ECLIPSON

VORTEX
DUAL EDF ADD-ON
BUILD GUIDE

//TABLE OF CONTENTS

01 **INTRODUCTION** Page 03
Discover the Vortex EDF and the engineering philosophy behind its lightweight, high-performance design.

02 **SPECIFICATIONS** Page 04
Explore the aircraft's dimensions, weight, power requirements, and key performance data.

03 **PRINTING PARAMETERS** Page 08
Recommended materials, print settings, and best practices for achieving optimal results.

04 **ASSEMBLY** Page 07
Step-by-step instructions for assembling the aircraft from printed parts to final integration.

05 **SAFETY & LIABILITY** Page22
Review essential safety information, operating precautions, and important liability notices before flying.

06 **FAIR DATA USE** Page 23
Notice on the proper use. file integrity. And copyright restriction.

ECLIPSON VORTEX RC

REDEFINING RETRACTABLE EDF DESIGN

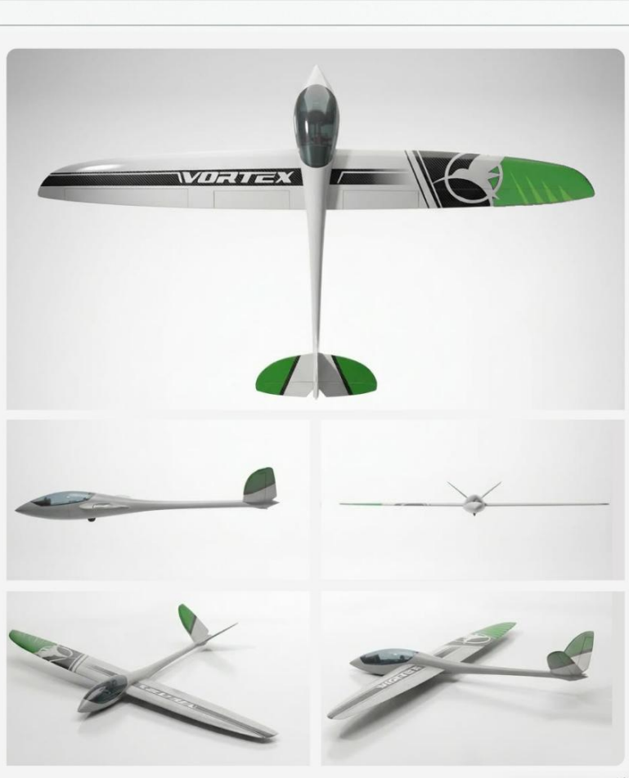
Welcome to a new and radical approach to retractable EDF integration.

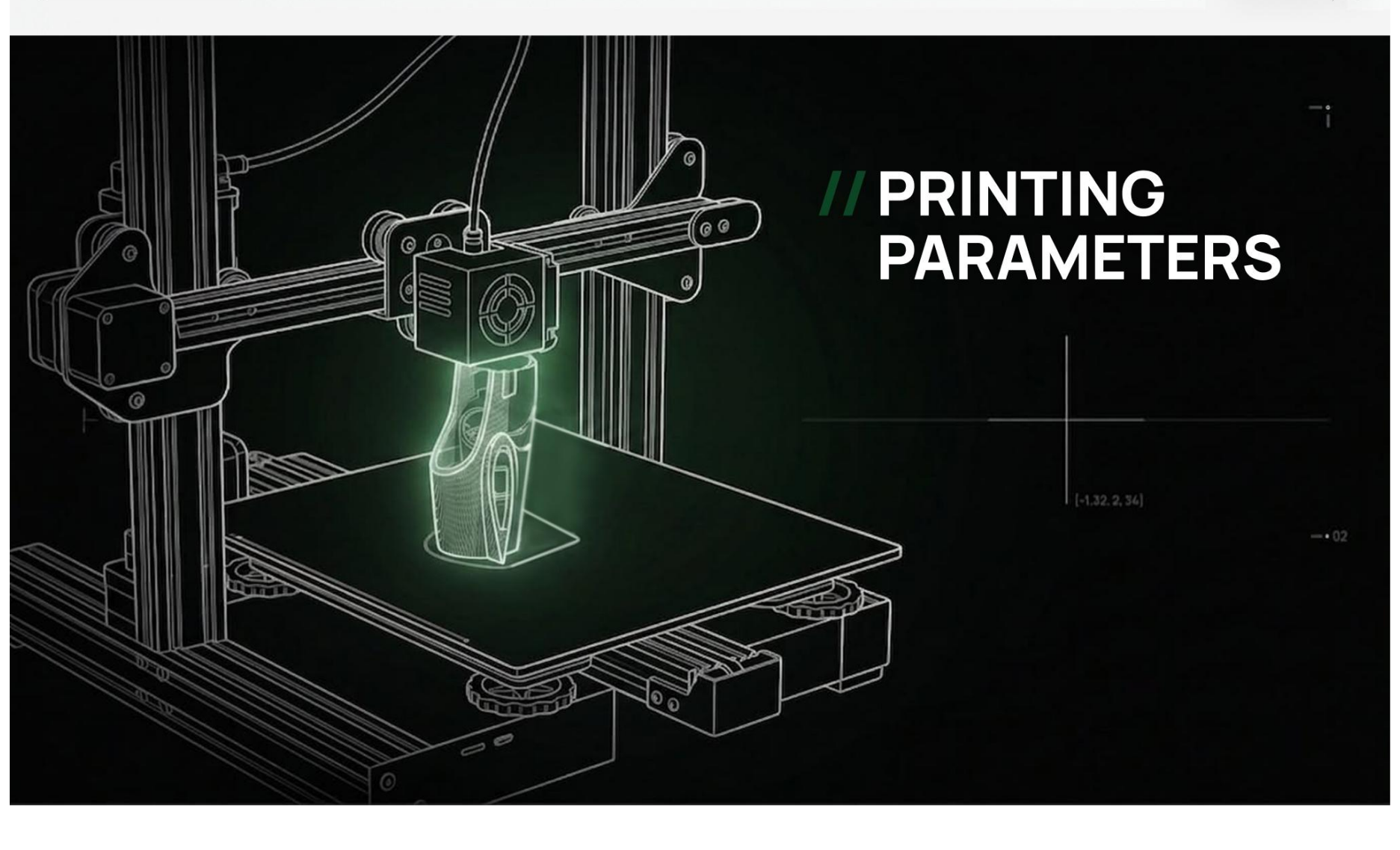
Unlike traditional top-mounted EDF configurations, which suffer from a nose-down pitching tendency due to an unfavorable thrust line and challenging center-of-gravity balancing, this innovative design overcomes those limitations with a fundamentally different approach.

Welcome to **Vortex**—the most advanced 3D-printed glider ever designed.

