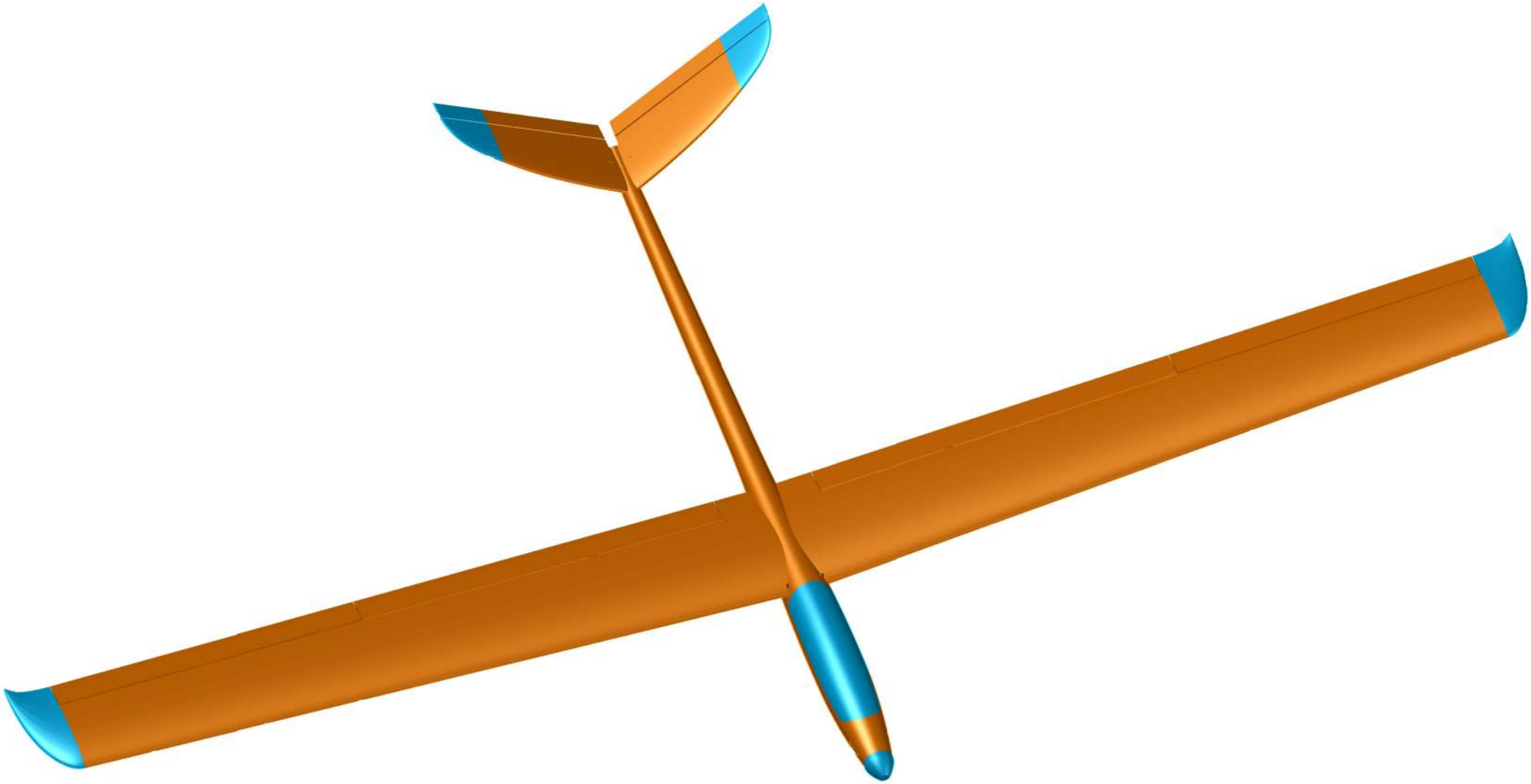


PAMPERO version 1.0	2026
Generally	AeroPrint3D

PAMPERO:

Technical Specifications:

Wingspan:	2180mm
Length Long:	1180mm (inkl. Spinner und Leitwerk)
Length Short:	1160mm (inkl. Spinner und Leitwerk)
Weight ready to fly:	~1950g (depending on equipment and filament)
Wing Loading:	~51g/dm²
Wing A:	Profil HS16 Trapezoidal shape
Wing A Root Depth:	190mm
Wing B:	Profil HS16 Elliptical shape
Wing B Root Depth:	210mm
Center of Gravity:	66mm
Incidence:	1,5°
Diffusion:	2,0° per side
Side thrust:	1,5°
Motor downthrust:	2,0°
Joiner and Bearing A:	9mm aluminum tube with 8mm carbon rod
Joiner B:	8mm x 8mm carbon rod
V-Tail:	110° opening - symmetrical airfoil
Motor:	300-400W
ESC:	45-55A depending on the engine
Spinner:	40mm
Folding propeller:	12 x 6
Battery:	3S Lipo 2500-3000mAh

Controls:

Ailerons:	2pc KST-HS08A in a servo frame and IDS mini
Flaps:	2pc KST-HS08A in a servo frame and IDS mini
Elevator and rudder:	2pc KST-HS08B

Fuselage:
To achieve an optimal center of gravity, the fuselage can be built using either a long or a short version of component R1. Fuselage section R4 can be redesigned to accommodate different wings and is therefore interchangeable. A wing root chord of 180–210 mm is possible. The wings are secured using 10x5 mm neodymium magnets. A dihedral angle of 2.0° per side is integrated into the wing attachment system. Electrical connections are made using MPX plugs and sockets; these can either be glued in place or left loose for manual connection. The canopy is held in place by 8x2 mm neodymium magnets.

V-Tail:
The control surfaces of the tail unit can be attached using a film hinge (version LA) or an adhesive hinge (version LB). No carbon-fiber components are required, as there is a sufficient number of internal frames (ribs/bulkheads). The tail surfaces can also be removed.

Wings:
The KST-HS08A servos with *"Servorahmen.de"* IDS Type KST 08 Mono push rod Mini are intended to be installed in the wings.
ATTENTION: Only the Mini push rod fits into the rudder flaps.

Gluing:
PLA can be glued with cyanoacrylate adhesive. Ideally, use a CA glue labeled "smokeless." This type of adhesive will not leave white marks on the part. PP filament must be primed before gluing. After the primer has set (3-5 minutes), cyanoacrylate adhesive can be applied. This should be done within the next 12 hours.

Shopping List:

Fuselage:
1pc carbon tube 6mm / 4mm 612mm
2pcs carbon tube 4mm / 2mm ~720mm - control linkage for v-tail
1pc Aluminum pipe 9mm / 8mm 60mm - Wing A
2pcs Round neodymium magnets 10x5mm
2pcs Round neodymium magnets 8x2mm - Canopy
2pcs M3 long threaded inserts 5.7mm bore 4.0mm
2pcs M3 short threaded inserts 3.0mm bore 4.0mm
6pcs M2 short threaded inserts 3.0mm bore 3.2mm
2pcs M3 30mm Hexagon socket head cap screw - Wing A
2pcs M3 20mm Hexagon socket head cap screw - Wing B
2pcs M3 5mm Cylinder head bolt - V-Tail
6pcs M2 5mm Countersunk screw
4pcs M2 40mm Threaded rod

Fuselage Long:
3pcs 0,8mm 460mm Steel wire
2pcs 0,8mm 310mm Steel wire
2pcs 0,8mm 207mm Steel wire

Fuselage Short:
3pcs 0,8mm 440mm Steel wire
2pcs 0,8mm 290mm Steel wire
2pcs 0,8mm 197mm Steel wire

V-Tail:
2pcs 2mm Steel wire 35mm
2pcs 4mm ball joint with 2mm bore
6pcs 0.2mm Kavan foil hinge 28 x 20mm - tailplane halved

Wing A:
1pc Round carbon rod 8mm 363mm
2pcs Round neodymium magnets 10x5mm
2pcs Aluminum pipe 9mm / 8mm 150mm
4pcs Round carbon rod 4mm 40mm
2pcs Carbon tube 6mm / 4mm 1000mm
12pcs 0.2mm Kavan foil hinge 28 x 20mm - tailplane halved
24pcs 2,2mm 6,5mm Countersunk screw

Wing B:
1pc Carbon rod 8 x 8mm 363mm
2pcs Round neodymium magnets 10x5mm
2pcs Round carbon rod 4mm 40mm
2pcs Carbon tube 6mm / 4mm 712mm
2pcs Carbon tube 4mm / 2mm 520mm
12pcs 0.2mm Kavan foil hinge 28 x 20mm - tailplane halved

Wing C:
Upon request via email to *"support@aeroprint3d.at"* a new fuselage section (**R4**) and two wing halves can be designed, and a download link for the print files will be provided.
The maximum root chord must not exceed 230 mm, and the wingspan must not exceed 2500 mm. The wing incidence angle (EWD) can be chosen freely.
The cost contribution is determined based on the scope of work (number of servos and carbon rods, design of the wingtips and wing attachment system, etc.).

3D PRINTING:

Build volume:	220 x 220 mm - Height 240 mm
Nozzle:	0.4 mm
Temperature:	up to 250°C
Heated bed:	up to 100°C
Filament:	PLA PolyAir 1.0 from 3DLabPrint
Filament:	PP Bavafil® Olefin from Bavaria

To achieve a smooth surface, the print bed should be free of texture (e.g., glass plate or Bambu Lab Cool Plate SuperTack). For better adhesion to the print bed, use an adhesive (e.g., SmartStick or DimaFix). The EWD gauge can be printed with two colors for the text. Bambu Lab AMS or Creality CFS are ideal for this.

Filament and process settings are available as a JSON file.

Each part is delivered as an STL file.

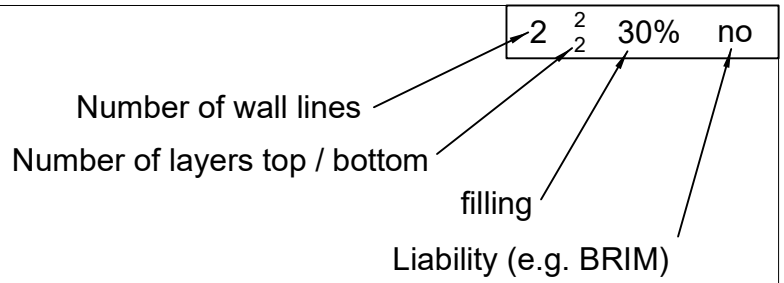
Bambu Studio includes 3MF files with build plates and all settings for printing with a BambuLab X1C.

