

# Zanonia Macrocarpa



**3d-printz.at**  
...hinterlässt EinDruck!

3d-printz Original

Take-off weight: approx. 390 g

Empty weight: approx. 150 g

Wingspan: approx. 1100 mm

Profile: Zanonia-1

CG: 90-92 mm

additional material:

RC system

Piano wire for articulations

8 pcs screws - 2x7mm (driver)

Superglue super viscous & viscous

Acetate strips for rudder attachment

Cutter knife

Sandpaper

4mm / 4.5mm carbon rod

1 – 1.5mm carbon rod (leading edge)

Trim lead 230g



Electronics:

Micro receiver

Battery (e.g. 1S / 500mah Lipo for Gliders)

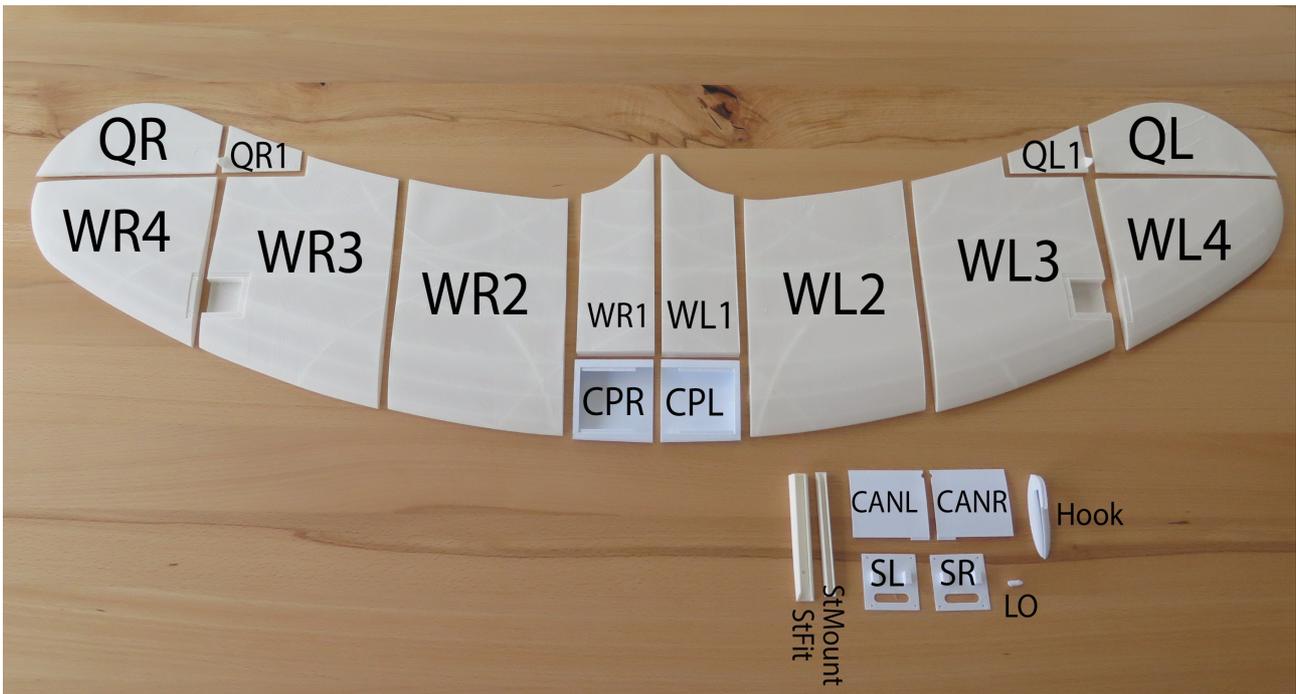
2x servos (5g servos)

Foreword

The Zanonia Macrocarpa is a very special flying wing modeled on the seed of the liana species of the same name. Its wafer-thin profile enables extremely low air resistance and the unique shape, as well as the possibility to fly it without an optional fin, make the Zanonia a real exotic. This form can be achieved on the one hand through the use of special plastic (Lightweight PLA) and on the other hand through a large amount of trim lead in the cockpit. When flying with a fin, the Zanonia shows a very sporty side - steering movements are implemented quickly and tight circles and quick turns without loss of speed are no problem. If you want the feeling of a "real" flying wing, simply remove the fin. Without lateral stabilization, the Zanonia is a bit sluggish and shows horten-like behavior patterns, but can still be mastered wonderfully - provided you have the right CG.

individual parts

Please check first of all whether all parts in your kit are present and intact:



Construction:



As a preparation, it makes sense to first deburr all edges carefully with sandpaper and remove residues from the manufacturing process. The end faces of the profile can also be easily roughened.

