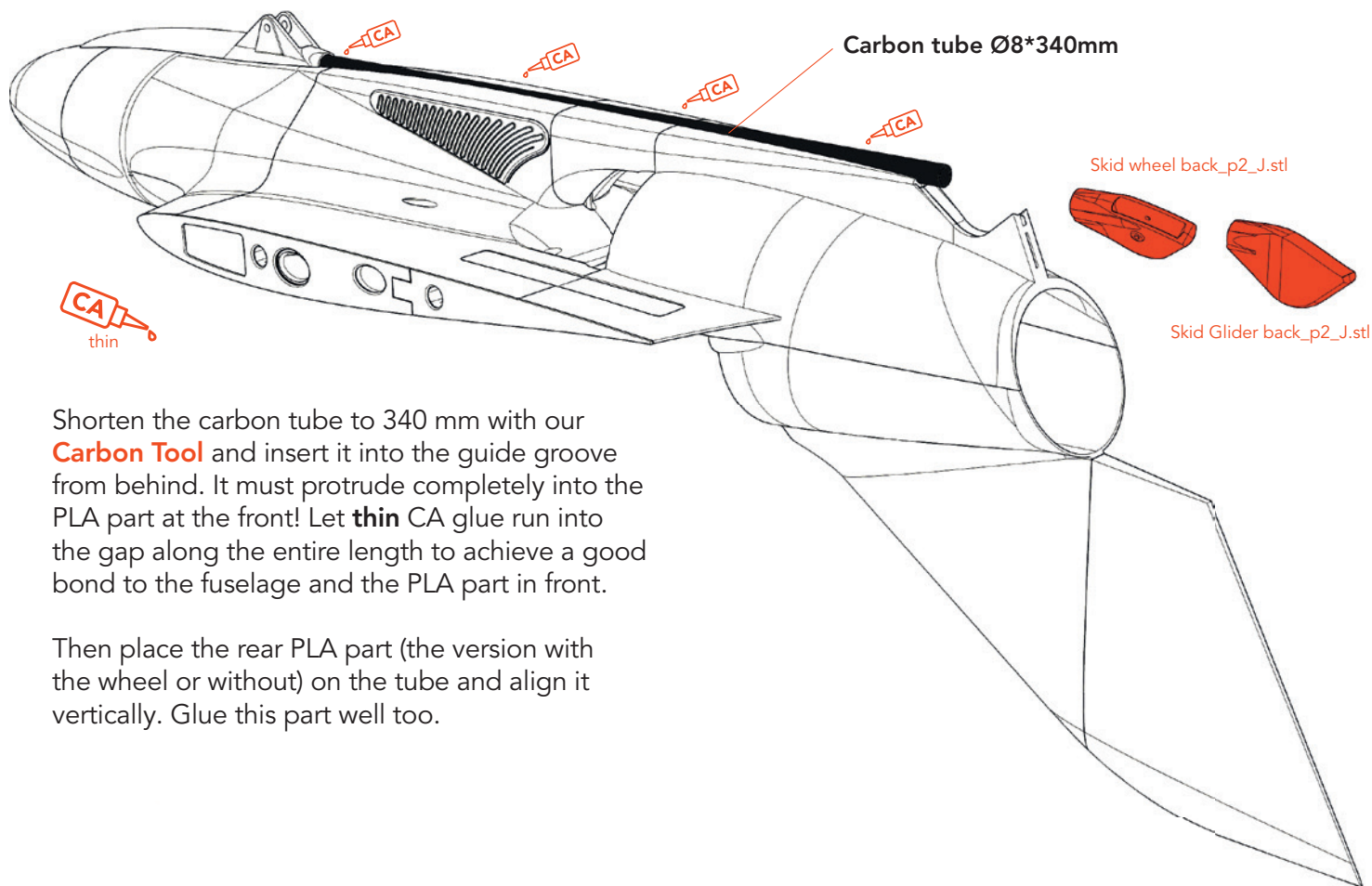
Shorten the carbon tube to 340 mm with our **Carbon Tool** and insert it into the guide groove from behind. It must protrude completely into the PLA part at the front! Let **thin** CA glue run into the gap along the entire length to achieve a good bond to the fuselage and the PLA part in front.

Then place the rear PLA part (the version with the wheel or without) on the tube and align it vertically. Glue this part well too.

Wheel front_p4_J.stl

Metal screw 3*20mm with self-locking nut

Wheel back_p4_J.stl

Tapping screw Ø2*12 mm

EDF mounting

Check which EDF brackets have the correct height for your EDF. The EDF must be exactly flush with the pushrod.

If the height of the bracket does not fit, you can print it in Cura using the Z dimension at the required height.
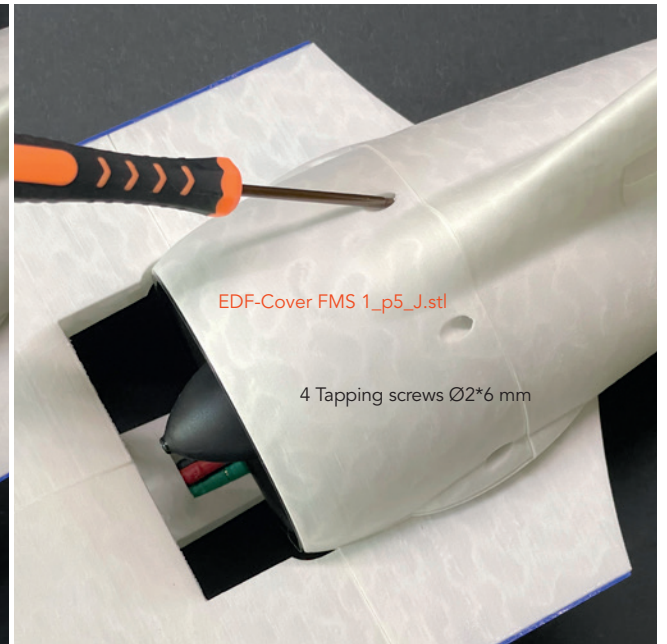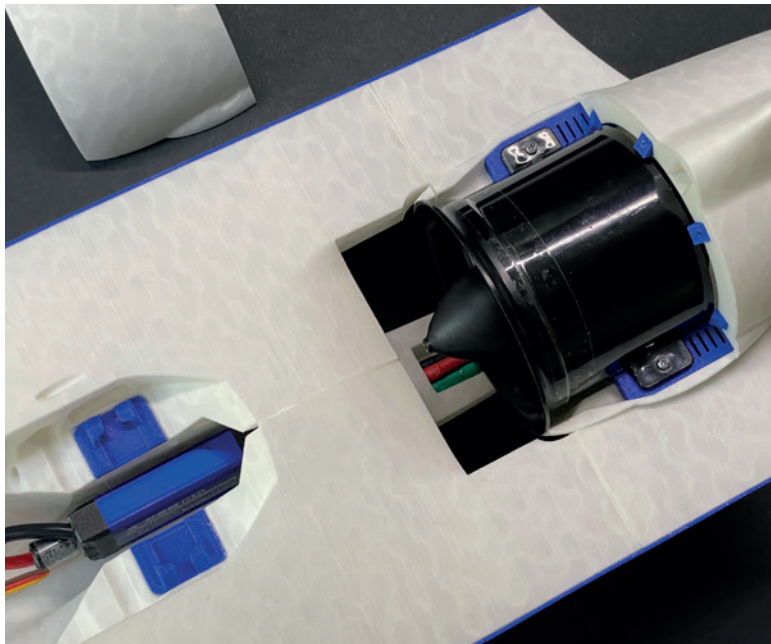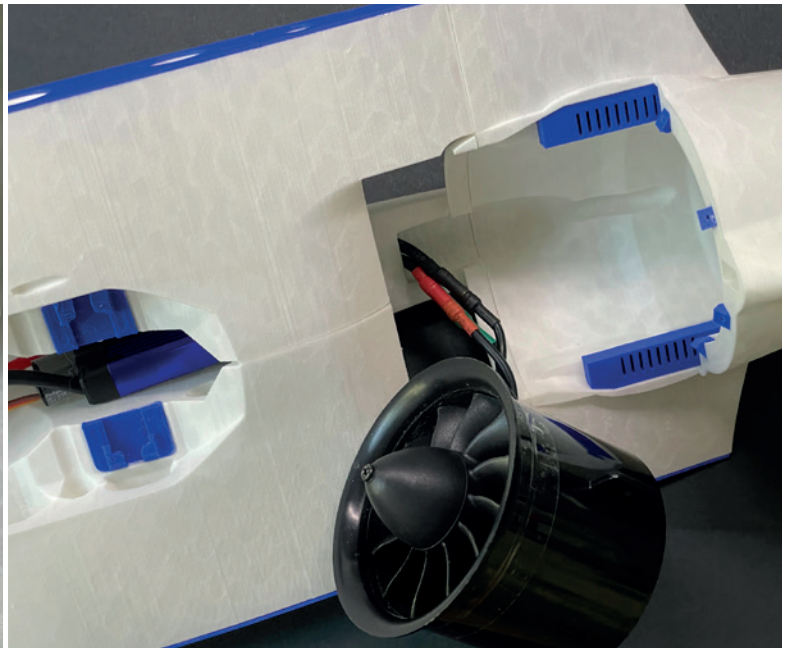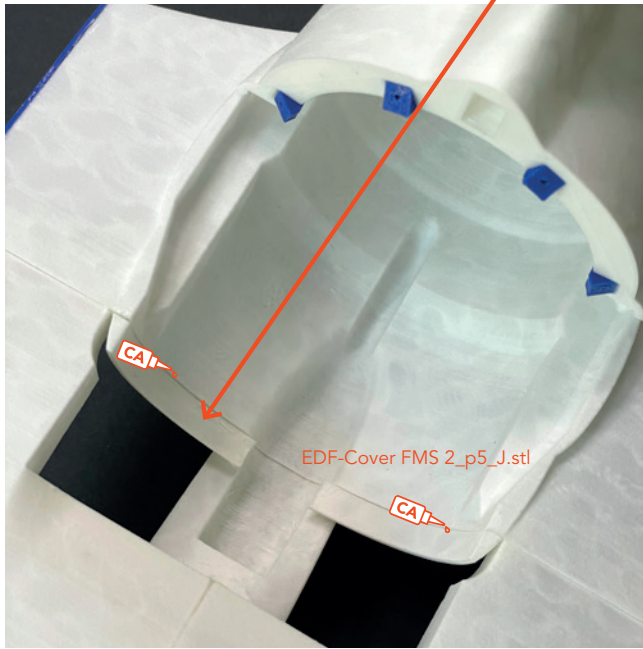
Only when everything fits correctly, stick the brackets in the fuselage as shown in the picture and screw the EDF in place.

 IMPORTANT   it is imperative that the **intake ring** supplied with the EDF is mounted!

CA

CA

EDF-parts FMS_p2_J.stl

EDF-Cover FMS 1_p5_J.stl

Controller
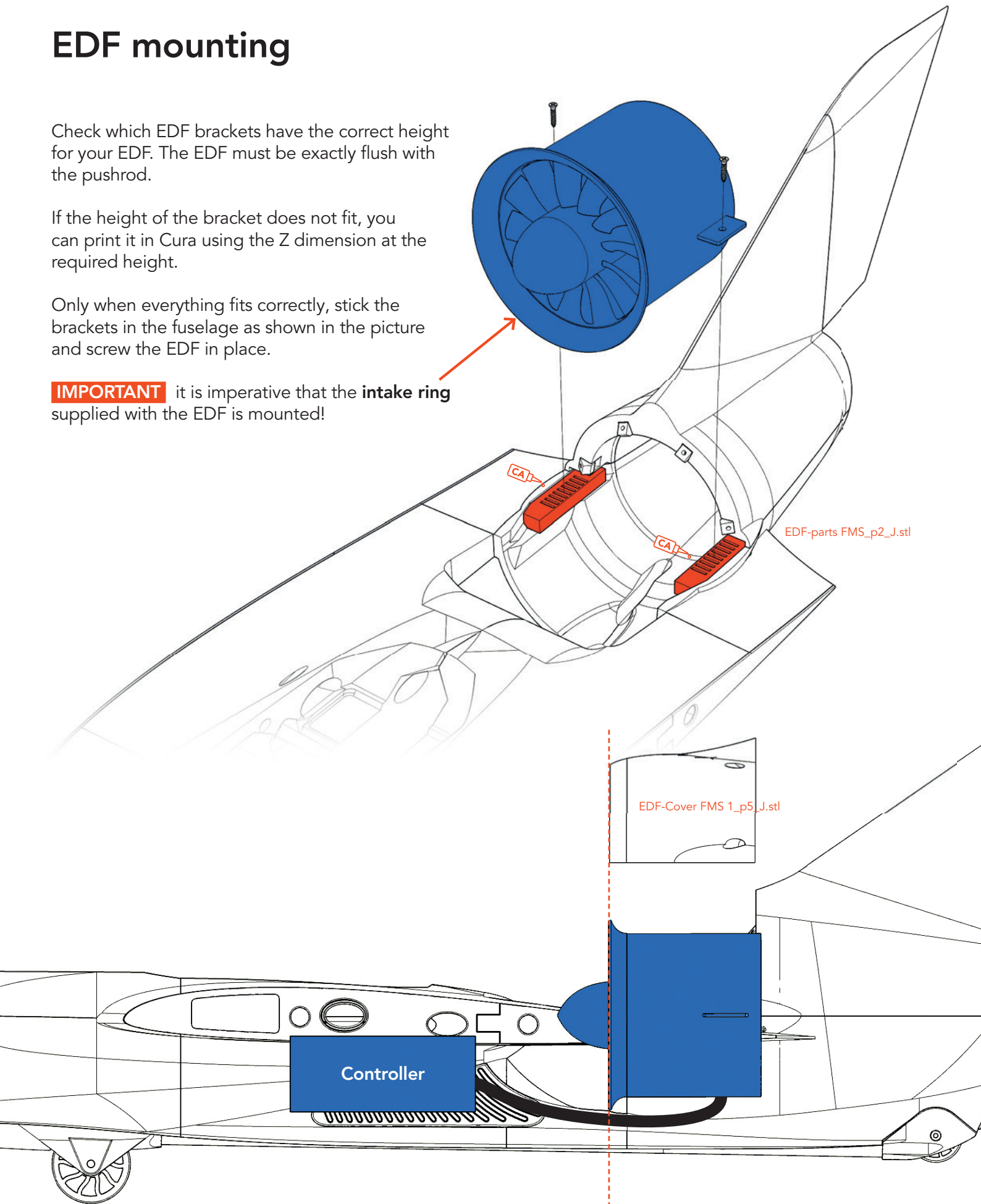
EDF mounting

For the EDF from FMS, these parts are glued here:

CA

CA

EDF-Cover FMS 2_p5_J.stl

EDF-Cover FMS 1_p5_J.stl

4 Tapping screws Ø2*6 mm

NOTE Before mounting the EDF cover, pour **a little** thin CA glue into the screw holes and spray activator on it. This stabilizes this area.
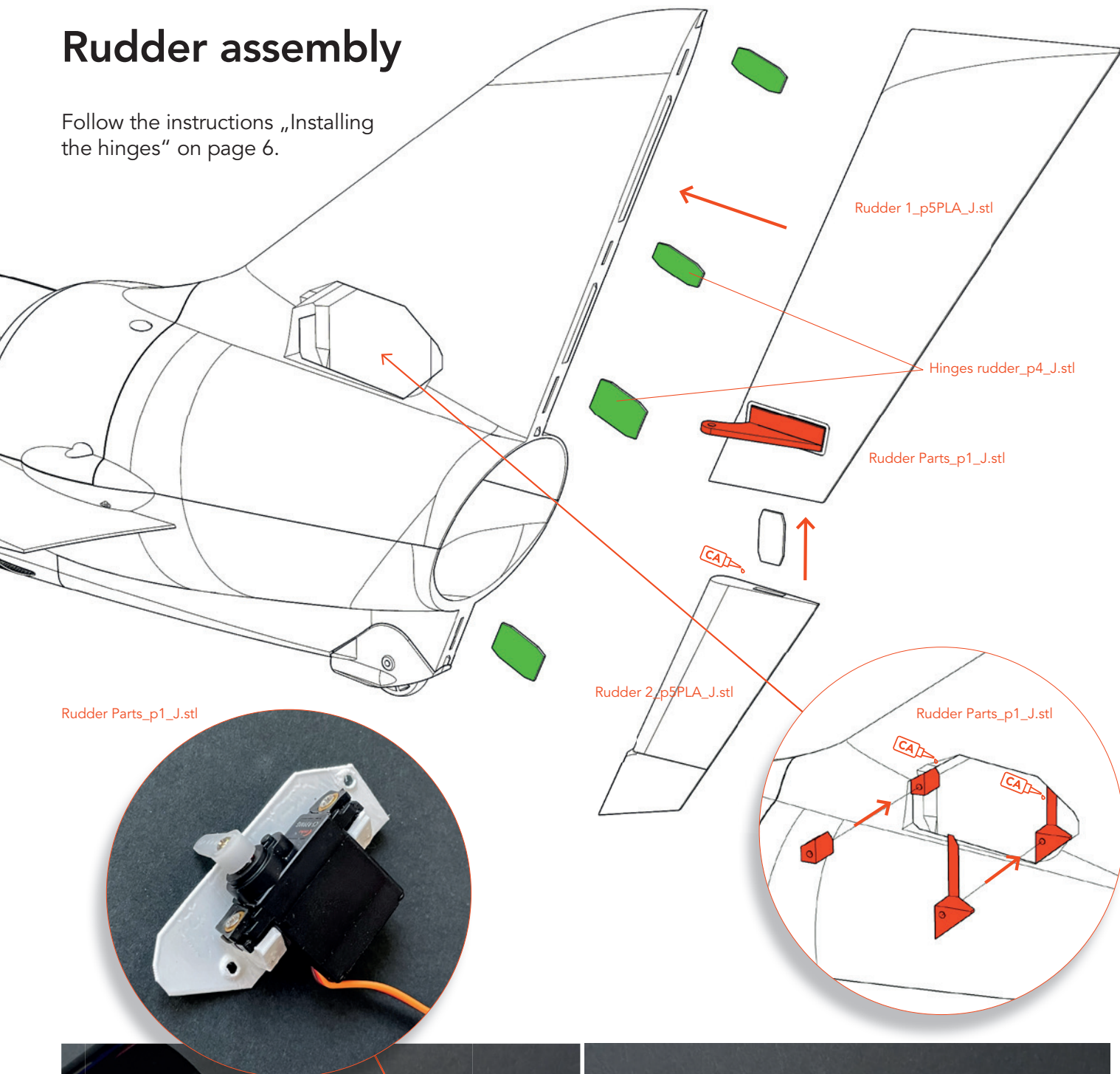
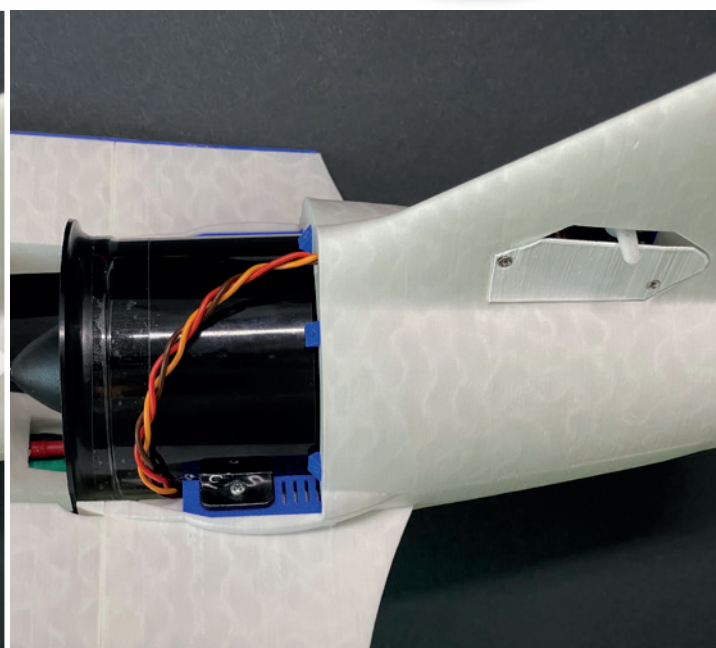If you plan to launch from the ground, you should glue the TPU mesh to the lower intake openings of the EDF.
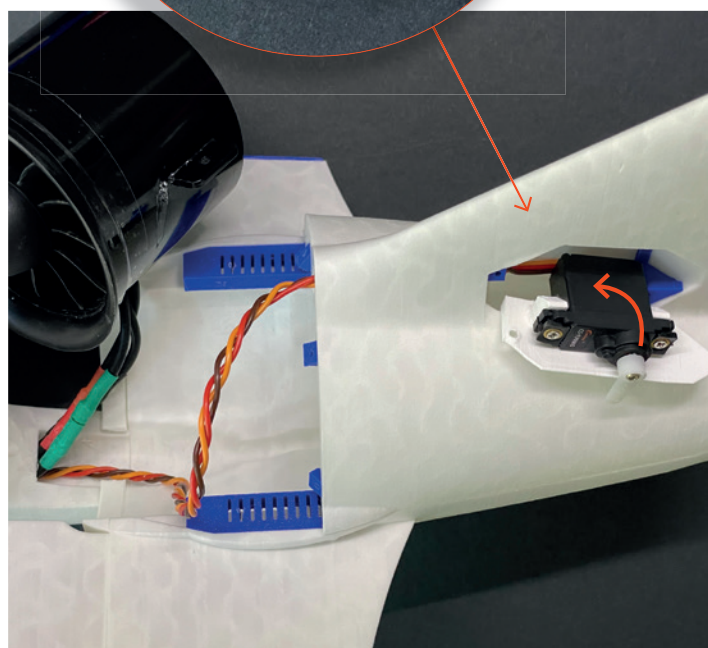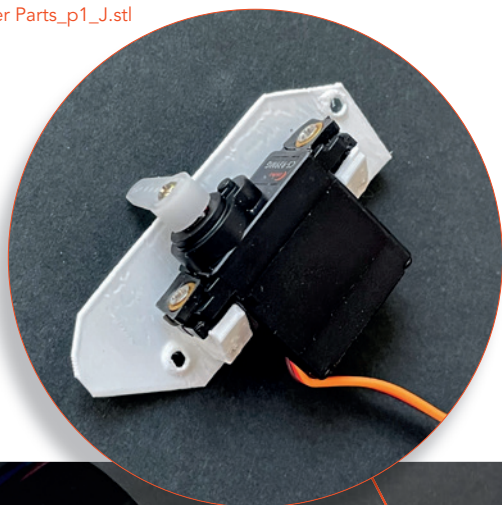
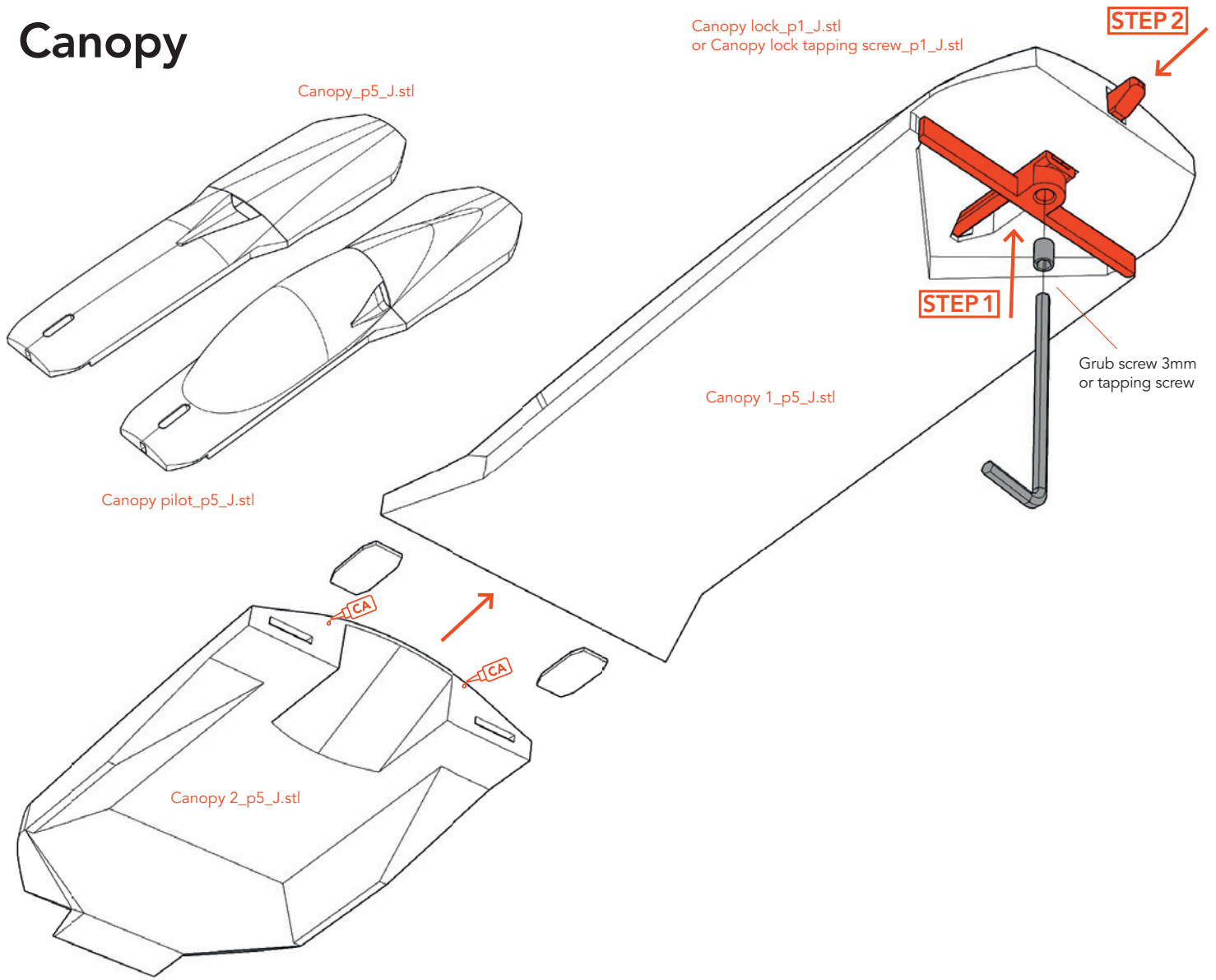This will prevent dirt and small stones from being sucked in.

Rudder assembly

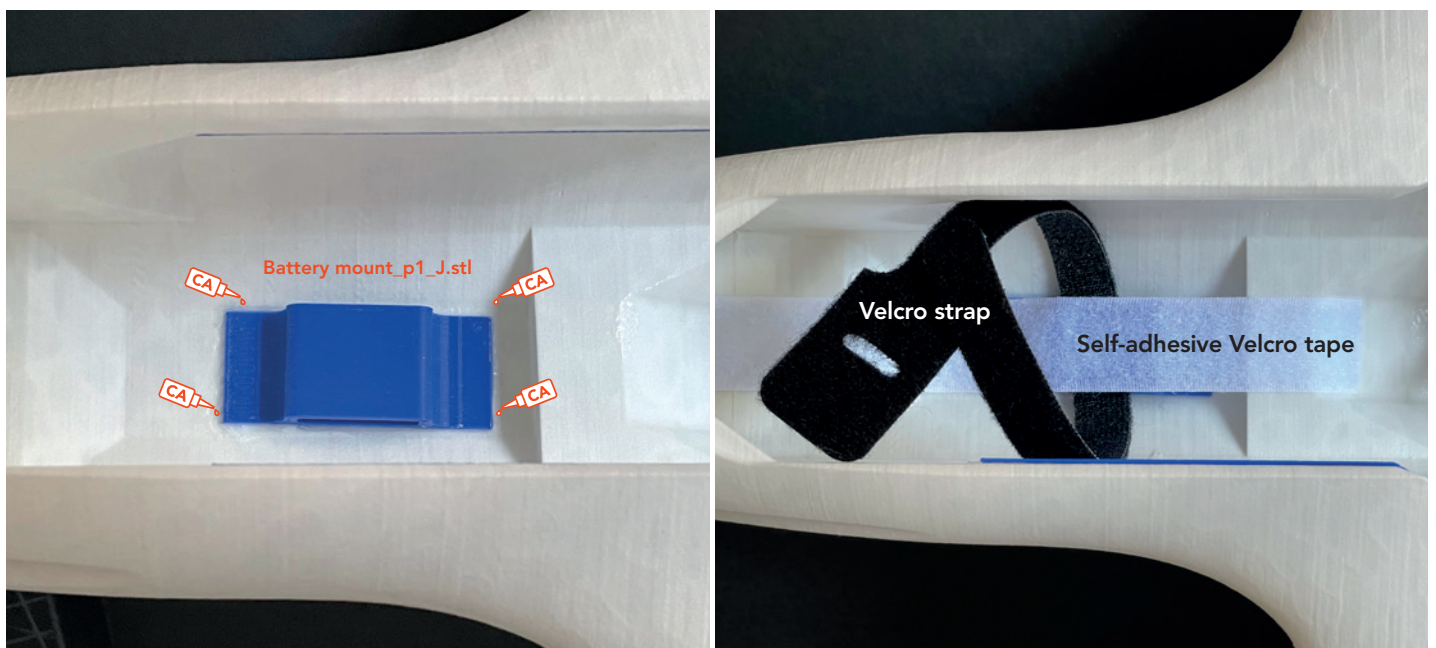Follow the instructions „Installing the hinges" on page 6.
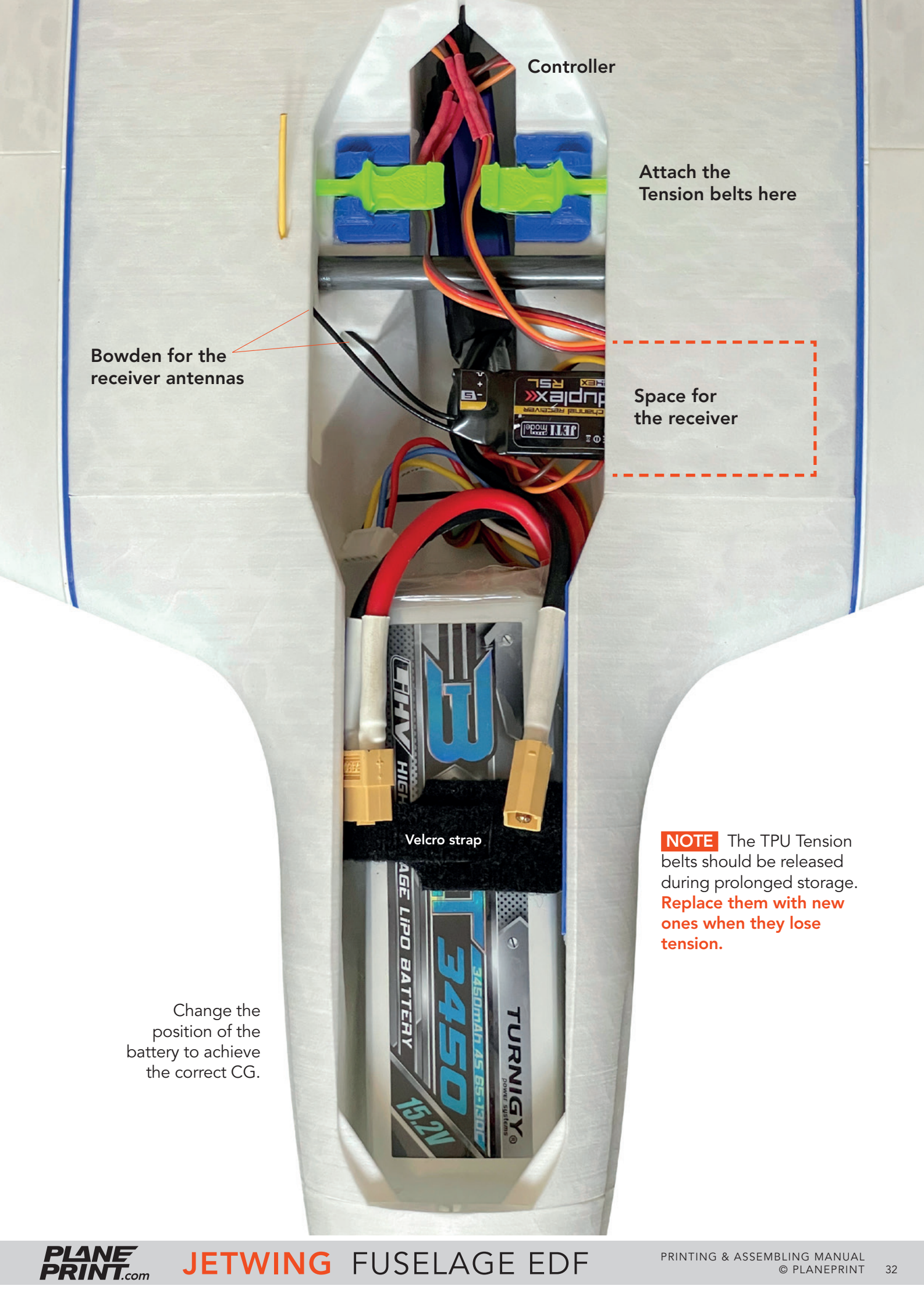

Rudder 1_p5PLA_J.stl

Hinges rudder_p4_J.stl

Rudder Parts_p1_J.stl

Rudder 2_p5PLA_J.stl

Rudder Parts_p1_J.stl

Rudder Parts_p1_J.stl

Canopy

Canopy_p5_J.stl

Canopy pilot_p5_J.stl

Canopy lock_p1_J.stl
or Canopy lock tapping screw_p1_J.stl

STEP 2

STEP 1

Canopy 1_p5_J.stl

Grub screw 3mm
or tapping screw

CA
CA

Canopy 2_p5_J.stl

RC Components – Battery mount

CA   Battery mount_p1_J.stl   CA

CA   CA

Velcro strap

Self-adhesive Velcro tape

Controller

Attach the
Tension belts here
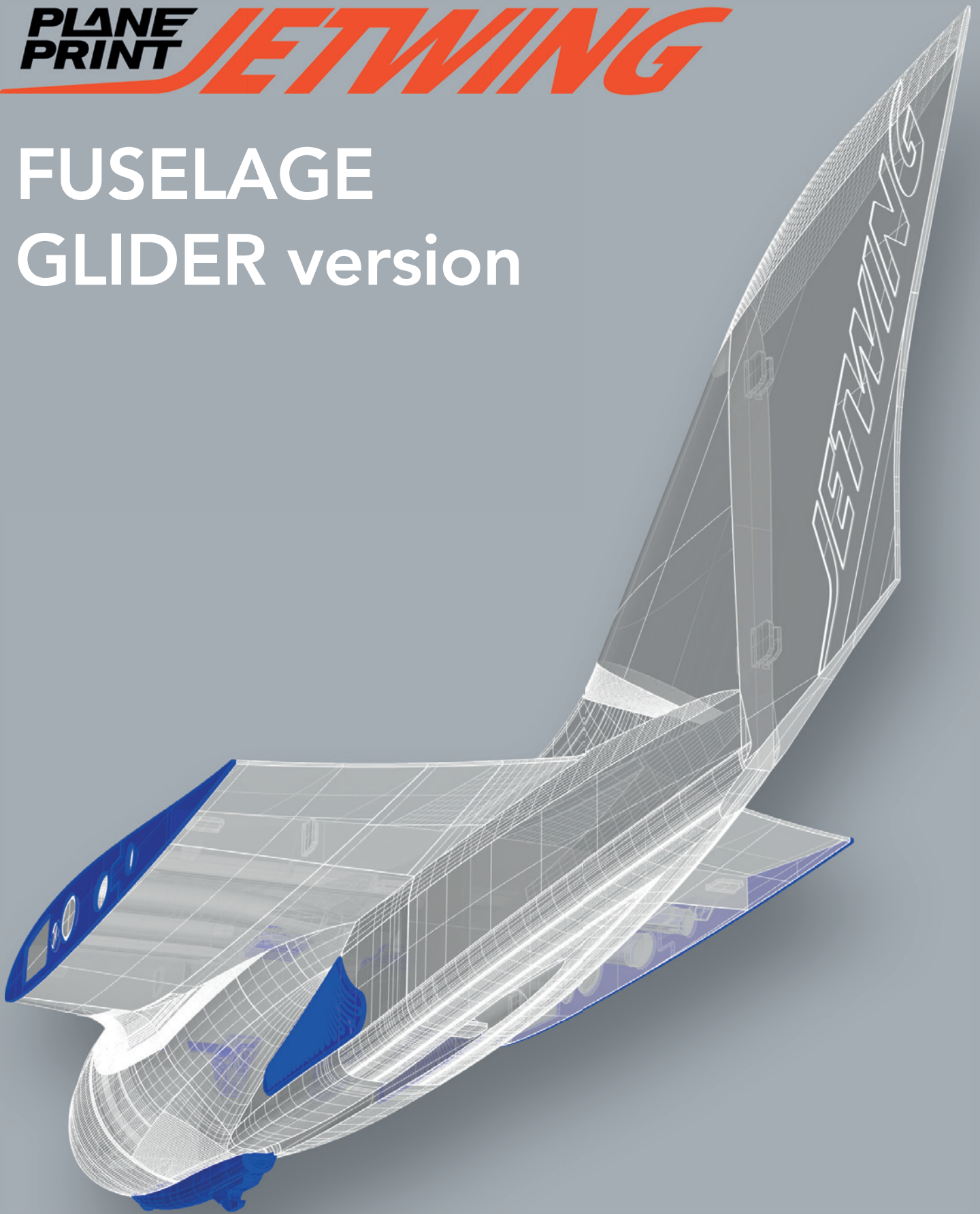
Bowden for the
receiver antennas

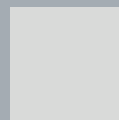Space for
the receiver

Velcro strap

NOTE The TPU Tension
belts should be released
during prolonged storage.
**Replace them with new
ones when they lose
tension.**

Change the
position of the
battery to achieve
the correct CG.