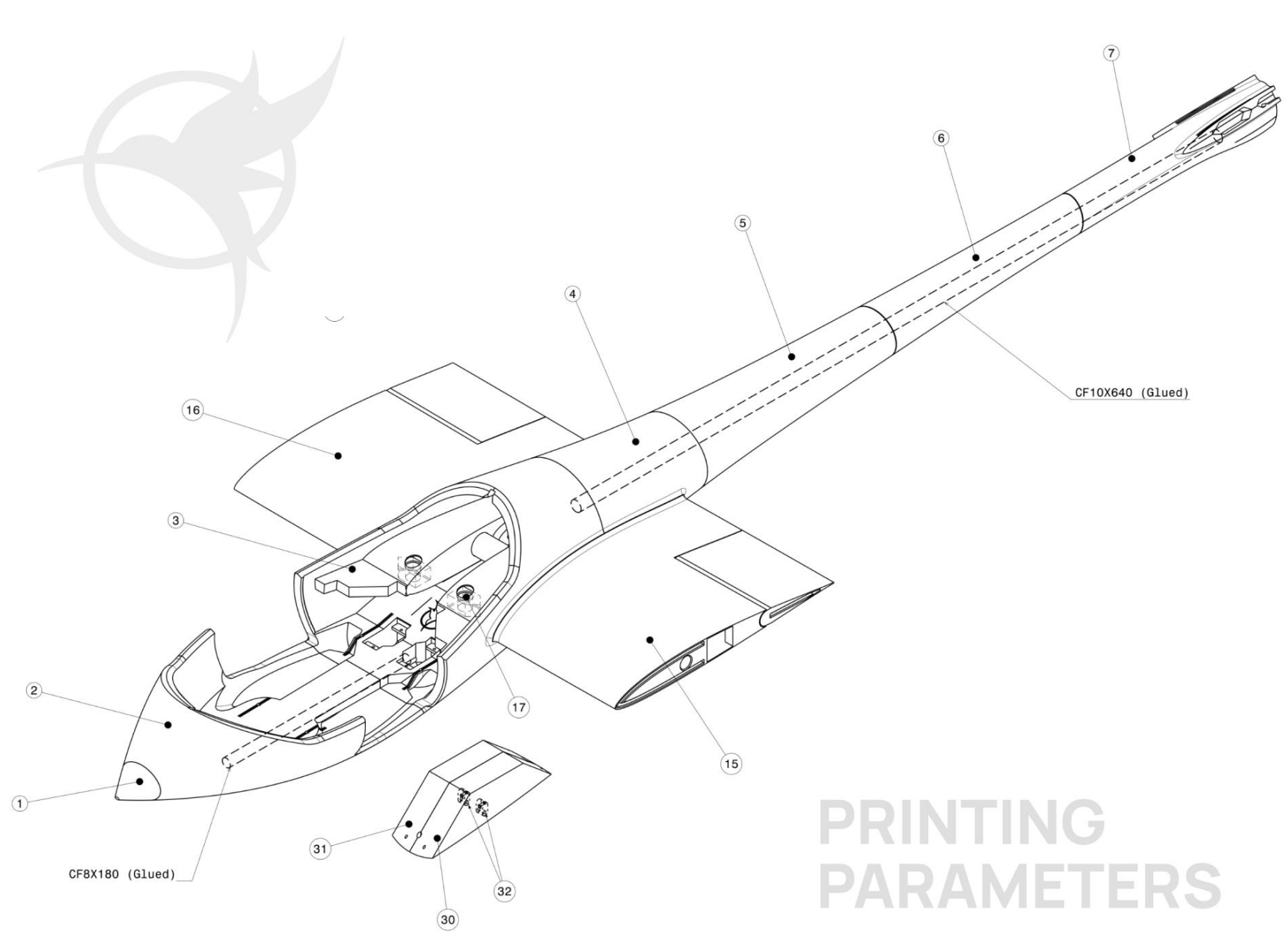
SPECIFICATIONS

Wingspan	2000mm
Ready to fly weight	2000g
Wing area	36dm2
Wing loading	55g/dm2
Lenght	1200mm
Wing Surface	37dm^2
Wing aspect ratio	11
Motor	2xEDF 50mm