The terminology used in this guide and the filenames of the STL files are identical.

Bambu Studio:
If this error occurs in Bambu Studio, DO NOT attempt a repair. If you have already repaired an STL file, and, for example, the inner ribs are missing, then reload the STL file (right-click on the STL part).

Error: ** non-manifold edges (Repair)

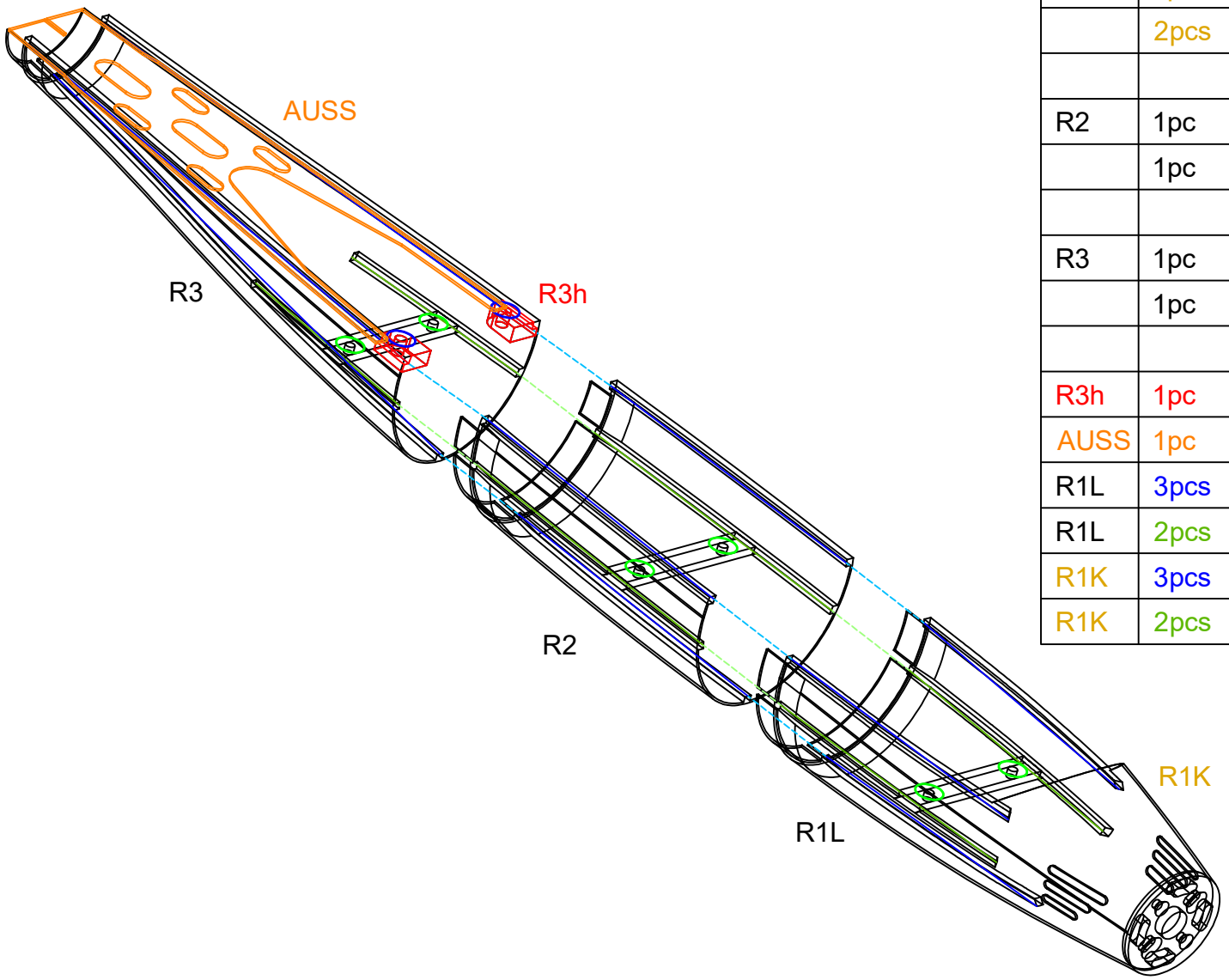
Explanation:



General slicer settings for a 0.4mm nozzle:

Layer height:	0,2mm
First layer height:	0,2mm
Line width:	0,42mm
Seam position:	Back side
Slice gap closing radius:	0,001
Resolution:	0,012
Smoothing:	No smoothing
Wall generator:	Classic
Outer wall speed:	100mm/s
Inner wall speed:	200mm/s

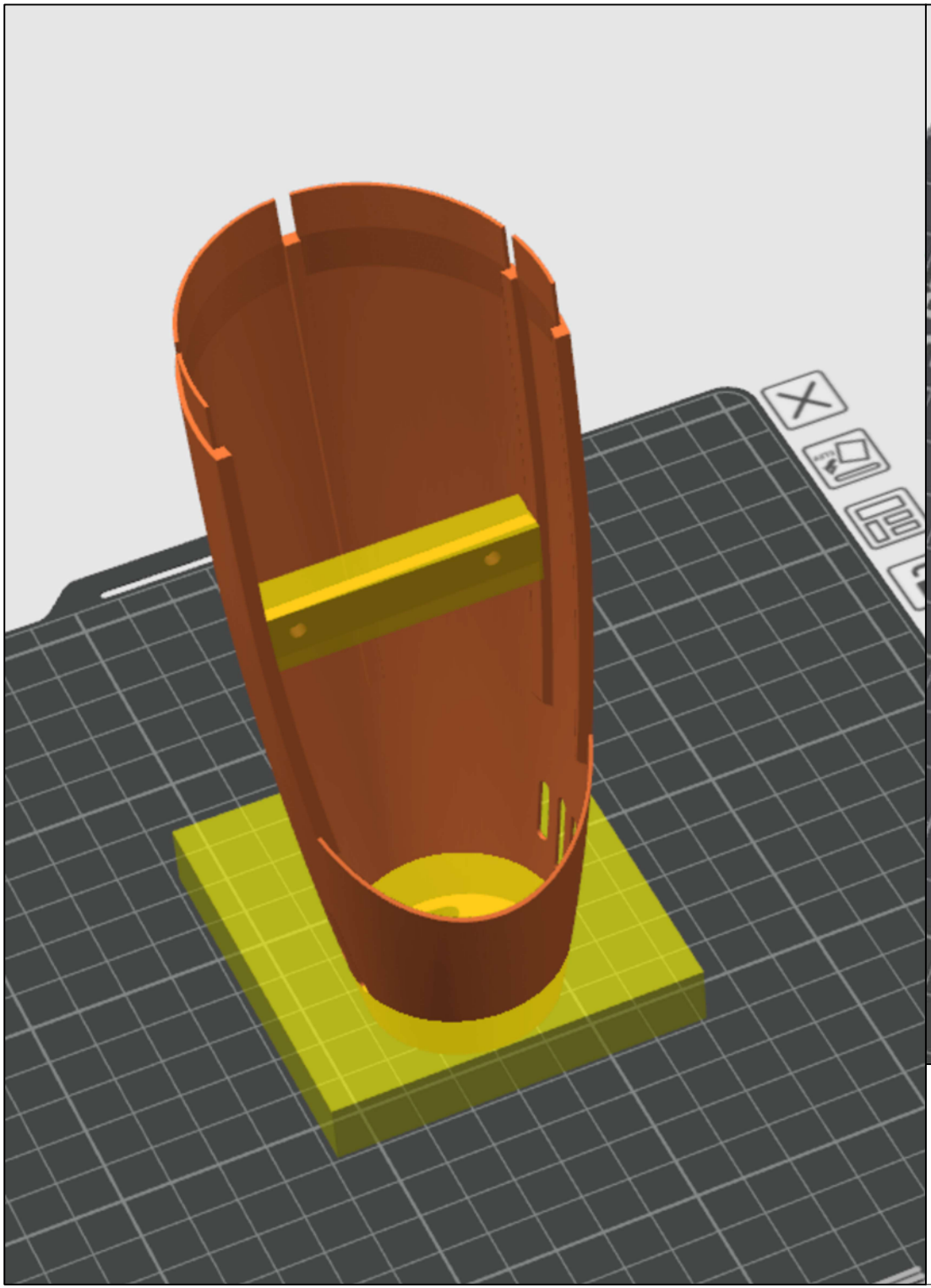
6pcs	M2 short heat-set insert 3.0mm 3.2mm hole diameter
2pcs	M3 heat-set insert 5.7mm hole diameter 4.0mm