FUSELAGE
GLIDER version

PLA   LW-PLA   TPU

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!

Canopy lock_p1_J.stl or
Canopy lock tapping screw_p1_J.stl

MATERIAL   PLA, Weight: ~ 2 g

ADDITIONAL SETTINGS
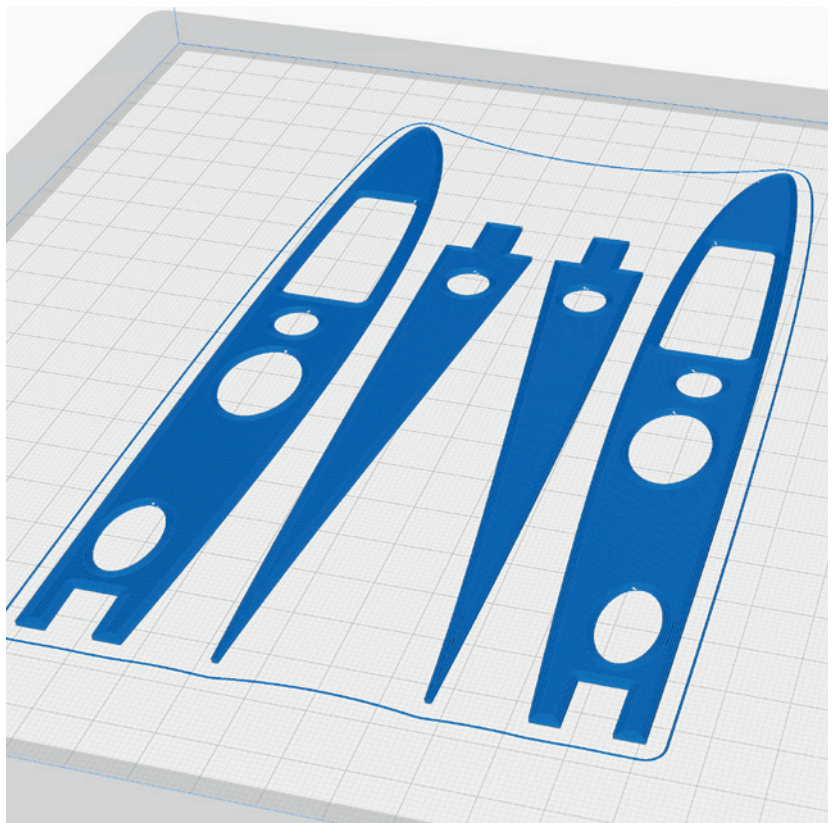
None required

Fuselage protector_p1_J.stl

MATERIAL   PLA, Weight: ~ 9 g

ADDITIONAL SETTINGS

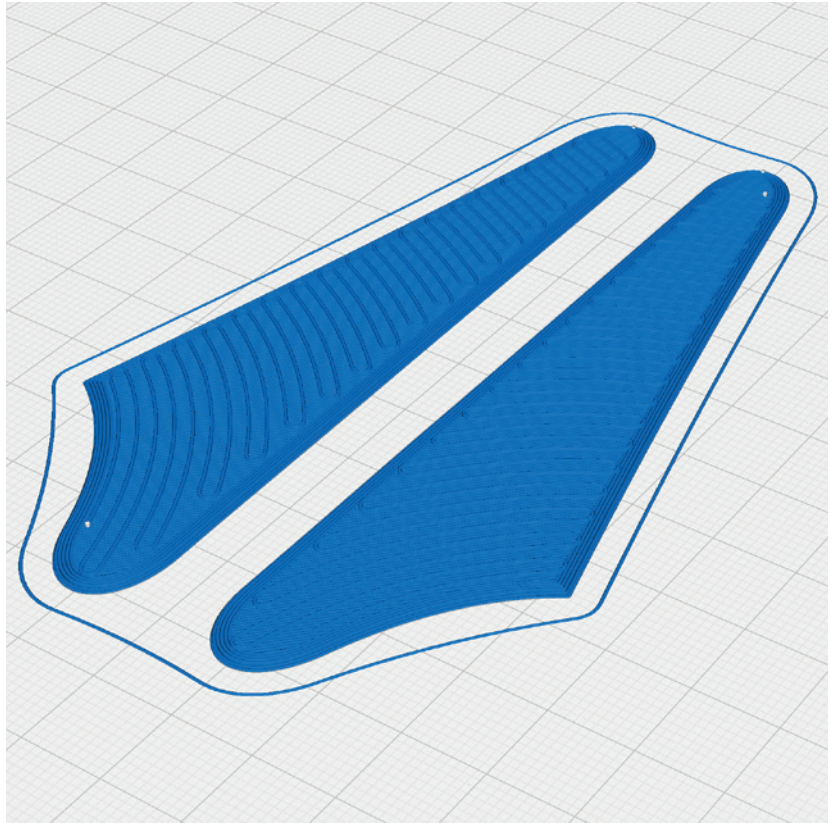None required

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!

Handling surfaces_p1_J.stl

MATERIAL PLA, Weight: ~ 4 g

ADDITIONAL SETTINGS

None required

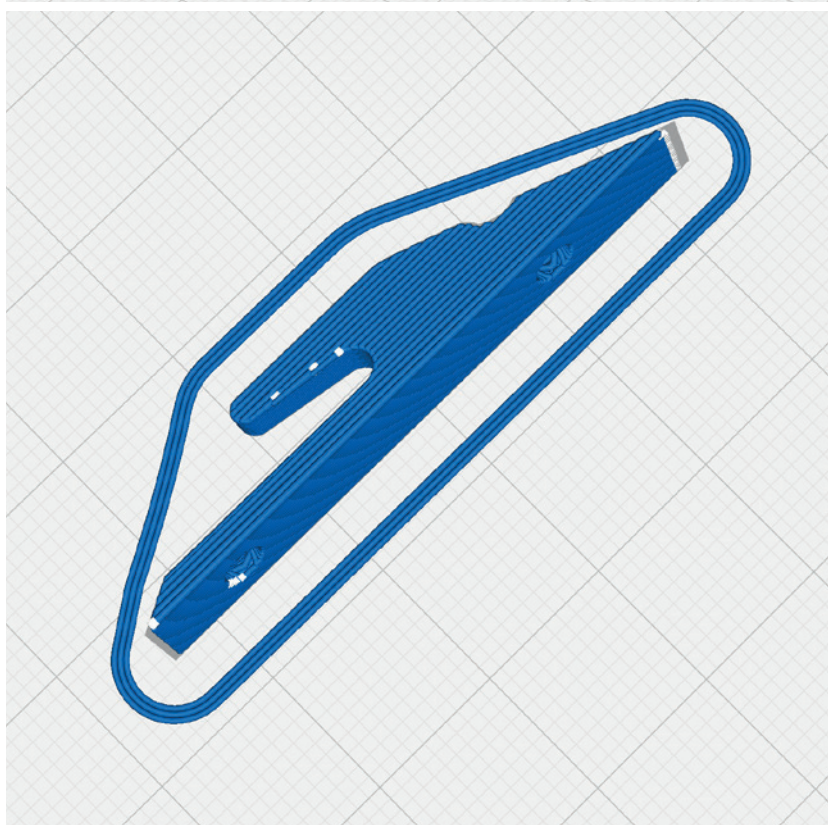## Hook_p1_J.stl

MATERIAL PLA, Weight: ~ 1 g

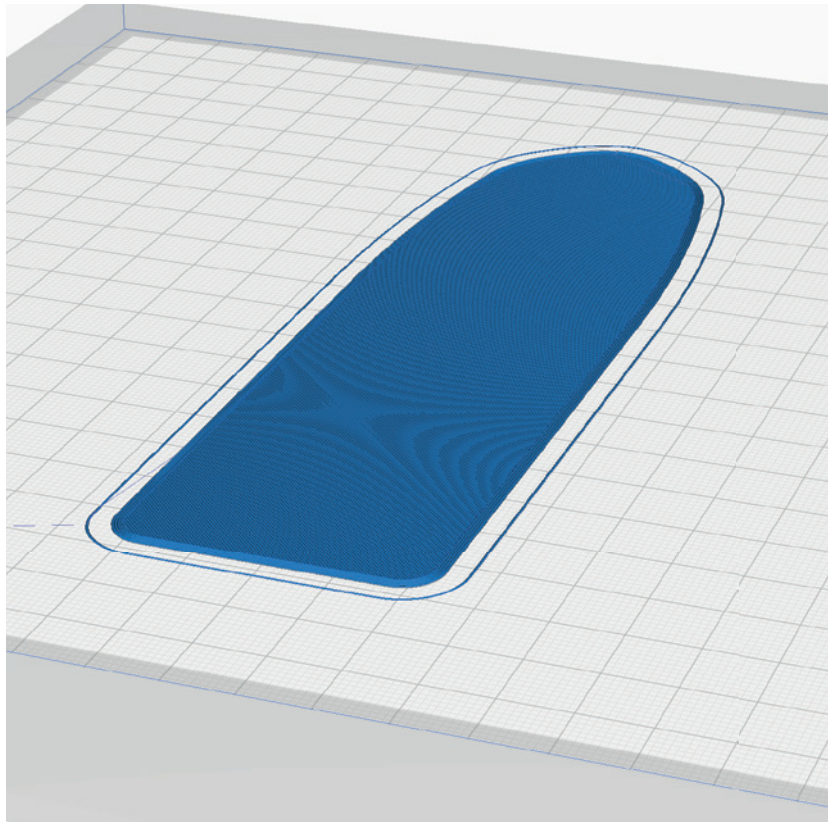ADDITIONAL SETTINGS

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!

Battery plate_p1.stl

MATERIAL PLA, Weight: ~ 4 g

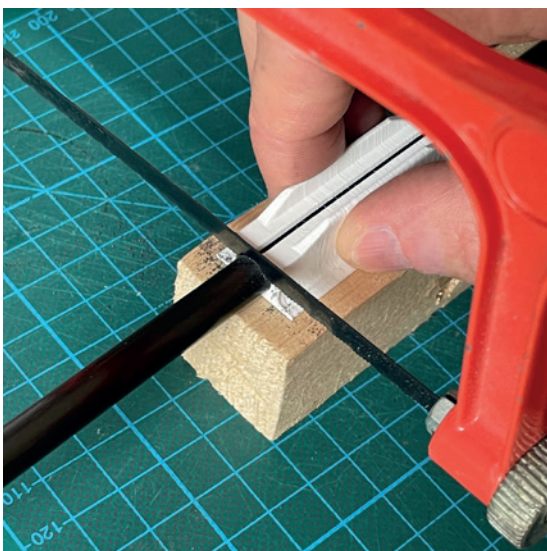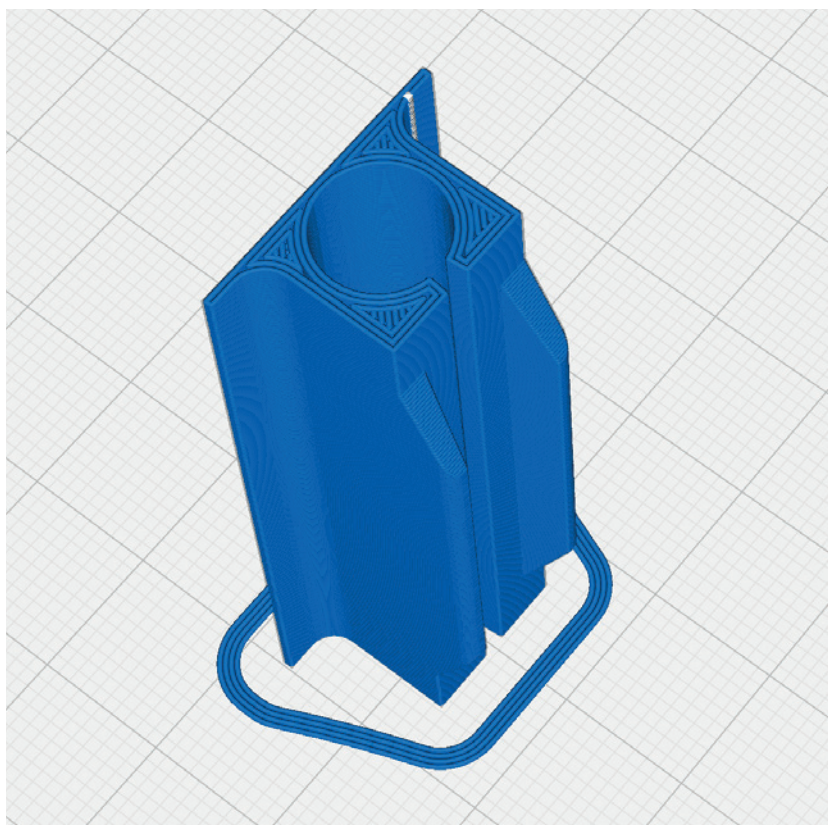**ADDITIONAL SETTINGS**

None required

Carbon tool_p1_J.stl

MATERIAL PLA, Weight: ~ 6 g

ADDITIONAL SETTINGS

None required

PROFILE P2_HOLLOWBODY PLA or Tough PLA

The following parts must be sliced with the PROFILE P2_HOLLOWBODY.
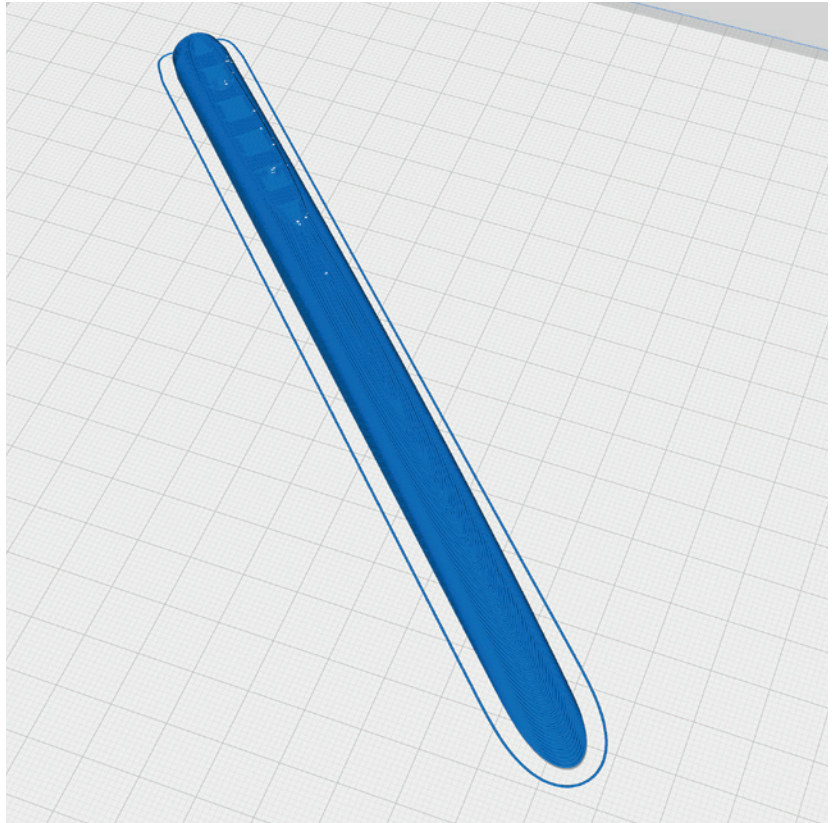**Please note the additional settings for the individual parts!**

Skid Glider front_p2_J.stl
or Skid Tow_p2_J.stl

MATERIAL PLA, Weight: ~ 7 g

ADDITIONAL SETTINGS

None required

If you want to build the **version with Tow coupling**, take instead the STL
Skid Tow_p2_J.stl

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!
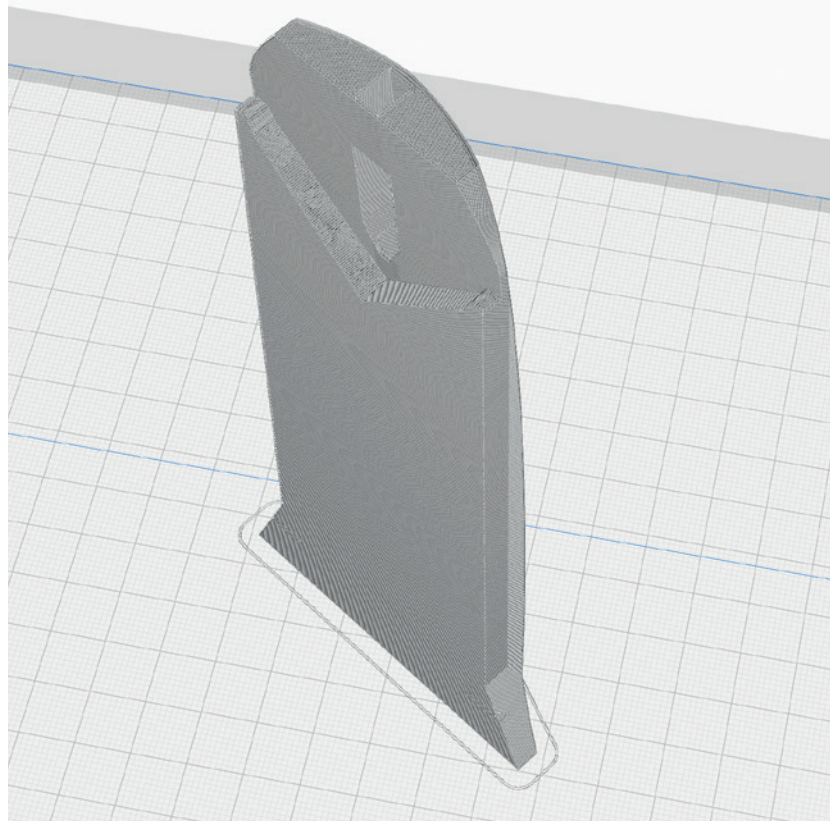
Canopy flat 1_p5_J.stl or Canopy pilot 1_p5_J.stl

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

ADDITIONAL SETTINGS

None required

Canopy flat 2_p5_J.stl or Canopy pilot 2_p5_J.stl

MATERIAL **LW-PLA**, ~ 7 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!
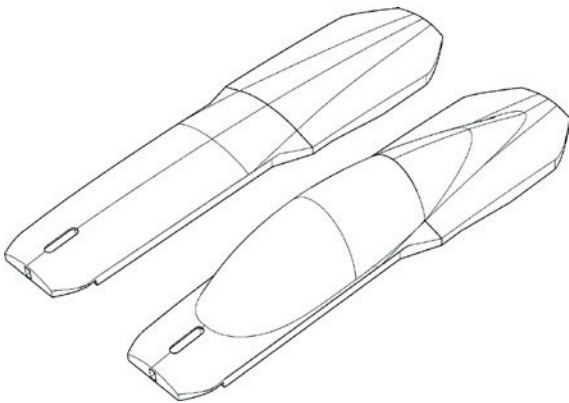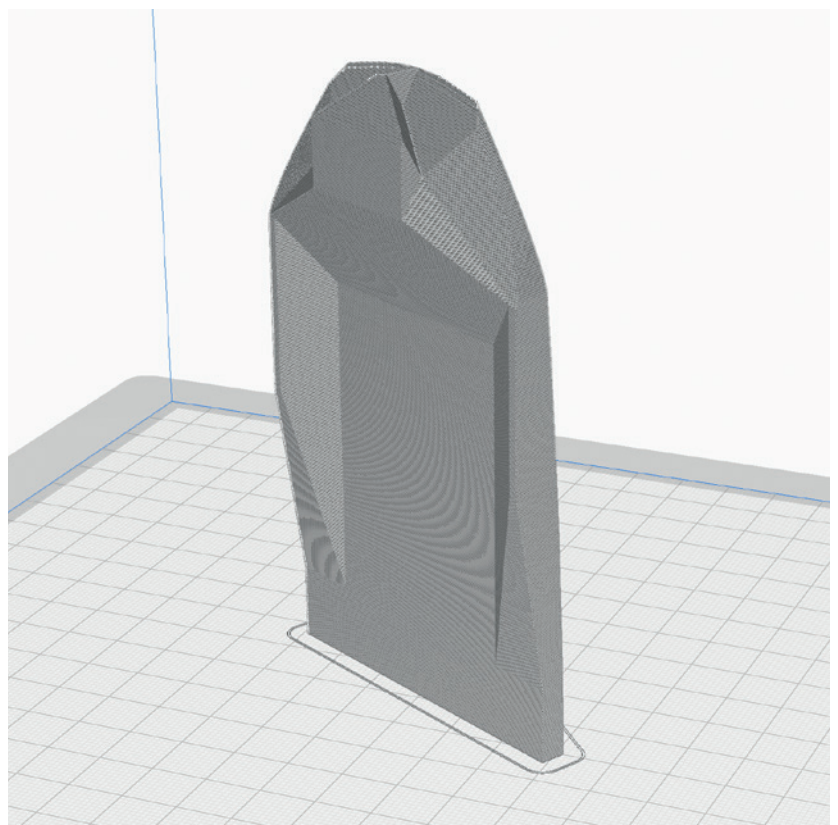
Fuselage 1_p5_J.stl

MATERIAL LW-PLA, ~ 33 g*

*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required

Fuselage 2 Glider left_p5_J.stl
Fuselage 2 Glider right_p5_J.stl

MATERIAL LW-PLA, ~ 45 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!
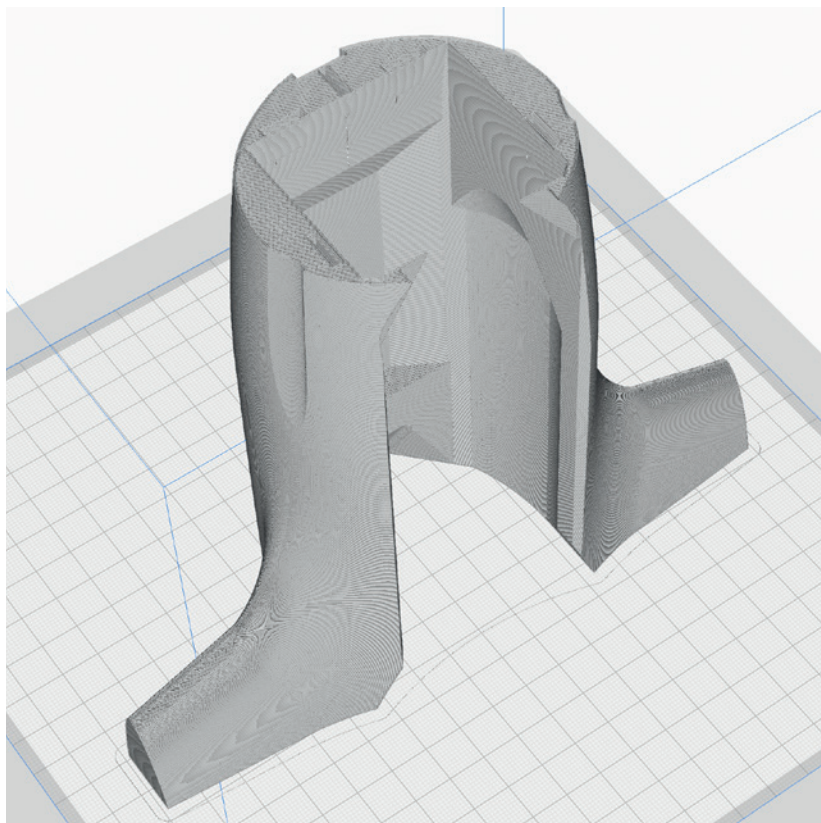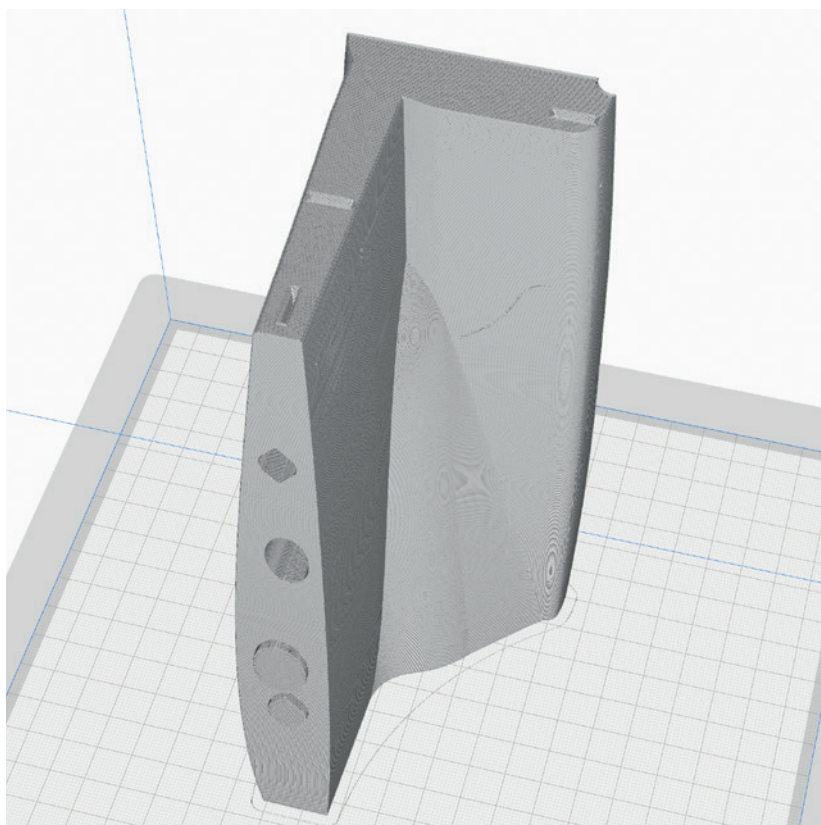
Fuselage 3 Glider_p5_J.stl

MATERIAL LW-PLA, ~ 39 g*

*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required

Fuselage 4 Glider_p5_J.stl or Fuselage 4+decal Glider_p5_J.stl

MATERIAL LW-PLA, ~ 10 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!
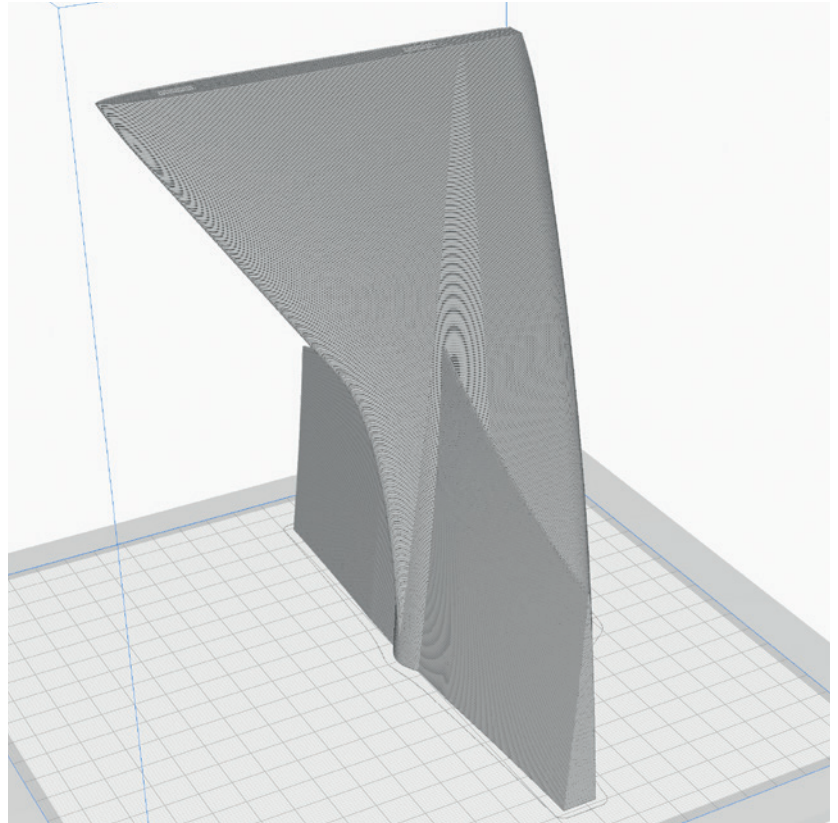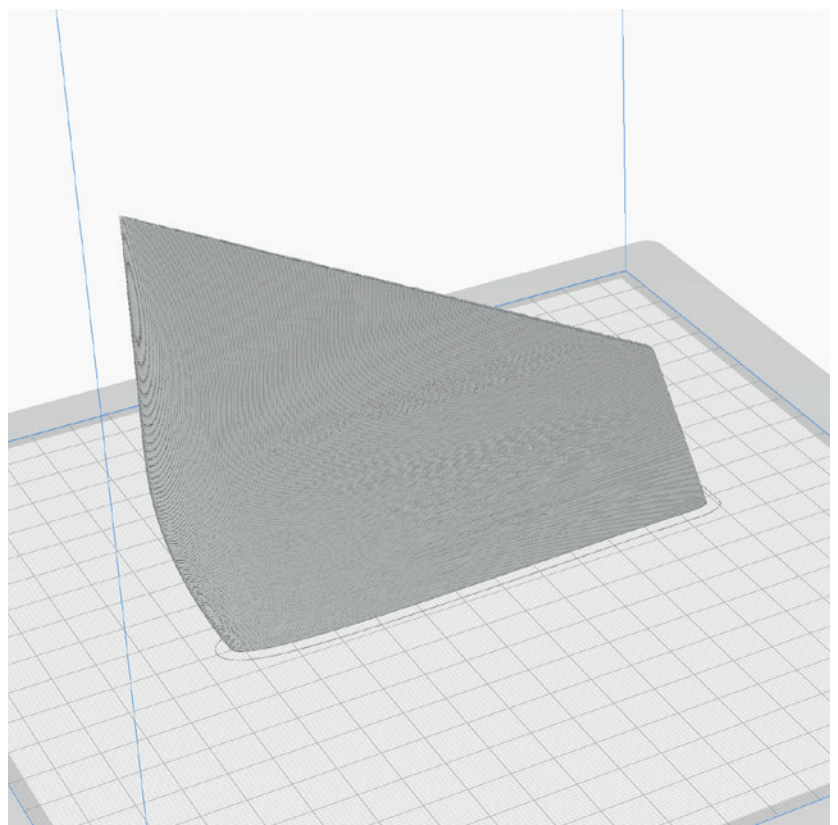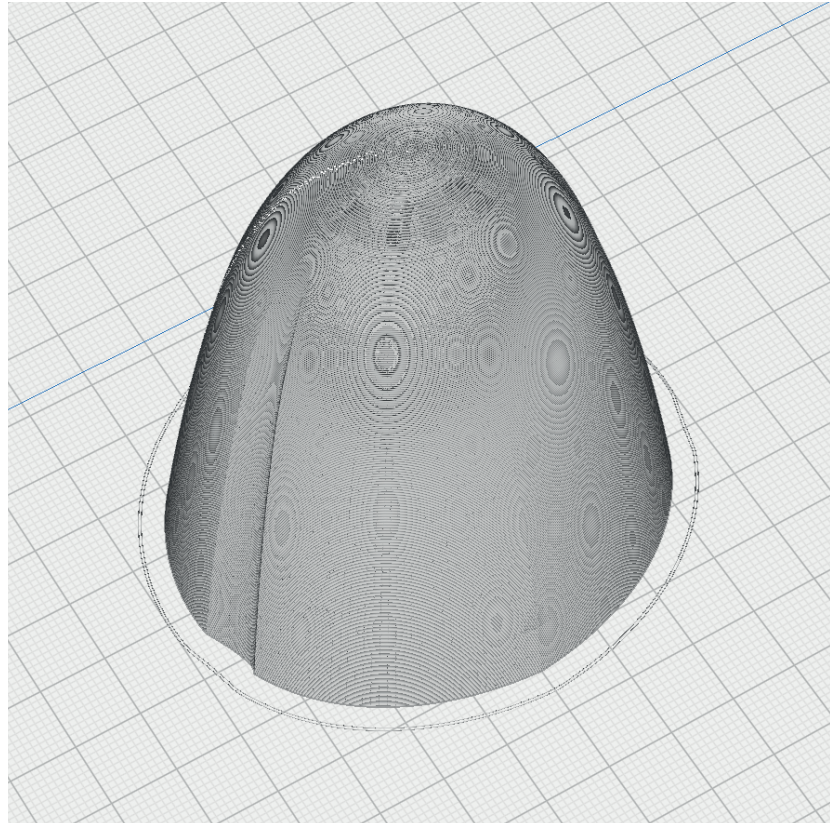
Nose_p5_J.stl

MATERIAL **LW-PLA**, ~ 12 g*

*Weighed (approximate guideline)

ADDITIONAL SETTINGS

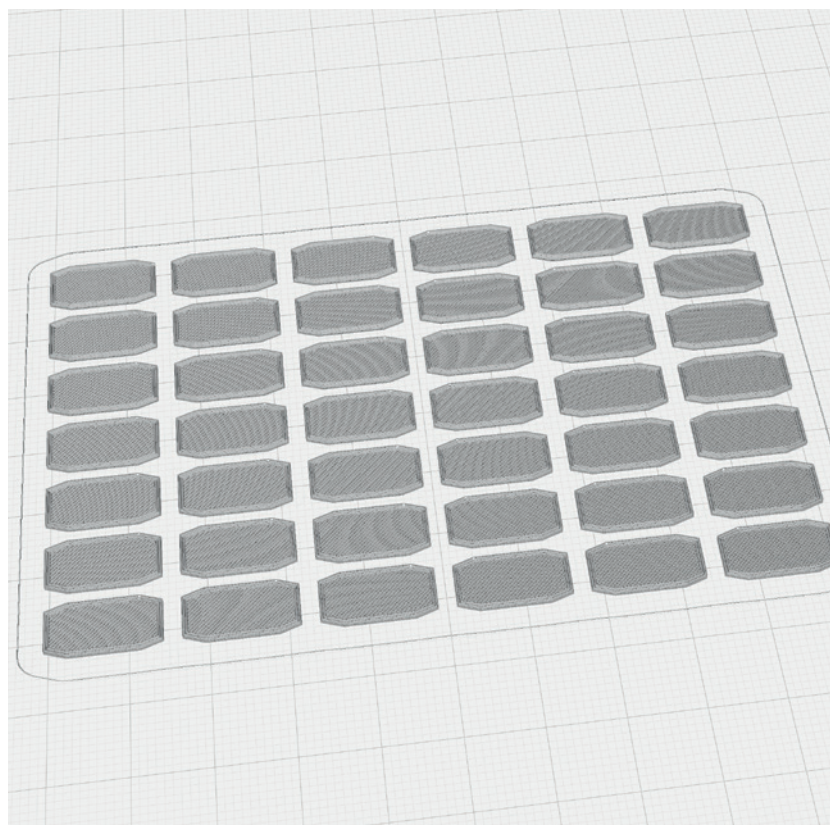• set Brim

Interconnects_p1_J.stl

MATERIAL **LW-PLA**, ~ 2 g*

*Weighed (approximate guideline)
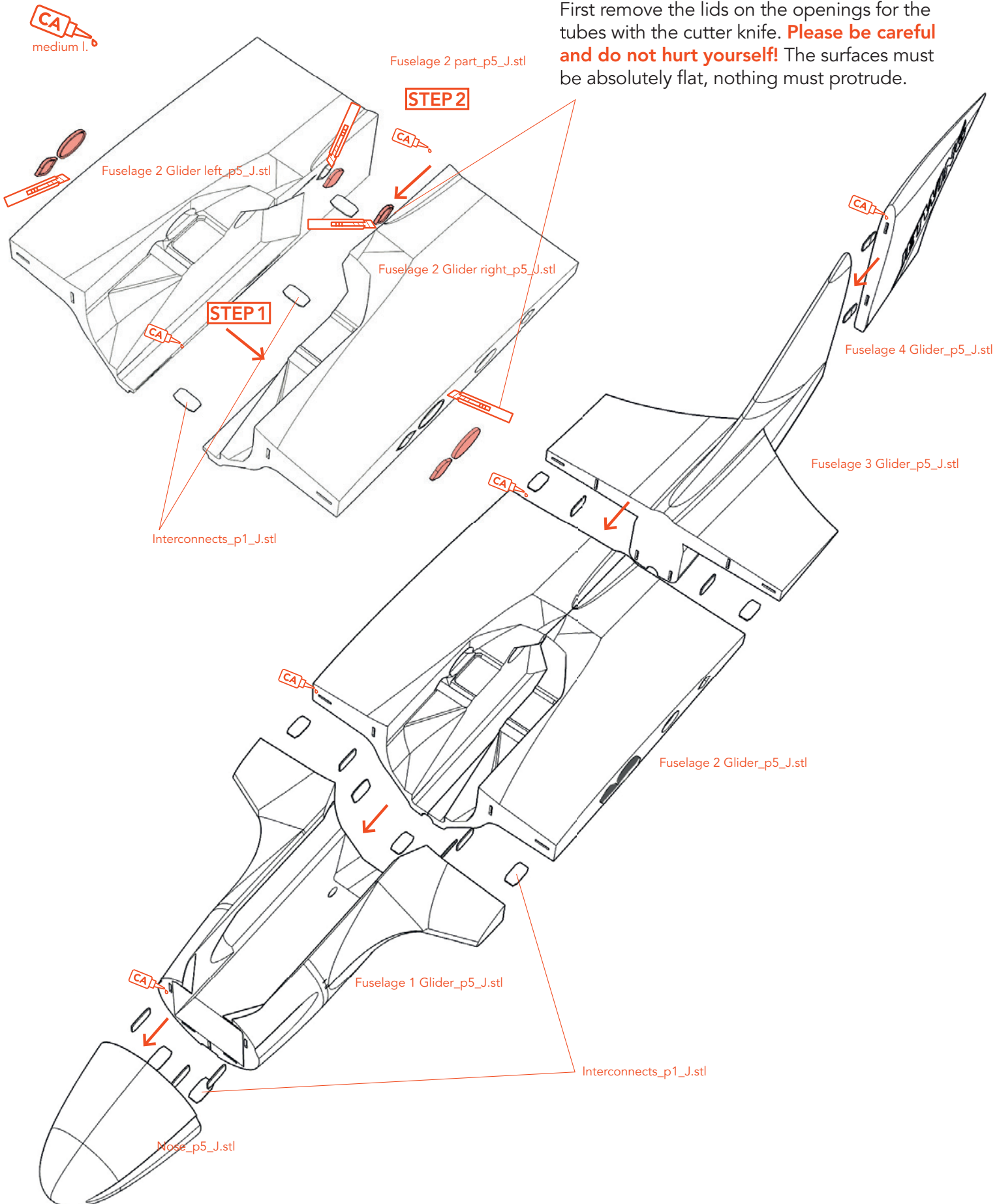
ADDITIONAL SETTINGS

None required

You can also print the interconnects with PROFILE_1.