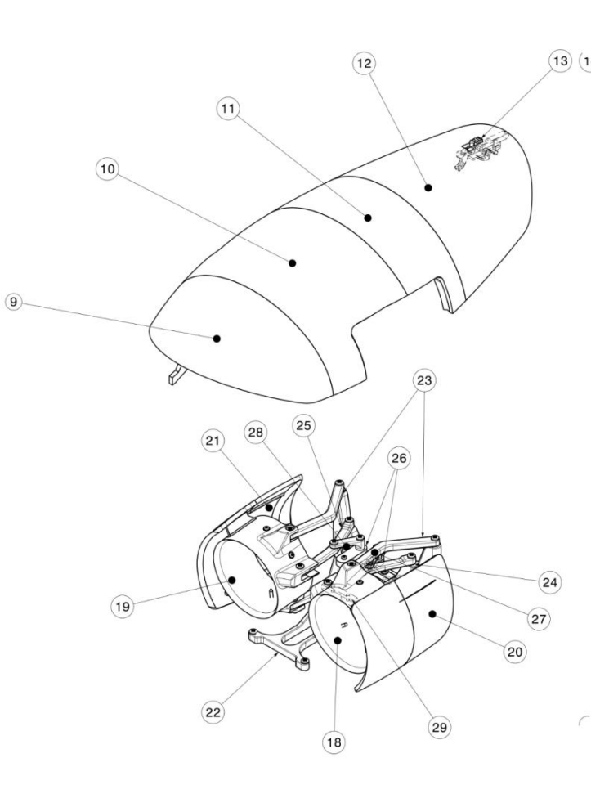


PRINTING PARAMETERS

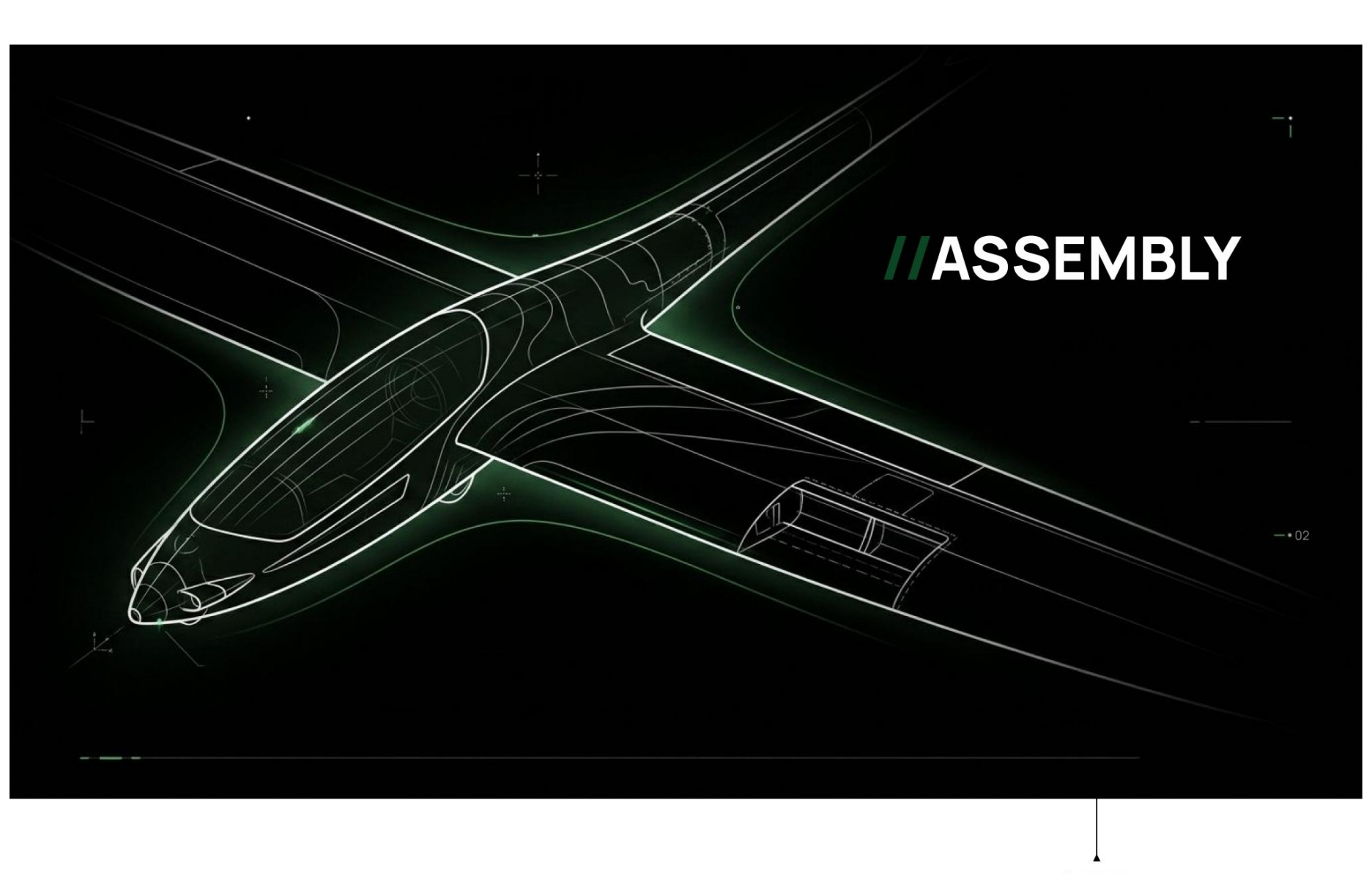


PRINTING PARAMETERS

PRINTING PARAMETER	CATEGORY		
	B2-LW	C	D
Material	LW-PLA	PLA/PETG TPU/ABS	PLA+/ PETG
Layer height (mm)	0.25	0,13	0,2
Bottom layers	4	4	4
Top layers	0	6	4
Wall lines / perimeter	1	2	1
Infill density (%)	0	10	3
Printing temp (°C)	235	205 to 240	220
Speed (mm/s)	55	50 to200	50 to 200
Flow (%)	53	100	100
Spiralize Outer Contour / vase mode	YES	NO	NO
Printing Support	NO	NO	NO
Nozzle diameter (mm)	0,4	0,4	0,4

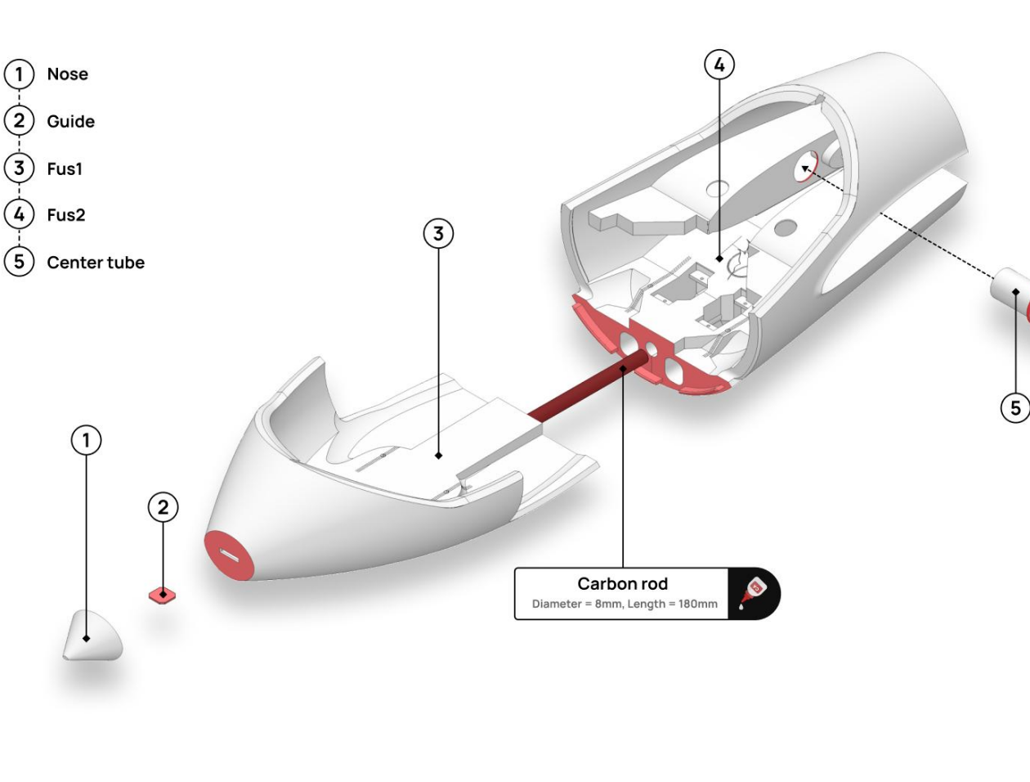


	ITEM	NAME	CATEGORY
	1	Nose	D
	2	Fus1	D
	3	Fus2	D
	4	Fus3	D
	5	Fus4	B2-LW
	6	Fus5	B2-LW
	7	Fus6	B2-LW
X12	8	Guide	C
	9	Canopy1	D
	10	Canopy2	D
	11	Canopy3	D
	12	Canopy4	D
	13	Lock1	C
	14	Lock2	C
	15	Wing1L	D
	16	Wing1R	D
X2	17	Insert_lock	C
	18	EDF_support_L	C
	19	EDF_support_R	C
	20	Fus_door_L	C
	21	Fus_door_R	C
	22	EDF_structure	C
X4	23	Top_bottom_arm	C
	24	Middle_arm_L	C
	25	Middle_arm_R	C
X2	26	Servo_horn	C
	27	Conector_arm_L	C
	28	Conector_arm_R	C
X2	29	Servo_spacer	C
	30	LG1	C
	31	LG2	C
	32	LG3	C



//ASSEMBLY

① Nose
② Guide
③ Fus1
④ Fus2
⑤ Center tube



STEP 01

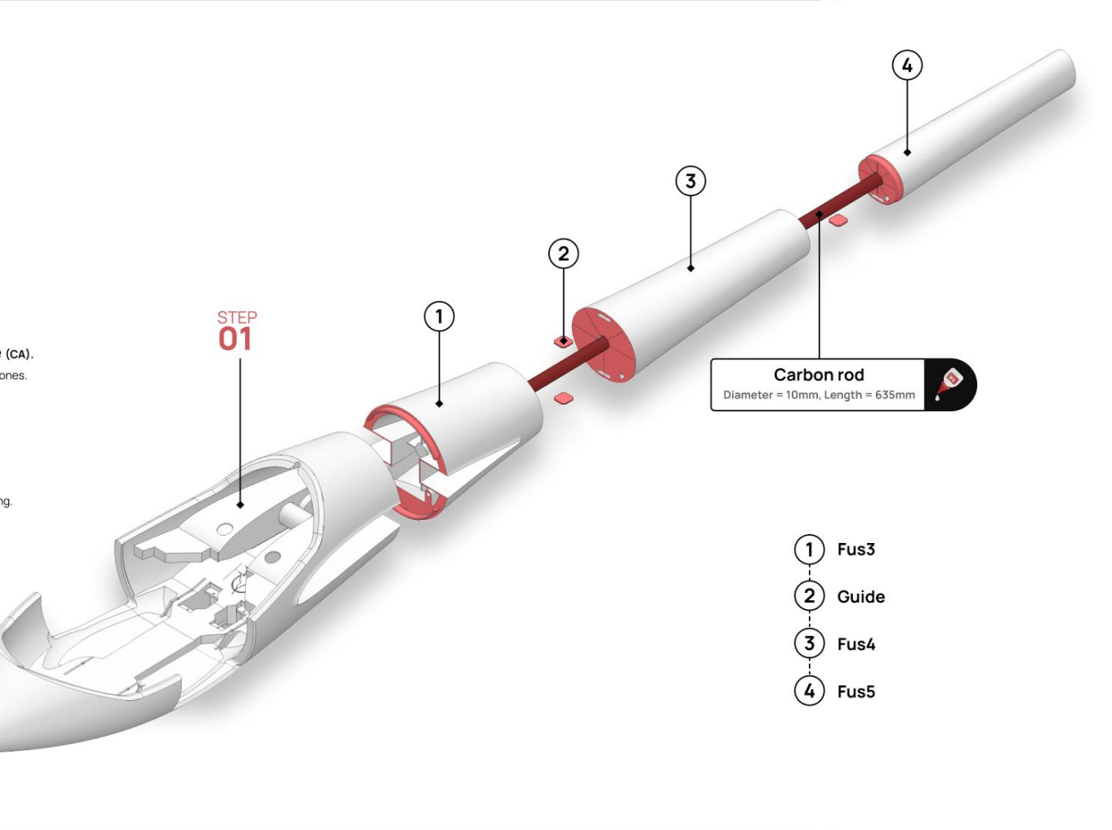
Apply cyanoacrylate (CA).
Apply only in the indicated red zones. Use medium-thickness CA.