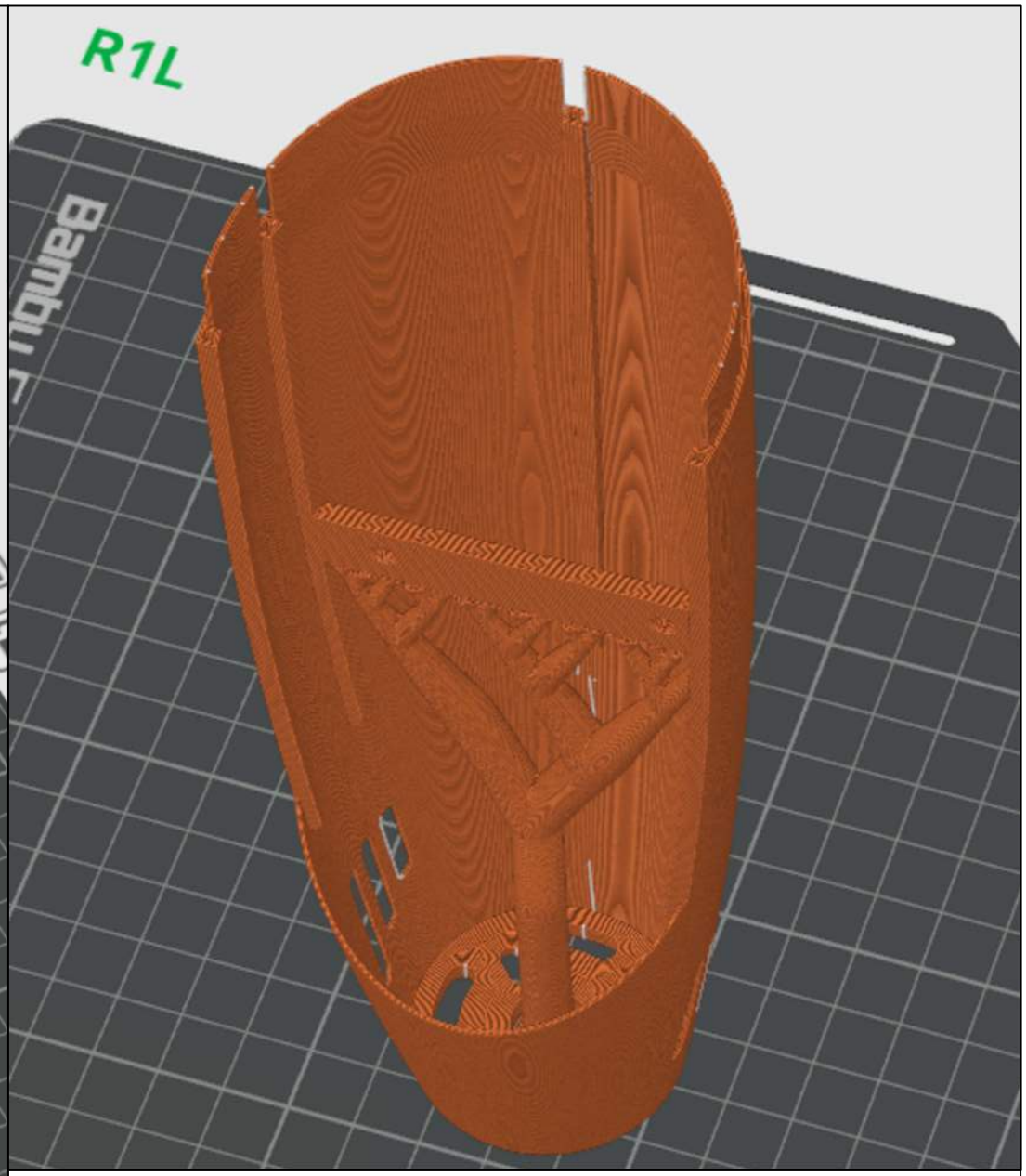


R1L	1pc	Fuselage R1 Long	2	0 0	0% no
	2pcs	Generic Die	2	2 2	40% no
		Support structures YES			
R1K	1pc	Fuselage R1 Short	2	0 0	0% no
	2pcs	Generic Die	2	2 2	40% no
		Support structures YES			
R2	1pc	Fuselage R2	2	0 0	0% Brim
	1pc	Generic Die	2	2 2	40% no
		Support structures YES			
R3	1pc	Fuselage R3	2	0 0	0% no
	1pc	Generic Die	2	2 2	40% no
		Support structures YES			
R3h	1pc	Support section	2	2 2	80% no
AUSS	1pc	Bracing	2	2 2	25% no
R1L	3pcs	0,8mm Steel wire 440mm			
R1L	2pcs	0,8mm Steel wire 310mm			
R1K	3pcs	0,8mm Steel wire 420mm			
R1K	2pcs	0,8mm Steel wire 290mm			

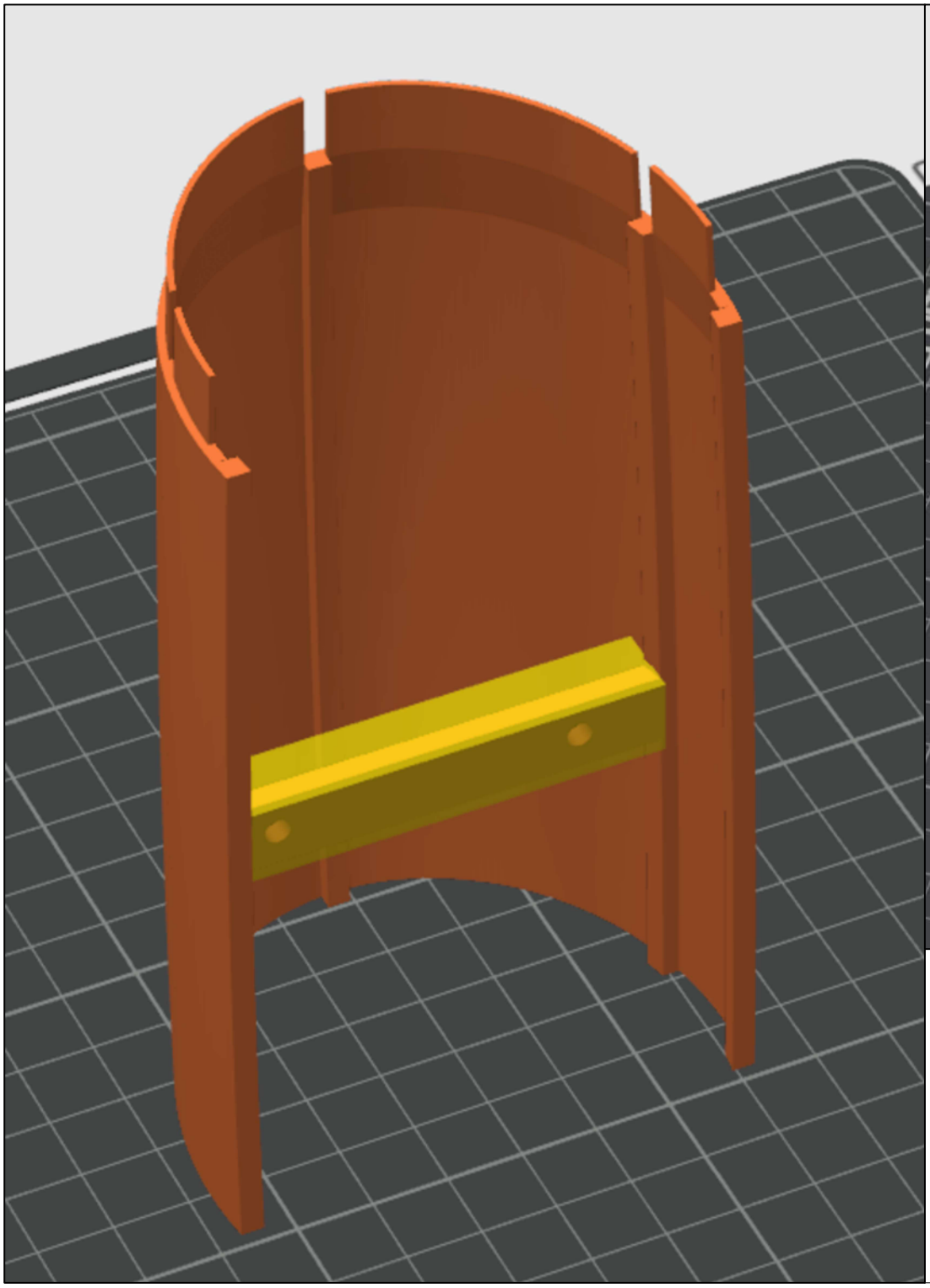
Before gluing the fuselage parts together, check the threaded sleeves for a proper fit; if necessary, enlarge the holes and melt the sleeves into place.
When gluing the fuselage parts R1L (R1K), R2, and R3, insert the 0.8 mm steel wires at the same time. **Do not glue in the stiffener (AUSS) yet.**

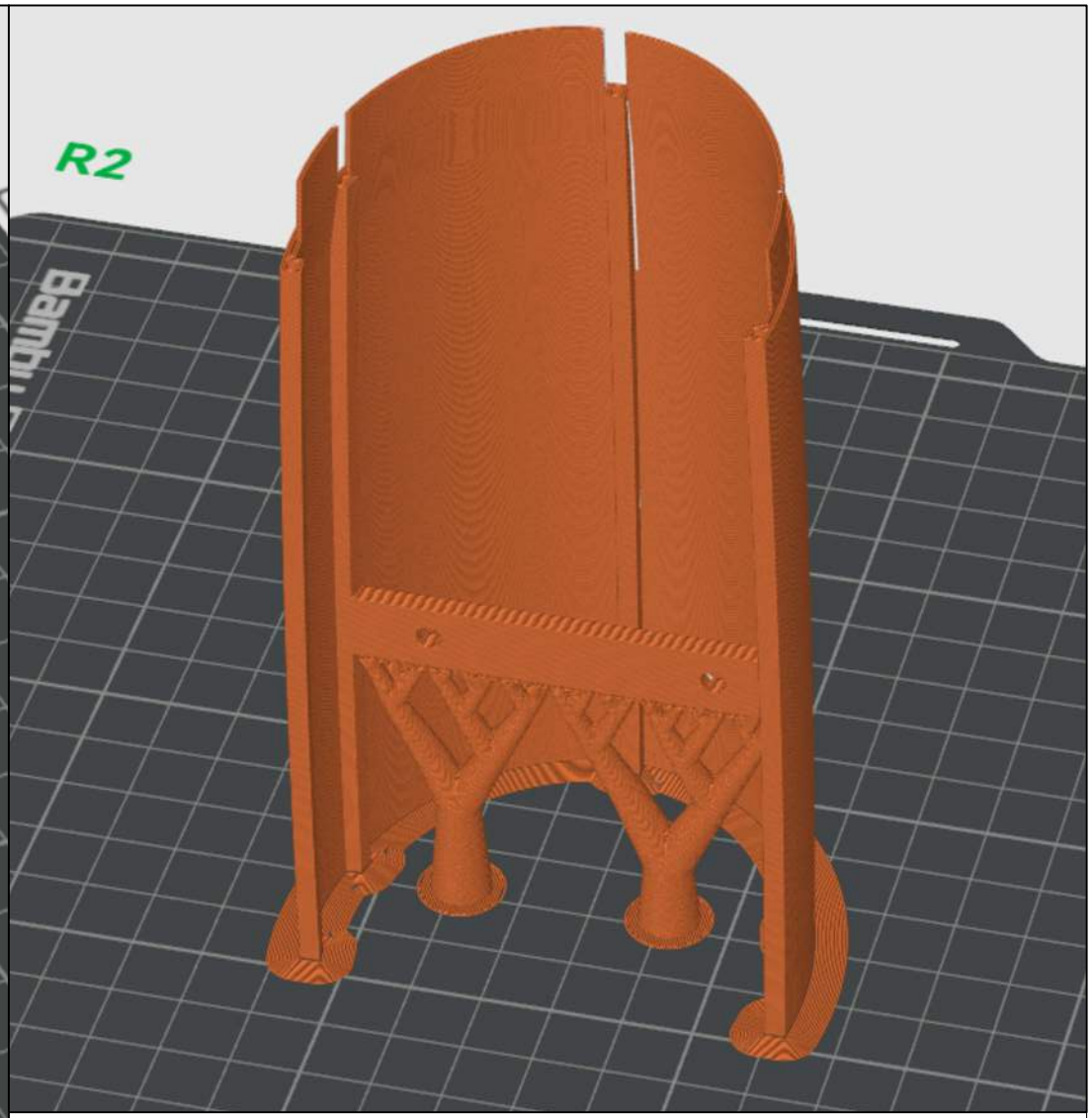
PAMPERO version 1.0	2026
Fuselage front	AeroPrint3D