ASSEMBLING MANUAL FUSELAGE GLIDER

Follow the instructions „Glueing the parts" on page 6.

CA
medium l.

Fuselage 2 part_p5_J.stl

STEP 2

First remove the lids on the openings for the tubes with the cutter knife. **Please be careful and do not hurt yourself!** The surfaces must be absolutely flat, nothing must protrude.

Fuselage 2 Glider left_p5_J.stl

CA

Fuselage 2 Glider right_p5_J.stl

CA

Fuselage 4 Glider_p5_J.stl

STEP 1

CA

Fuselage 3 Glider_p5_J.stl

Interconnects_p1_J.stl

CA

Fuselage 2 Glider_p5_J.stl

CA

Fuselage 1 Glider_p5_J.stl

Interconnects_p1_J.stl

CA

Nose_p5_J.stl

Carbon tube Ø8*480mm

Fuselage protector 1_p1_J.stl

Handling surfaces_p1_J.stl
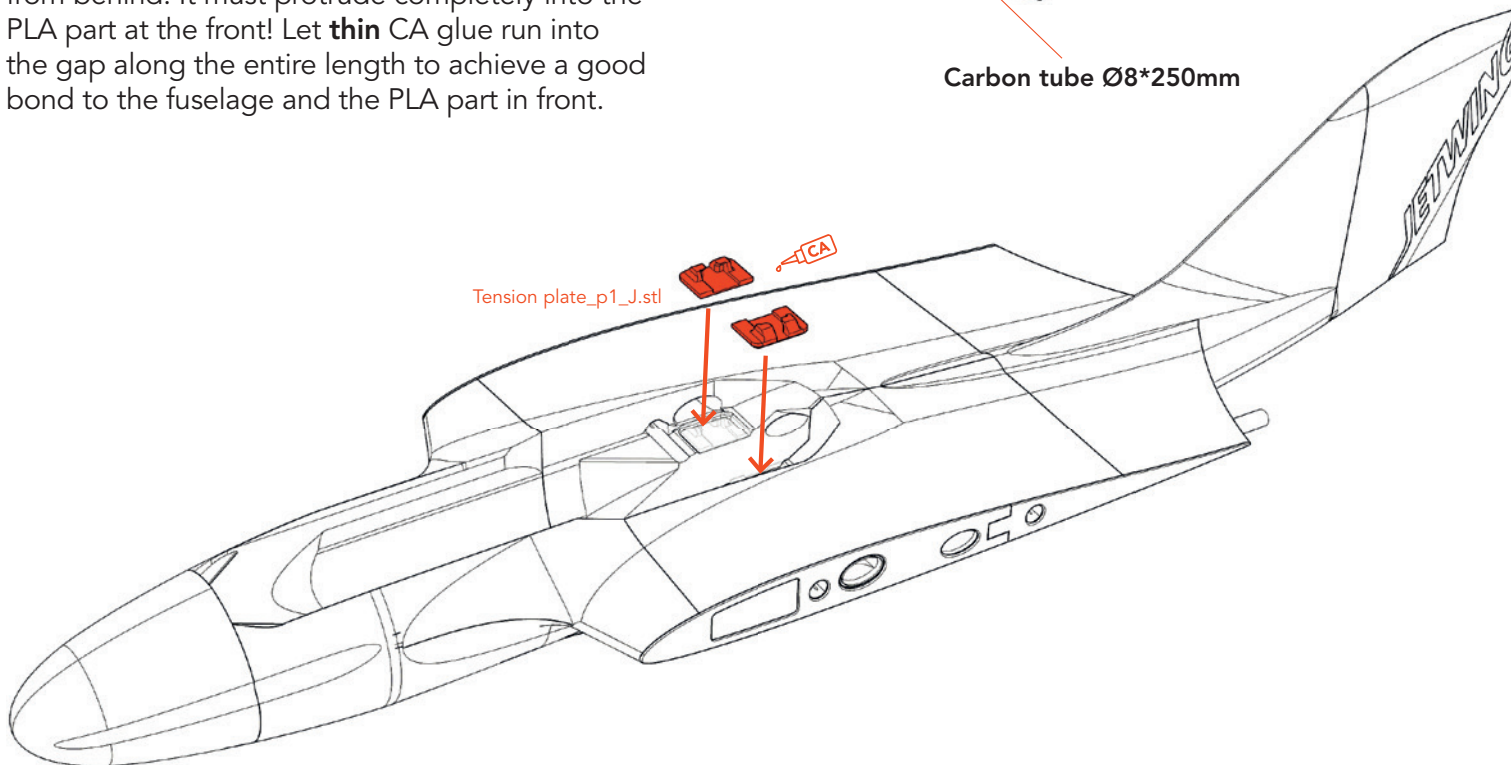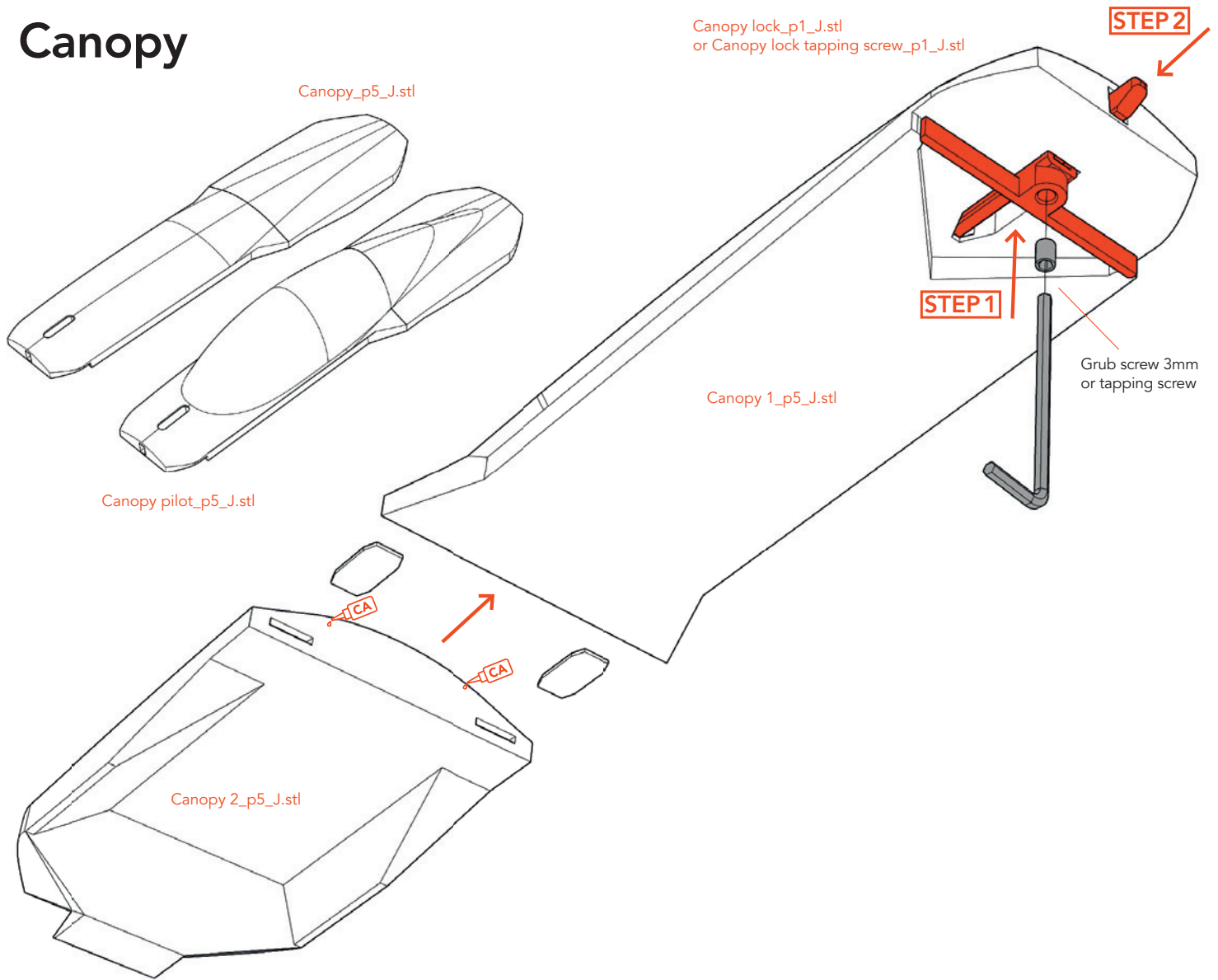
CA

CA

Skid Glider_p2_J.stl

CA
thin

Shorten the carbon tube to 250 mm with our **Carbon Tool** and insert it into the guide groove from behind. It must protrude completely into the PLA part at the front! Let **thin** CA glue run into the gap along the entire length to achieve a good bond to the fuselage and the PLA part in front.

Carbon tube Ø8*250mm

CA

Tension plate_p1_J.stl

Canopy

Canopy_p5_J.stl

Canopy lock_p1_J.stl
or Canopy lock tapping screw_p1_J.stl

Canopy pilot_p5_J.stl

Canopy 1_p5_J.stl
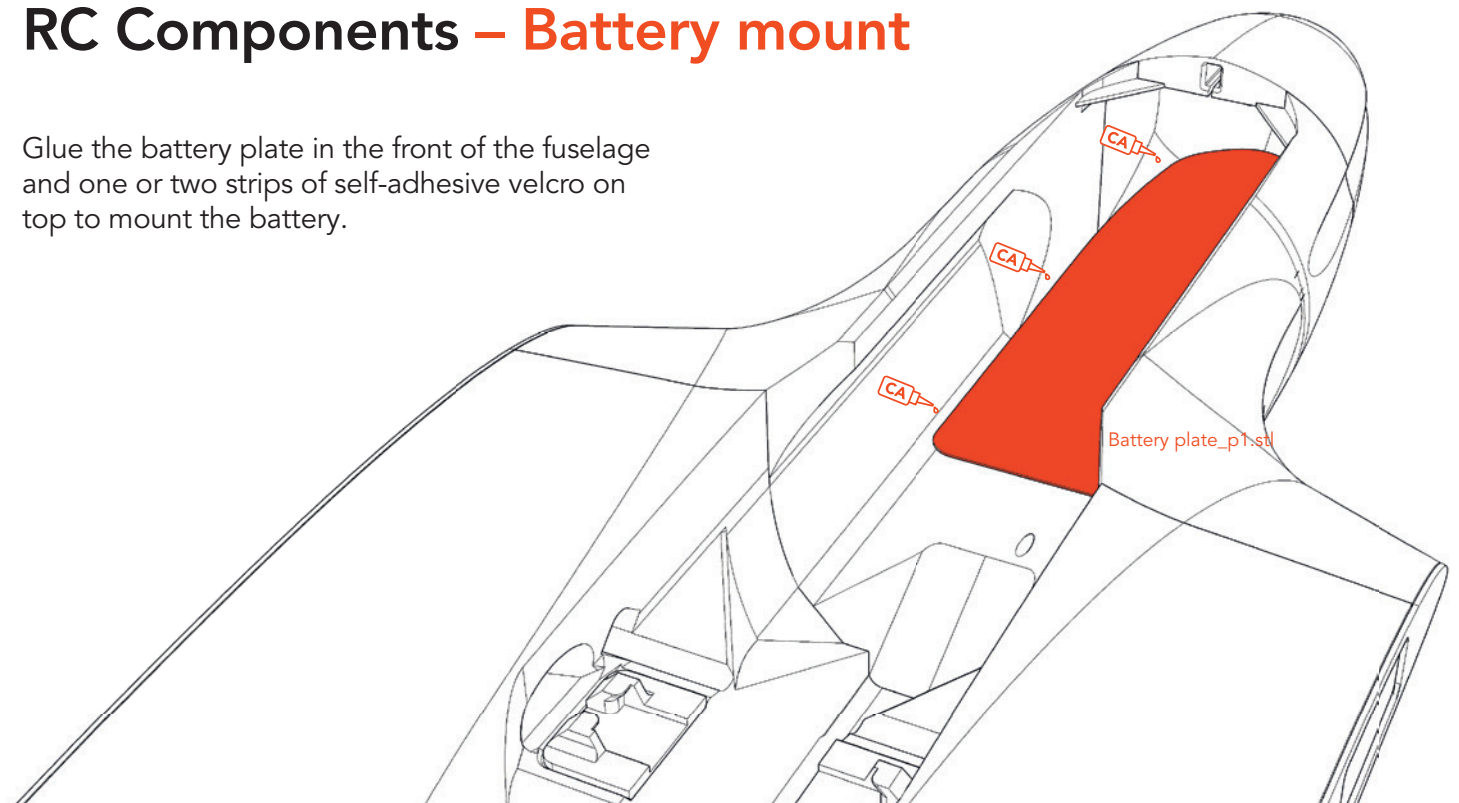
Grub screw 3mm
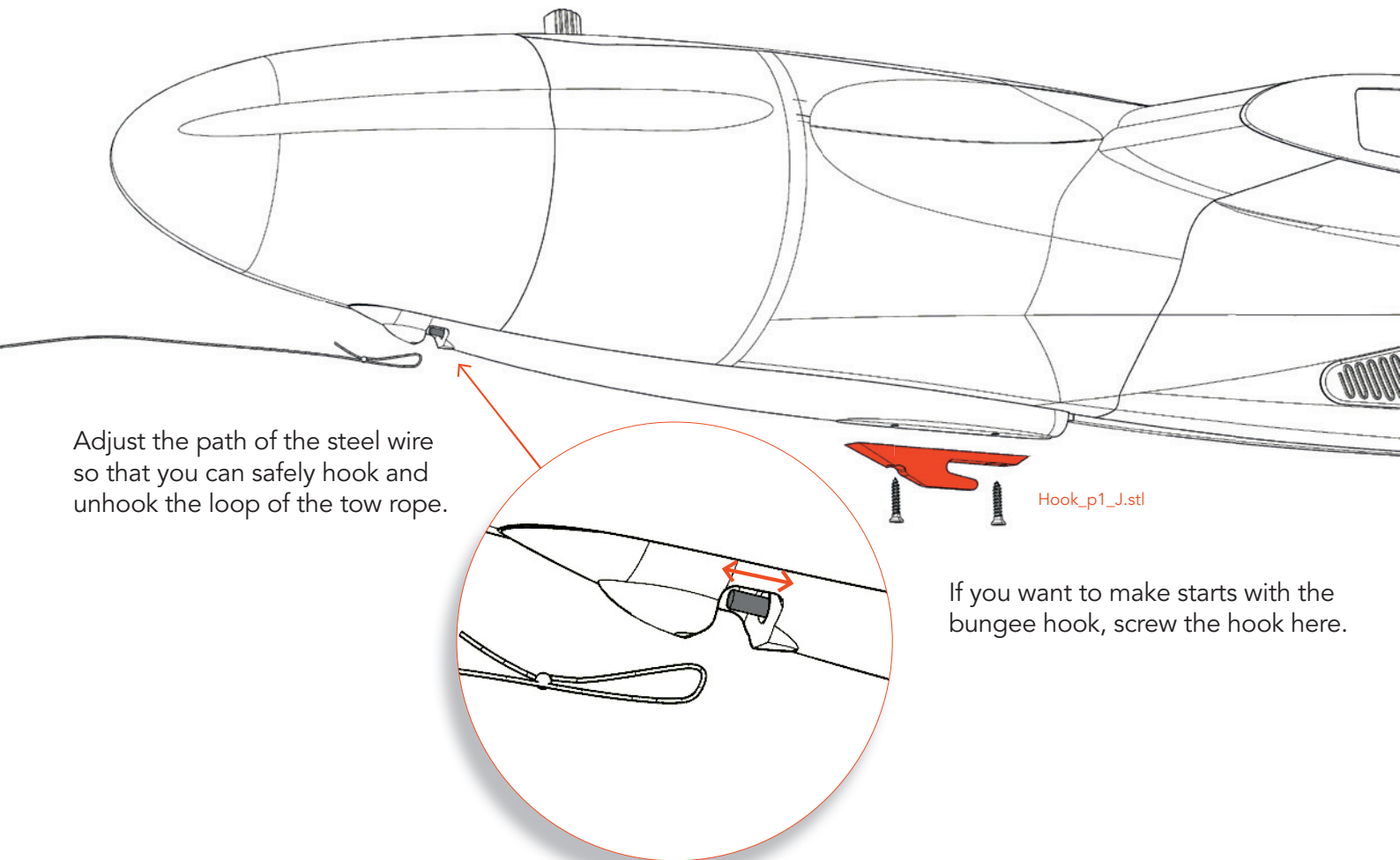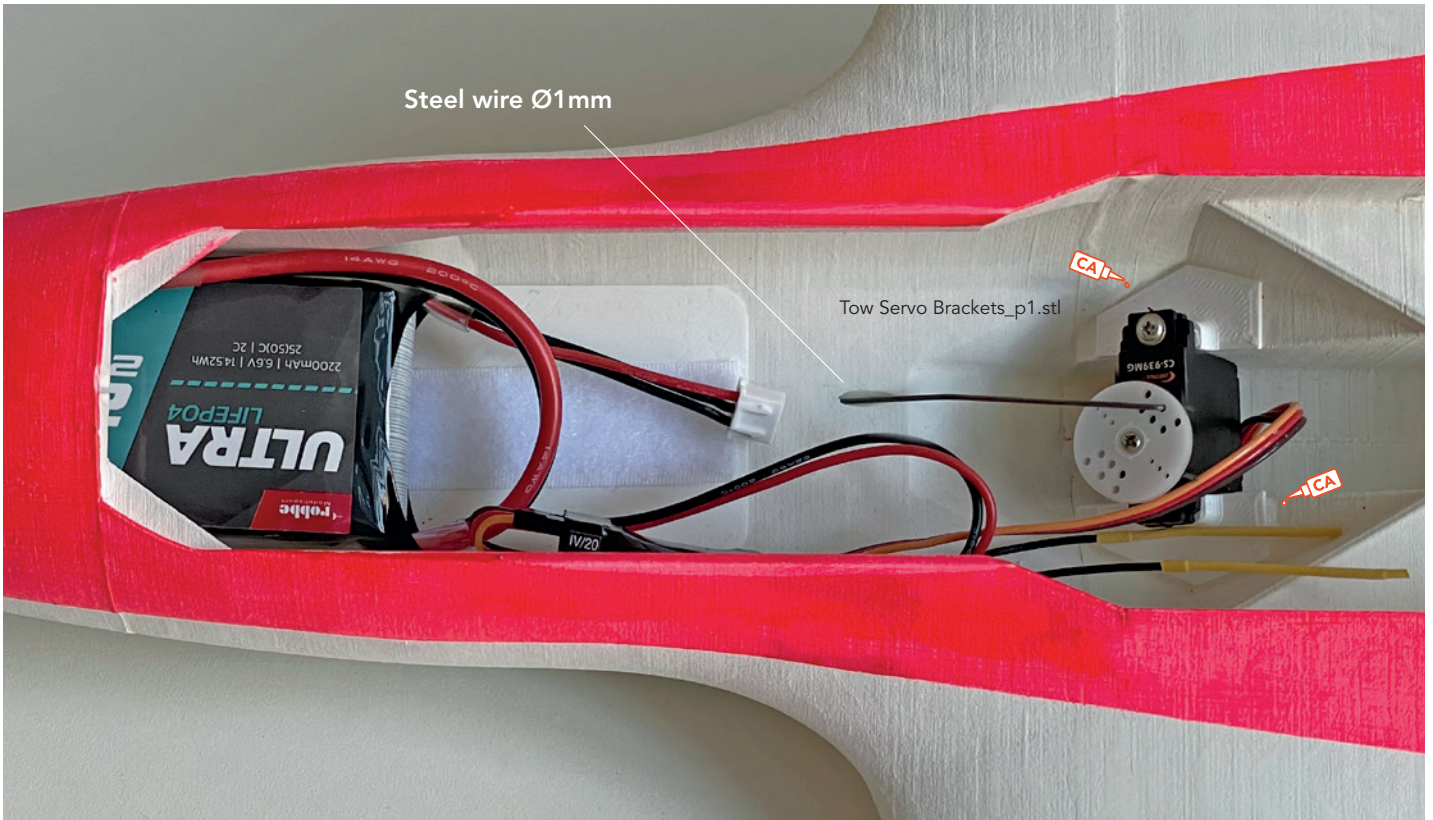or tapping screw

CA

CA

Canopy 2_p5_J.stl

RC Components – Battery mount

Glue the battery plate in the front of the fuselage
and one or two strips of self-adhesive velcro on
top to mount the battery.

CA

CA

CA

Battery plate_p1.stl

Tow coupling – optionally

Install the servo for the tow coupling as shown in the picture.

Steel wire Ø1mm
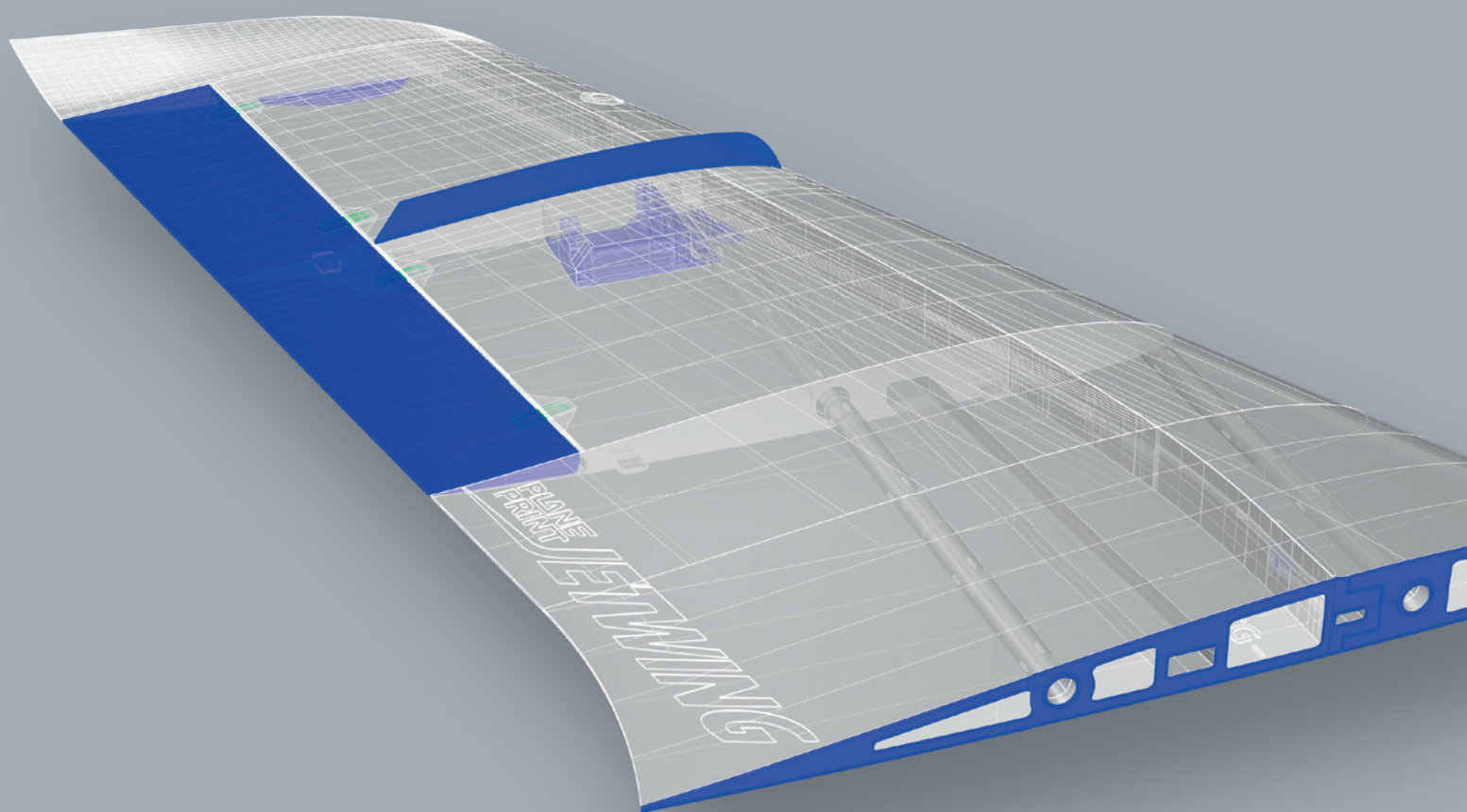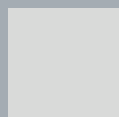
Tow Servo Brackets_p1.stl

Adjust the path of the steel wire so that you can safely hook and unhook the loop of the tow rope.

Hook_p1_J.stl

If you want to make starts with the bungee hook, screw the hook here.

Standard WING

PLA   LW-PLA   TPU

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!

Aileron Parts_p1_J.stl

MATERIAL   PLA, Weight: ~ 15 g

ADDITIONAL SETTINGS

None required

Wing fences_p1_J.stl

MATERIAL   PLA, Weight: ~ 4 g

ADDITIONAL SETTINGS

None required

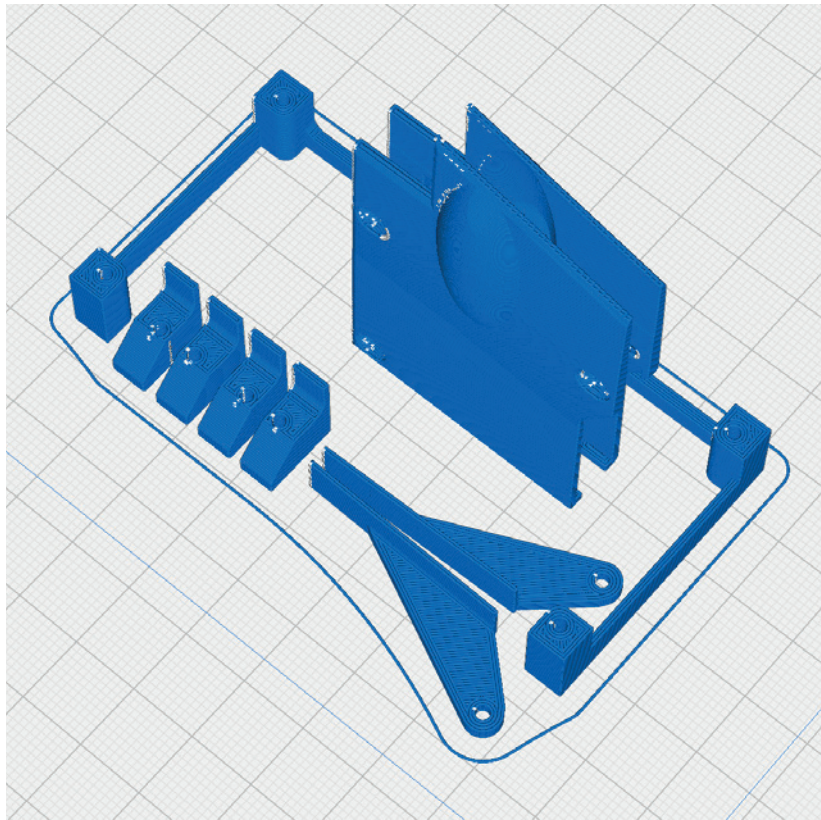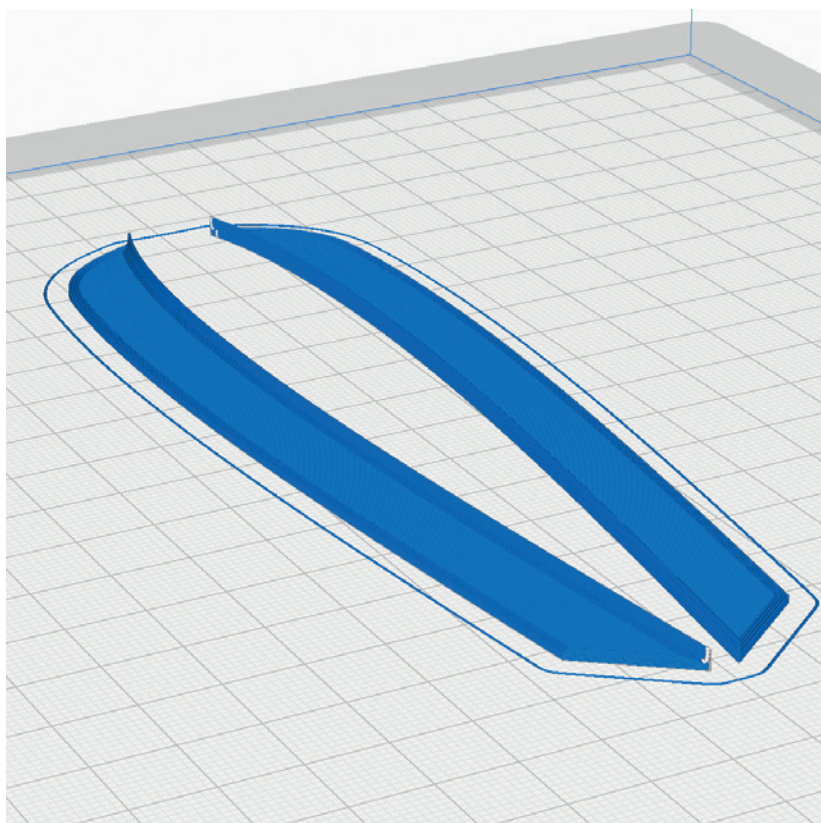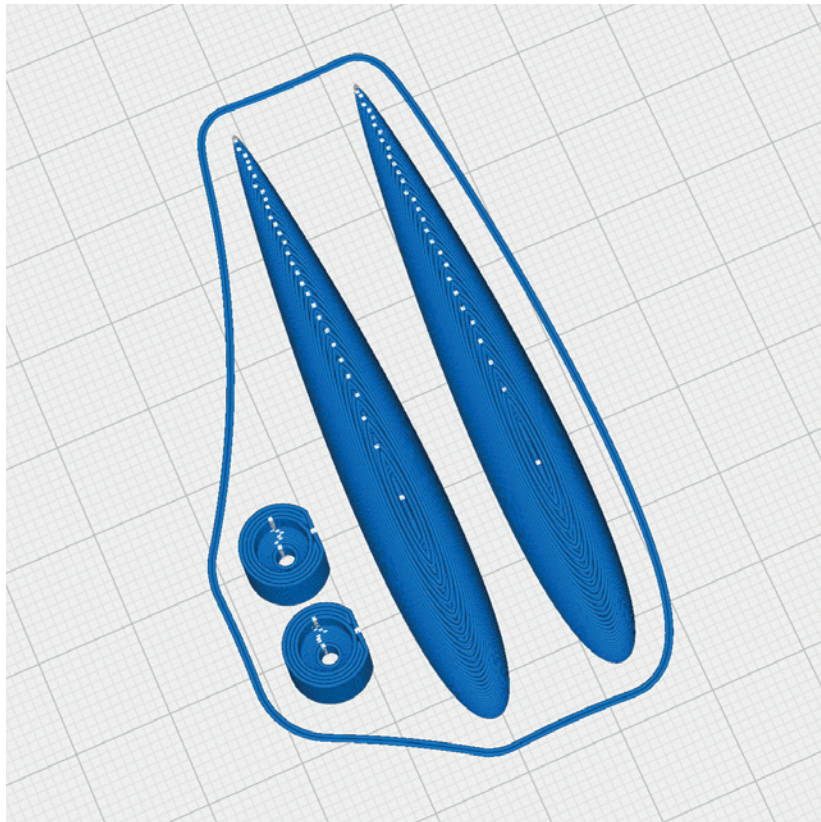# PROFILE P1_FULLBODY PLA or Tough PLA

The following parts must be sliced with the PROFILE P1_FULLBODY.
Please note the additional settings for the individual parts!