Align and Press
Using a CA accelerator is recommended to speed up curing.

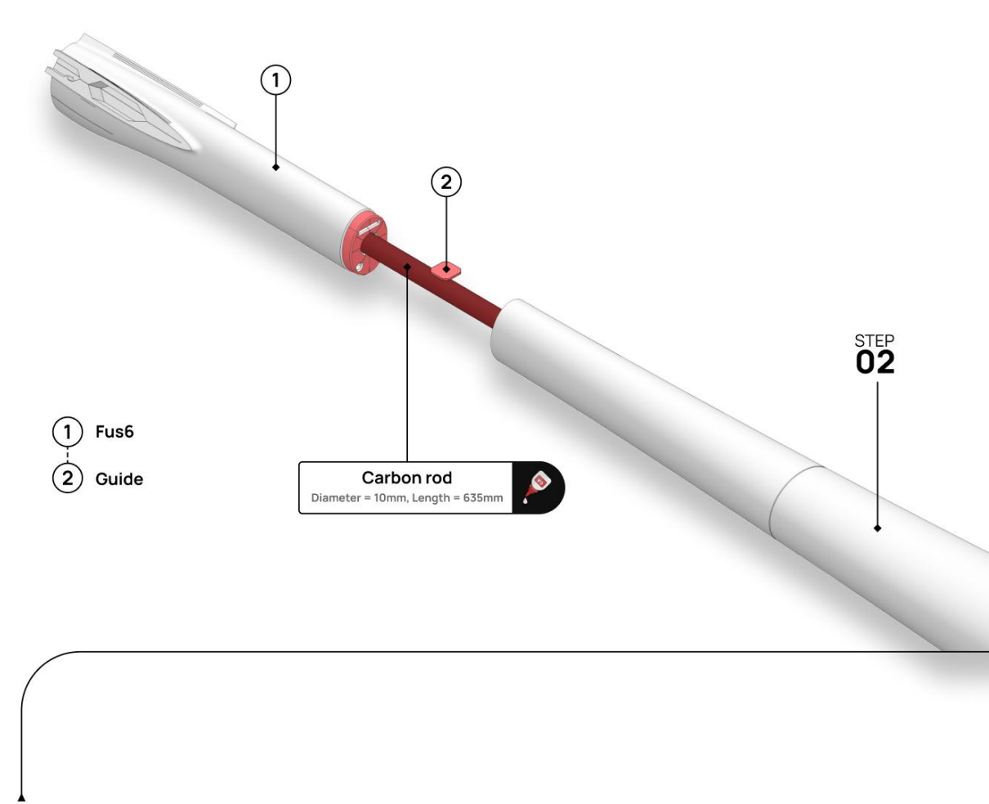
STEP 02

Apply cyanoacrylate (CA).
Apply only in the indicated red zones. Use medium-thickness CA.

Align and Press
Using a CA accelerator is recommended to speed up curing.



① Fus3
② Guide
③ Fus4
④ Fus5



① Fus6
② Guide

STEP 03

Apply cyanoacrylate (CA).
Apply only in the indicated red zones. Use medium-thickness CA.

Align and Press
Using a CA accelerator is recommended to speed up curing.

STEP 04

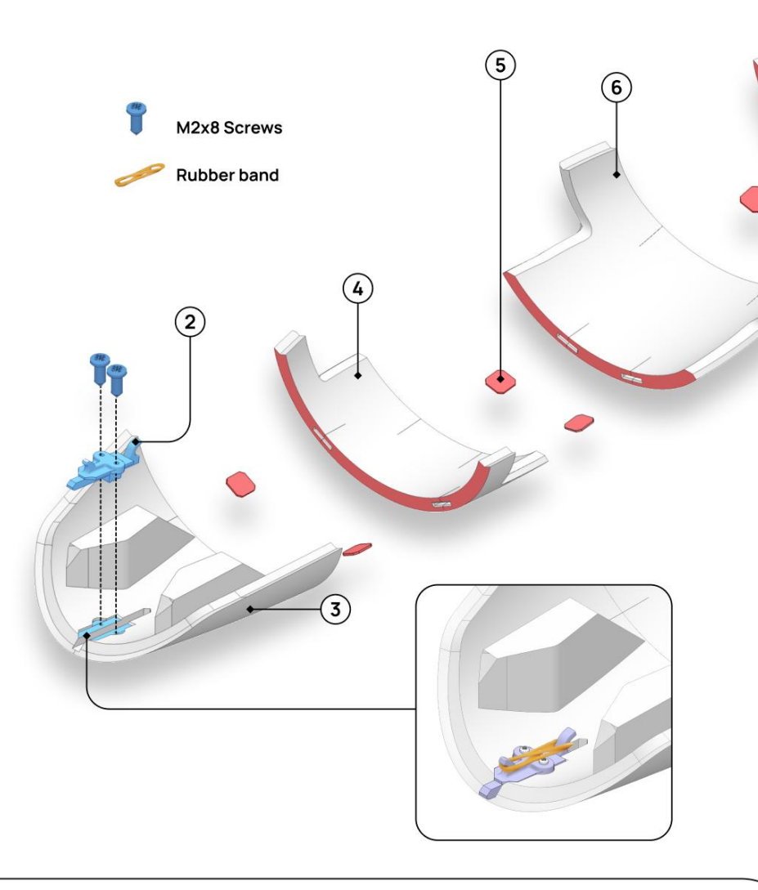
M2x8 Screws
Rubber band

Apply cyanoacrylate (CA).
Apply only in the indicated red zones. Use medium-thickness CA.

Align and Press
Using a CA accelerator is recommended to speed up curing.