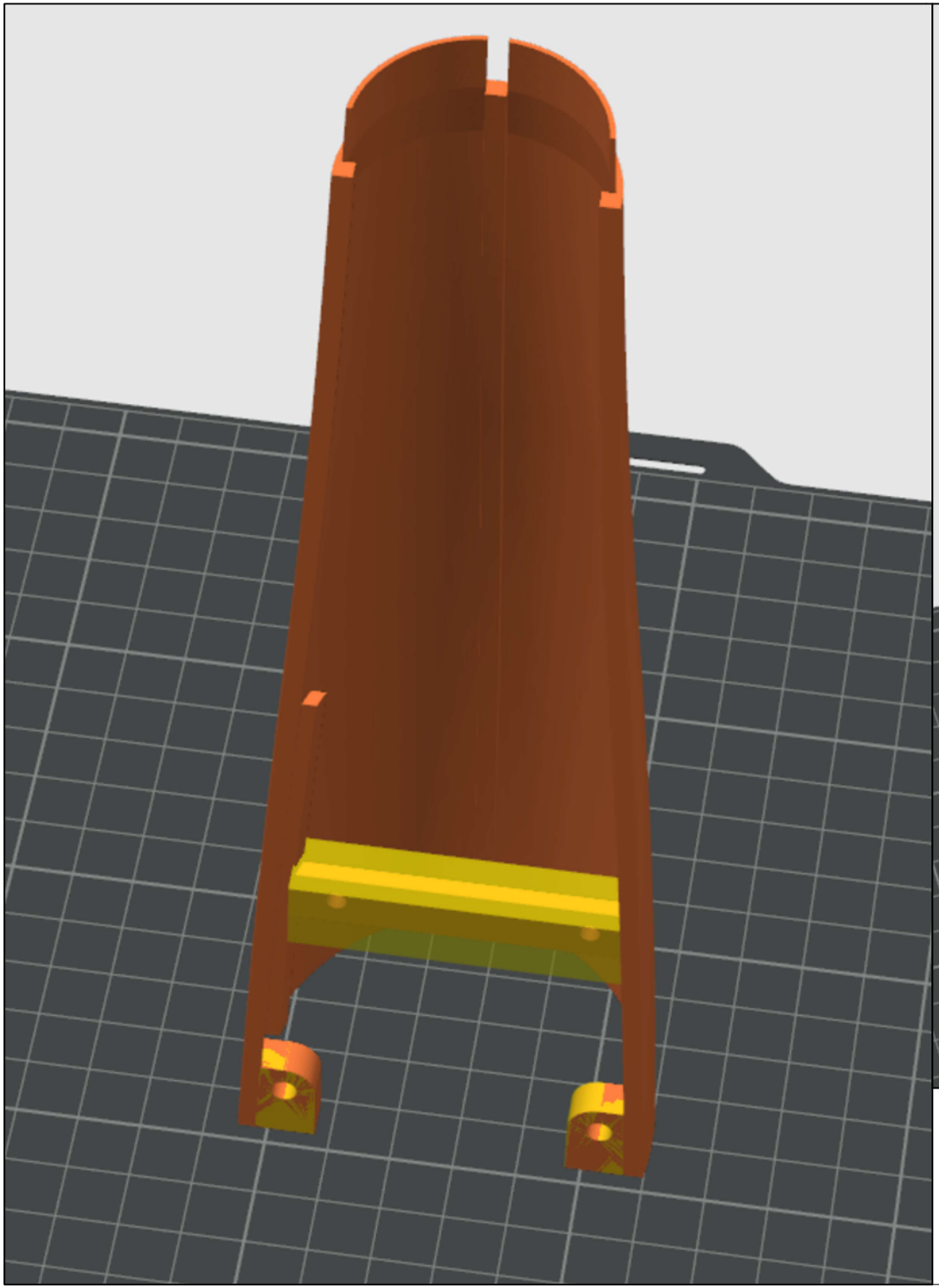


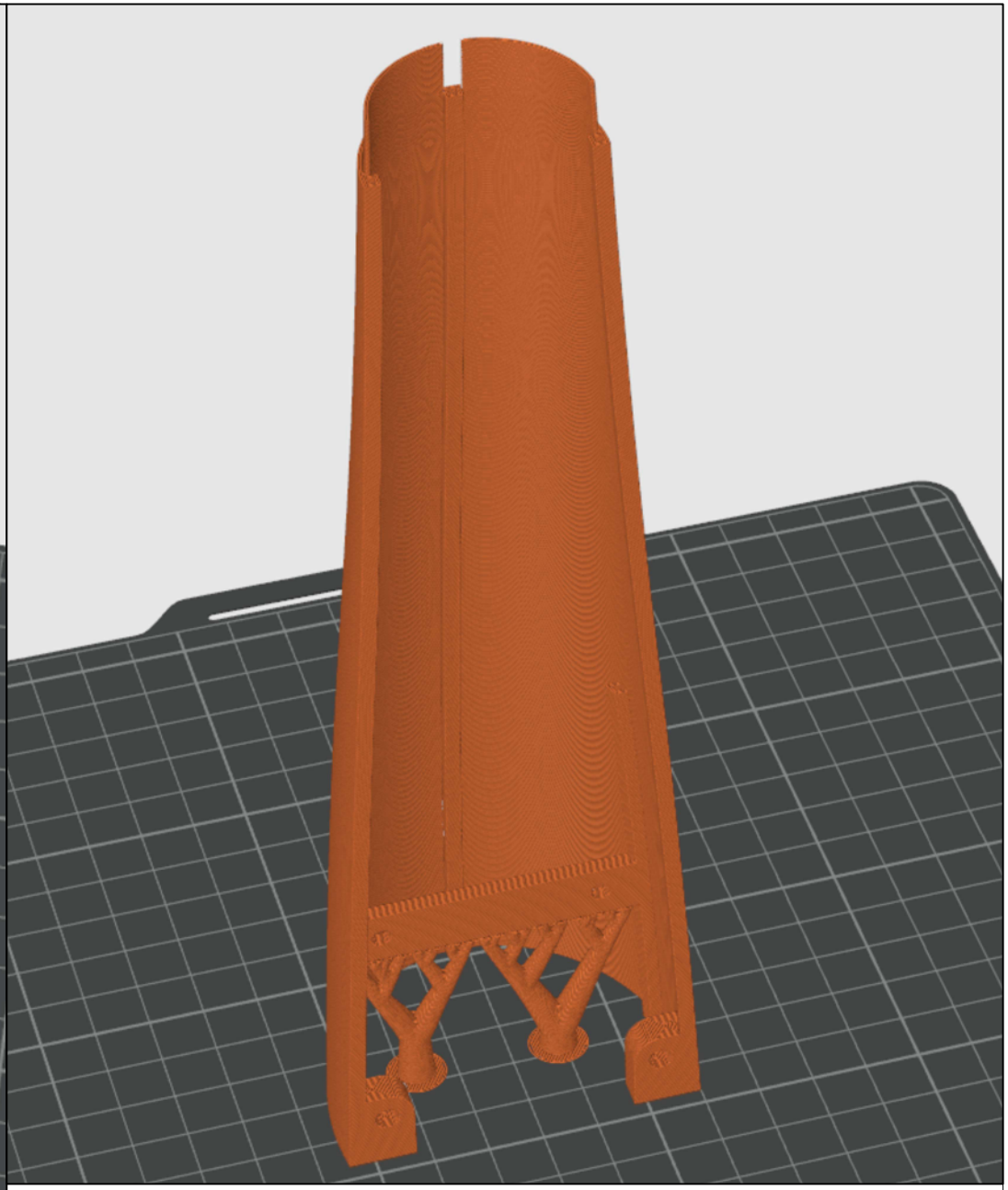
PAMPERO version 1.0	2026
Fuselage R1	AeroPrint3D