Wing parts_p1_J.stl

MATERIAL   PLA, Weight: ~ 6 g

ADDITIONAL SETTINGS
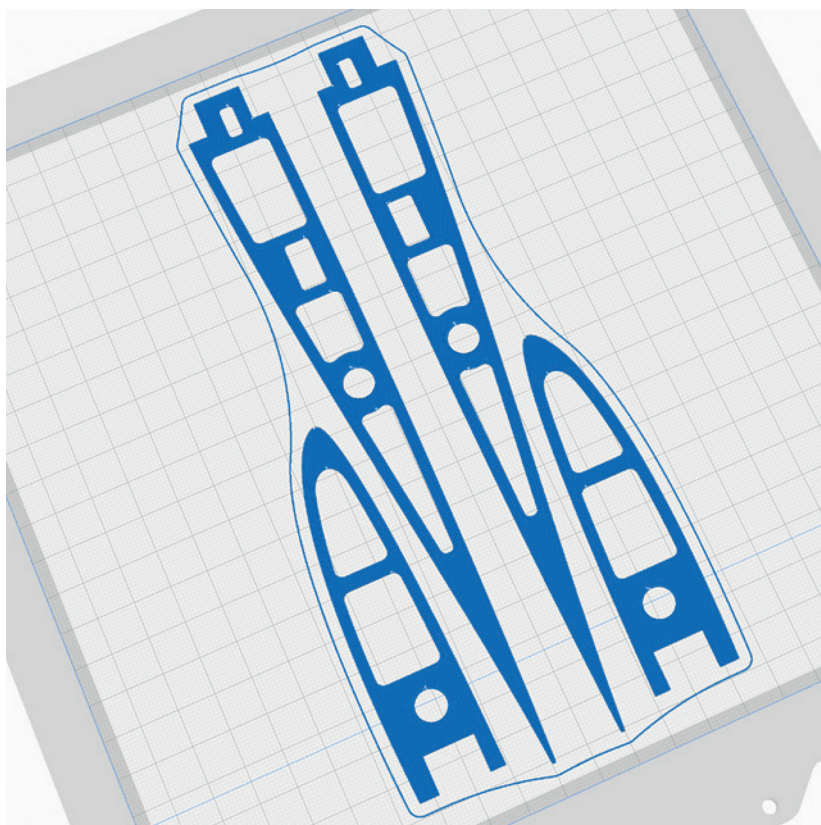
None required

Wing protector_p1_J.stl

MATERIAL   PLA, Weight: ~ 7 g

ADDITIONAL SETTINGS

None required

PROFILE P5_GYROID normal PLA or Tough PLA!

The following parts must be sliced with the PROFILE P5_GYROID. **Please note the additional settings for the individual parts!** These parts must be printed with normal or Tough PLA.

Aileron 1 left_p5PLA_J.stl
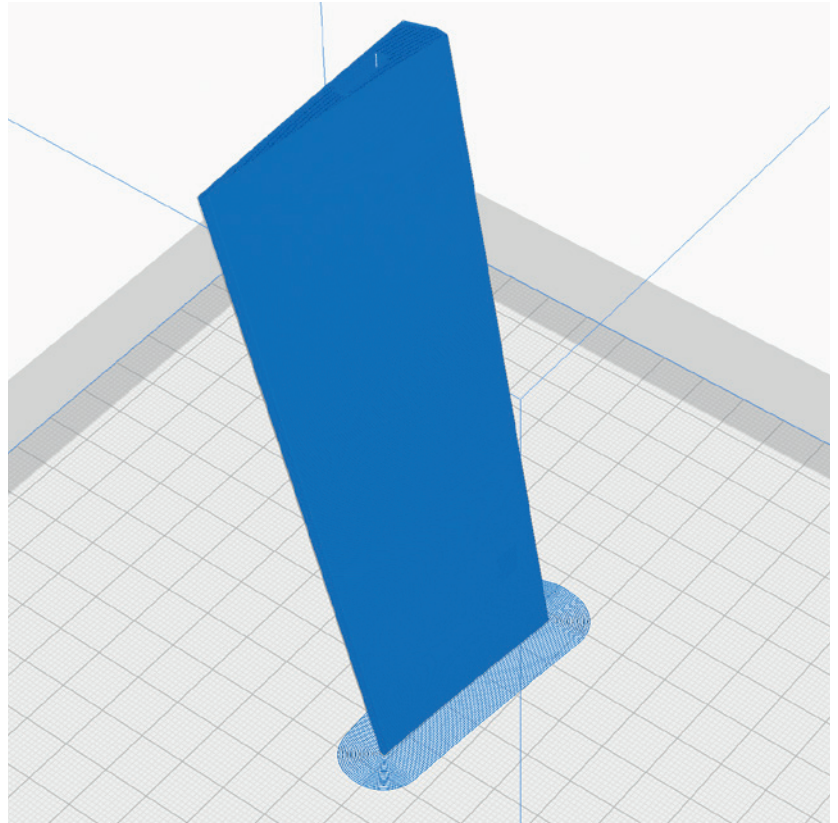### Aileron 1 right_p5PLA_J.stl

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

ADDITIONAL SETTINGS

- Flow 100 %
- set Brim
- Retract settings for normal PLA

IMPORTANT The ailerons must **NOT** be printed with LW-PLA, because at the high speed the JETWING can reach, the bending strength is not sufficient!

Aileron 2 left_p5PLA_J.stl
Aileron 2 right_p5PLA_J.stl

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

ADDITIONAL SETTINGS

- set Brim
- Retract settings for normal PLA
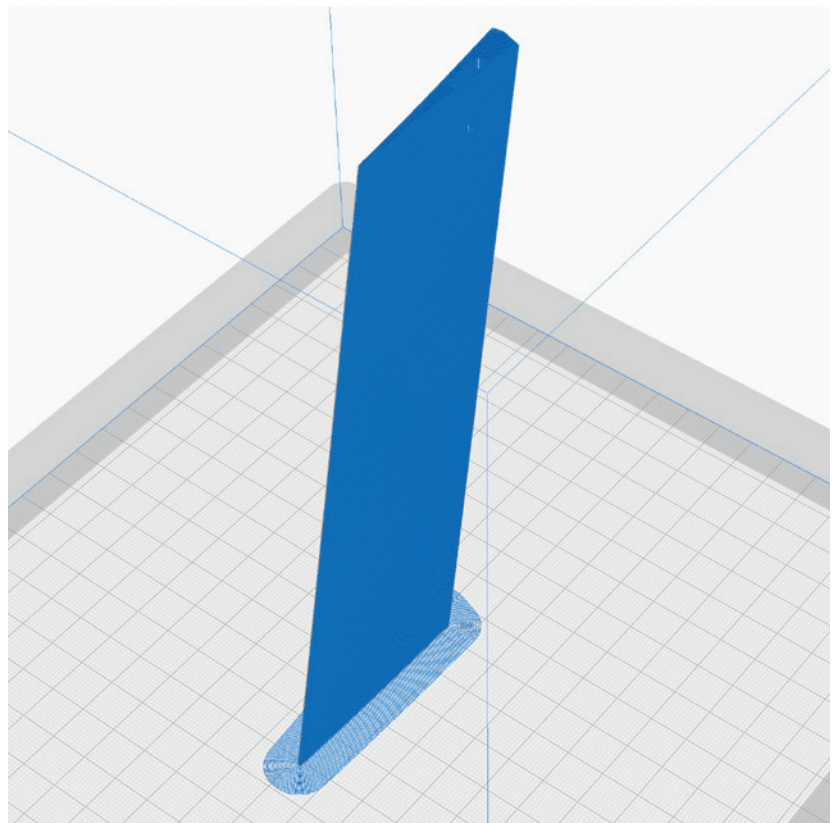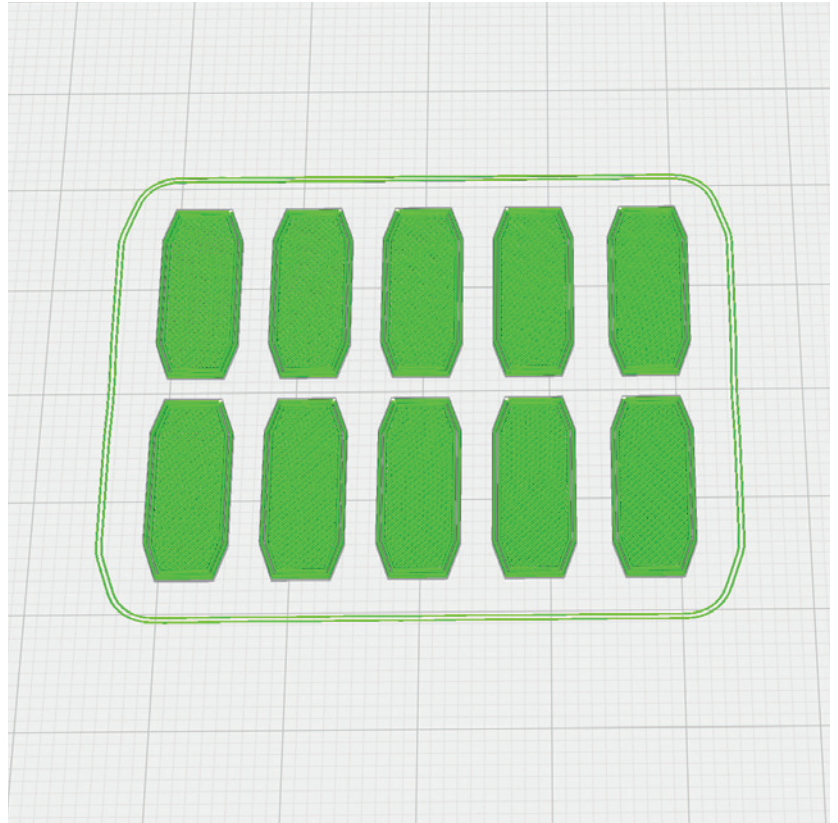
PROFILE P4_FLEX TPU A95

The following parts must be sliced with the PROFILE P4_FLEX.
Please note the additional settings for the individual parts!

Hinges wings_p4_J.stl

MATERIAL   TPU ~ A95, Weight: ~ 2 g

ADDITIONAL SETTINGS

None required

PROFILE P4_FLEX TPU A95 or VarioShore

The following parts must be sliced with the PROFILE P4_FLEX.
Please note the additional settings for the individual parts!

Tension belt TPUA95_p4_J.stl
Tension belt VarioShore_p4_J.stl

MATERIAL TPU ~ A95, Weight: ~ 2 g

ADDITIONAL SETTINGS

• Infill Density 100 %

INFO: the tension belt made of VarioShore LW-TPU is shorter because the material is more elastic. We recommend the variant made of VarioShore.

INFO **Tension belt length**

If you want to change them slightly in length, you can simply change the dimension of the X-axis in Cura (Uniform scaling must NOT be selected).

PROFILE P5_GYROID Light-Weight LW-PLA!

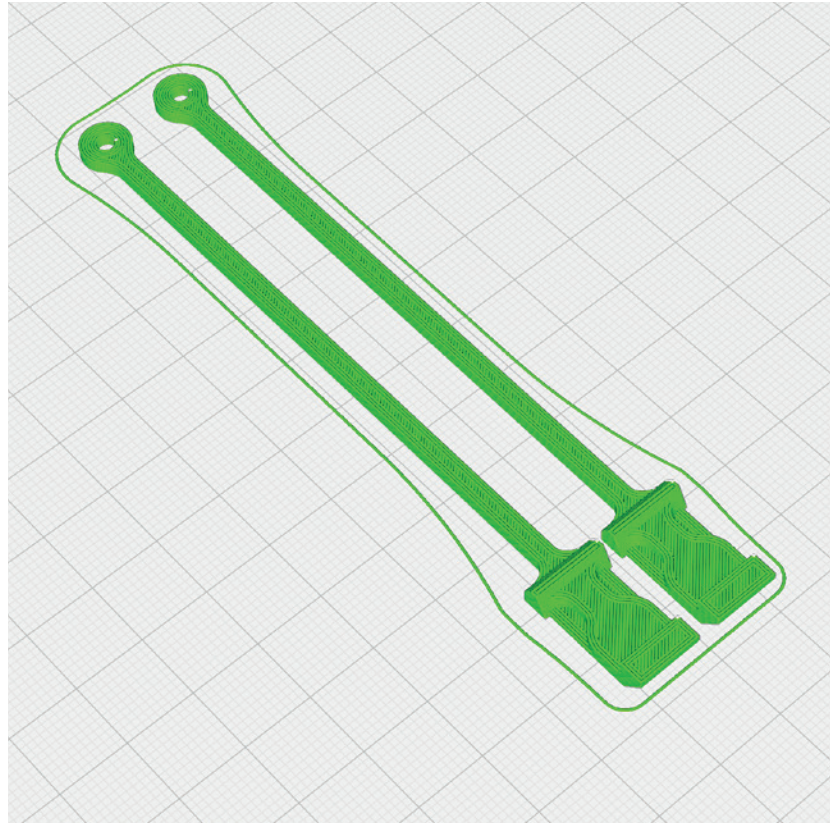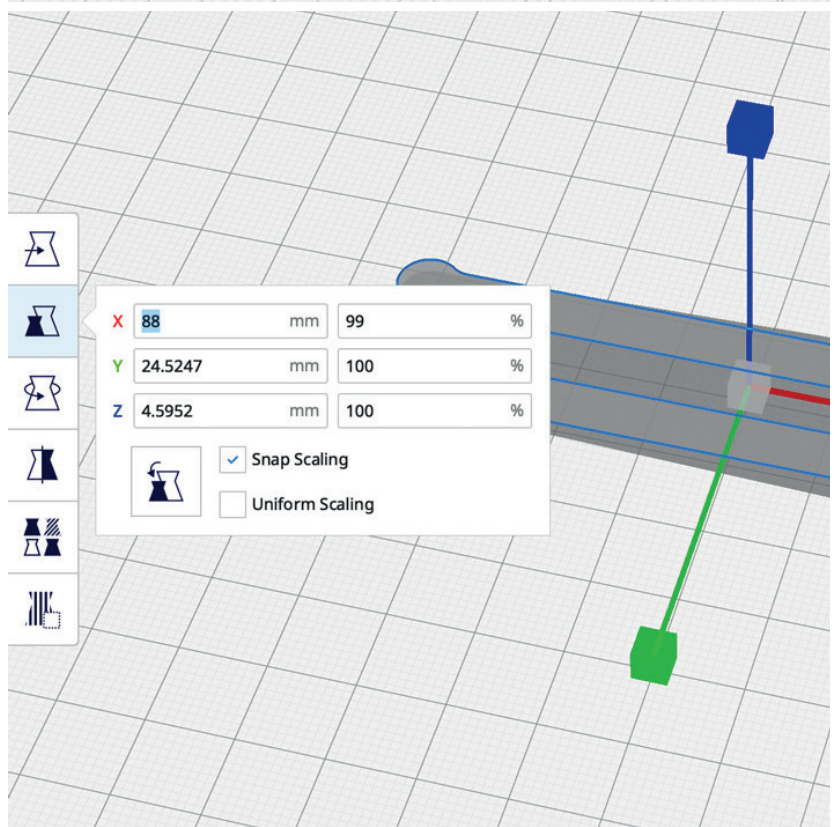The following parts must be sliced with the PROFILE P5_GYROID. **Please note the additional settings for the individual parts!** It is essential to print these parts with LW-PLA!

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

Wing 1 left_p5+_J.stl
Wing 1 right_p5+_J.stl

MATERIAL LW-PLA, ~ 29 g*

*Weighed (approximate guideline)

ADDITIONAL SETTINGS

• Wall Line Count: 2

Wing 2 left_p5+_J.stl
Wing 2 right_p5+_J.stl

MATERIAL LW-PLA, ~ 16 g*

*Weighed (approximate guideline)

ADDITIONAL SETTINGS

• Wall Line Count: 2

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!
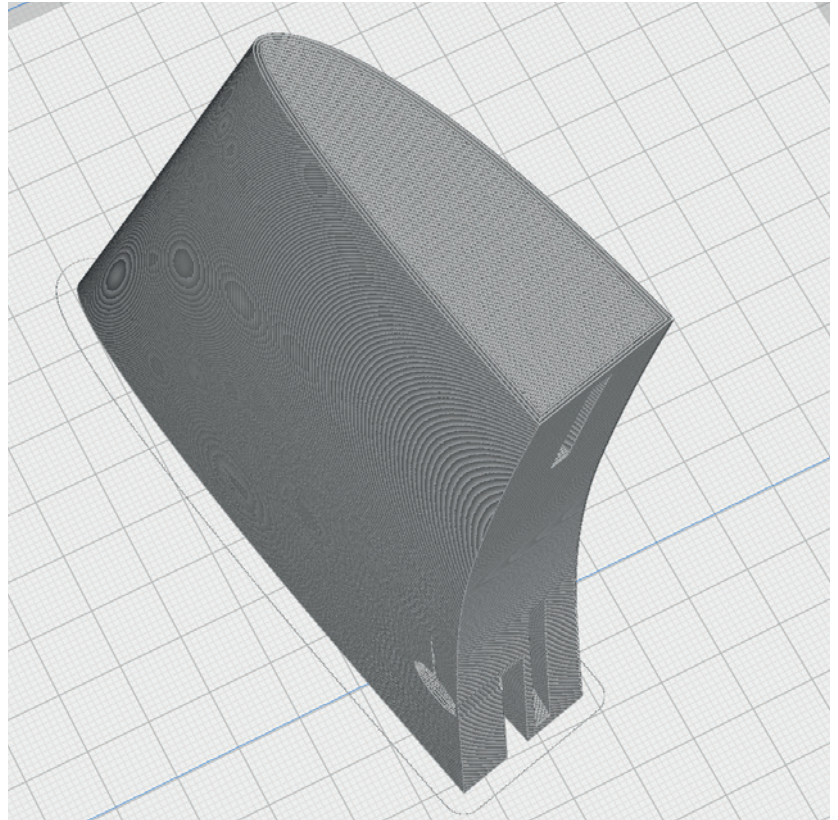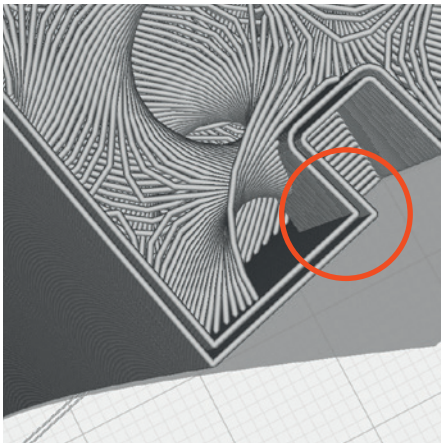
Wing 3 left_p5+_J.stl
Wing 3 right_p5+_J.stl

MATERIAL LW-PLA, ~ 9 g*

*Weighed (approximate guideline)
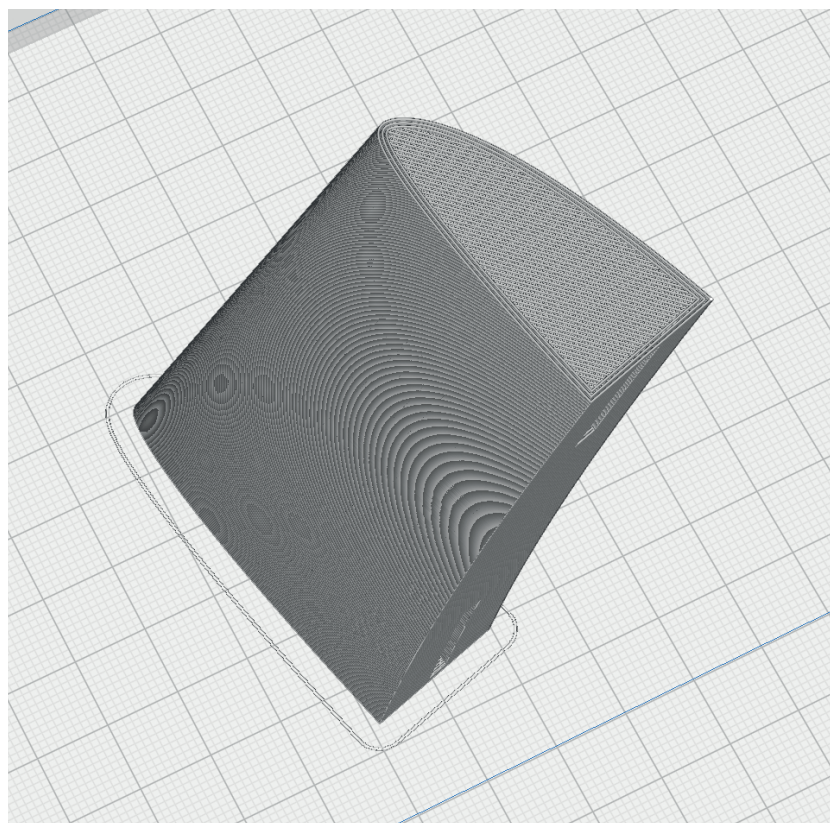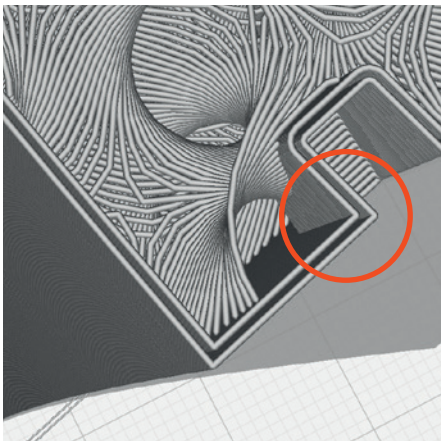
ADDITIONAL SETTINGS

• **Wall Line Count: 2**

Wing 4 left_p5_J.stl
Wing 4 right_p5_J.stl

MATERIAL LW-PLA, ~ 38 g*

*Weighed (approximate guideline)

ADDITIONAL SETTINGS

• Wing left: Z Seam Position **Back Right**
• Wing right: Z Seam Position **Back Left**

Don't forget to set the Wall Line Count back to 1!

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!
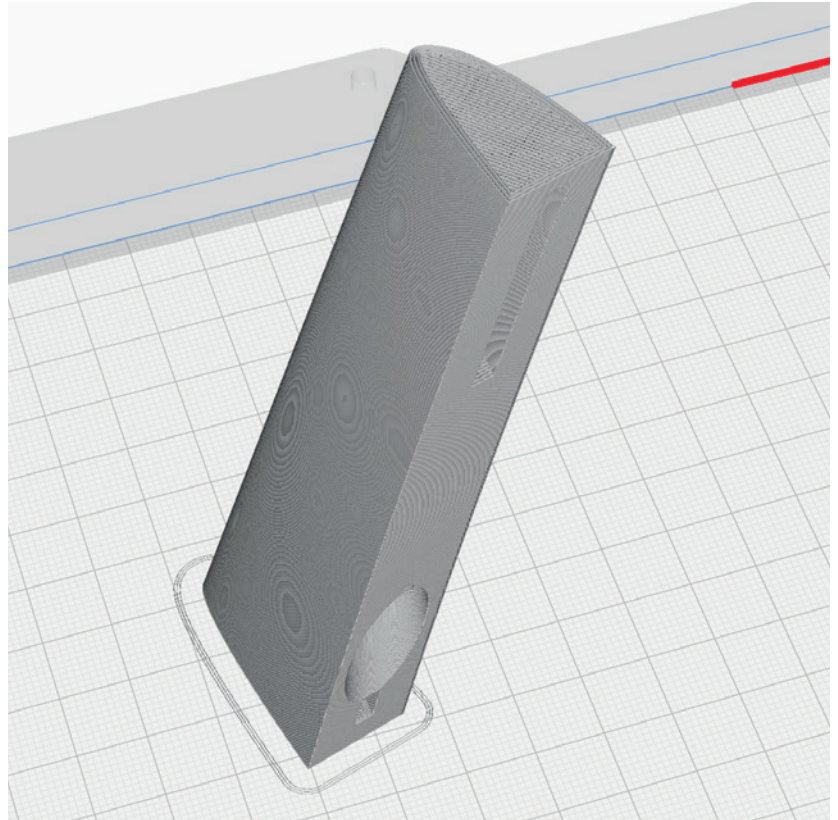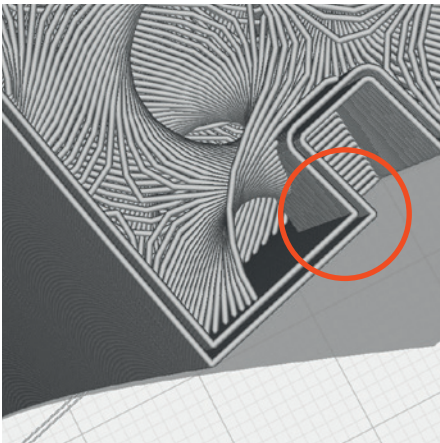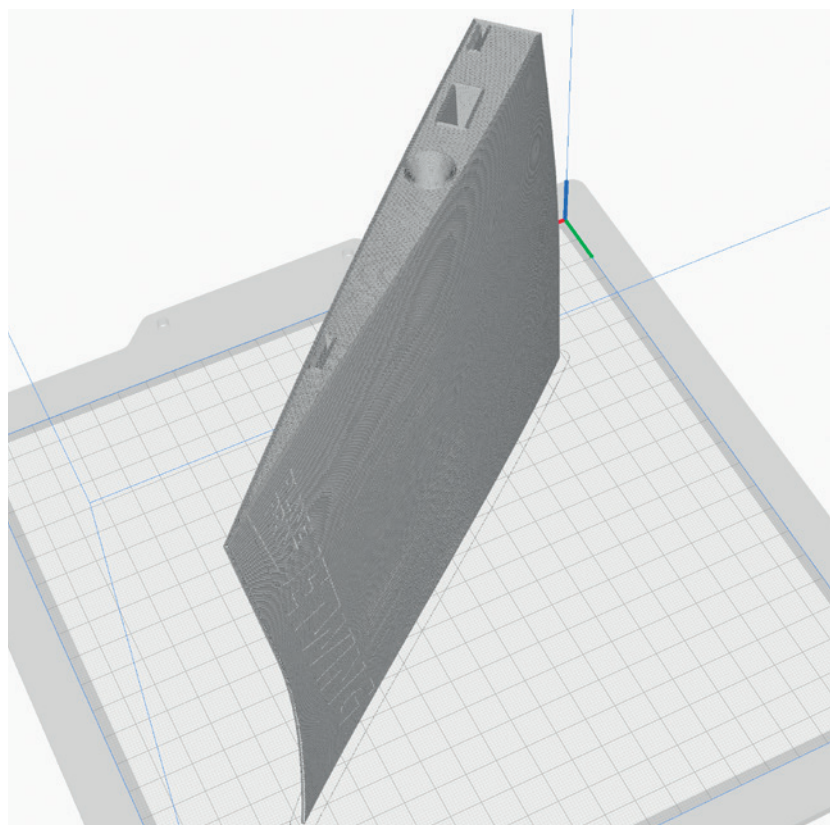
Wing 5 left_p5_J.stl
Wing 5 right_p5_J.stl

MATERIAL   LW-PLA, ~ 30 g*

*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required

NOTE   If you plan to use 10mm wingservos like MASTER DS3010, print the STL **Wing 5 10mmServo_p5_Jsw.stl**. You can find it for download in the FREE TUNING PARTS on our website.

max. 30 mm
max. 10 mm
max. 35 mm

Wing 6 left_p5_J.stl
Wing 6 right_p5_J.stl

MATERIAL   LW-PLA, ~ 25 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!
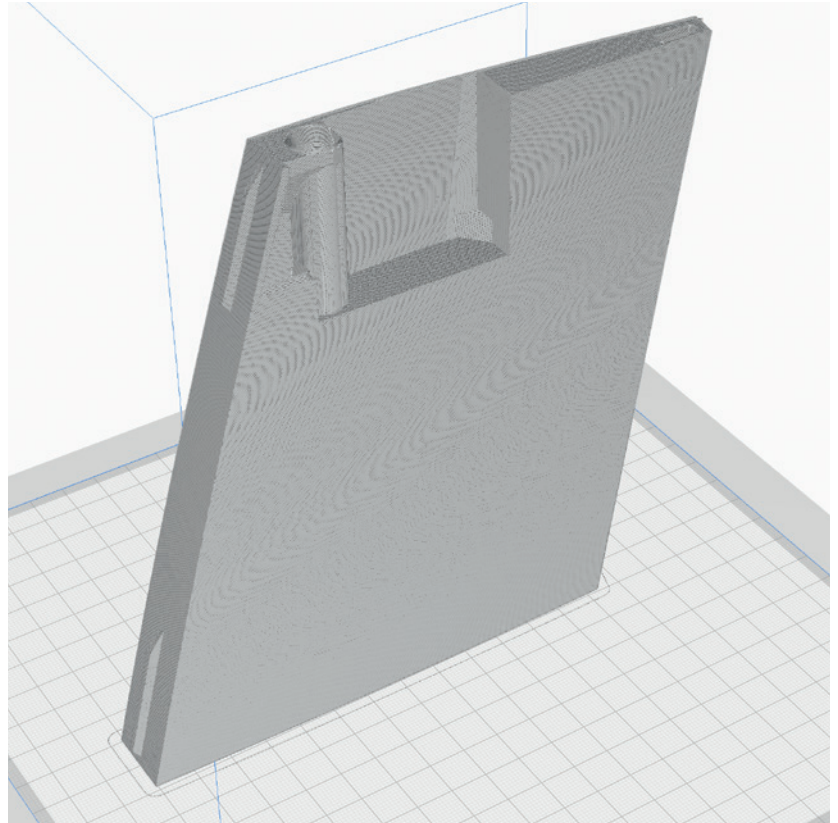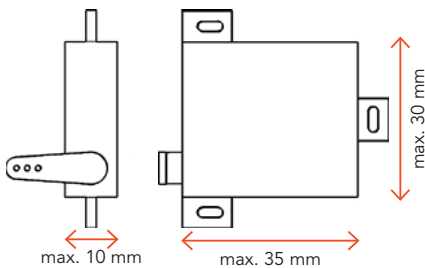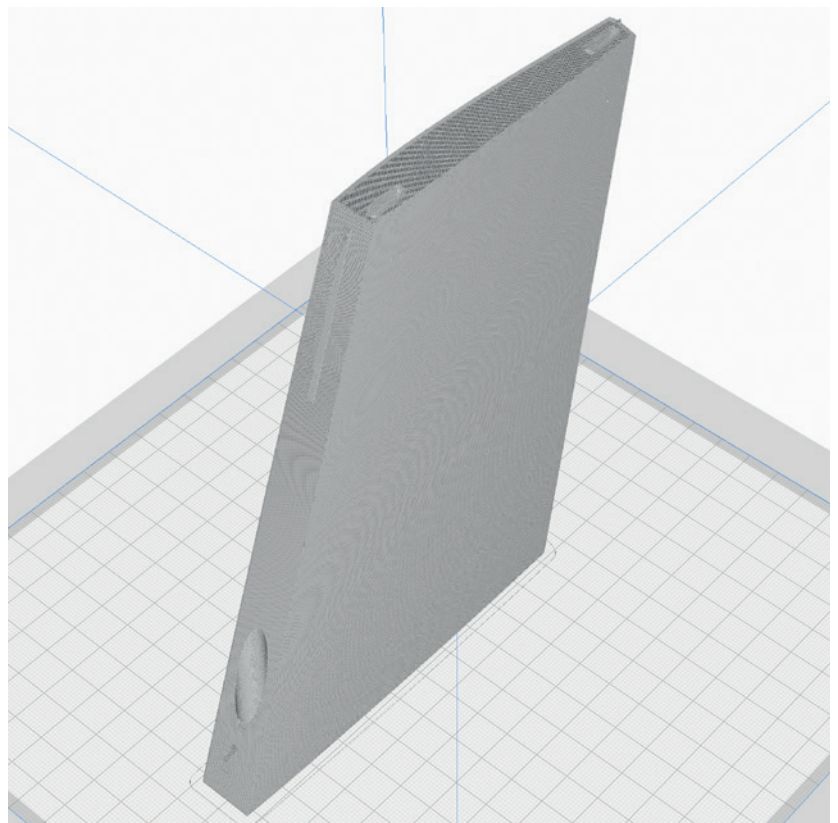
Wingtip left_p5_J.stl
Wingtip right_p5_J.stl

MATERIAL   LW-PLA, ~ 10 g*

*Weighed (approximate guideline)

ADDITIONAL SETTINGS
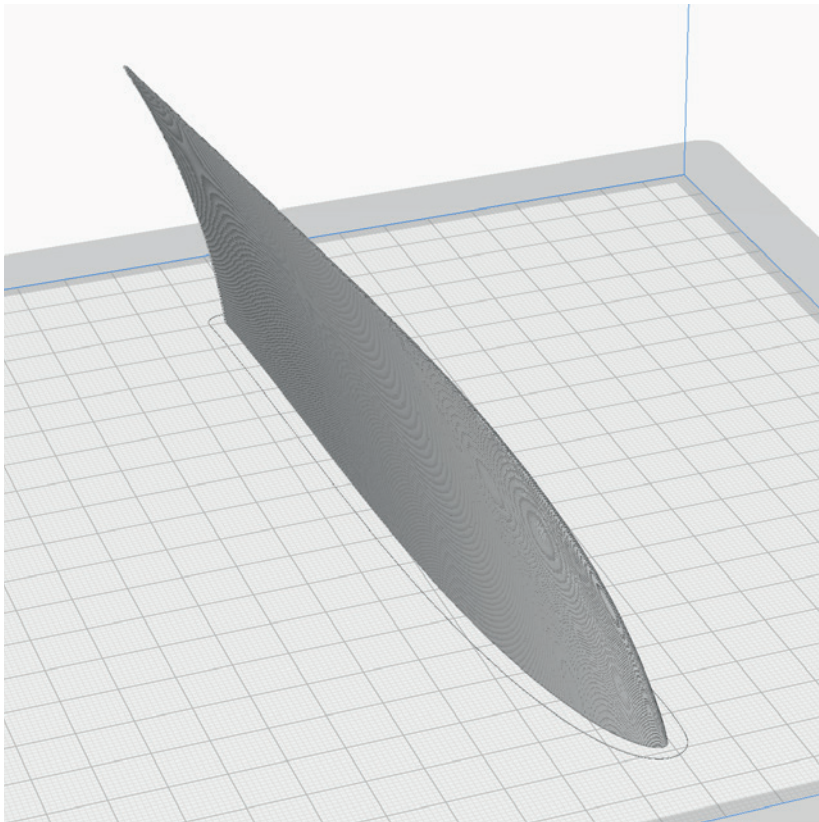
None required

Interconnects wing_p1_J.stl

MATERIAL   LW-PLA, ~ 2 g*

*Weighed (approximate guideline)

ADDITIONAL SETTINGS

None required

You can also print the interconnects with PROFILE_1.
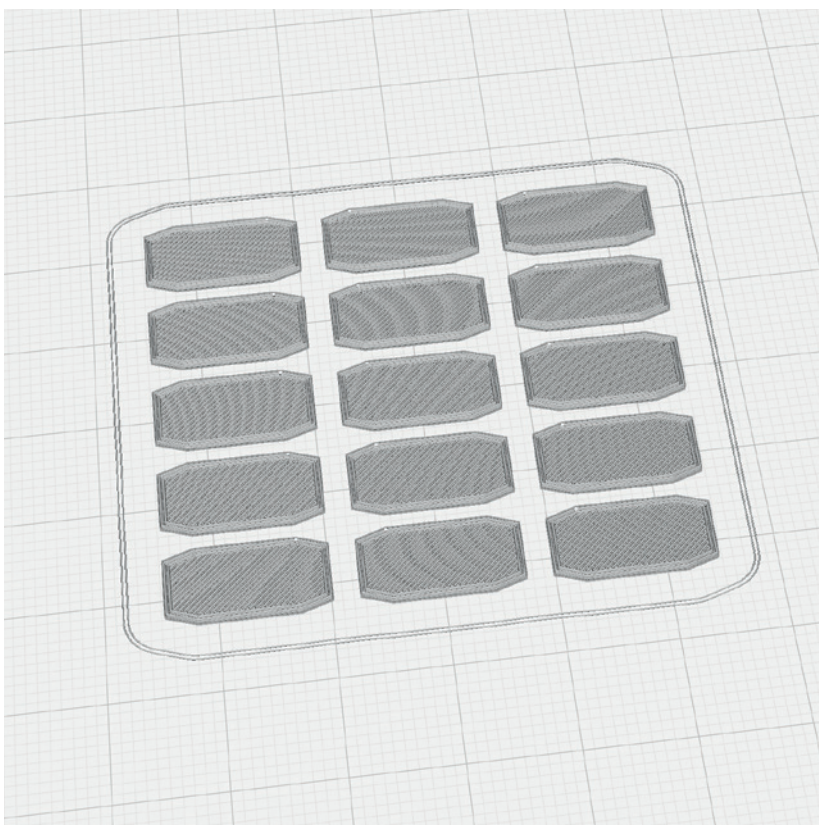
ASSEMBLING MANUAL Standard WINGS

Follow the instructions „Gluing the parts" on page 6.