Align & Screw
indicated components

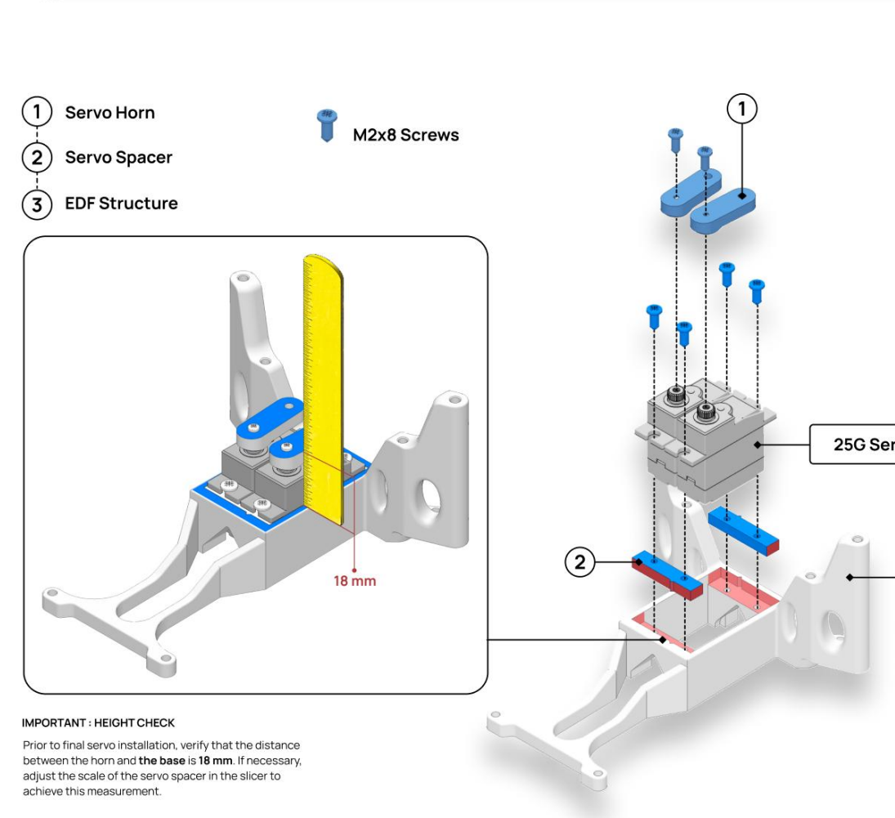
Join Lock 1&2
Place a rubber band around both tabs to keep the mechanism under tension



② Lock 1&2
③ Canopy1
④ Canopy2
⑤ Guide
⑥ Canopy3
⑦ Canopy4

① Servo Horn
② Servo Spacer
③ EDF Structure

M2x8 Screws



IMPORTANT : HEIGHT CHECK

Prior to final servo installation, verify that the distance between the horn and **the base** is **18 mm**. If necessary, adjust the scale of the servo spacer in the slicer to achieve this measurement.

STEP 05

Apply cyanoacrylate (CA).
Apply only in the indicated red zones. Use medium-thickness CA.

Align and Press
Using a CA accelerator is recommended to speed up curing.