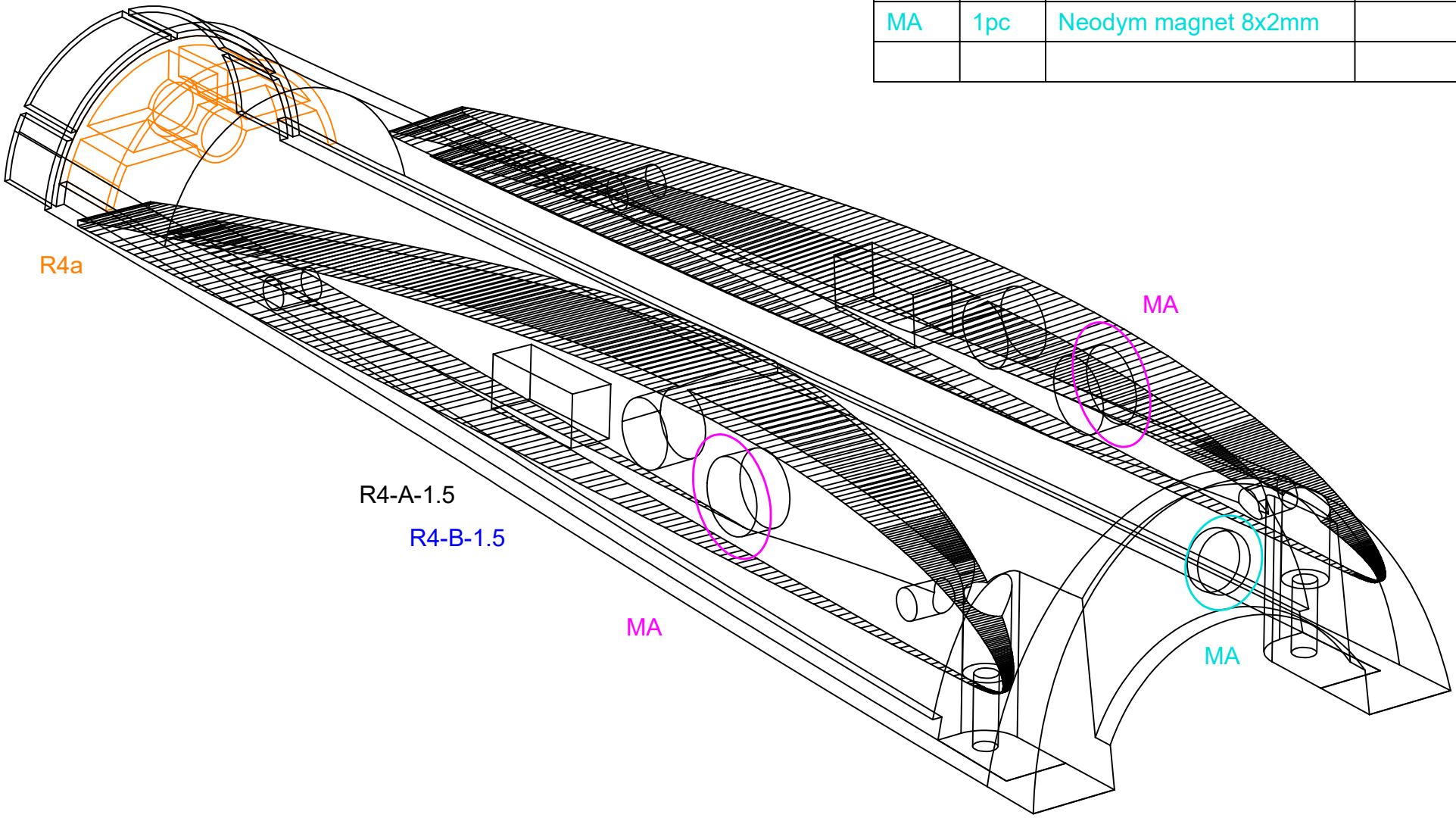
PAMPERO version 1.0	2026
Fuselage R2	AeroPrint3D





PAMPERO version 1.0	2026
Fuselage R3	AeroPrint3D

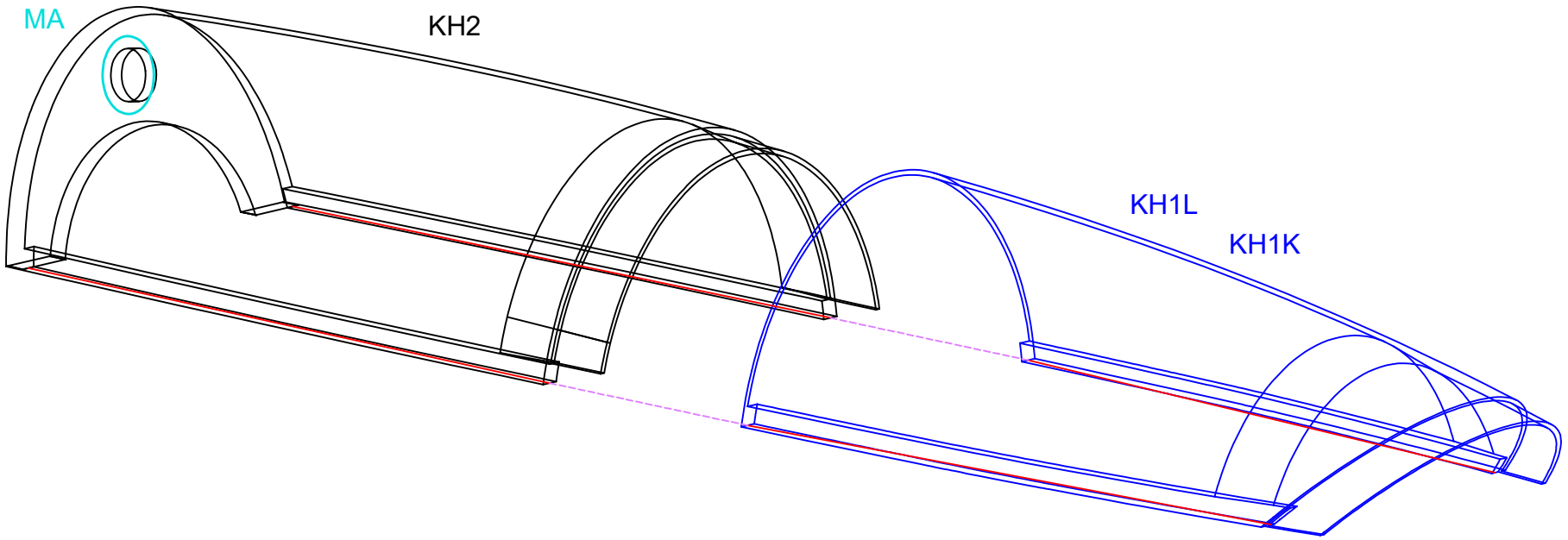
R4-A	1pc	Wing A	2 2/2 20% no
R4-B	1pc	Wing B	2 2/2 20% no
R4a	1pc	Holder for carbon tube	2 0/0 0% no
MA	2pcs	Neodym magnet 10x5mm	
MA	1pc	Neodym magnet 8x2mm	



Ensure the neodymium magnets are oriented with the correct polarity relative to the respective wing halves and the cockpit canopy when gluing them in place.
Fit part R4a and glue it into R4-A or R4-B.

PAMPERO version 1.0	2026
Fuselage R4-A / R4-B	AeroPrint3D

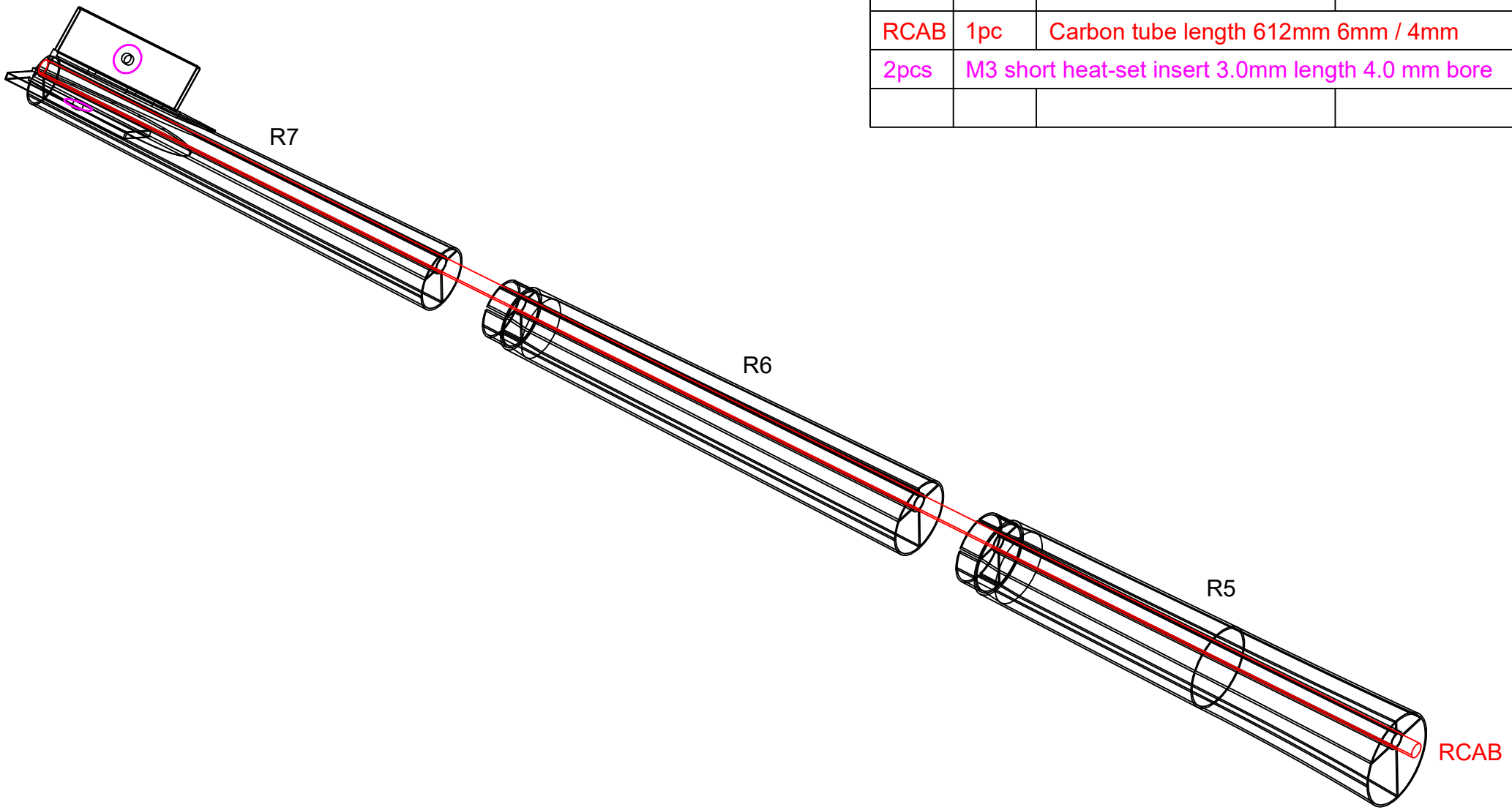
KH1L	1pc	Canopy Long	2 $^{0}_{0}$	0%	Brim
KH1K	1pc	Canopy Short	2 $^{0}_{0}$	0%	Brim
KH2	1pc	Canopy	2 $^{0}_{0}$	0%	no
	1pc	Generic Die	2 $^{2}_{2}$	25%	no
MA	1pc	Neodym magnet 8x2mm			
KH1L	2pcs	0,8mm Steel wire 207mm			
KH1K	2pcs	0,8mm Steel wire 197mm			



Ensure the neodymium magnet is oriented with the correct polarity when gluing it in place.
Install the 0.8 mm steel wires at the same time as you glue the canopy in place.