For now, glue the following pairs together:

Wing 1 left_p5_J.stl

CA
medium l.

Wing 4 left_p5_J.stl

JETWING
PLANE PRINT

Wing 2 left_p5_J.stl

CA
medium l.

Wing 5 left_p5_J.stl

Wing 3 left_p5_J.stl

CA
medium l.

Wing 6 left_p5_J.stl

Carbon tube Ø8*1000mm

CA
medium l.

CA
medium l.

Interconnects wing_p1_J.stl

CA
medium l.

Wing parts_p1_J.stl

CA

Wingtip left_p5_J.stl
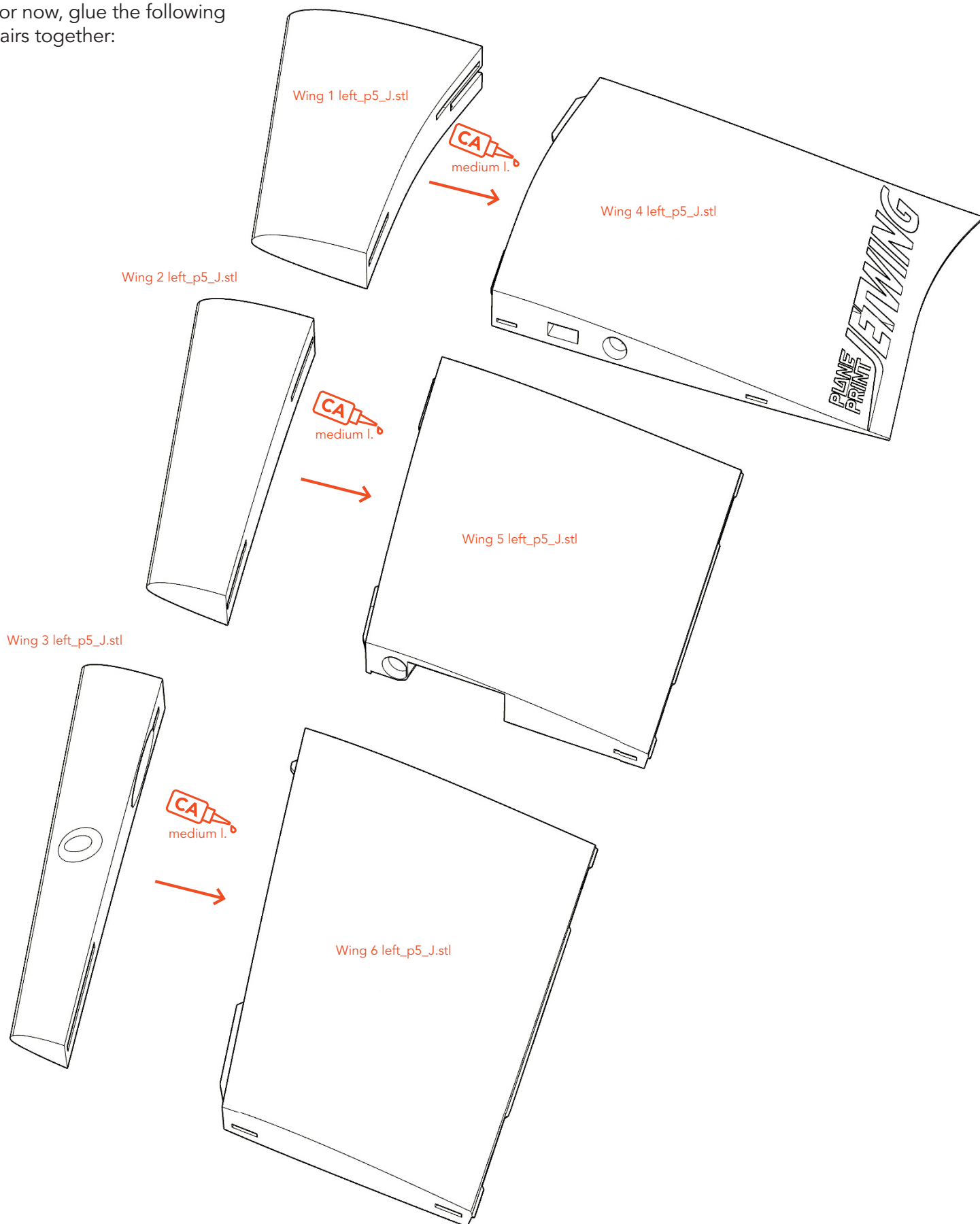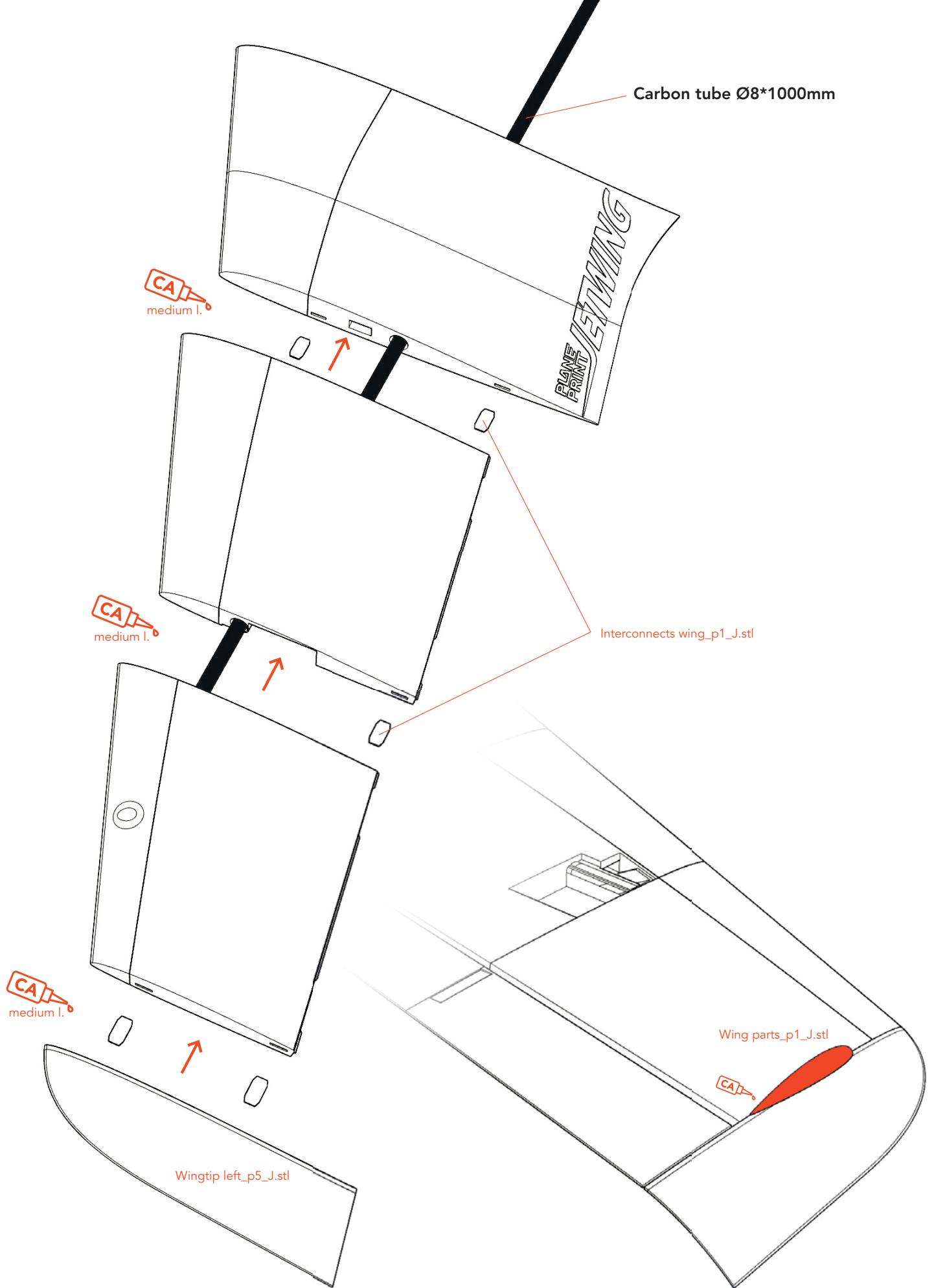
Aileron assembly

Follow the instructions „Installing the hinges" on page 6.

Glue the **Wing fences** along the edge between wing 5 and wing 6. They have the function to delay the stall point in slow flight and improve the flight characteristics in the border area.
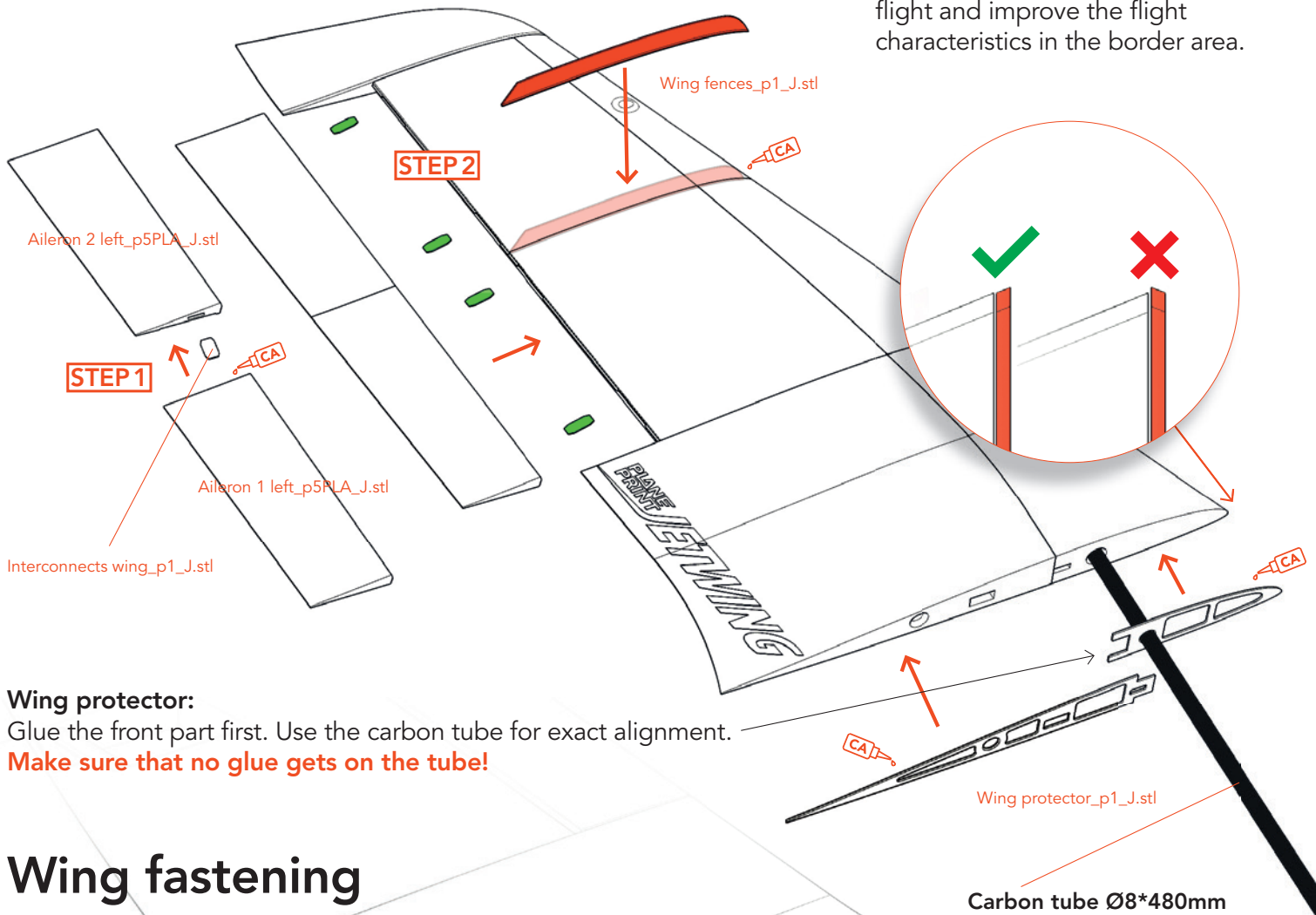
Wing fences_p1_J.stl

STEP 2

Aileron 2 left_p5PLA_J.stl

STEP 1

CA

Aileron 1 left_p5PLA_J.stl

Interconnects wing_p1_J.stl

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

Wing protector_p1_J.stl

Carbon tube Ø8*480mm

Wing fastening

Tapping screw Ø2*8 mm

Wing parts_p1_J.stl

CA

Bottom side

Tension belt TPUA95_p4_J.stl
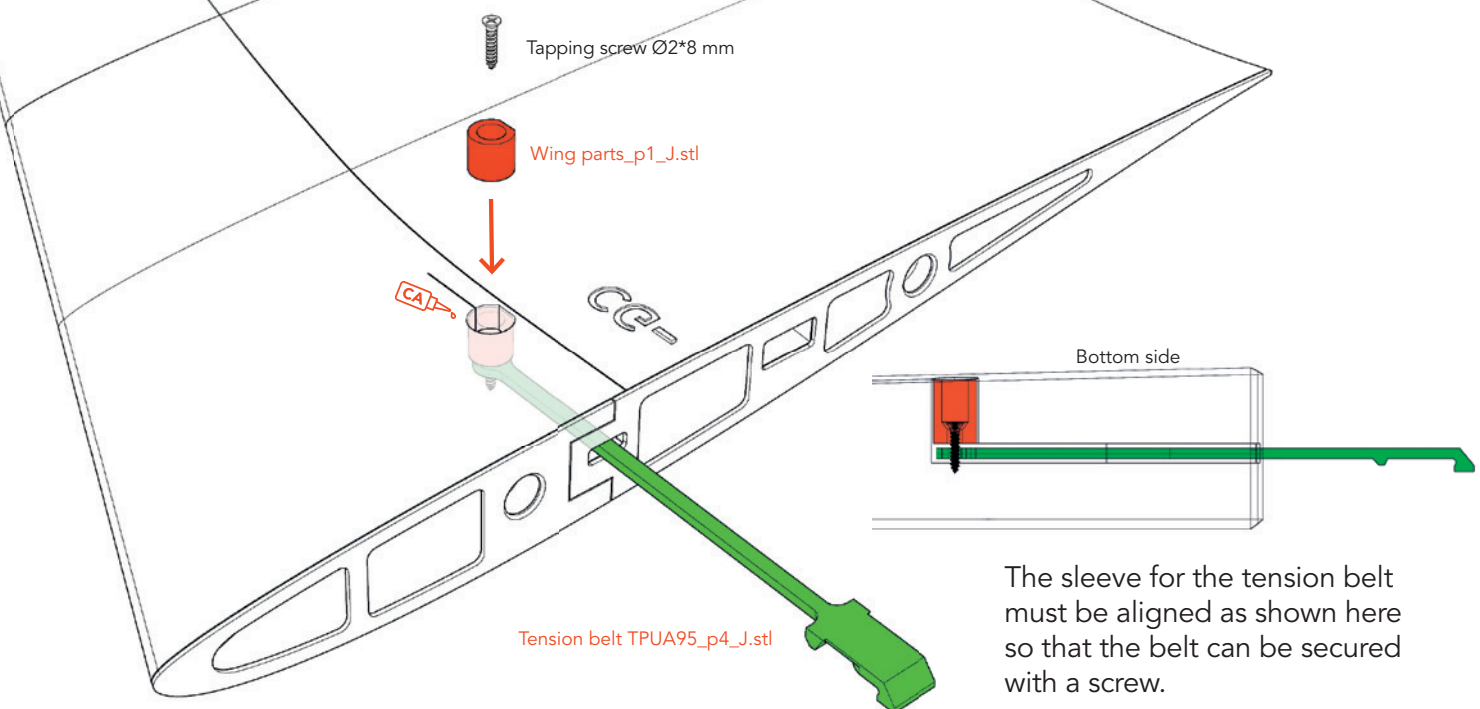
The sleeve for the tension belt must be aligned as shown here so that the belt can be secured with a screw.

Aileron Servo mounting

If you use the variant with the 10mm wing servos (FREE TUNING PARTS), see instructions BIG WING on page 79.

Tapping screws Ø2*8 mm

Cable duct

CA

Mount the servo as shown here:

CA

Aileron Parts_p1_J.stl

CA

CA

CA

Servo plate optional_p1.stl

CA

CA
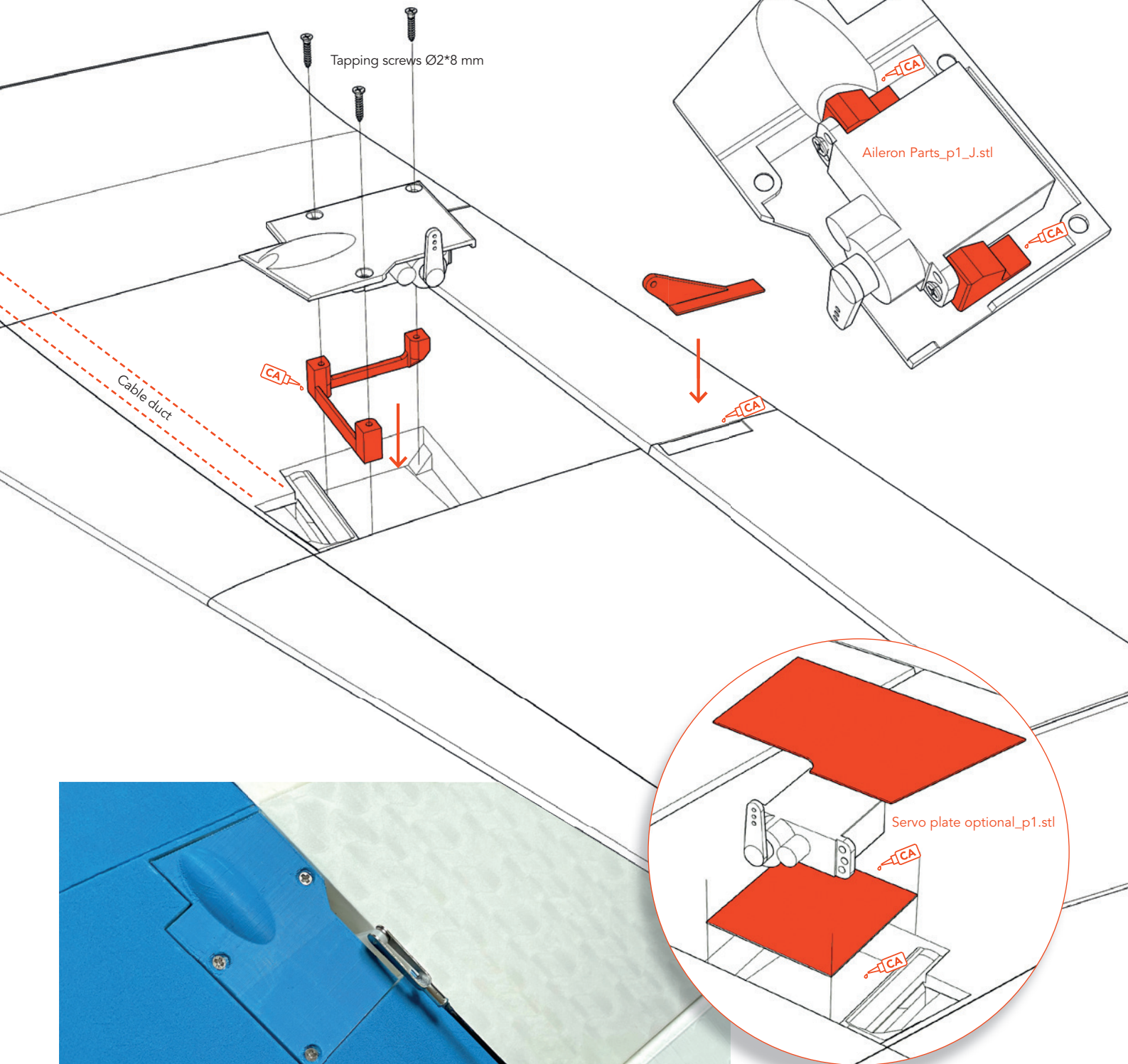
Make sure to achieve a stable connection of all glued joints and use strong materials for the linkage! Due to the high flying speed of the JETWING, the parts are heavily loaded.

If you prefer to glue the servo in place, you can use the STL „Servo platte optional_p1.stl" and attach the servo cover with tape.

Wrap the servo with heat shrink tubing or tape before gluing!

SETTINGS FOR FLYING – Standard WING

After installing the electronics and setting up the transmitter, check that the control surfaces are aligned correctly. Set the transmitter trim to zero. Align all rudders to zero position. Change the position of the moving parts by changing the length of the linkage from the servo arm to the control horn. In-flight adjustments can be made later with the trim.

Setting the servo travel

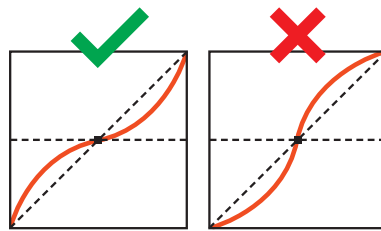**AILERON**   up: 12 mm, down: 12 mm   **ELEVATOR**   up: 10 mm, down: 10 mm

RUDDER   (FUSELAGE EDF Rudder Version) left/rihgt: 18 mm

Expo setting

AILERON   40 %

ELEVATOR   30 %

RUDDER   0 %

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

Center of Gravity (CG)

The aircraft must balance **precisely** at the marks on the wing. Attention the different wings have different CG!

 NOTE   **With flying wings the optimum CG range is very small, the JETWING must balance exactly on the marks on the wings!**

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.
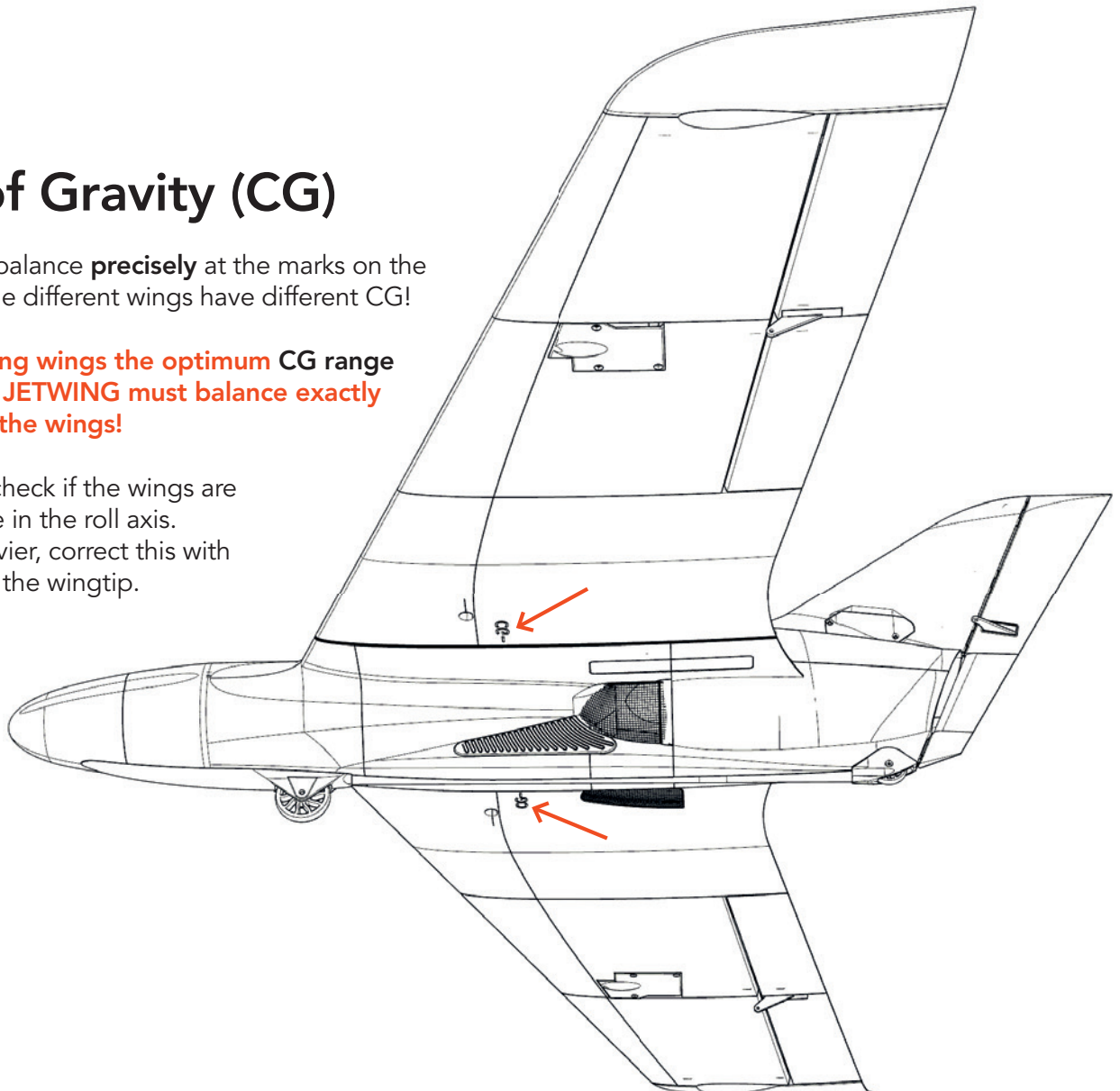
Control Direction Test – Standard WING
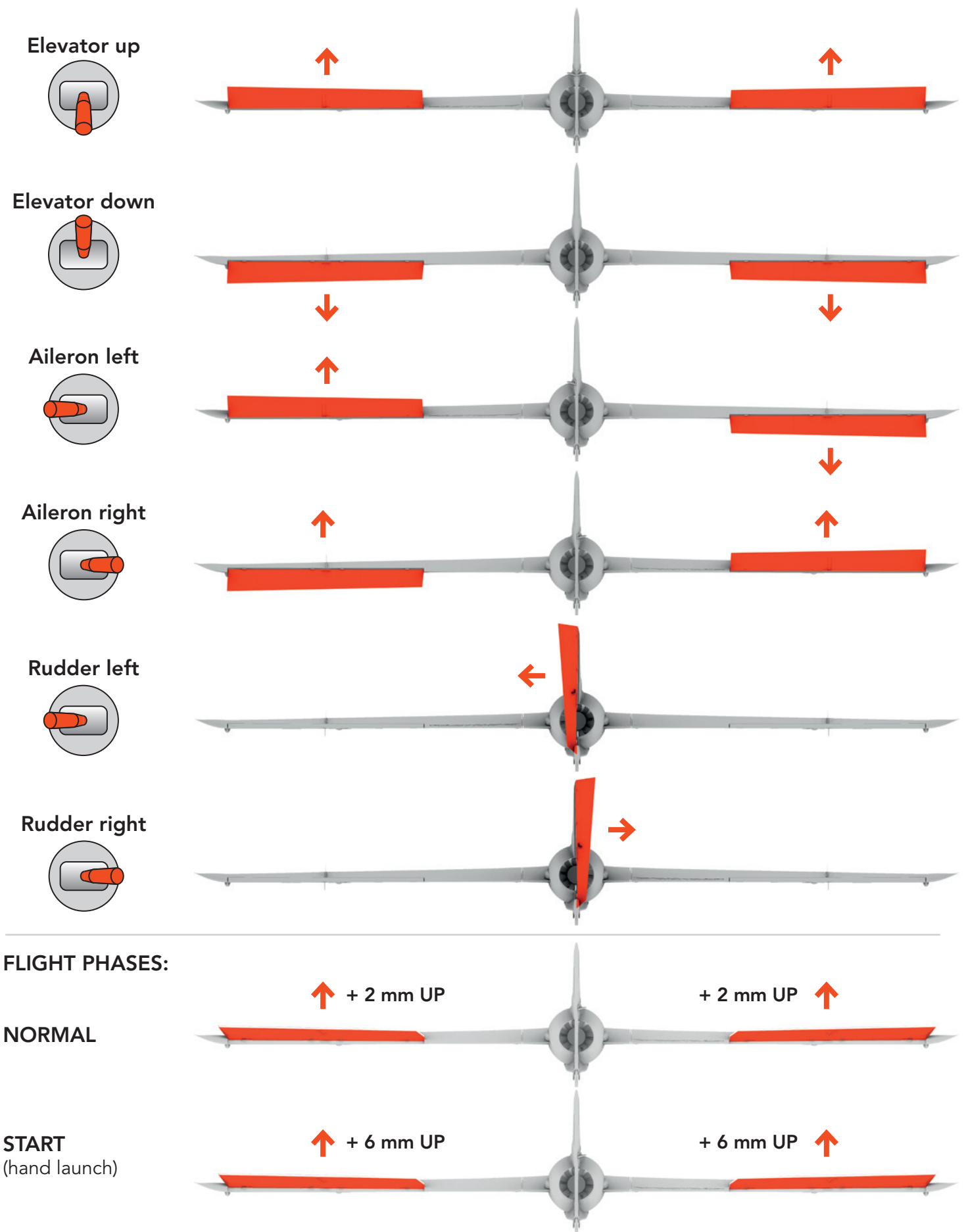
When checking the control directions, **look at the aircraft from behind.**

Elevator up

Elevator down

Aileron left

Aileron right

Rudder left

Rudder right

FLIGHT PHASES:

NORMAL

↑ + 2 mm UP   + 2 mm UP ↑

START
(hand launch)

↑ + 6 mm UP   + 6 mm UP ↑

PLANE PRINT JETWING

BIG WING
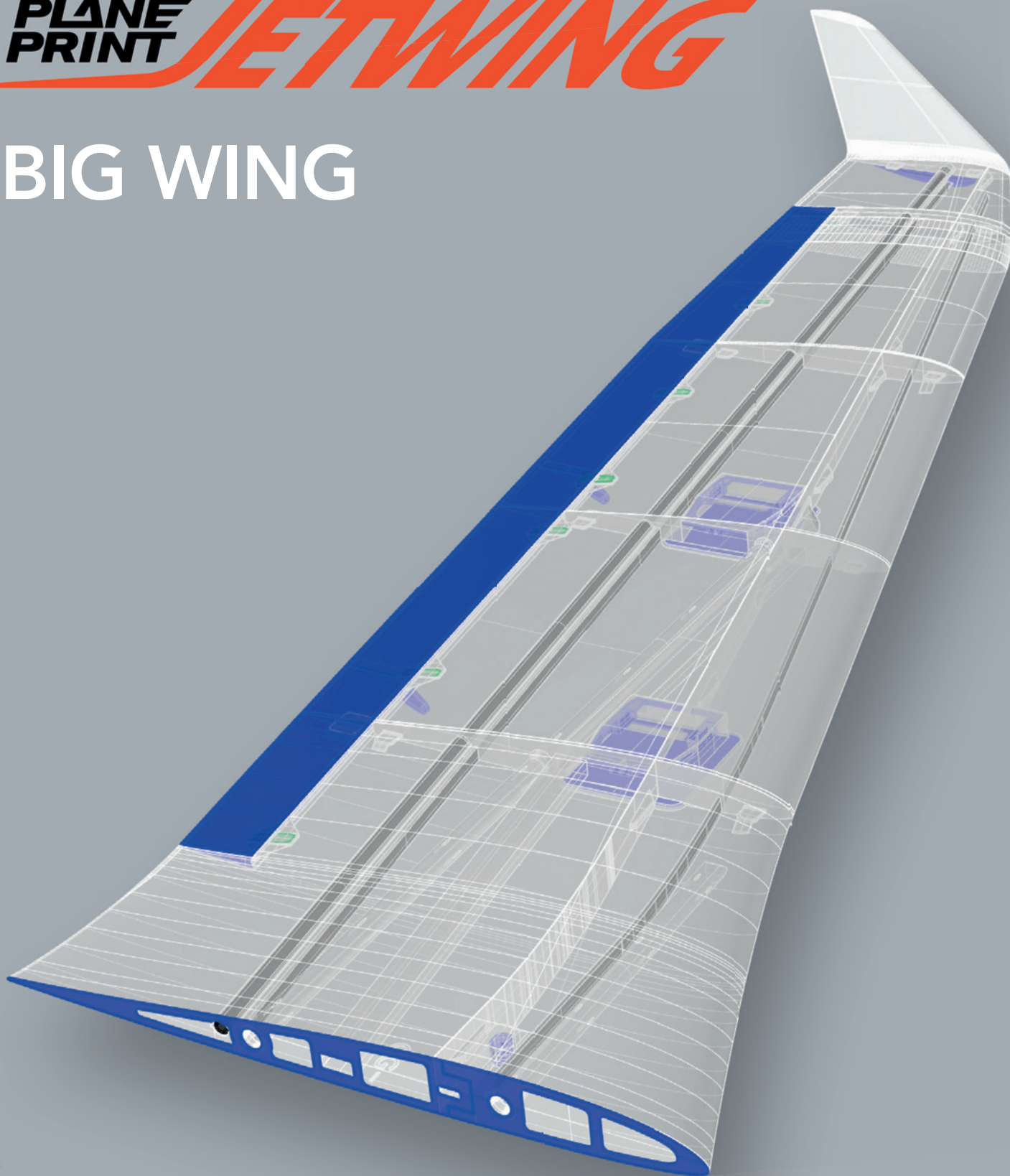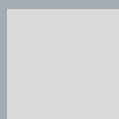
PLA   LW-PLA   TPU   CARBON

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!

Interconnects_p1_Jbw.stl

MATERIAL   PLA, Weight: ~ 3 g

ADDITIONAL SETTINGS

None required

servobrackets_p1_Jbw.stl

MATERIAL   PLA, Weight: ~ 4 g

ADDITIONAL SETTINGS

• Print this part twice
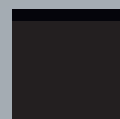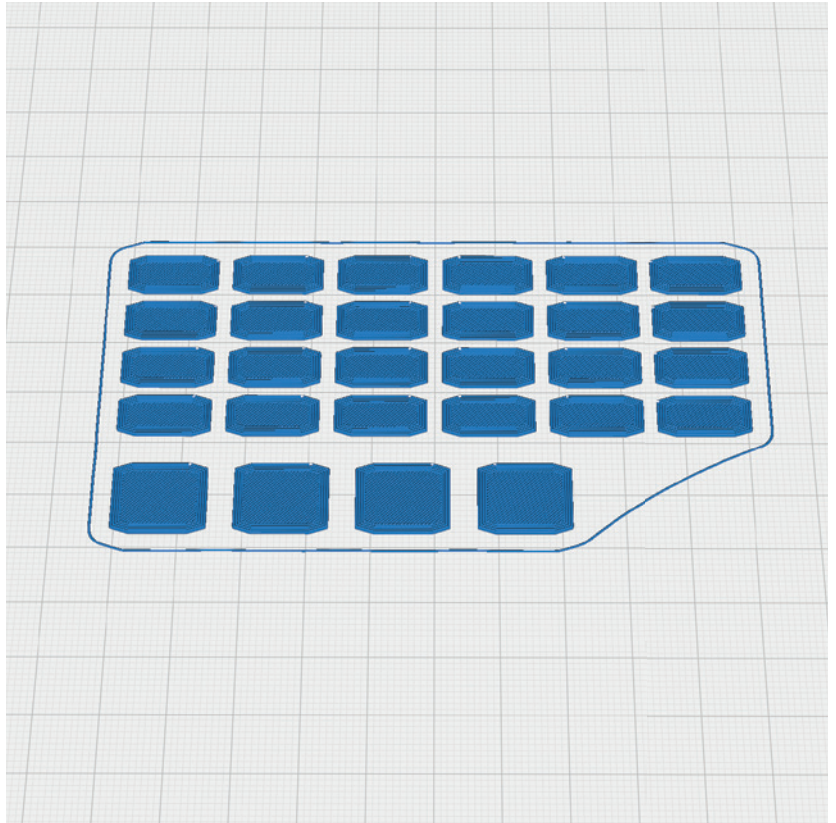
PROFILE P1_FULLBODY PLA or Tough PLA

The following parts must be sliced with the PROFILE P1_FULLBODY.
Please note the additional settings for the individual parts!