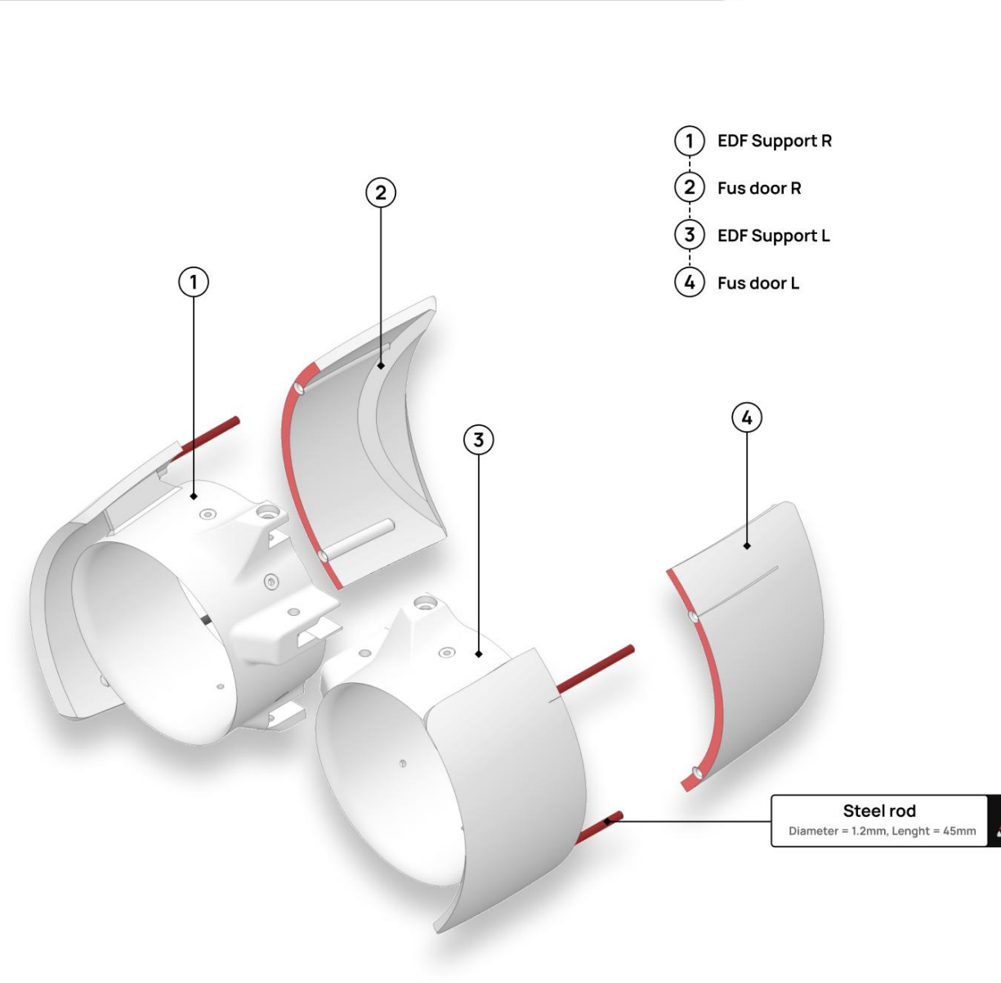
Align & Screw
indicated components

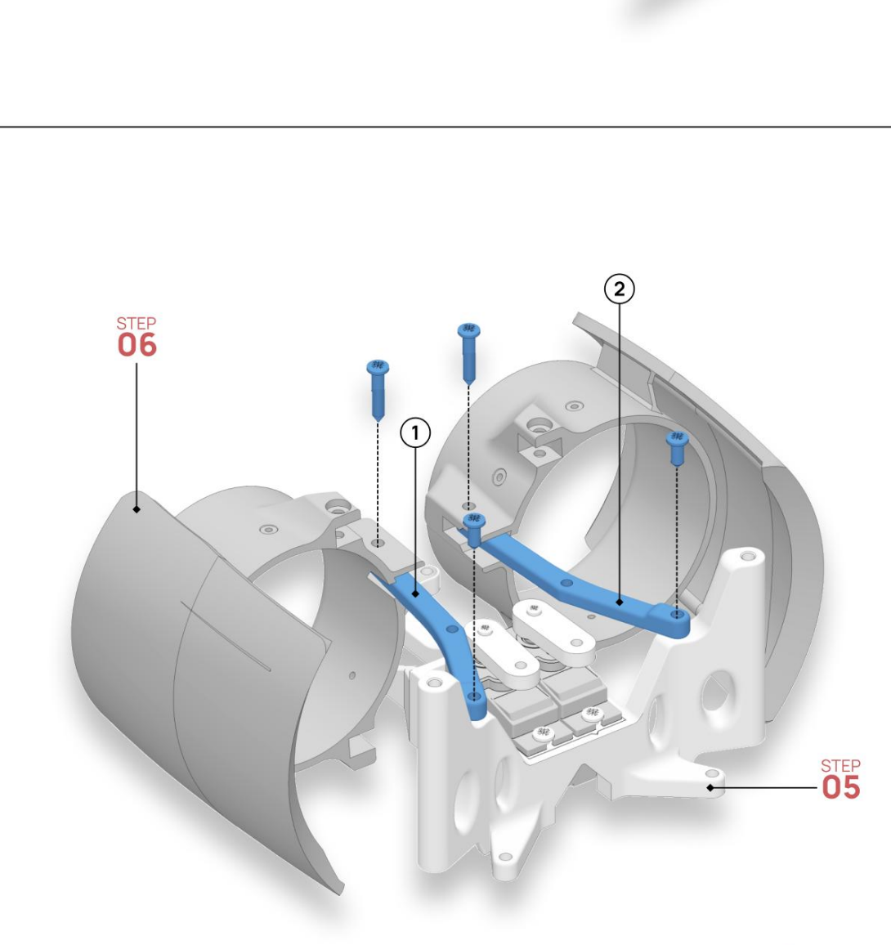
STEP 06

Apply cyanoacrylate (CA).
Apply only in the indicated red zones. Use medium-thickness CA.

Align and Press
Using a CA accelerator is recommended to speed up curing.