PAMPERO version 1.0	2026
Canopy	AeroPrint3D

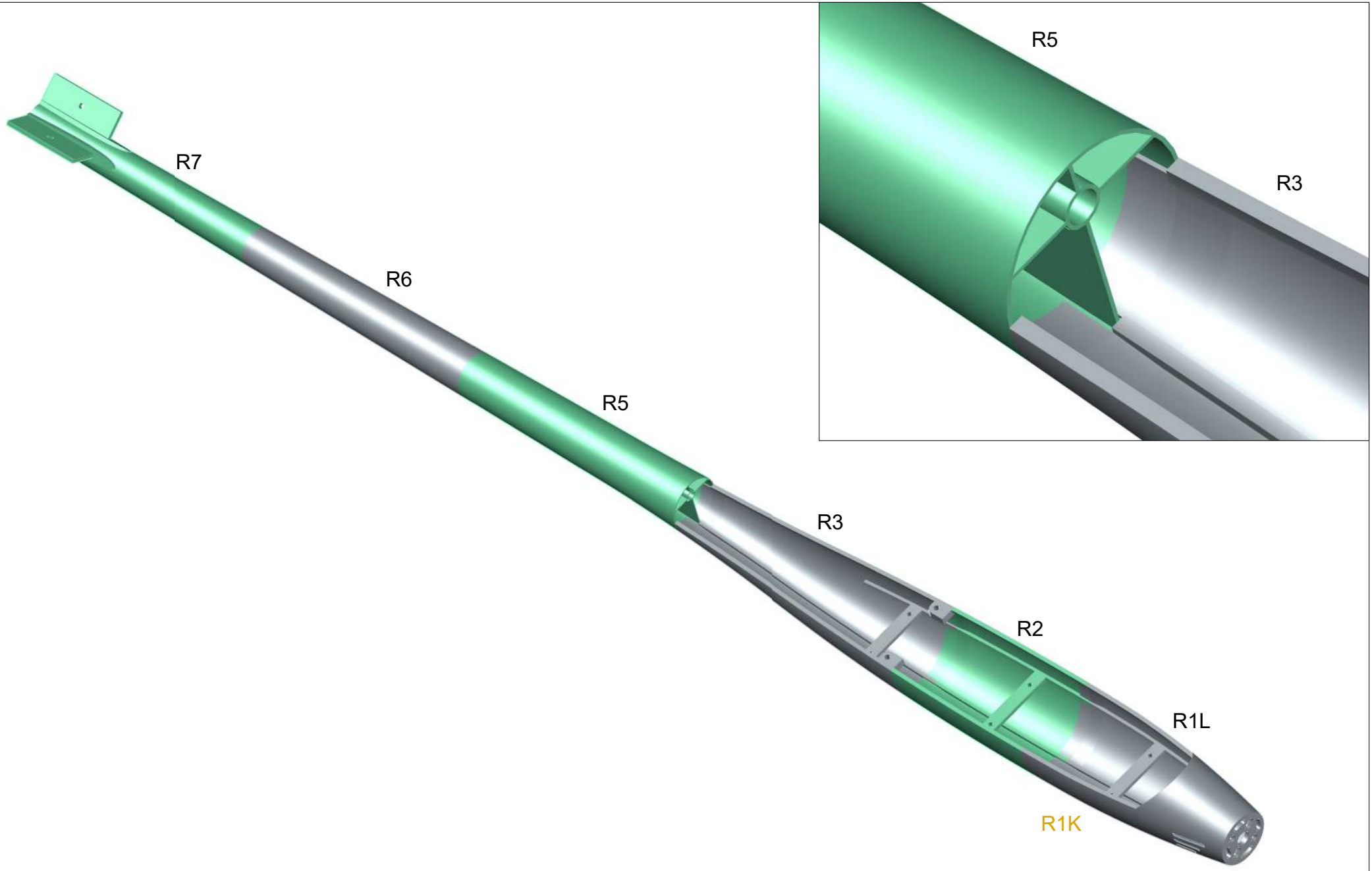
R5	1pc	tail section	2 0 0 0% Brim
R6	1pc	tail section	2 0 0 0% Brim
R7	1pc	tail section	2 2 2 35% no
RCAB	1pc	Carbon tube length 612mm 6mm / 4mm	
2pcs	M3 short heat-set insert 3.0mm length 4.0 mm bore		



Before melting the threaded sleeves into place, check them for a precise fit and re-drill if necessary.

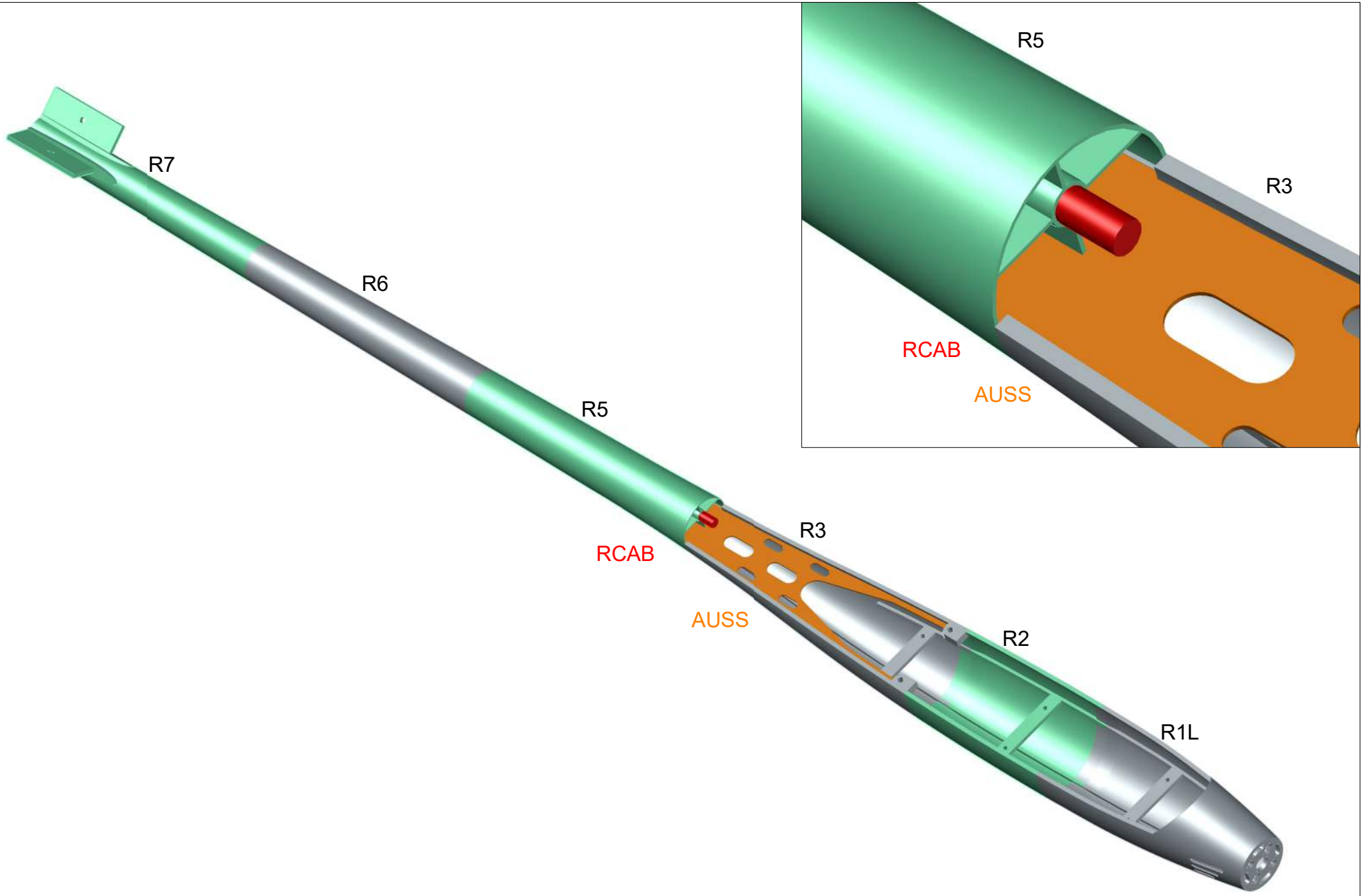
The tail sections are bonded together before the carbon tube is inserted.