Servocovers_p1_Jbw.stl

MATERIAL   PLA, Weight: ~ 4 g

ADDITIONAL SETTINGS

None required

Wing parts_p1_Jbw.stl

MATERIAL   PLA, Weight: ~ 13 g

ADDITIONAL SETTINGS
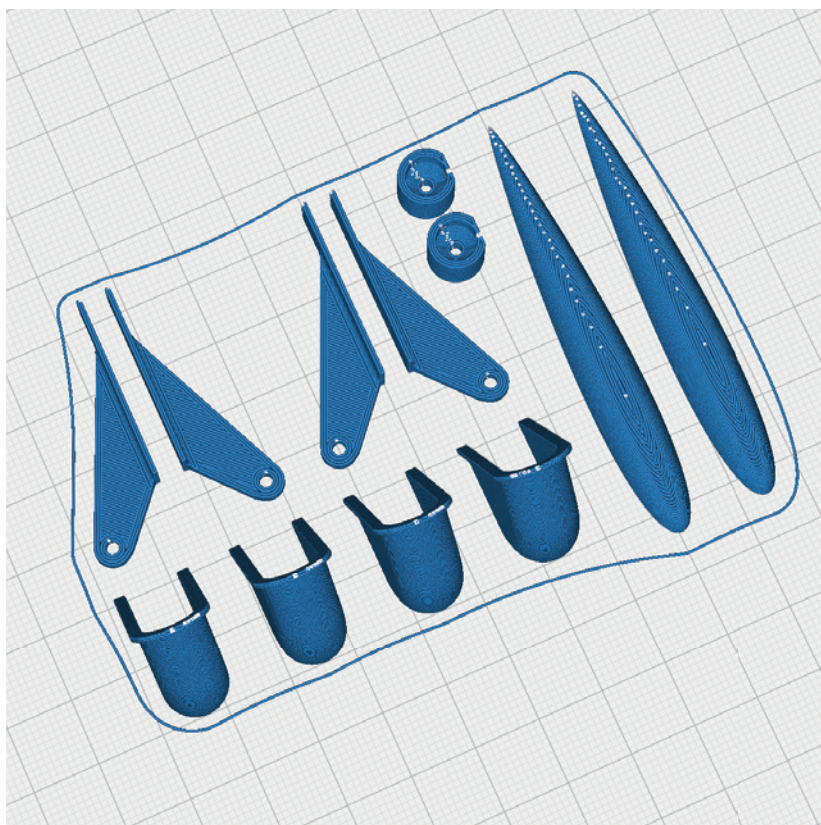
None required

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!

Wing protector_p1_Jbw.stl
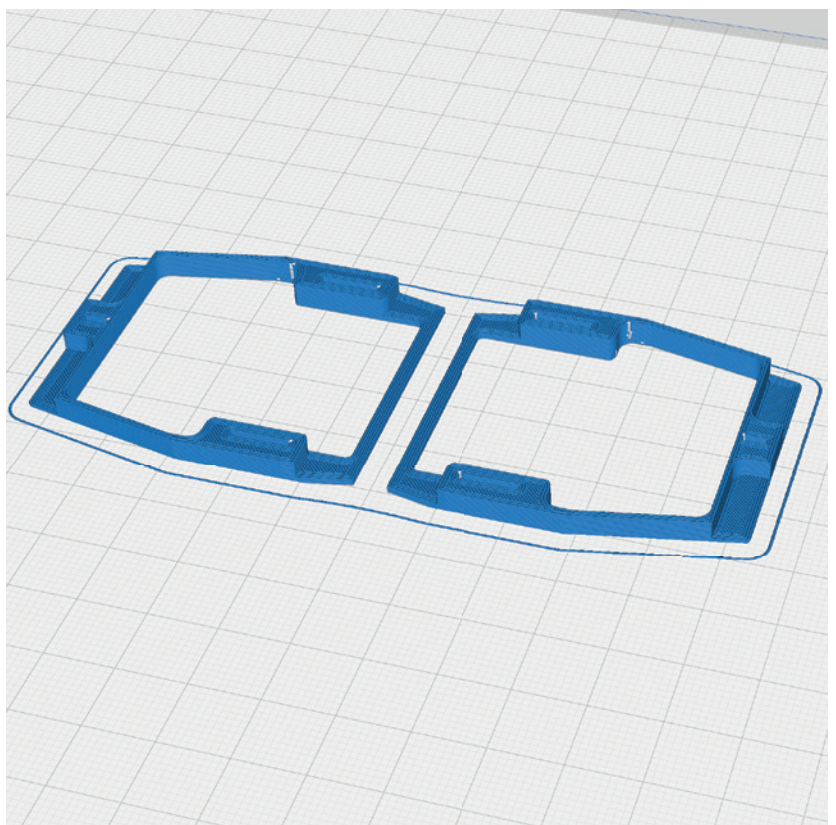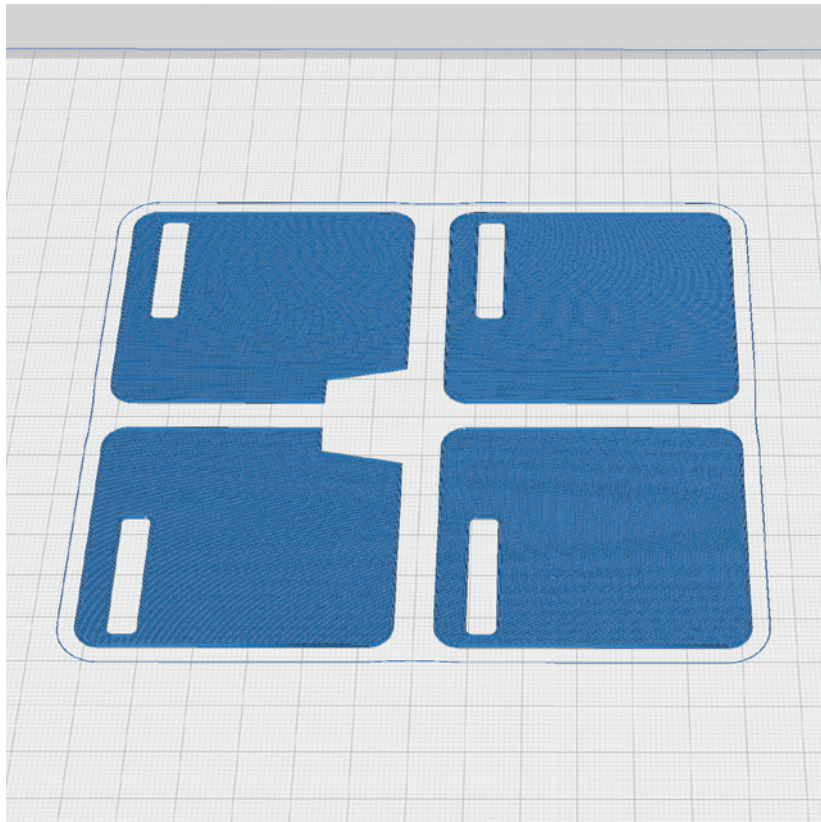
MATERIAL   PLA, Weight: ~ 7 g

ADDITIONAL SETTINGS

None required

Spar_p1_Jbw.stl

MATERIAL   PLA, Weight: ~ 6 g

ADDITIONAL SETTINGS

None required

You only need these spars if you do
not have a carbon flat profile available.
This STL must then be printed four times.
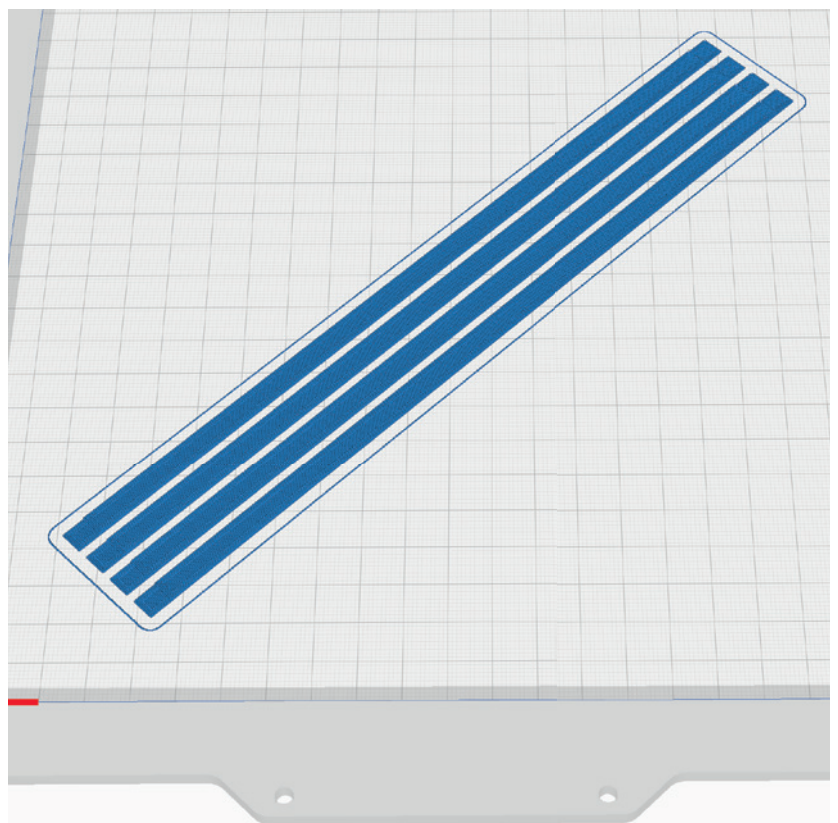
PROFILE P5_GYROID PLA or Tough PLA

The following parts must be sliced with the PROFILE P5_GYROID. **Please note the additional settings for the individual parts!**

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

Aileron 1_p5PLA_Jbw.stl

MATERIAL   **LW-PLA**, ~ 23 g

ADDITIONAL SETTINGS

These parts must be printed with normal or Tough PLA.

• Retract settings for normal PLA!
• Flow 100 %
• set Brim
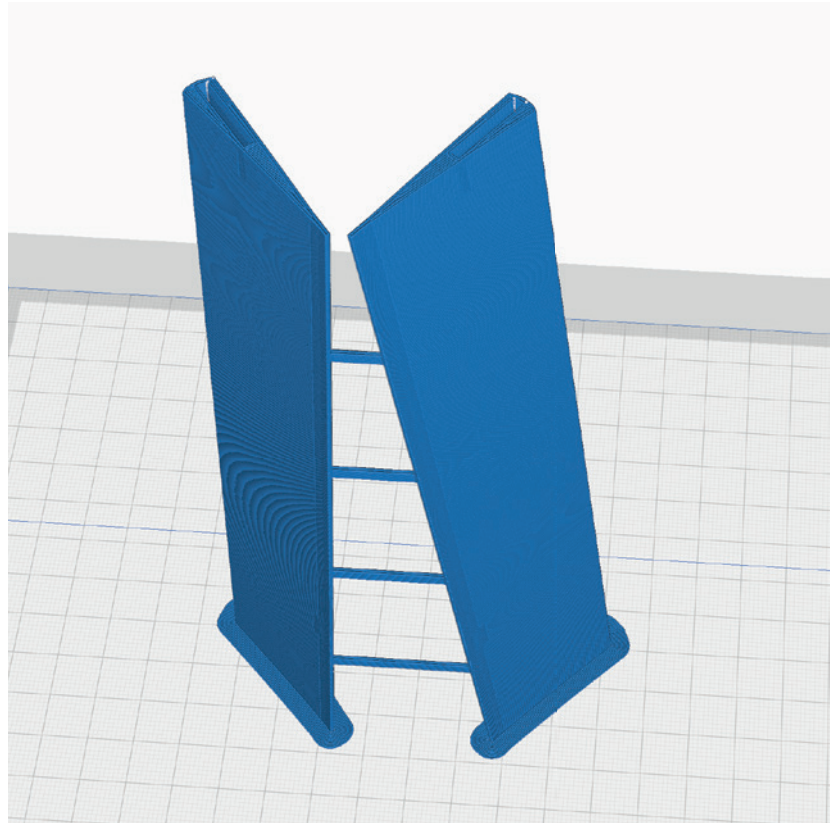
Aileron 2_p5PLA_Jbw.stl

MATERIAL   **LW-PLA**, ~ 20 g

ADDITIONAL SETTINGS

These parts must be printed with normal or Tough PLA.

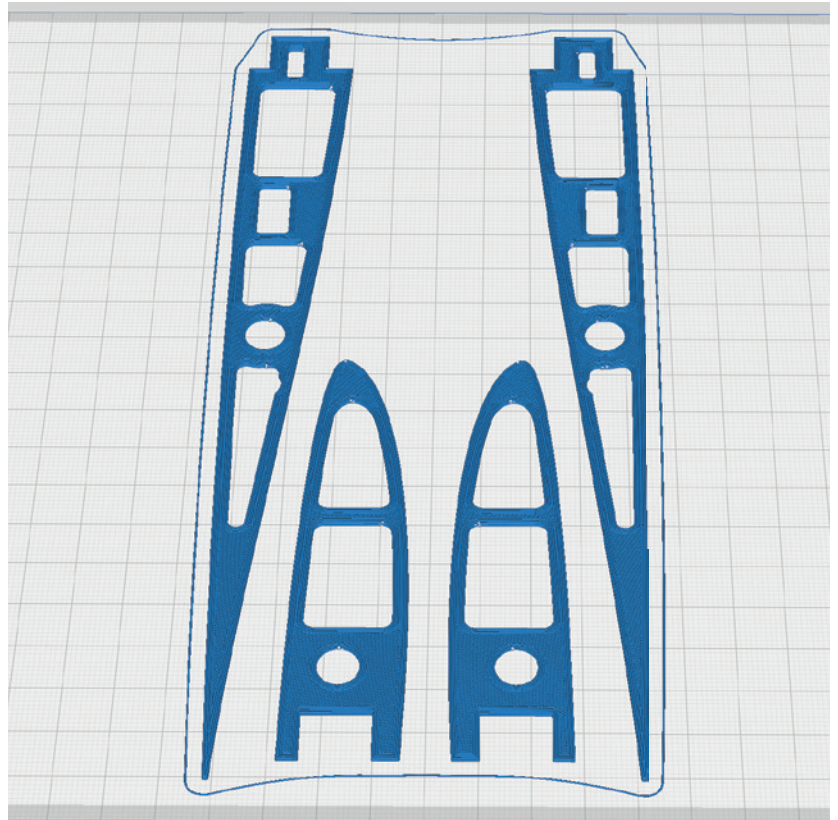• Retract settings for normal PLA!
• Flow 100 %
• set Brim
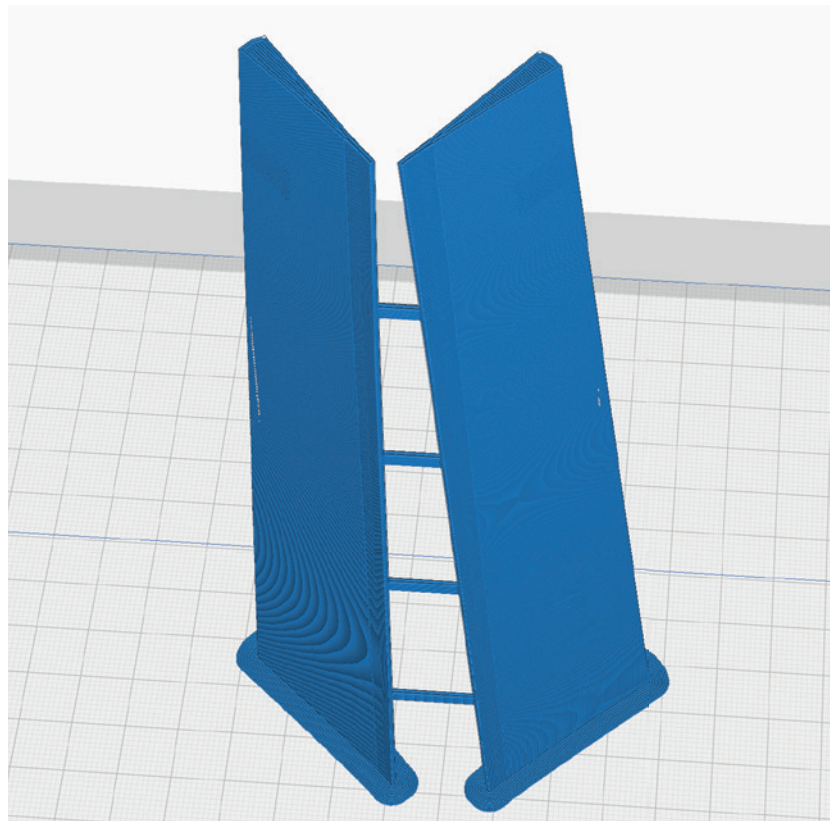
PROFILE P5_GYROID PLA or Tough PLA

The following parts must be sliced with the PROFILE P5_GYROID. **Please note the additional settings for the individual parts!**

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

Flap 1_p5PLA_Jbw.stl

MATERIAL   LW-PLA, ~ 11 g

ADDITIONAL SETTINGS

These parts must be printed with normal or Tough PLA.

• Retract settings for normal PLA!
• Flow 100 %
• set Brim

Flap 2_p5PLA_Jbw.stl

MATERIAL   LW-PLA, ~ 22 g

ADDITIONAL SETTINGS

These parts must be printed with normal or Tough PLA.

• Retract settings for normal PLA!
• Flow 100 %
• set Brim
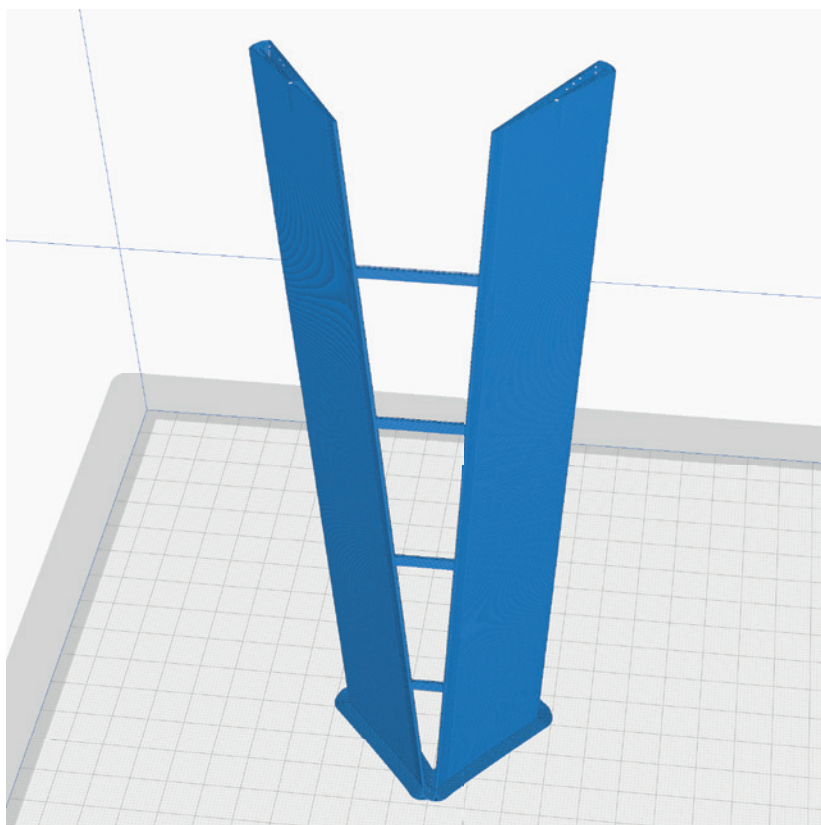
PROFILE P5_GYROID Light-Weight LW-PLA!

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!

Wing 1 left_p5+_Jbw.stl
Wing 1 right_p5+_Jbw.stl

MATERIAL   LW-PLA, ~ 36 g*

*Weighed (approximate guideline)

ADDITIONAL SETTINGS

• Wall Line Count: 2

Wing 2 left_p5+_Jbw.stl
Wing 2 right_p5+_Jbw.stl

MATERIAL   LW-PLA, ~ 22 g*

*Weighed (approximate guideline)

ADDITIONAL SETTINGS

• Wall Line Count: 2

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!
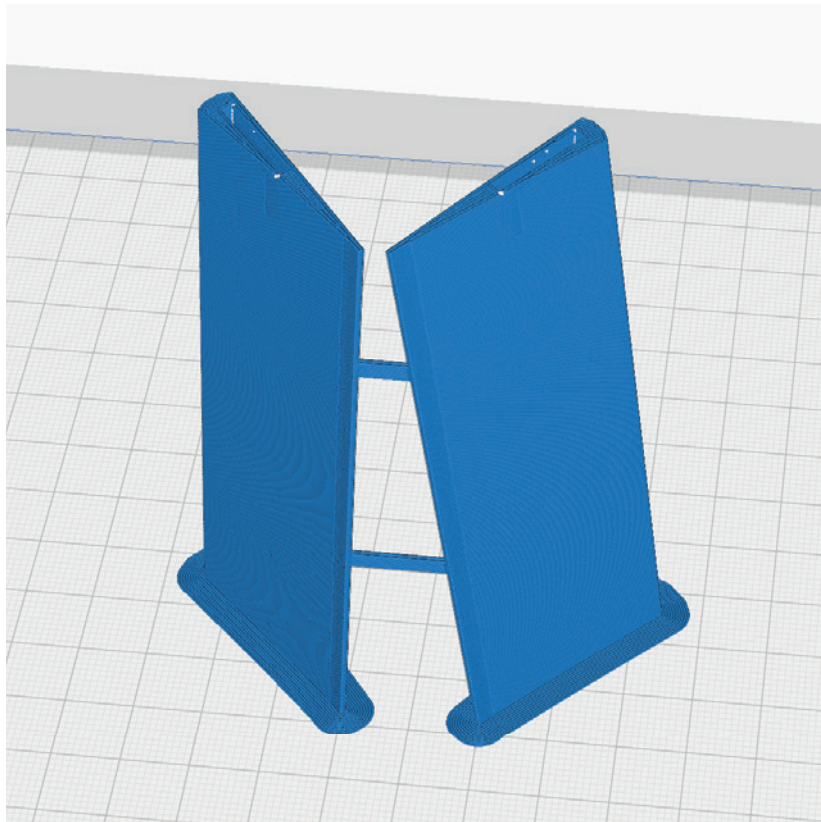
Wing 3 left_p5+_Jbw.stl
Wing 3 right_p5+_Jbw.stl

MATERIAL   LW-PLA, ~ 19 g*
*Weighed (approximate guideline)

ADDITIONAL SETTINGS

• Wall Line Count: 2

Wing 4 left_p5+_Jbw.stl
Wing 4 right_p5+_Jbw.stl

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

ADDITIONAL SETTINGS

• Wall Line Count: 2

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!
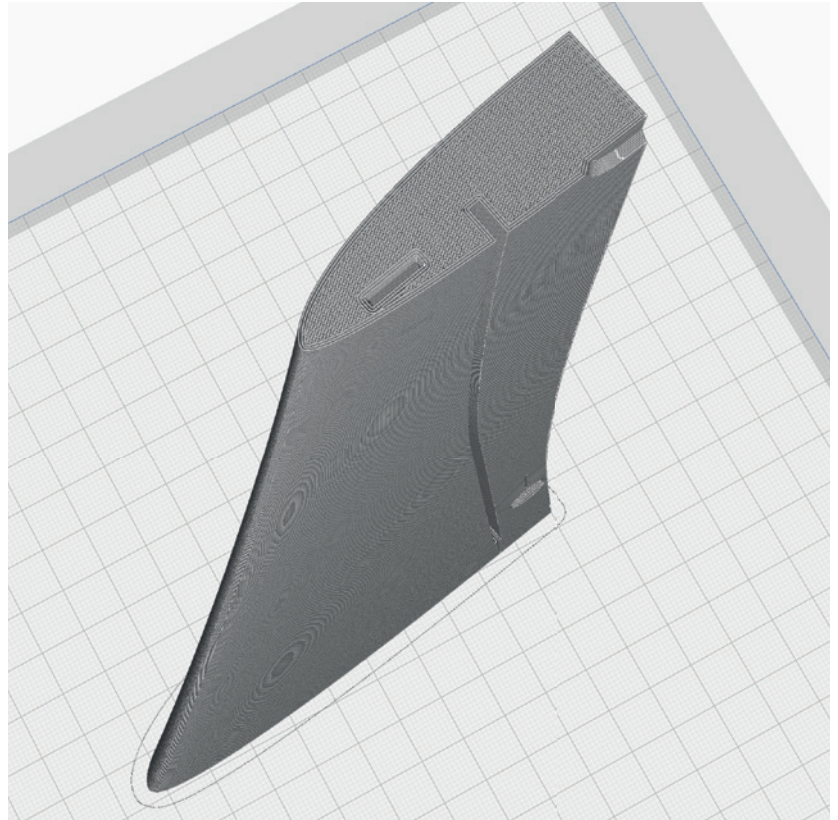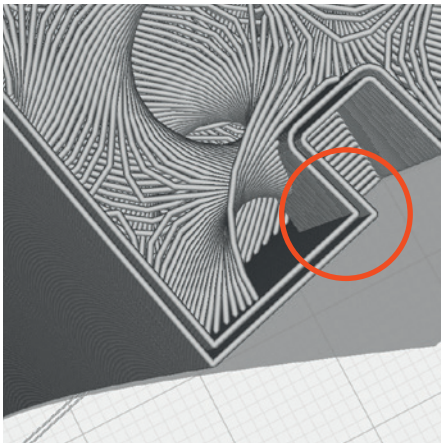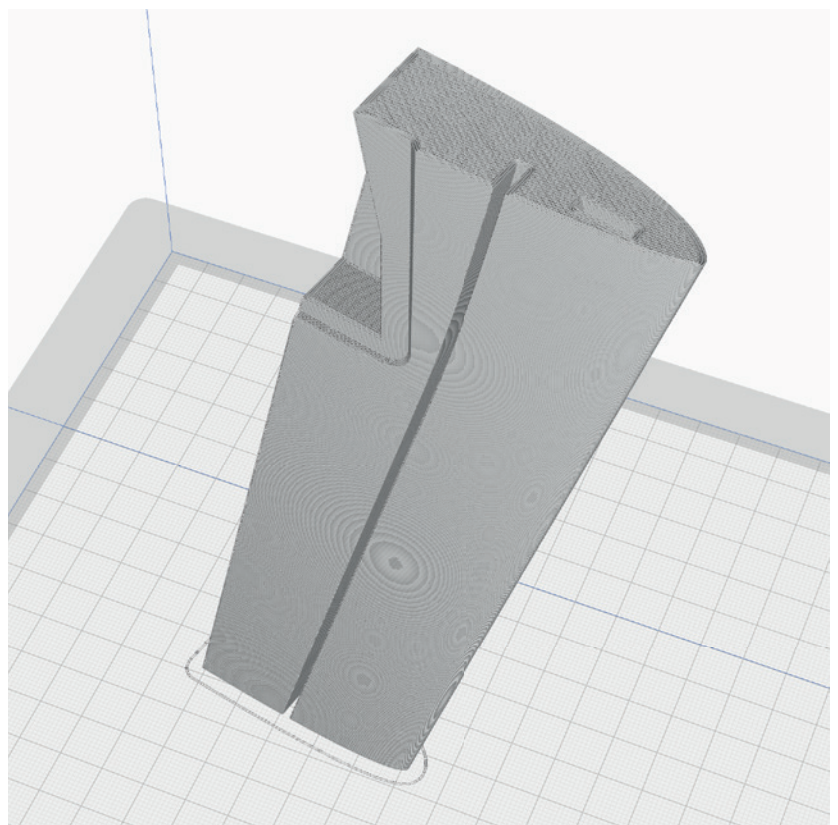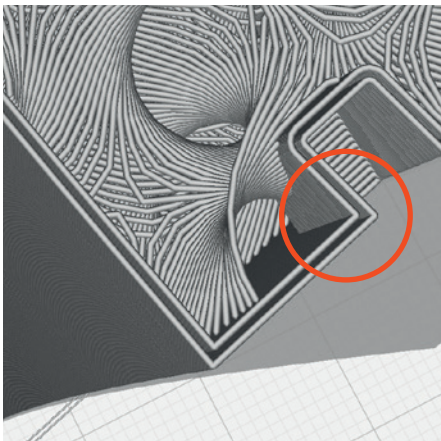
Wing 5 left_p5+_Jbw.stl
Wing 5 right_p5+_Jbw.stl

MATERIAL **LW-PLA**, ~ 4 g*

*Weighed (approximate guideline)

ADDITIONAL SETTINGS

• **Wall Line Count: 2**

Wing 6 left_p5_Jbw.stl
Wing 6 right_p5_Jbw.stl

MATERIAL **LW-PLA**, ~ 42 g*

*Weighed (approximate guideline)

ADDITIONAL SETTINGS

• Wing left: Z Seam Position **Back Left**
• Wing right: Z Seam Position **Back Right**

**Don't forget to set the
Wall Line Count back to 1!**
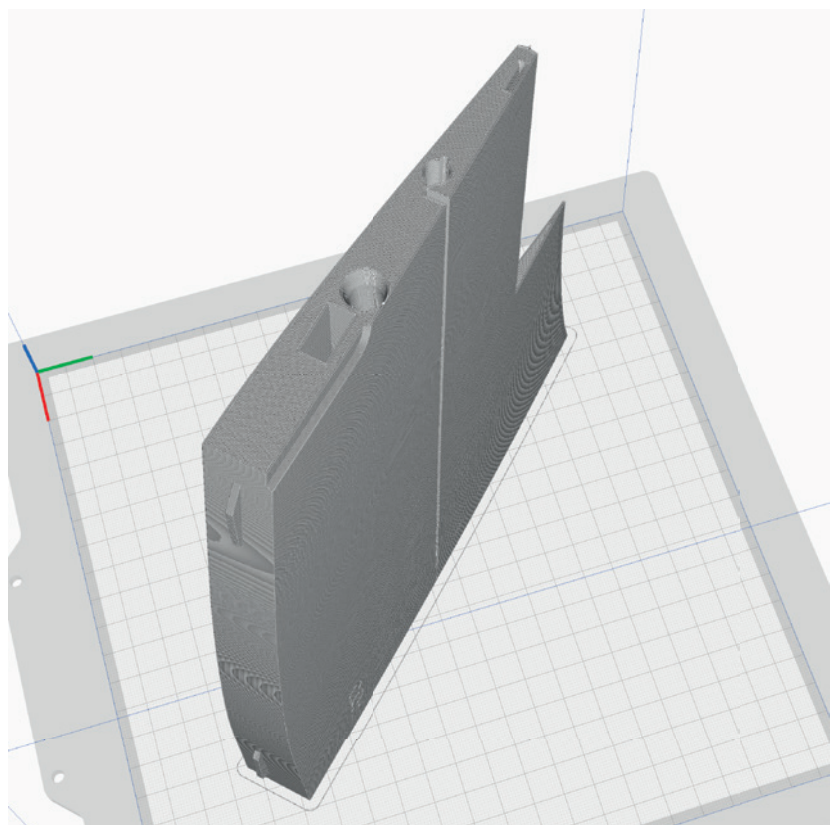
PROFILE P5_GYROID Light-Weight LW-PLA!