① EDF Support R
② Fus door R
③ EDF Support L
④ Fus door L





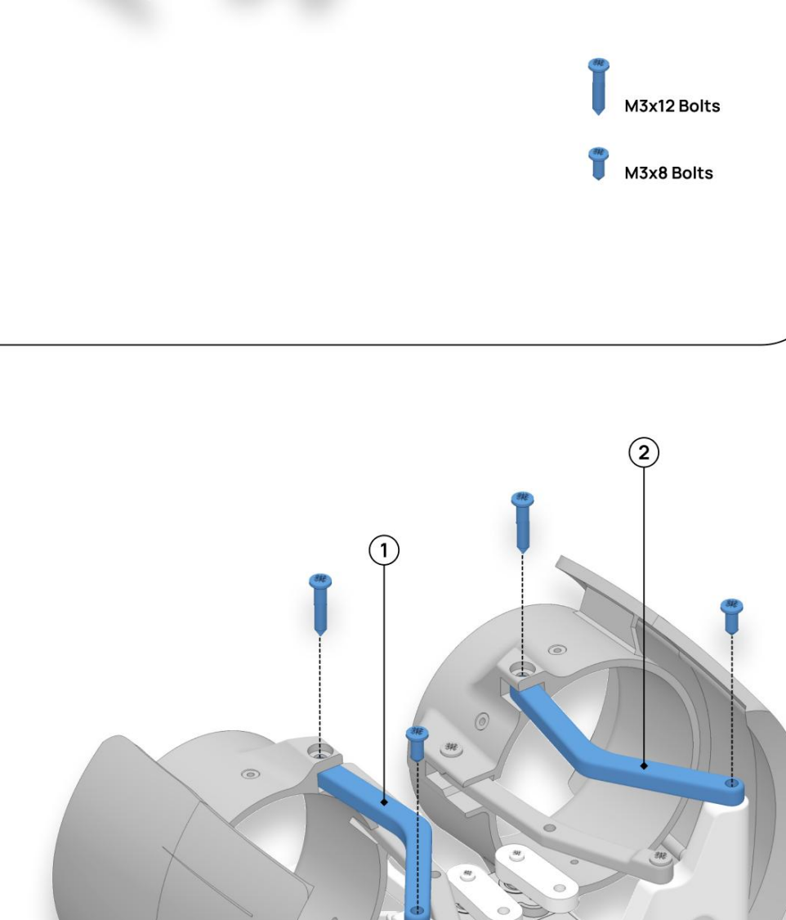
① Middle arm L
② Middle arm R

STEP 07

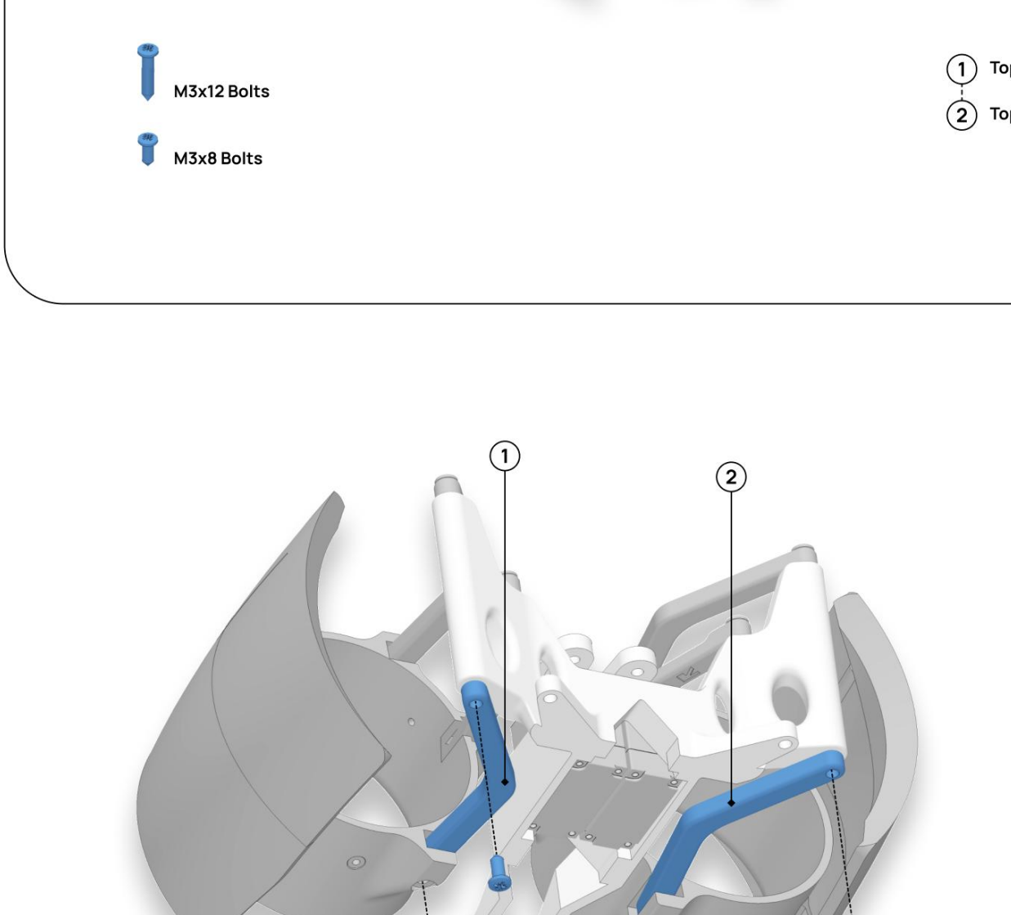
Align & Screw
indicated components

STEP 08

Align & Screw
indicated components



M3x12 Bolts
M3x8 Bolts



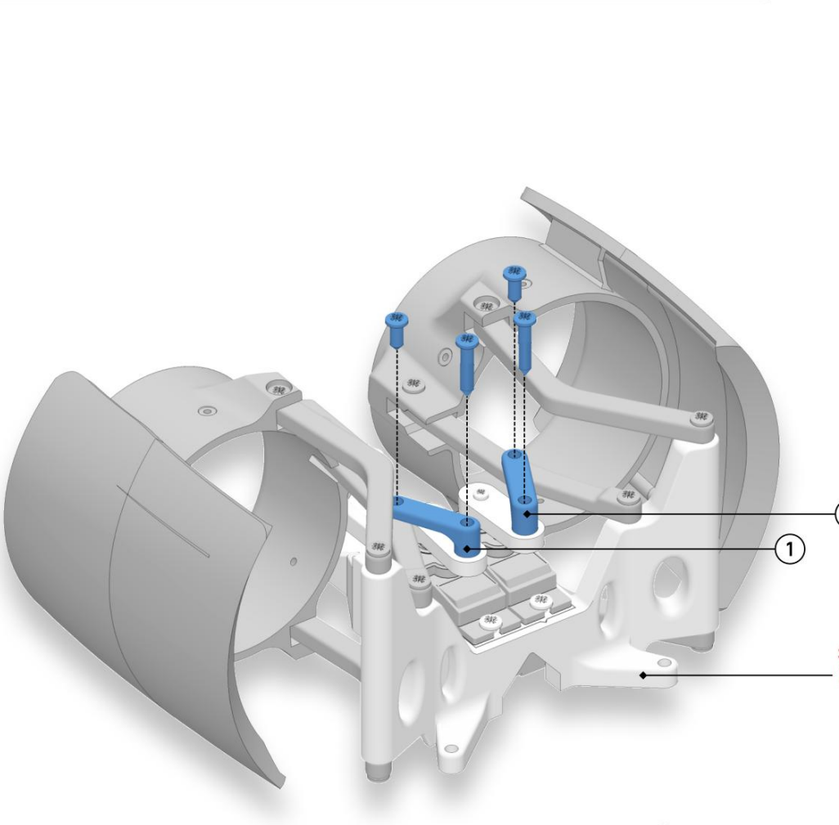
① Top_bottom arm
② Top_bottom arm

STEP 09

Align & Screw
indicated components

STEP 10

Align & Screw
indicated components

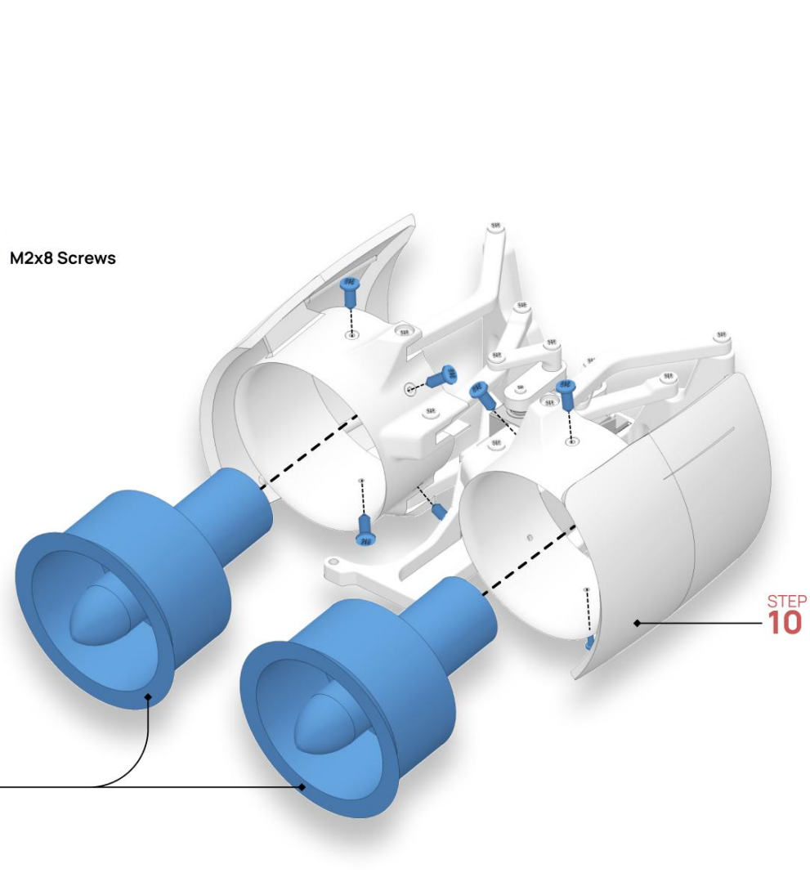


M3x12 Bolts
M3x8 Bolts

① Connector arm L
② Connector arm R

STEP 11

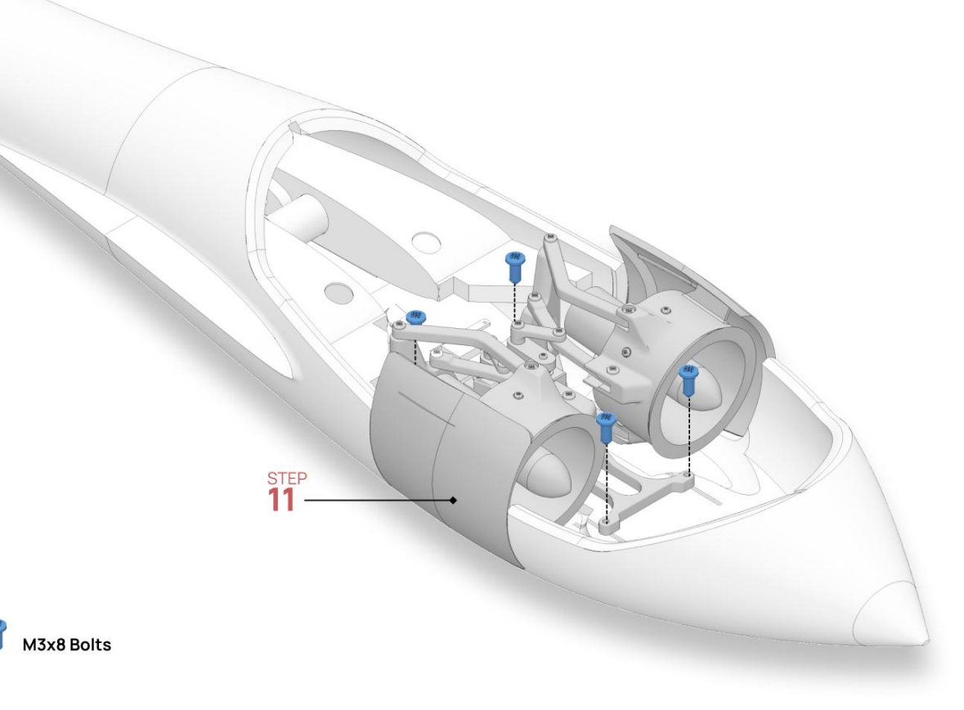
Align & Screw
indicated components

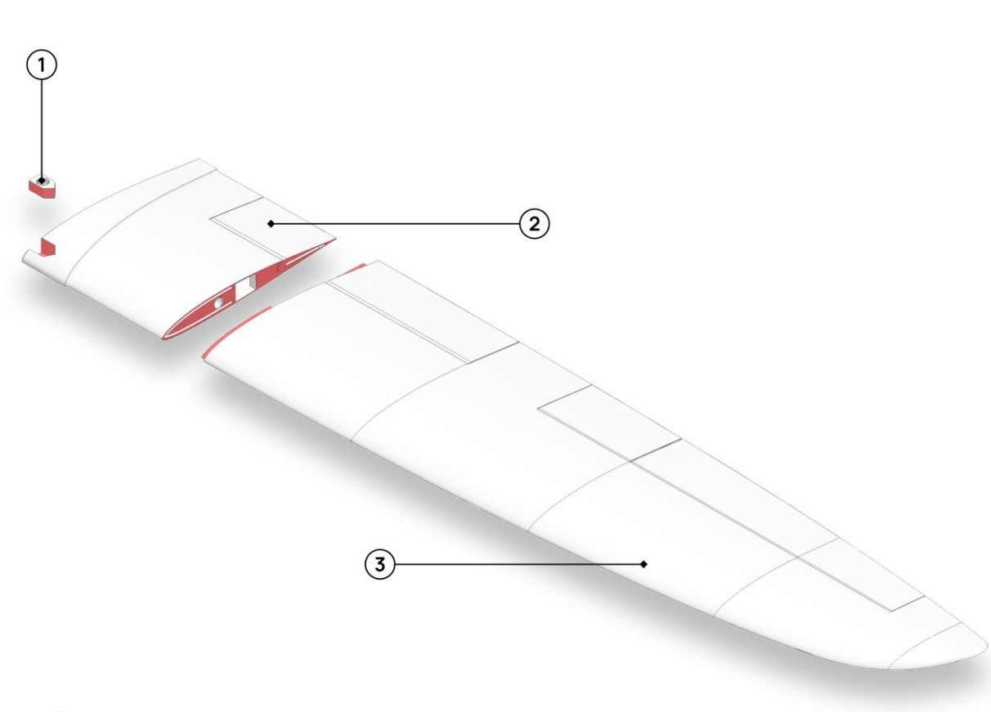


① EDF 50 mm motors

STEP 12

Align & Screw
indicated components





① Insert Lock
② Wing1L & R
③ Previous wing configuration

STEP 13

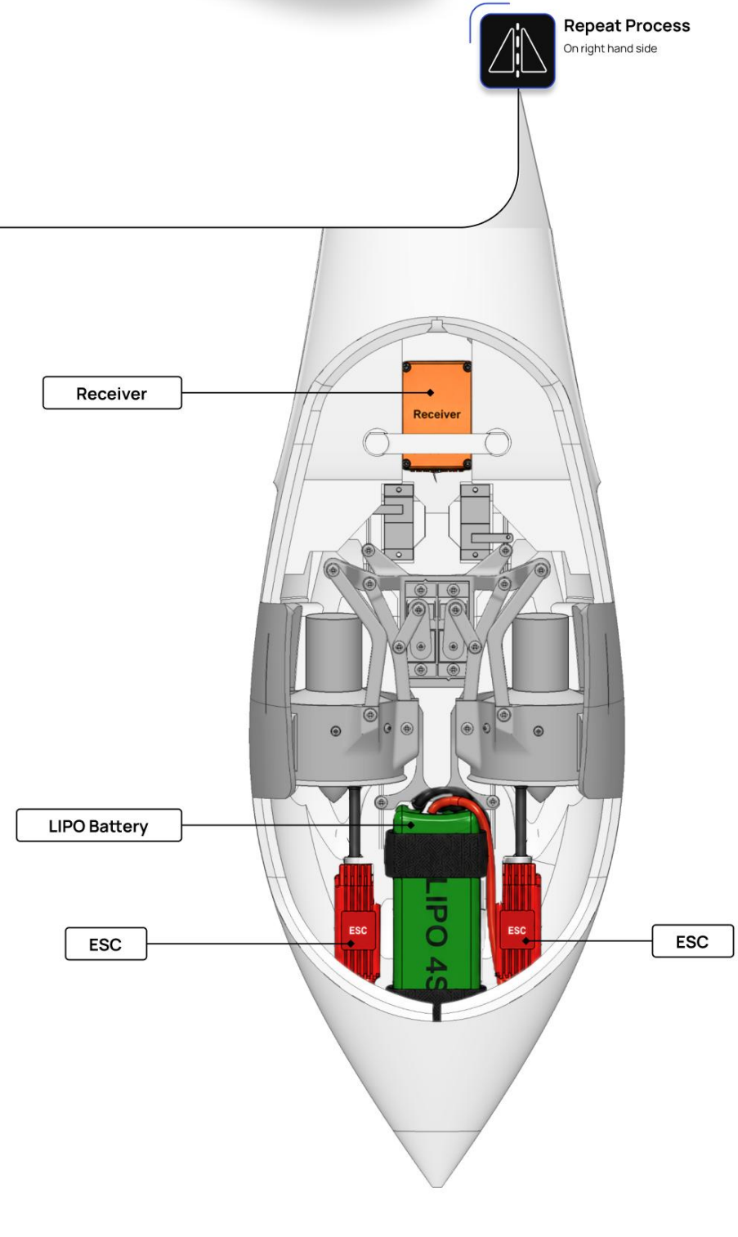
Apply cyanoacrylate (CA).
Apply only in the indicated red zones. Use medium-thickness CA.

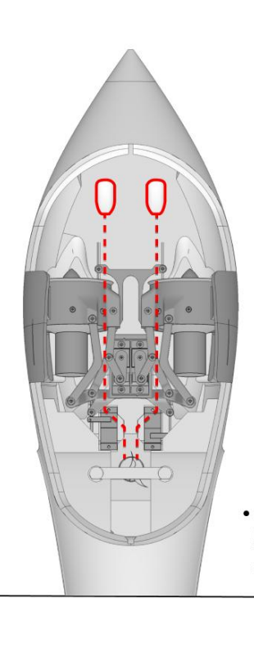
Align and Press
Using a CA accelerator is recommended to speed up curing.

Repeat Process
On right hand side

STEP 14

Electronic components installation
Install the battery, ESCs and receiver in the indicated position. Ensure they are firmly secured using velcro.





- **Cable Routing**
  Route the electrical cables through the indicated openings. This will prevent any interference or obstruction with the EDF motor Mechanism.

// SAFETY PRECAUTIONS AND WARNINGS

- Always fly in open and safe areas away from people, vehicles, and obstacles.
- Inspect all printed parts, electronics, and linkages before every flight.
- Never operate the aircraft with damaged components or loose connections.
- Always power on the transmitter before connecting the aircraft battery.