PAMPERO Version 1.0	2026
Fuselage tail section	AeroPrint3D



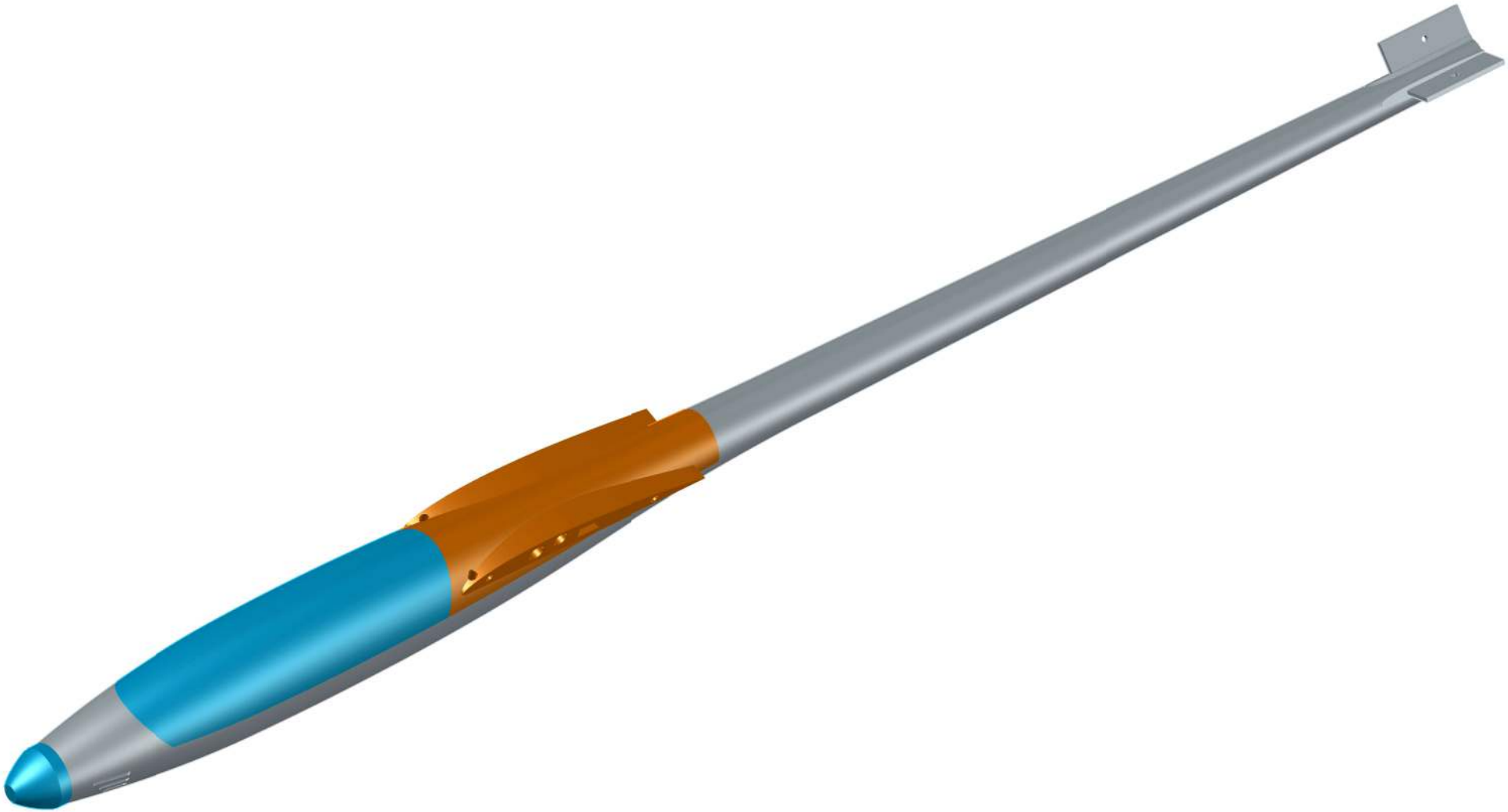
Glue together the forward fuselage sections R1L (R1K), R2, and R3, as well as the rear fuselage sections R5, R6, and R7, ensuring they are well joined. For a more robust connection between R3 and R5, a fiberglass mat can be bonded in place.

PAMPERO version 1.0	2026
Fuselage	AeroPrint3D



After bonding the front and rear sections, glue in the AUSS stiffener and ensure a tight, secure fit. The RCAB carbon tube can now be glued into place.

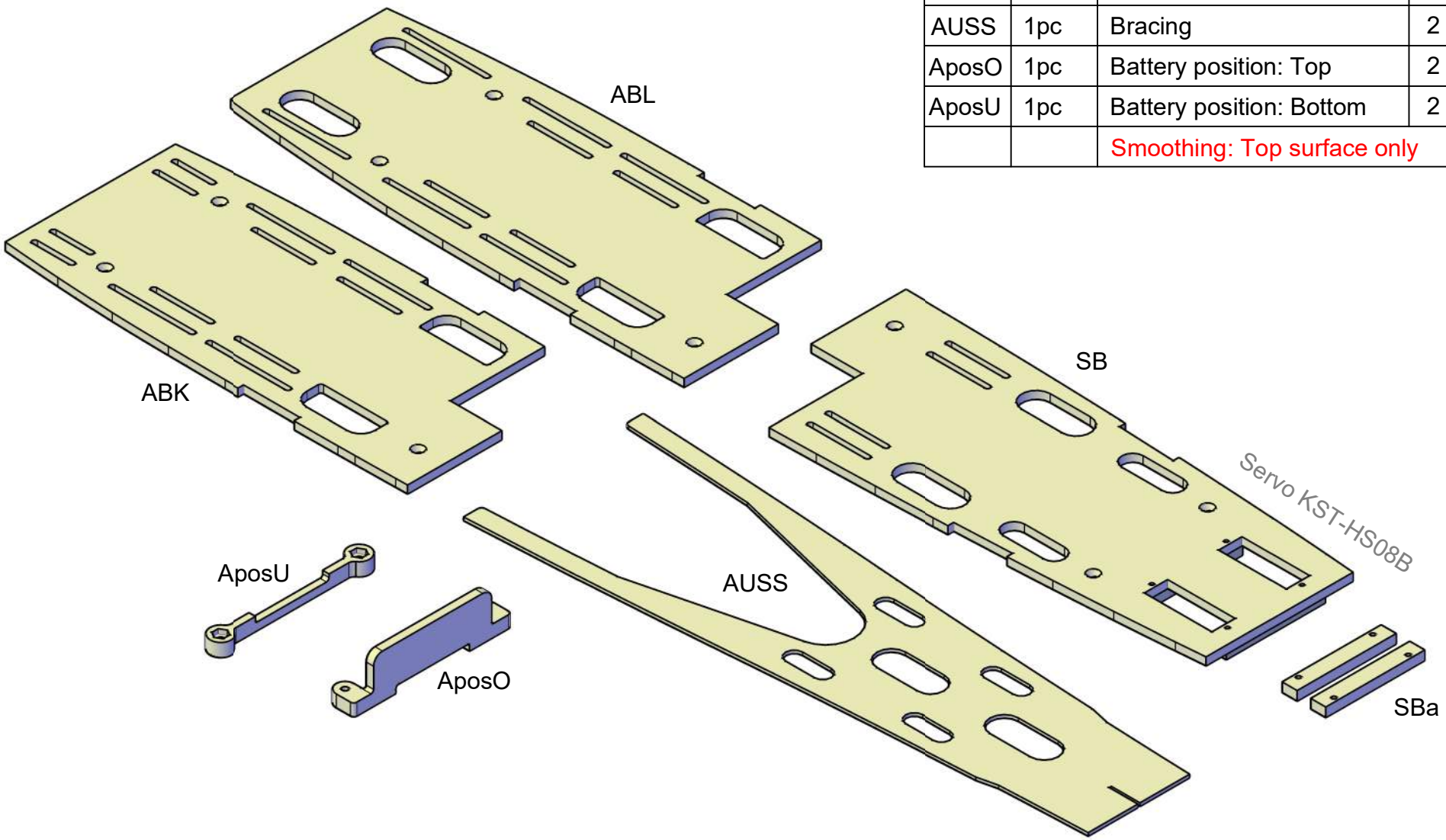
PAMPERO version 1.0	2026
Fuselage	AeroPrint3D



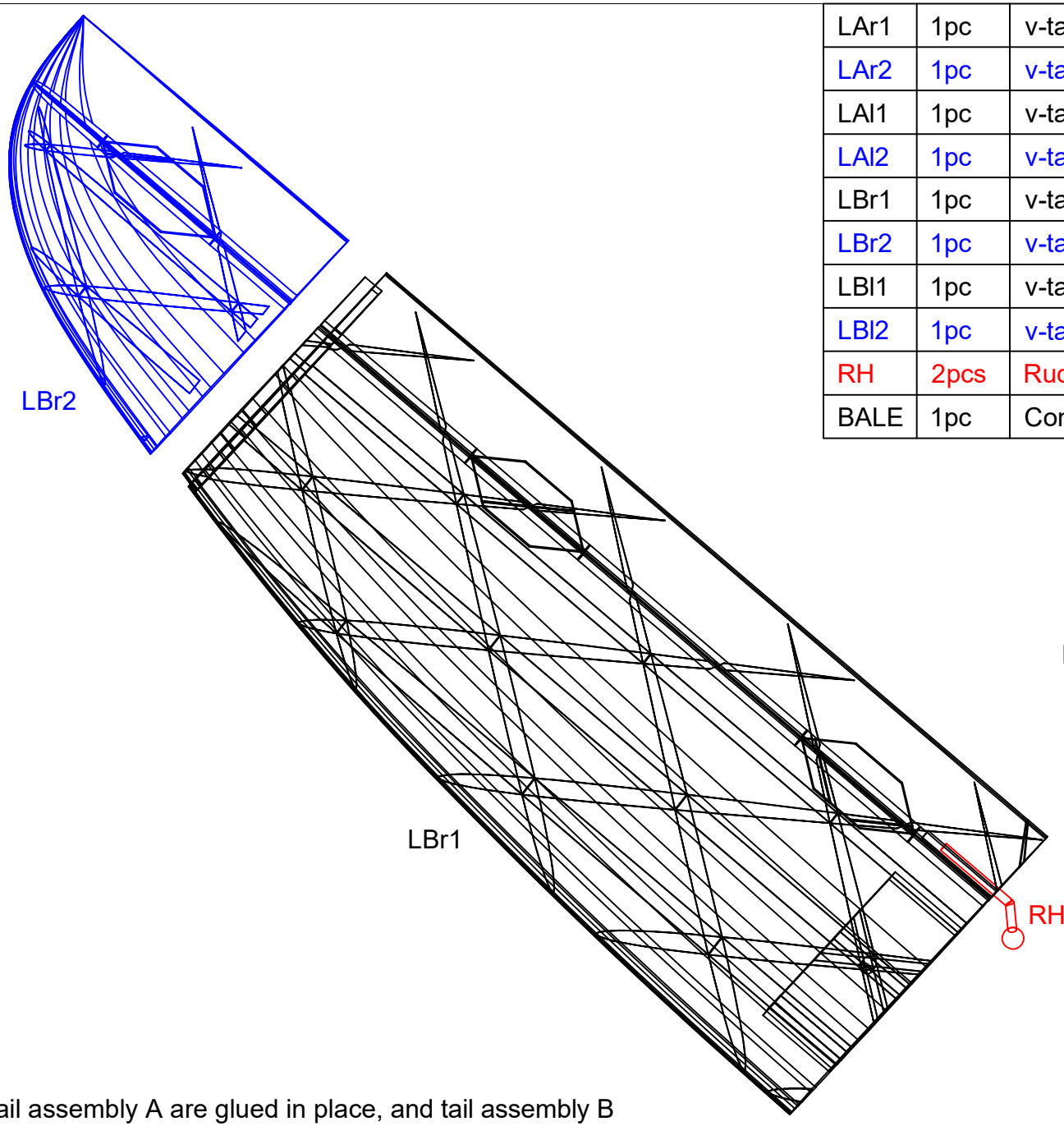
Fit fuselage section R4-A or R4-B (with part R4a glued in) into place.
Secure R4-A using two M3x30mm hex socket head screws, and secure R4-B using two M3x20mm hex socket head screws.