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!
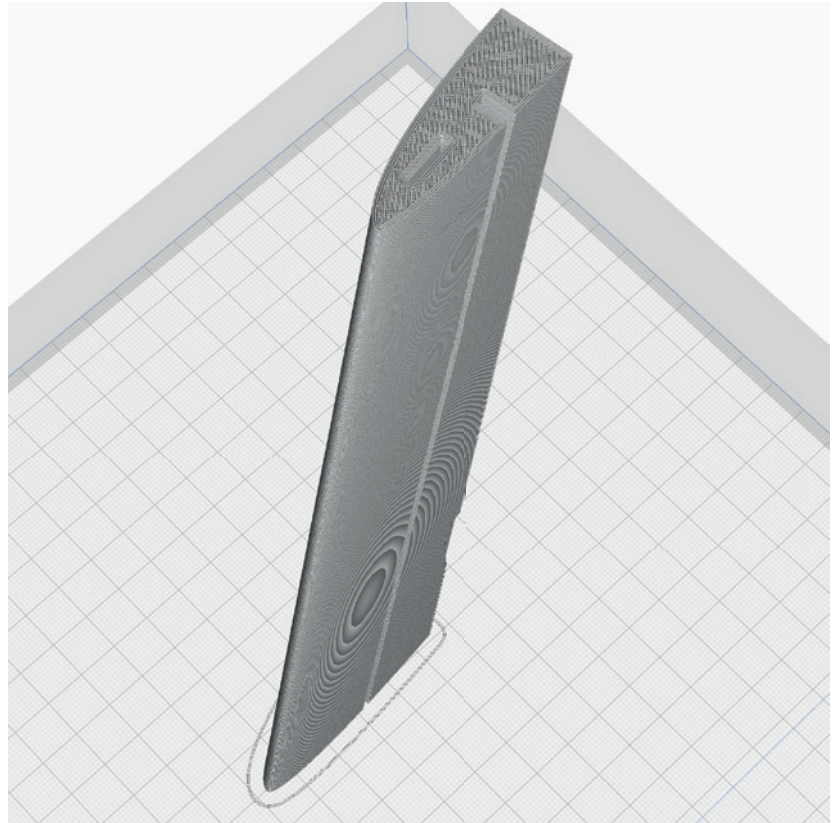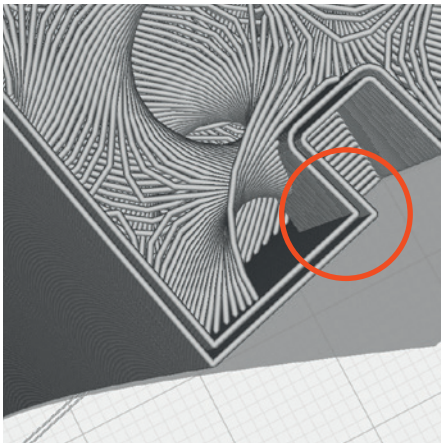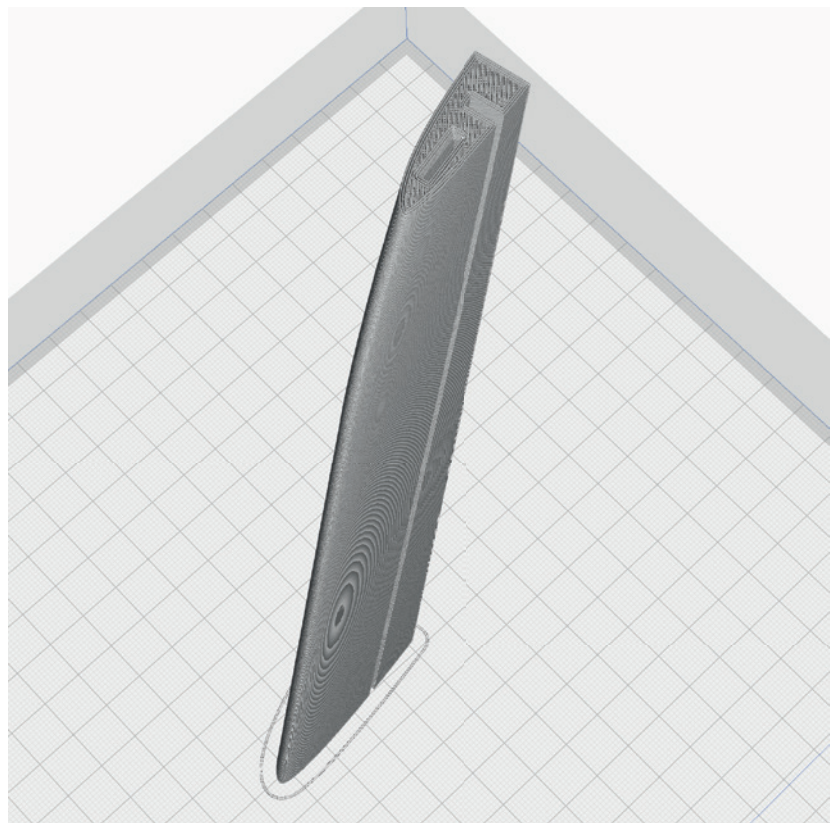
Wing 7 left_p5_Jbw.stl
Wing 7 right_p5_Jbw.stl

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

ADDITIONAL SETTINGS

None required

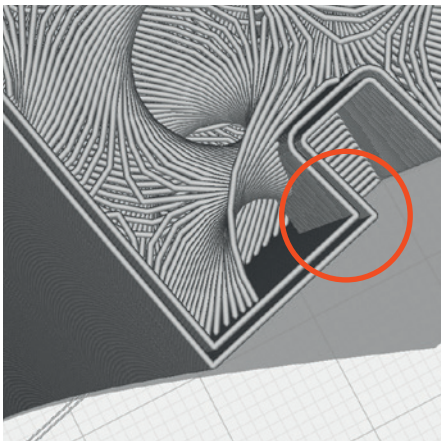## Wing 8 left_p5_Jbw.stl
Wing 8 right_p5_Jbw.stl

MATERIAL   **LW-PLA, ~ 27 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!
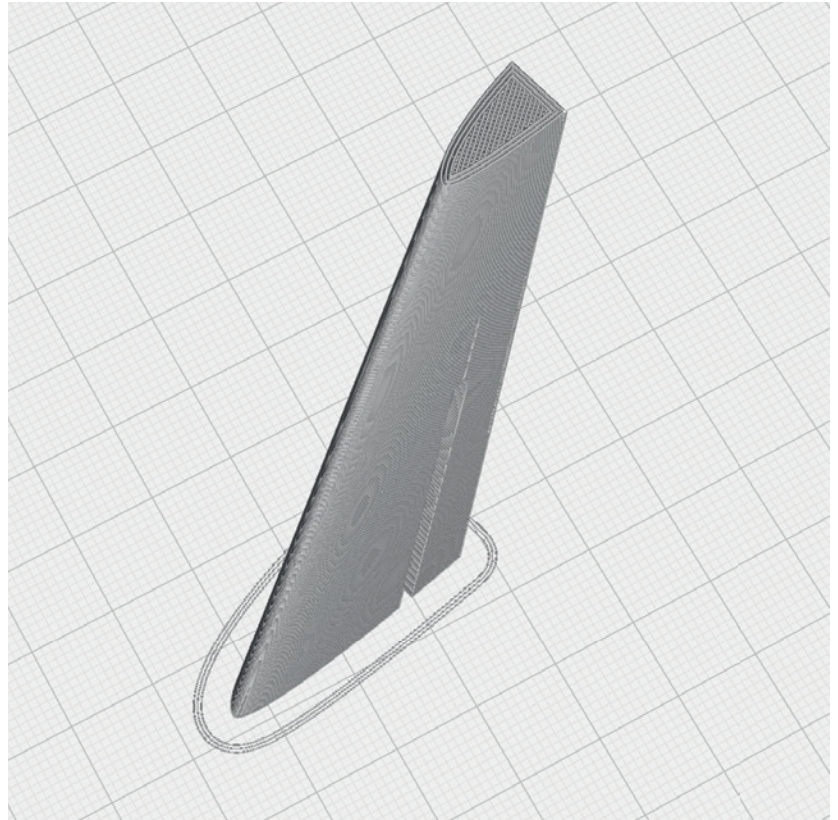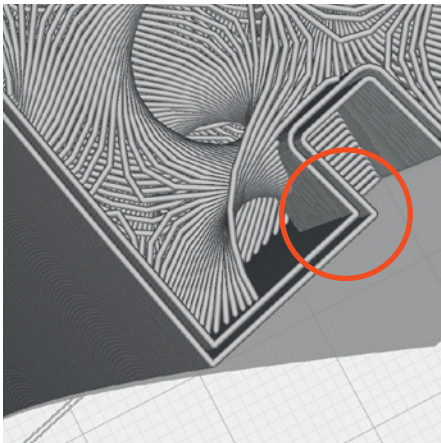
Wing 9 left_p5_Jbw.stl
Wing 9 right_p5_Jbw.stl

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

ADDITIONAL SETTINGS
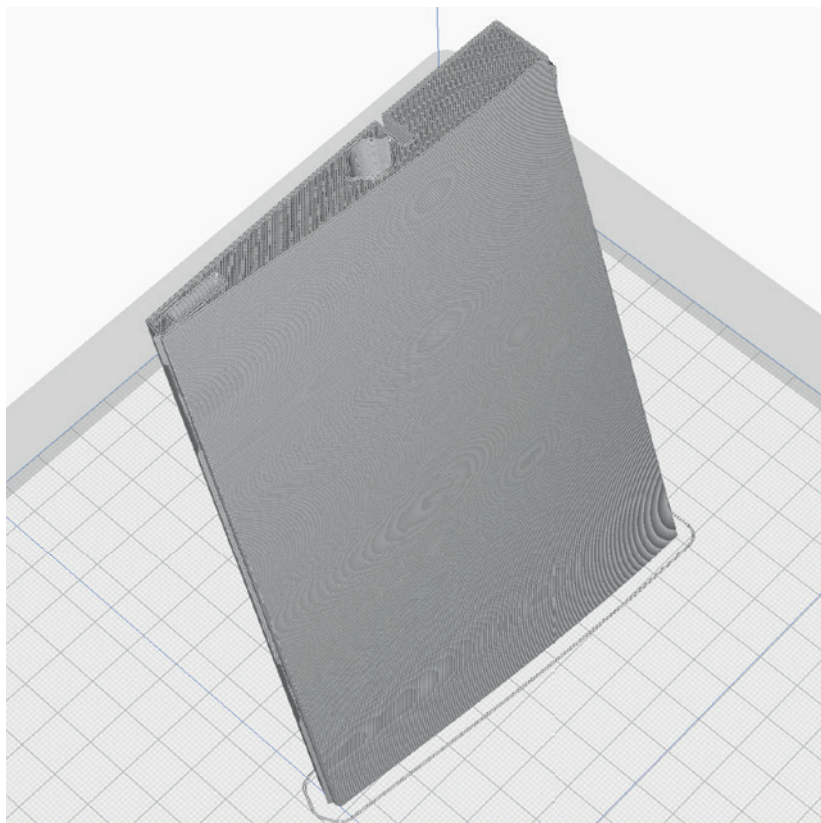
None required

Wing 10 left_p5_Jbw.stl
Wing 10 right_p5_Jbw.stl

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

ADDITIONAL SETTINGS

None required
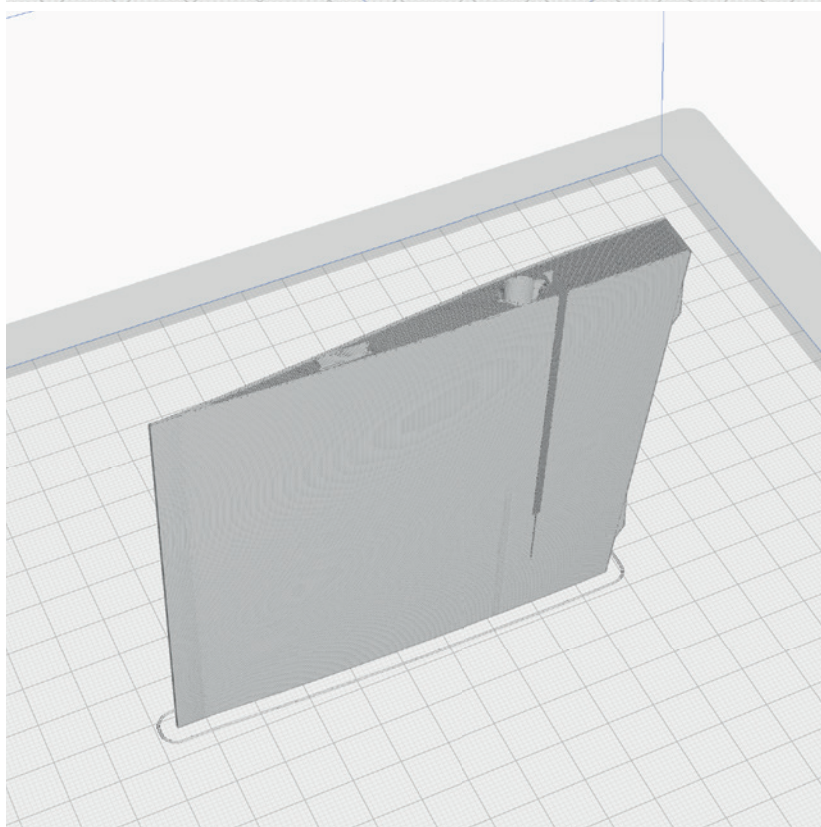
PROFILE P5_GYROID Light-Weight LW-PLA!

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!
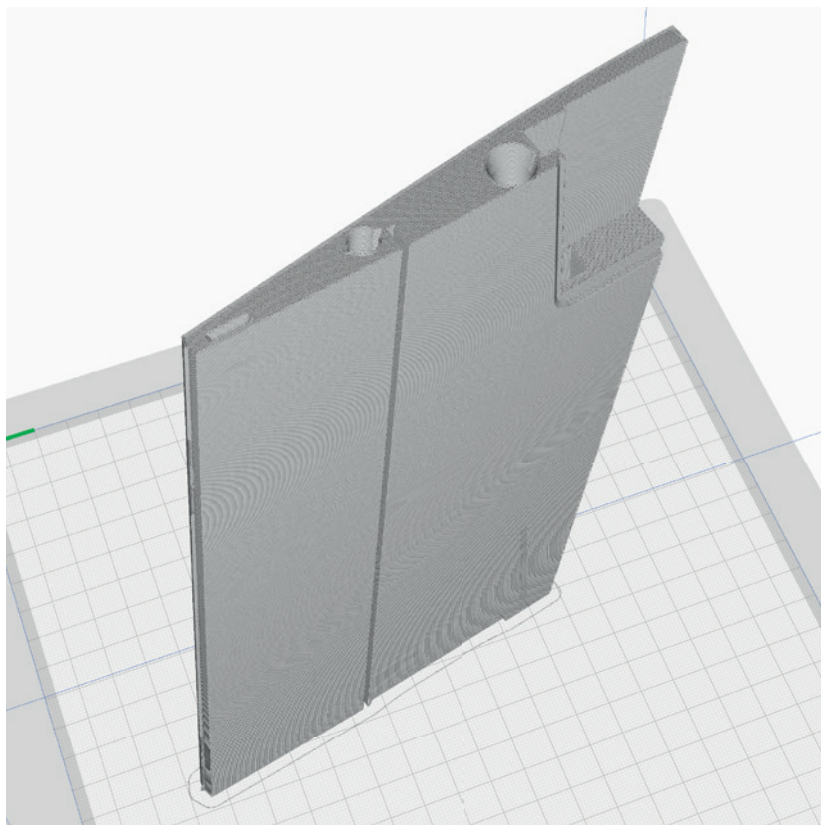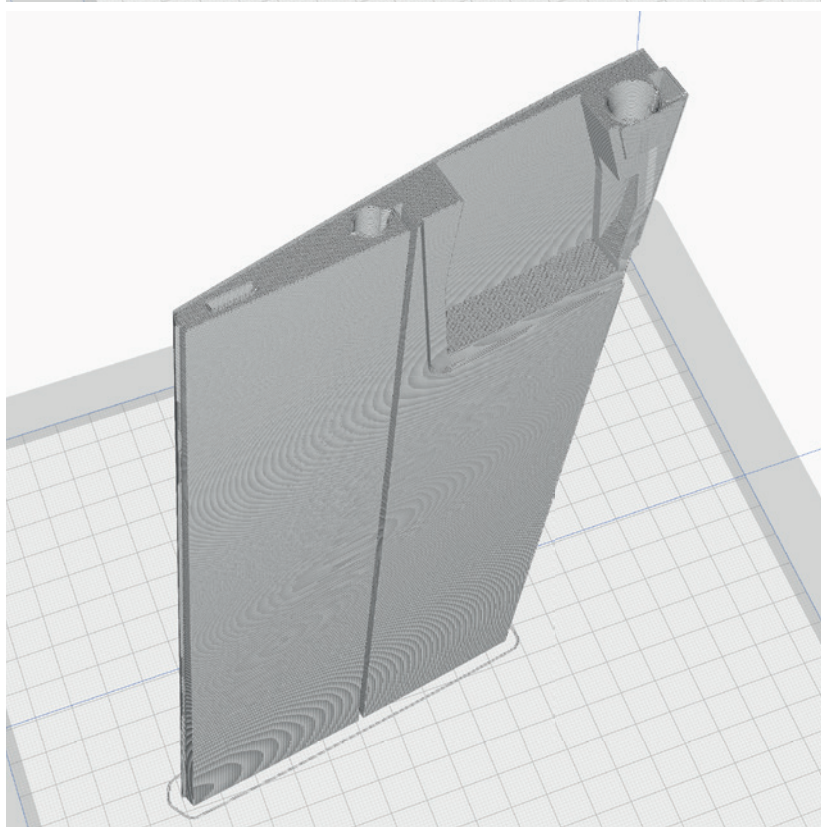
Winglet left_p5_Jbw.stl
Winglet right_p5_Jbw.stl

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

ADDITIONAL SETTINGS

None required

PROFILE P4_FLEX TPU A95 or VarioShore

The following parts must be sliced with the PROFILE P4_FLEX.
Please note the additional settings for the individual parts!

Tension belt TPUA95_p4_J.stl
Tension belt VarioShore_p4_J.stl

MATERIAL   TPU ~ A95, Weight: ~ 2 g

ADDITIONAL SETTINGS

• Infill Density 100 %

INFO: the tension belt made of VarioShore LW-TPU is shorter because the material is more elastic. We recommend the variant made of VarioShore.

INFO   **Tension belt length**

If you want to change them slightly in length, you can simply change the dimension of the X-axis in Cura (Uniform scaling must NOT be selected).

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!

Hinges_p4_Jbw.stl

MATERIAL   TPU ~ A95, Weight: ~ 2 g

ADDITIONAL SETTINGS

None required

ASSEMBLING MANUAL BIG WING

Follow the instructions „Gluing the parts" on page 6.

For now, glue the following pairs together:

CA
medium l.

Wing 1 left_p5+_Jbw.stl

Wing 6 left_p5_Jbw.stl

Wing 2 left_p5+_Jbw.stl

Wing 7 left_p5_Jbw.stl

Wing 3 left_p5+_Jbw.stl

Wing 8 left_p5_Jbw.stl

Wing 4 left_p5+_Jbw.stl

Wing 9 left_p5_Jbw.stl

Wing 5 left_p5+_Jbw.stl

First remove Support

Wing 10 left_p5_Jbw.stl
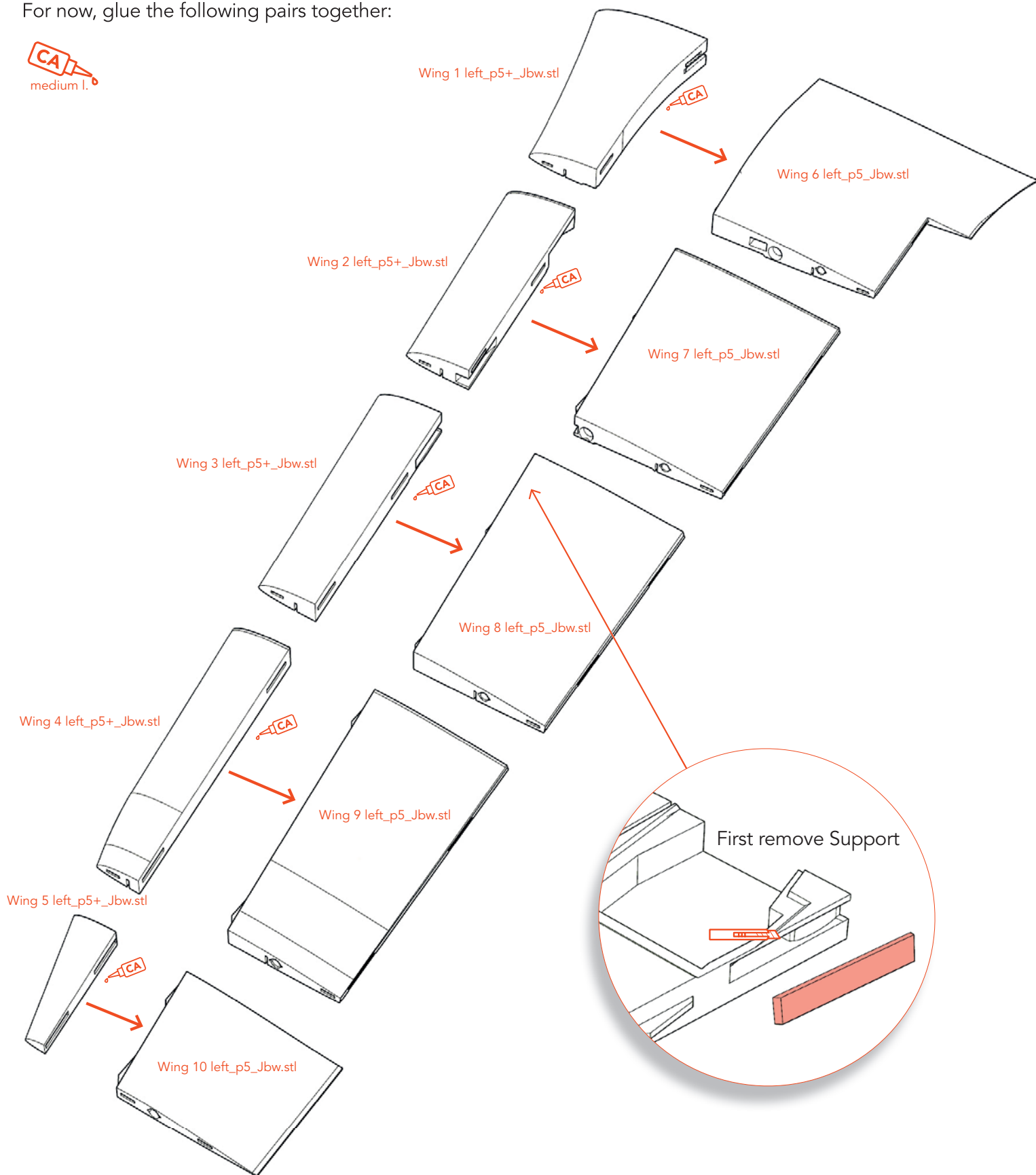
First glue the carbon tube into the first wing part with thin CA glue.

To ensure that the tube does not stick too early when it is inserted, insert it into the hole without glue and then let thin CA glue run into the two slots. The capillary action will give you a complete bond.

Before gluing the hole to the root rib, close it with adhesive tape so that no glue can leak out!

Wing 1 left_p5+_Jbw.stl

Wing 6 left_p5_Jbw.stl

CA thin liquid

CA thin liquid

CA

Carbon tube Ø6*880mm
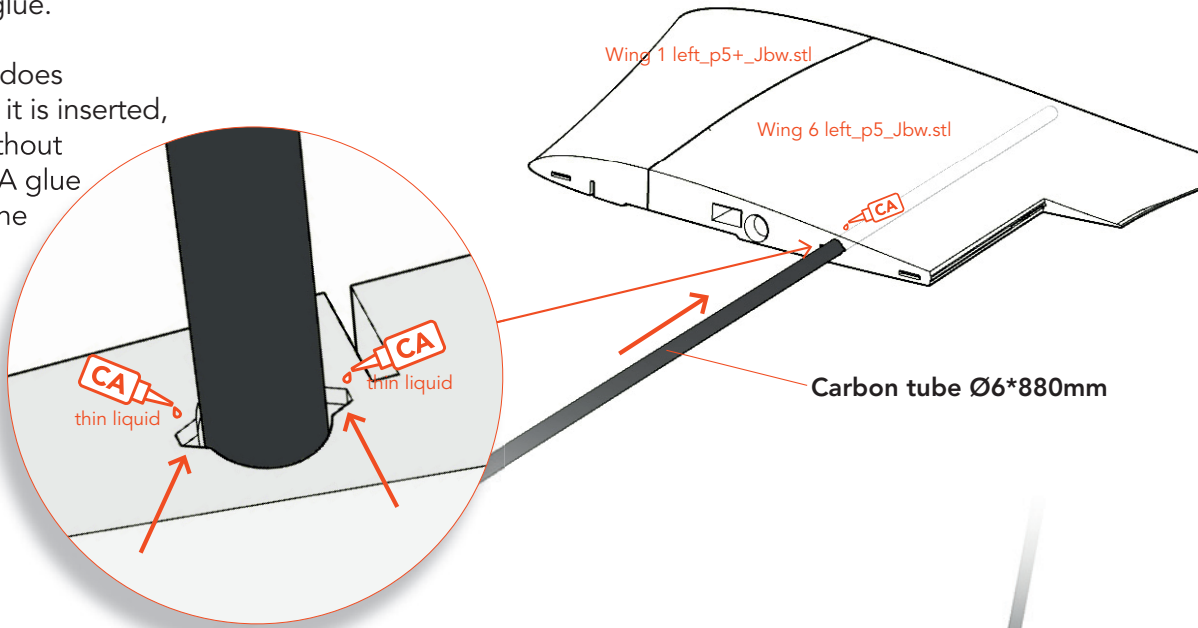
Now glue the second wing part with medium CA glue. **Do not apply glue to the carbon tube and make sure that no glue gets into this slots!**

Then glue the carbon tube as described above. **For the torsional stability of the wing, it is important that the carbon tube is glued to the wing over the entire length!**

CA thin liquid

STEP 1

STEP 2

CA medium l.

Interconnects_p1_Jbw.stl
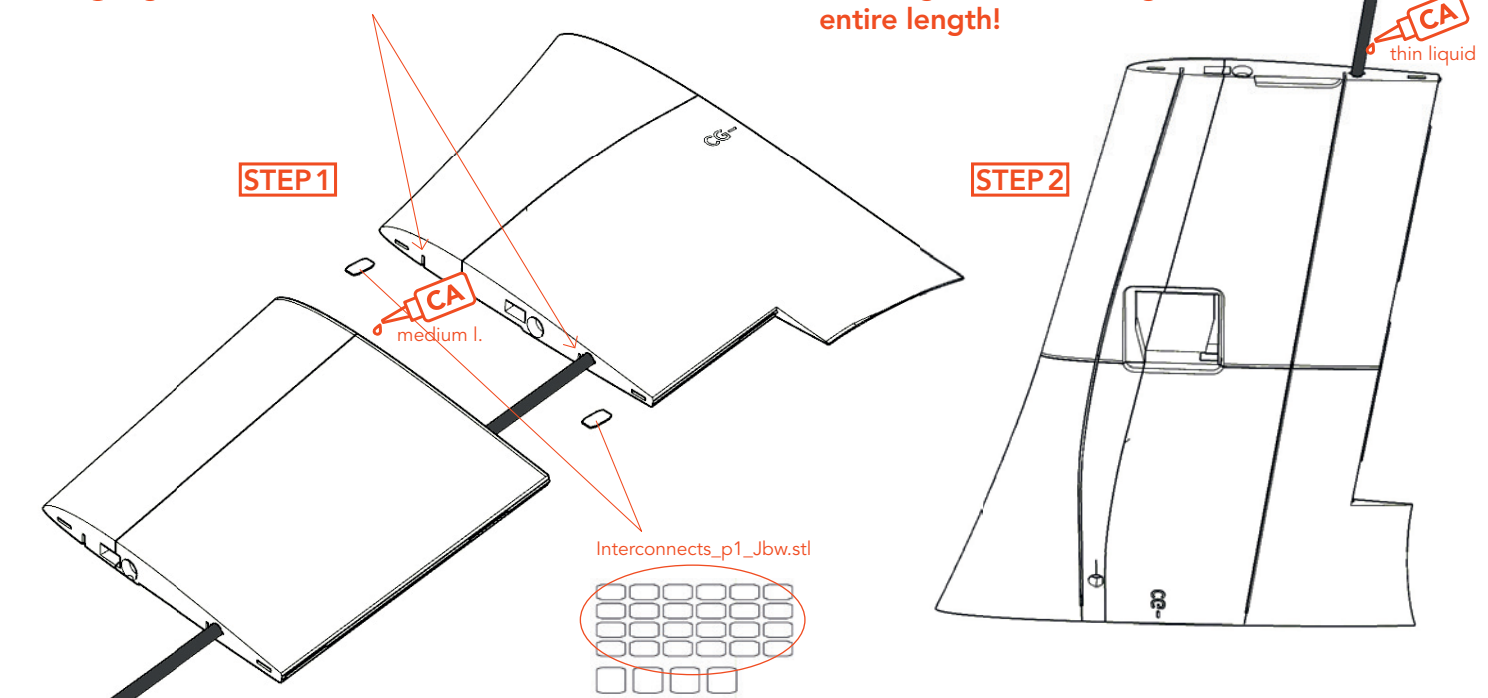
Now the remaining parts are mounted in the same way.
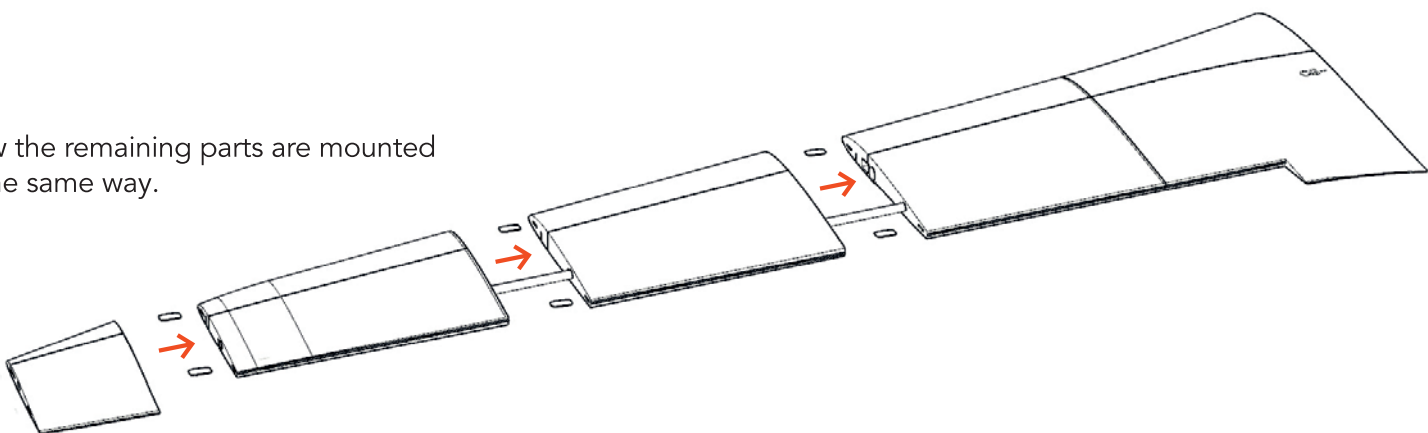
The carbon fiber stips (flat profiles) are important for the stability of the wing. If these are missing, the wing can start to **oscillate at high speeds or in turbulent air.** This is a common effect for flying wings with a large span, and can only be prevented by greater stability.

This is especially important when using the heavier EDF fuselage. With the lighter Glider fuselage these strips would not be absolutely necessary, but even here we recommend to install them.

As described below, you can also use other materials if you can't get these flat profiles in your country.

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_Jbw.stl from PLA or better Tough PLA several times and glue it as described.

CA
thin liquid

Carbon fiber strips (flat profile) 1*6*1000mm*

* 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.
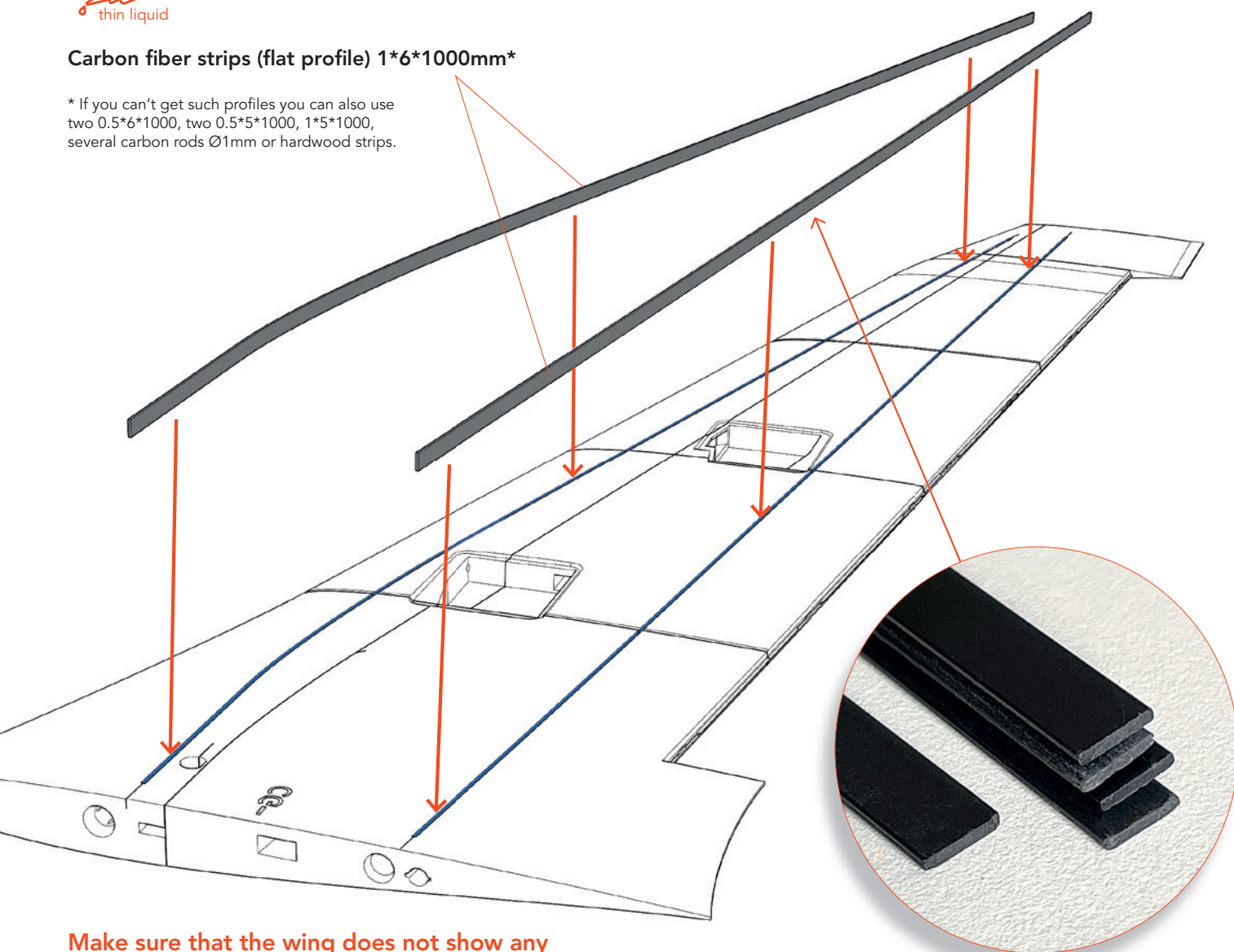
Make sure that the wing does not show any bending or tension during gluing.

Aileron assembly

Follow the instructions „Installing the hinges" on page 6.

Hinges_p4_Jbw.stl

The marks for the control horns must be down!