- Keep hands and loose objects away from moving propellers and rotating parts.
- Remove batteries before assembly, maintenance, or transport.
- Never leave LiPo batteries unattended while charging.
- Always verify control surface movement and fail-safe settings before takeoff.

This aircraft requires careful assembly, setup, and safe operation. Improper use, damaged parts, or incorrect installation may result in equipment damage or personal injury. Always perform proper pre-flight checks and operate responsibly.

// FAIR DATA USE

Dear Pilots,

We are excited to welcome you to another Eclipson project and truly appreciate your support and enthusiasm for our work. Each model requires extensive development, testing, refinement, and countless hours of engineering and design. To help us continue creating innovative aircraft for the RC community, we kindly ask you to respect the integrity of the files and documentation provided.

Please do not redistribute, resell, forward, or publicly share any part of these files, including within online groups, forums, or third-party communities.Your support and fair use of our work directly contribute to the future development of new models and experiences for pilots around the world.
Thank you for being part of the Eclipson community and for supporting independent aerospace design.

Best regards,
Eclipson

THANK YOU

Thank you for choosing Eclipson. We appreciate your support and trust in our designs.
We hope the Vortex EDF provides an enjoyable building experience and many successful flights.

CONNECT US

Visit our website and follow our social media channels for updates, support, new releases, and community content. Stay connected and share your creations with the Eclipson community.

eclipson.airplanes @eclipsonairplanes www.eclipson-airplanes.com