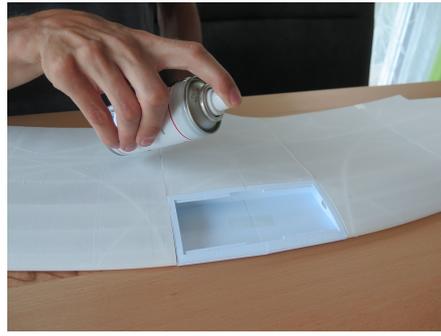


Then you can gently slide the individual wing segments WR4-WR1 onto the 4mm carbon rod and then connect them with super glue. Use some activator to get a firm adhesive connection.

Continue gluing the parts for the cockpit (CPR, CPL, CANL, CANR). These are also put together with superglue. They are made of impact-resistant PETG. When gluing the CANL and CANR Canopy parts, the locking part LO must also be placed in the recess at the same time - this should be freely rotatable after the gluing, so be careful not to glue it. To assemble the parts of the cover at the right angle, it is best to place them on the already glued cockpit parts before

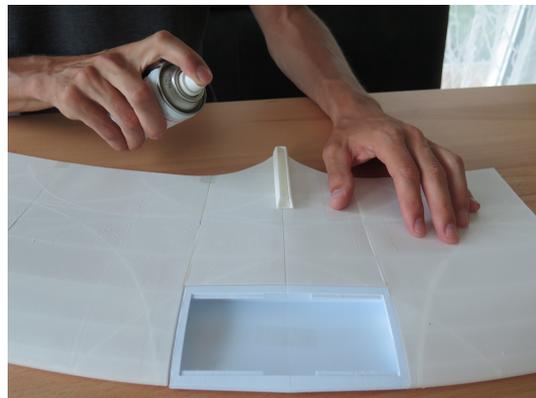


spraying with activator and only then use the activator, so the cover will fit perfectly into the recess later.



The cockpit can now be glued into the recess provided (also with super glue). Please make sure that there is no gap between the cockpit and wing - proper gluing is essential! Viscous superglue can also be used for this glue point if the gap dimensions are larger.

Now the left half of the wing (WL4-WL1) can be pushed onto the carbon rod and glued as before. Then the aileron halves (QR, QR1, QL, QL1) can be glued and the acetate strips can be cut for the articulation. Depending on the material, the slots for the acetate strips may be a little too narrow or generally not completely open - in this case, carefully uncover the slots with a utility knife until the hinge leaves fit. For the final gluing, first glue the acetate hinges into the ailerons (do not use an activator yet!) - then soak them completely with glue and insert them into the wing, only then should the activator be used, otherwise there is a risk that the glue is already hardened before the aileron is in the correct position. During the drying phase it makes sense to move the aileron back and forth to avoid stiffening the hinges.



For the removable fin, place the insert (StFit) at the end of the wing and fix it with superglue - make sure that it is aligned straight! Then the fin can be glued into the adapter (StMount) - hot glue is wonderful for this! Either balsa or (for a particularly uniform look) PVC multi-skin sheets (approx. 4mm thick) can be used for the fin (Template enclosed). After drying, the fin can simply be pushed in until it locks itself. If you want to fly without a fin, you can remove it at any time.



Now insert the 1,5mm Carbon rod into the recess at the leading edge – glue it in and optionally fix it with some powertape.

Last but not least, the two halves of the bungee hook can be put together and glued to the wing - the placement should be 1-2 cm in front of the center of gravity - the further back the greater the height, the further ahead the more stable the Zanoia during the startup.

Then only the installation of the RC system follows. Simply screw the servos (5g servos) into the covers and screw the covers into the wing.

### Throws

A general recommendation for the deflections is not really possible due to the different configurations. Basically, the Zanoia tolerates very large deflections because its shape tends to be sluggish (especially without a fin). Differentiation definitely plays a role - for a start, the negative throw should be around 30% of the positive throw. The neutral position varies depending on the chosen CG. If the fin is not used, this should be at least 1-2mm in height, which harmonizes with a center of gravity around 90mm.

### CG

A lot of trim lead is required to reach the specified focus area - this is due to the shape of the Zanoia. We recommend the use of beads, as these are optimally distributed in the wafer-thin cockpit of the Zanoia (be sure to arrange them at the very front near the leading edge!) And fix them with hot glue - this way you get the weight all the way forward, saving space and weight!

Please note that the center of gravity and the throws should be checked by the pilot himself for each Zanoia built - the values mentioned here are only guidelines.

We recommend the use of the fin for the first flight because it is much easier to fly to the ideal center of gravity.

**We wish you a lot of fun!**

**Enclosed: Template Fin**