STEP 2

Aileron 2_p5PLA_Jbw.stl

CA

STEP 1

Aileron 1_p5PLA_Jbw.stl

Interconnects_p1_Jbw.stl

Flap 2_p5PLA_Jbw.stl

CA

Flap 1_p5PLA_Jbw.stl

Aileron Servo mounting

Tapping screws Ø2*6 mm

Tapping screws Ø2*6 mm

CA

Cable duct

CA

Cable duct

Wing parts_p1_Jbw.stl

Servocovers_p1_Jbw.stl

Wing parts_p1_Jbw.stl

Servocovers_p1_Jbw.stl
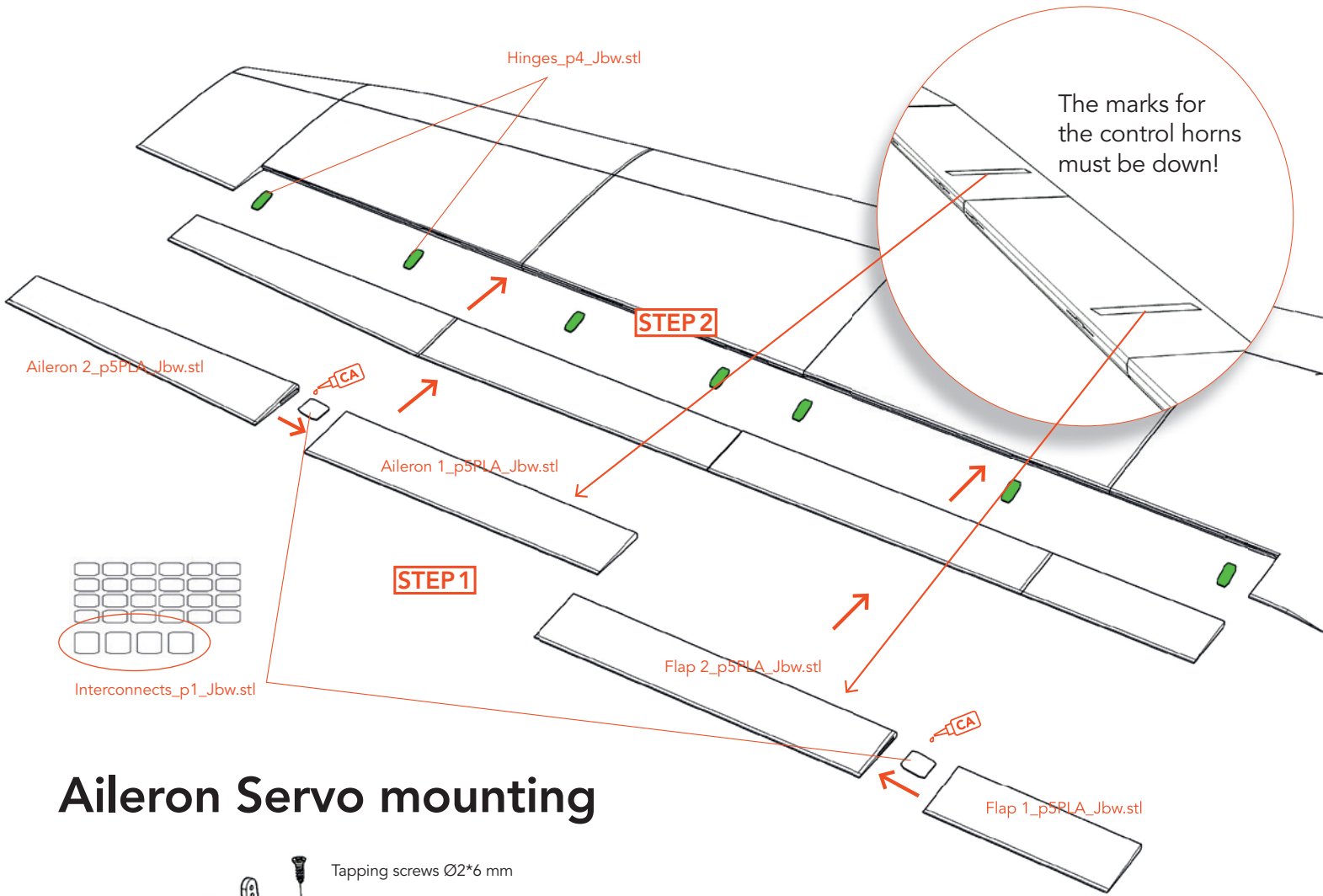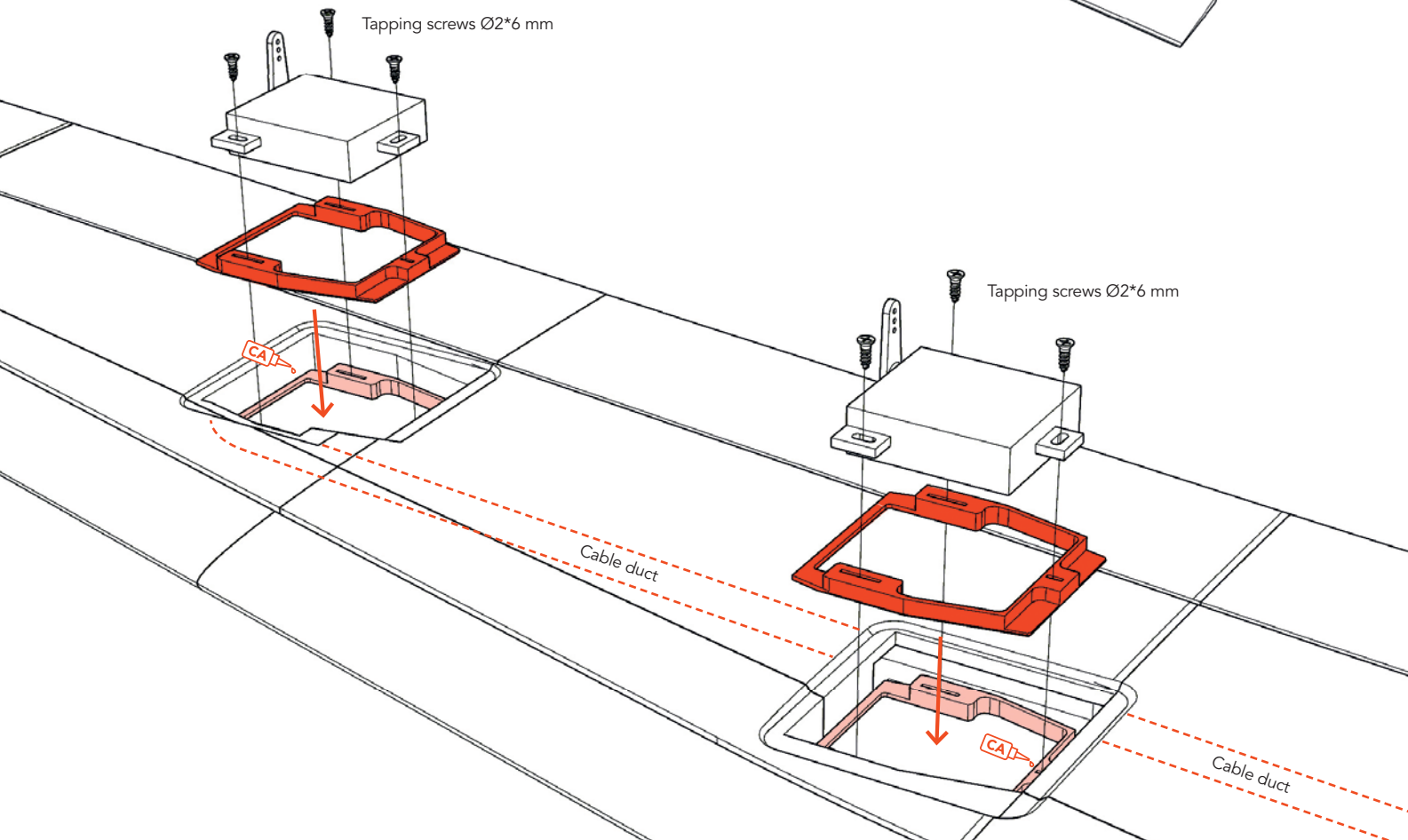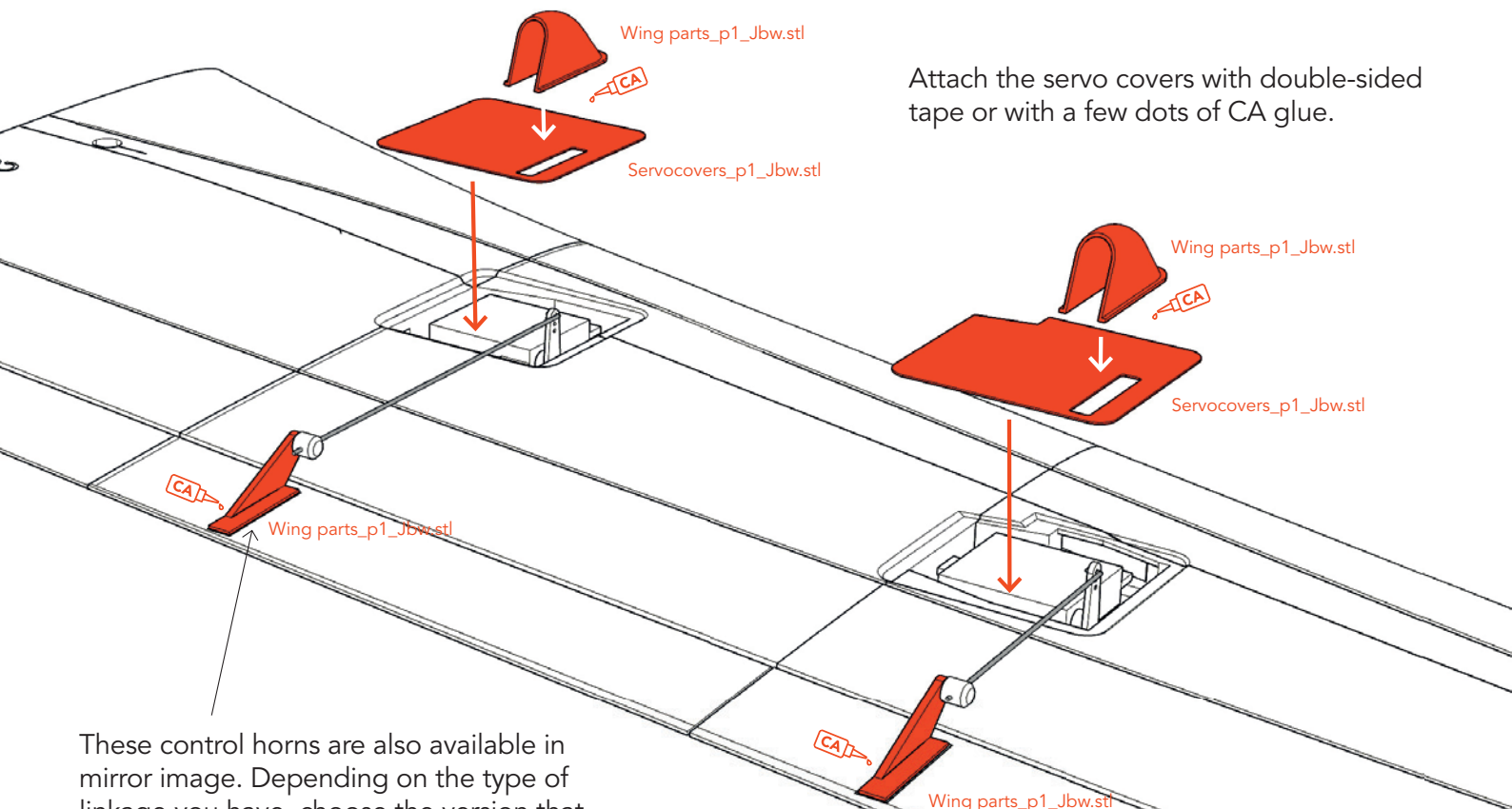
Attach the servo covers with double-sided tape or with a few dots of CA glue.

Wing parts_p1_Jbw.stl

These control horns are also available in mirror image. Depending on the type of linkage you have, choose the version that is more suitable for a straight linkage.

Wing parts_p1_Jbw.stl

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

Wing protector_p1_Jbw.stl

Carbon tube Ø8*480mm

Wing fastening

Tapping screw Ø2*8 mm

Wing parts_p1_Jbw.stl

CA

Bottom side

Tension belt TPUA95_p4_J.stl

The sleeve for the tension belt must be aligned as shown here so that the belt can be secured with a screw.

Wing parts_p1_Jbw.stl

CA

CA
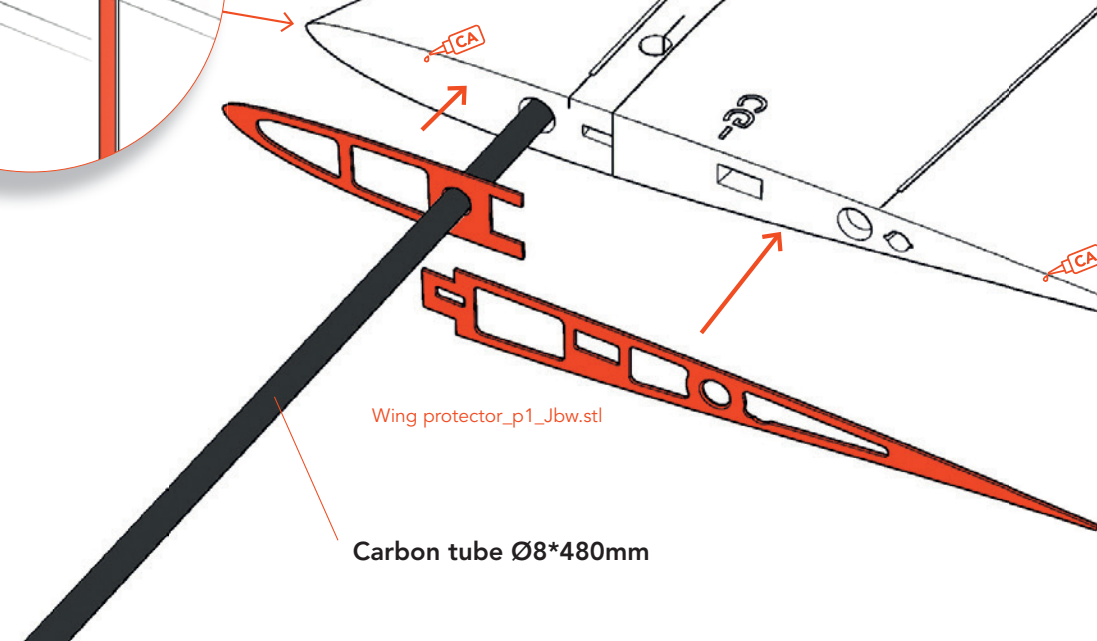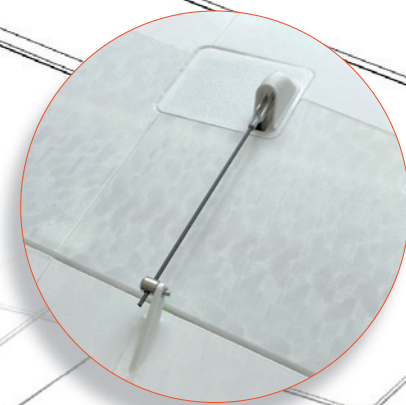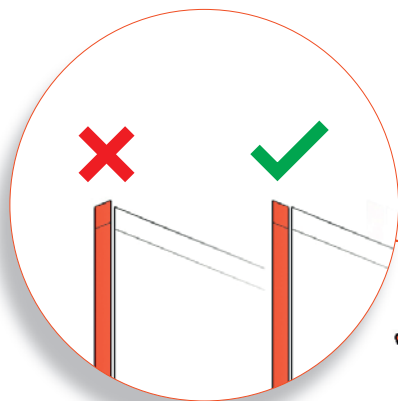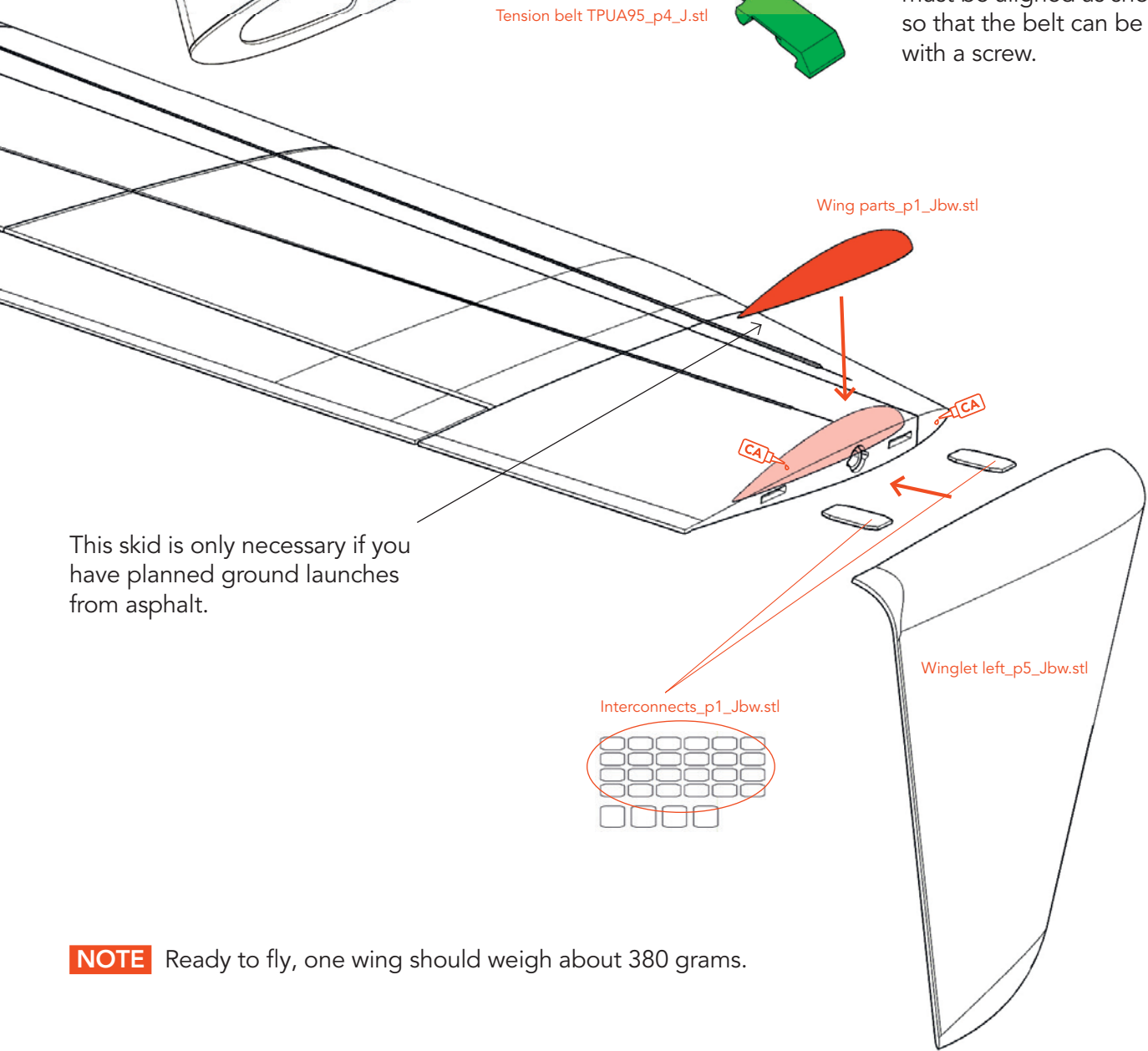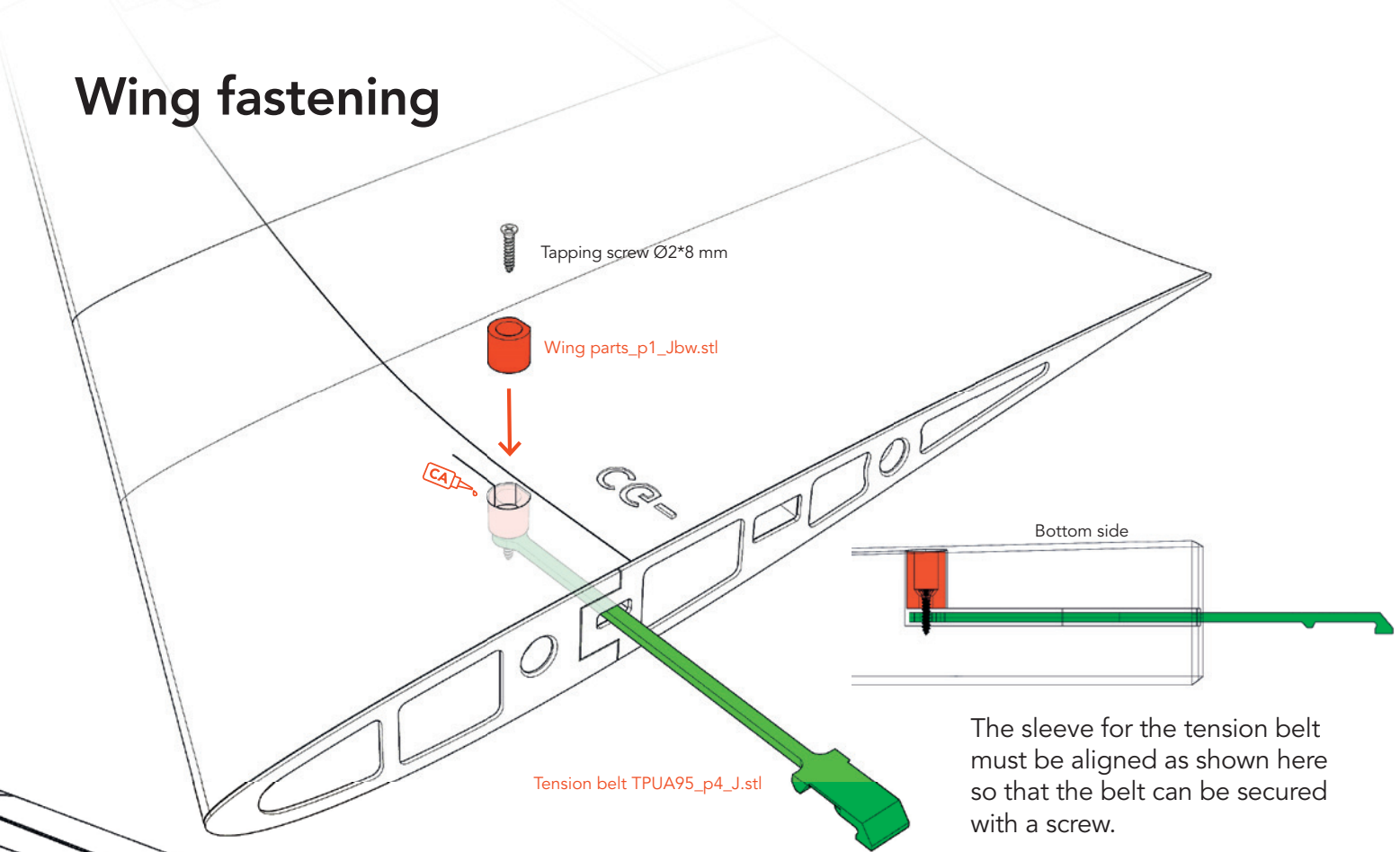
This skid is only necessary if you have planned ground launches from asphalt.

Winglet left_p5_Jbw.stl

Interconnects_p1_Jbw.stl

NOTE Ready to fly, one wing should weigh about 380 grams.

SETTINGS FOR FLYING – BIG WING

After installing the electronics and setting up the transmitter, check that the control surfaces are aligned correctly. Set the transmitter trim to zero. Align all rudders to zero position. Change the position of the moving parts by changing the length of the linkage from the servo arm to the control horn. In-flight adjustments can be made later with the trim.

Setting the servo travel

`AILERON`   **AILERONS** up: 12 mm, down: 12 mm and **FLAPS** up: 6 mm, down: 6 mm (coupled 50 %)

`ELEVATOR`   **AILERONS** up: 12 mm, down: 12 mm and **FLAPS** up: 6 mm, down: 6 mm (coupled 50 %)

`FLAPS`   up: 6 mm, down: 6 mm   `RUDDER`   (FUSELAGE EDF Rudder Version) left/rihgt: 18 mm

Expo setting

`AILERON`   40 %

`ELEVATOR`   30 %

`RUDDER`   0 %

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

Center of Gravity (CG)

The aircraft must balance **precisely** at the marks on the wing. Attention the different wings have different CG!

`NOTE` **With flying wings the optimum** CG range **is very small**, the JETWING must balance exactly on the marks on the wings!

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.
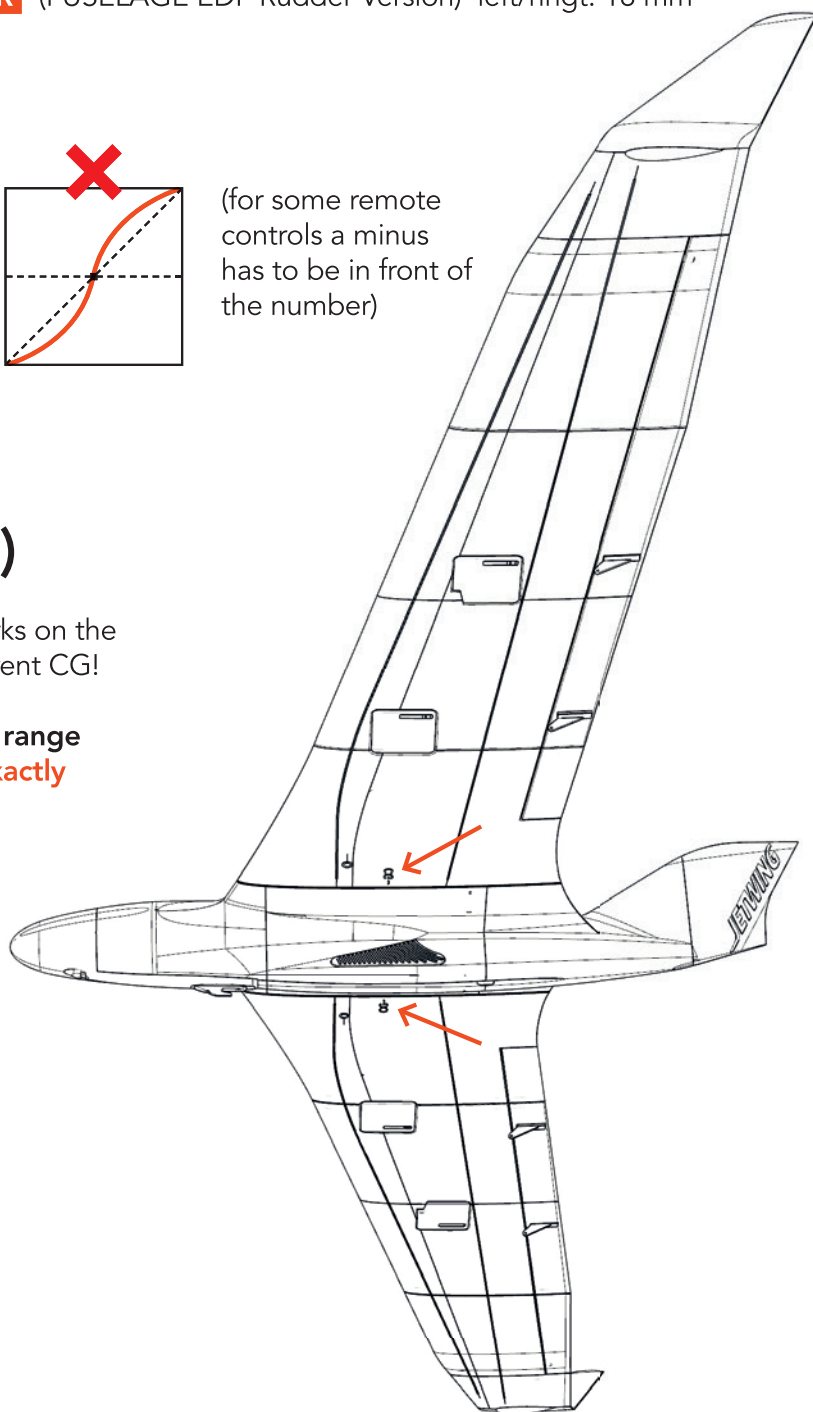
Important info about the stability of the BIG WING

The shopping list for the BIG WING includes a third **carbon tube Ø6mm**.

This should be inserted into the rear Ø8mm plug-in tube of the EDF FUSELAGE. If you want it to be extra strong, you can also glue a carbon rod Ø6*400 mm in the middle of the tube or a hardwood round rod. Due to the higher weight of the EDF FUSELAGE, the characteristic at high speeds is favored that an up and down bobbing of the wings begins.

This is a characteristic of larger flying wings that can only be contained by increased stability.
When using the GLIDER FUSELAGE, the additional tube is not necessary, but can still be used.
The firmer the main tube, the later the oscillation will start.

NOTE **If the JETWING starts to oscillate, simply reduce the speed!**

Carbon tube Ø8*1000mm

Carbon tube Ø6*1000mm (need not be glued)
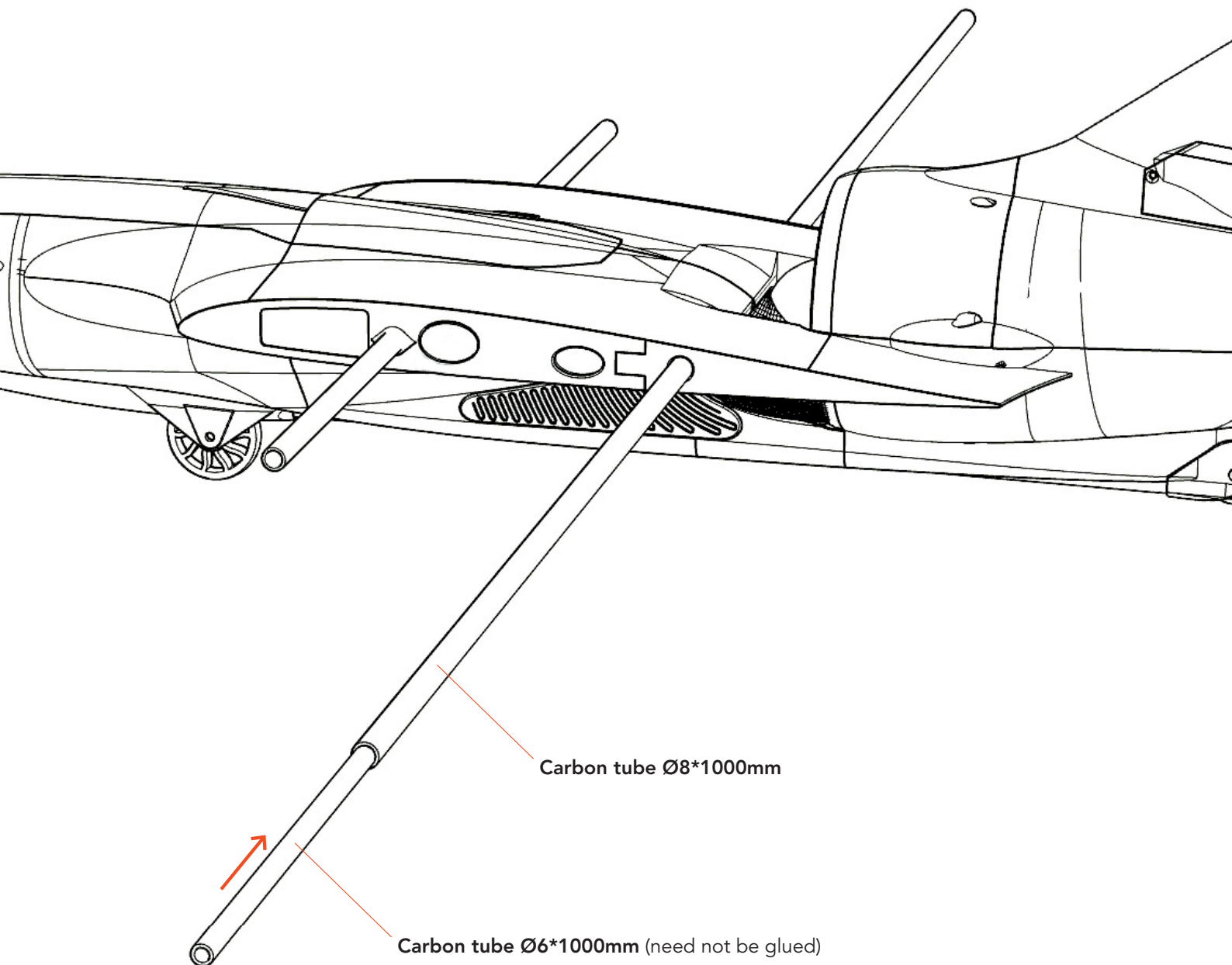
Control Direction Test – BIG WING

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

Elevator up

↑ ↑ 50 %   50 % ↑ ↑

Elevator down

↓ ↓ 50 %   50 % ↓ ↓

Aileron left

↑ ↑ 50 %

50 % ↓ ↓

Aileron right

50 % ↑ ↑

↓ ↓ 50 %

FLIGHT PHASES:

NORMAL

↑ + 1.5 mm UP   + 1.5 mm UP ↑

START
(hand launch)

↑ + 4 mm UP   + 4 mm UP ↑
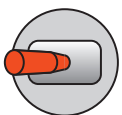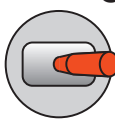
BUTTERFLY (Brake for landing)

This setting is rather soft, experienced pilots can increase the values to improve the braking effect.

↑ 7 mm UP   7 mm UP ↑

↓ 8 mm DOWN   8 mm DOWN ↓

Takeoff from the hand

If you want to take off from the hand, you should **definitely** set a flight phase START via a switch, which you can change to NORMAL at a safe altitude.

Hold the JETWING below the CG at the handling surfaces and throw it upwards by about 10° at 3/4 throttle or full throttle.

Flight phase: START

min. 3/4 throttle

~10°
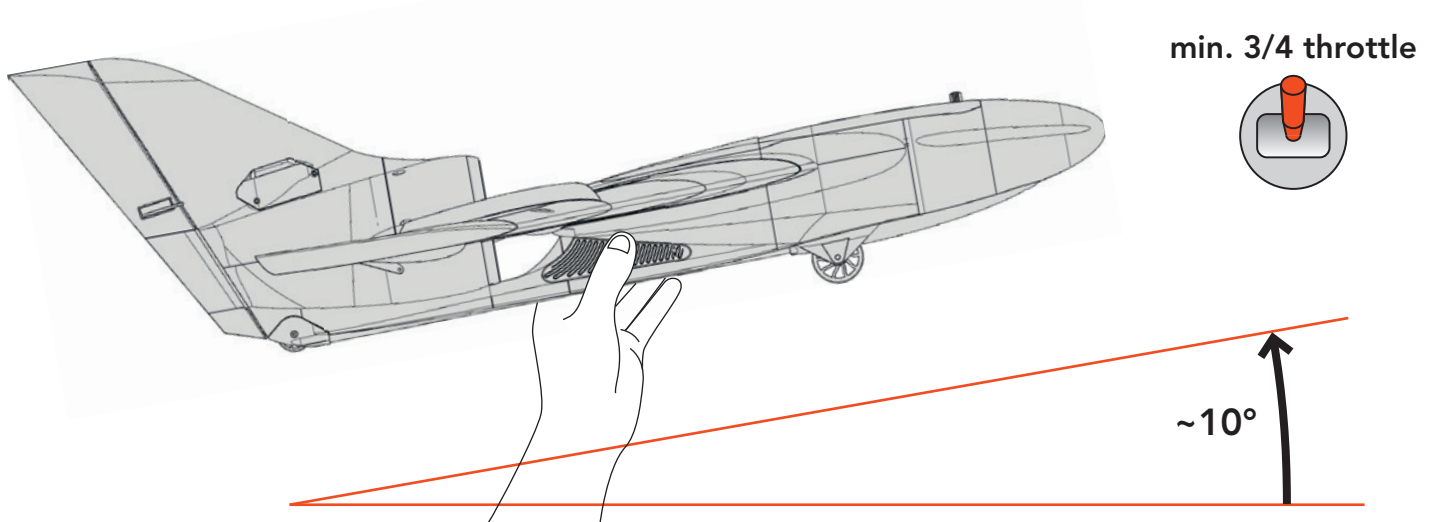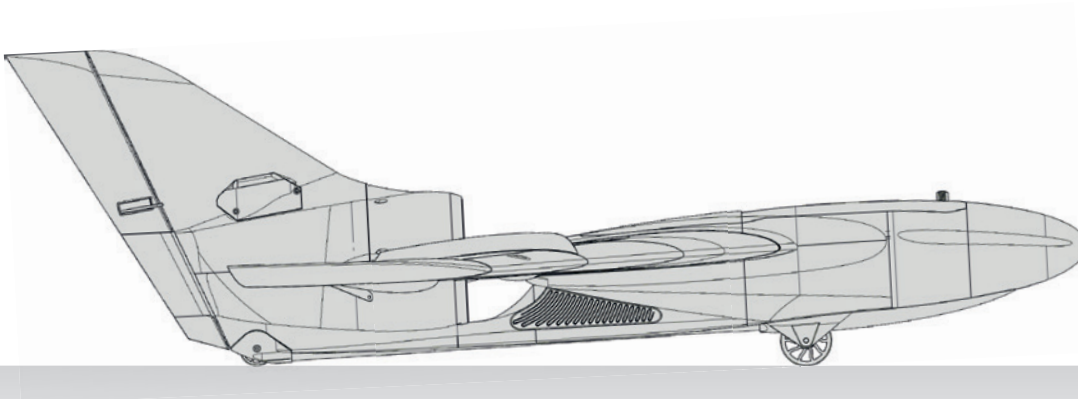
Takeoff from ground

Flight phase: NORMAL

Technical specifications

Standard WING with FUSELAGE EDF version

WINGSPAN 1270 mm/50 inches

LENGTH 739 mm/29 inches

WEIGHT

- FUSELAGE GLIDER: from 350 grams (with Battery 2S 2200 – 130 g)

- FUSELAGE EDF: 1020 grams (with Rudder, Battery 4S, 3450 mAh, without Carbon tubes)

- Standard WING: 235 grams (one wing, without Carbon tubes)
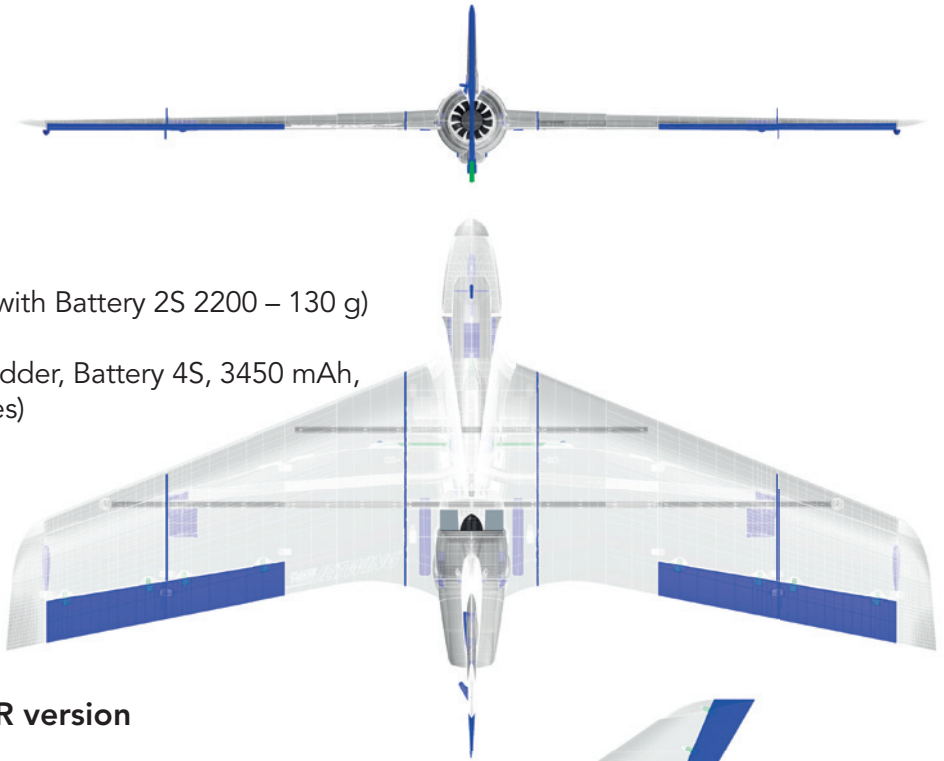
BIG WING with FUSELAGE GLIDER version

WINGSPAN 2060 mm/81.1 inches

LENGTH 739 mm/29 inches

WEIGHT 370 grams (one wing with Carbon)

AGE RECOMMENDATION 14+

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

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.

We develop our models to the best of our knowledge and belief. We accept no liability for consequential damage and injuries caused by improper use or incorrectly printed parts. **Please be careful when handling motors, batteries and propellers** and only move your model with insurance and in approved places!

PLANE PRINT