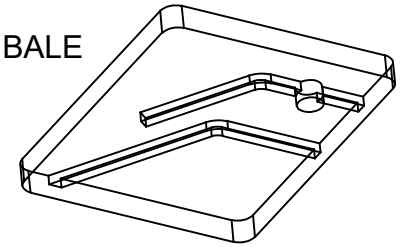
PAMPERO version 1.0	2026
Fuselage	AeroPrint3D

ABL	1pc	Long Battery Board	2 $\frac{2}{2}$	25%	no
ABK	1pc	Short Battery Board	2 $\frac{2}{2}$	25%	no
SB	1pc	Servo tray	2 $\frac{2}{2}$	25%	no
SBa	1pc	Lower Servo Support	2 $\frac{2}{2}$	25%	no
AUSS	1pc	Bracing	2 $\frac{2}{2}$	25%	no
AposO	1pc	Battery position: Top	2 $\frac{2}{2}$	45%	no
AposU	1pc	Battery position: Bottom	2 $\frac{2}{2}$	45%	no
		Smoothing: Top surface only			



PAMPERO version 1.0	2026
Fuselage	AeroPrint3D

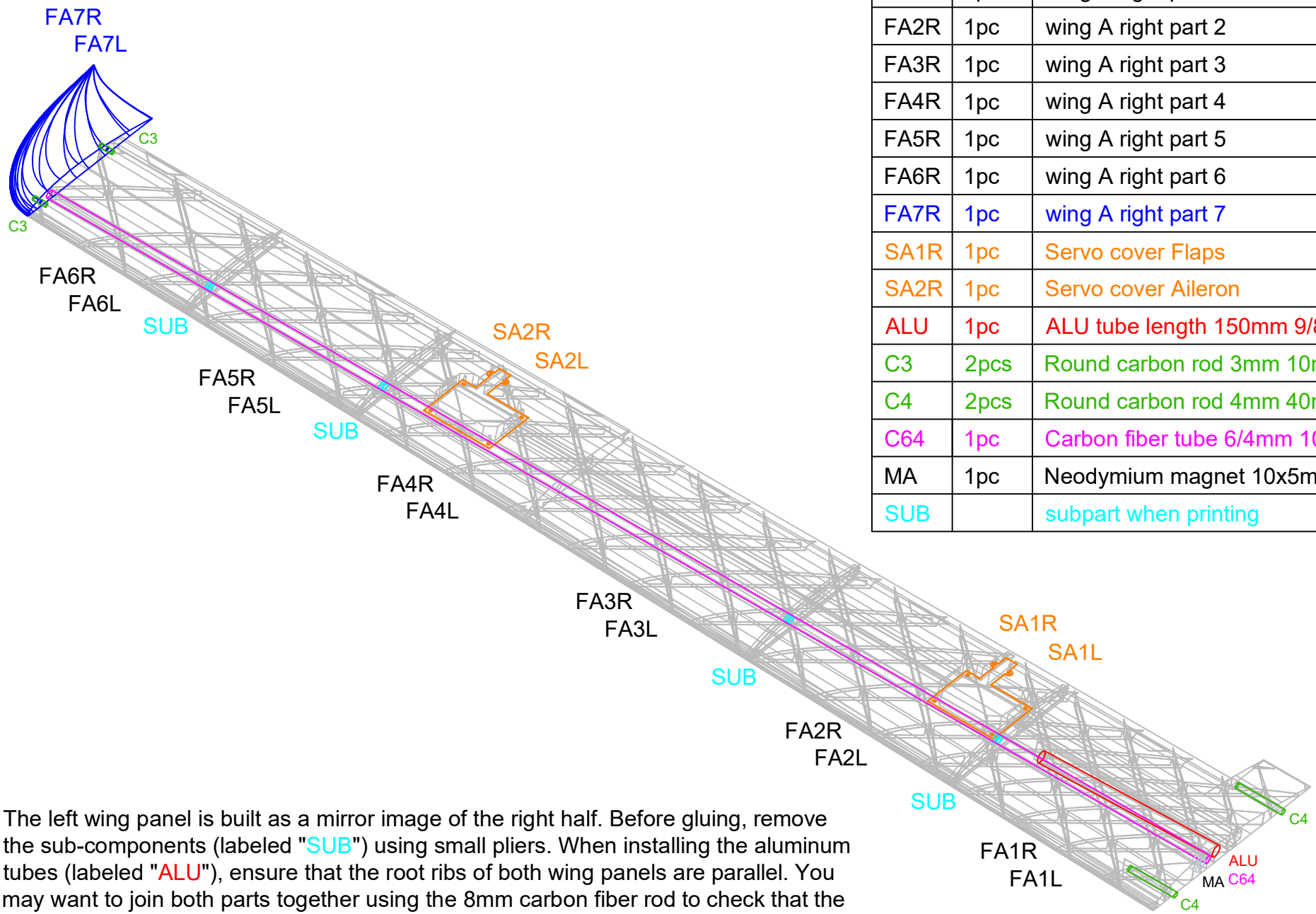




LAr1	1pc	v-tail A right part 1	1	0 2	0% Brim
LAr2	1pc	v-tail A right part 2	1	0 0	0% Brim
LAl1	1pc	v-tail A left part 1	1	0 2	0% Brim
LAl2	1pc	v-tail A left part 2	1	0 0	0% Brim
LBr1	1pc	v-tail B right part 1	1	0 2	0% Brim
LBr2	1pc	v-tail B right part 2	1	0 0	0% Brim
LBl1	1pc	v-tail B left part 1	1	0 2	0% Brim
LBl2	1pc	v-tail B left part 2	1	0 0	0% Brim
RH	2pcs	Rudder horn 2mm steel wire with 4mm ball			
BALE	1pc	Construction theory	2	4 4	25% no

The hinges on tail assembly A are glued in place, and tail assembly B is constructed with foil hinges (3 halved Kavan 0.2mm hinges).
A bent 2mm steel wire with a 4mm ball end is used as the control horn.
A BALE jig is available for making the control horns.

PAMPERO version 1.0	2026
V-Tail	AeroPrint3D



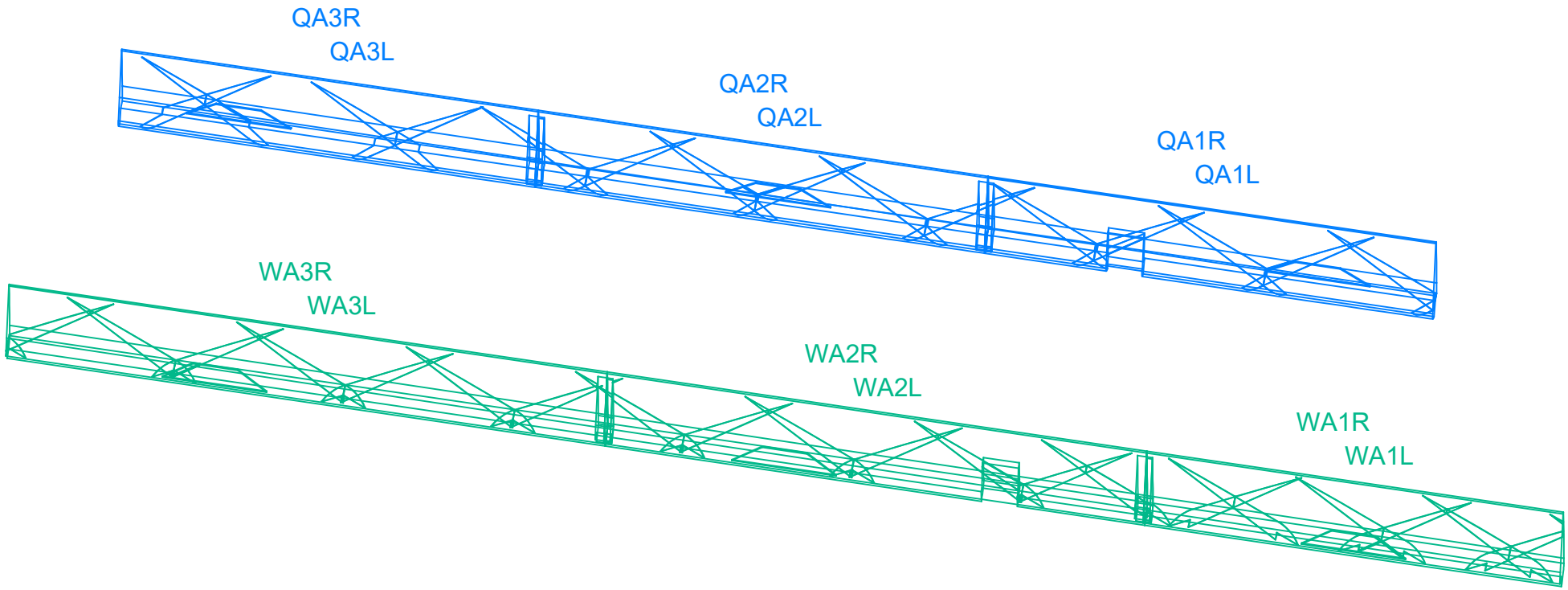
FA1R	1pc	wing A right part 1	1	0 3	0% Brim
FA2R	1pc	wing A right part 2	1	0 0	0% Brim
FA3R	1pc	wing A right part 3	1	3 0	0% Brim
FA4R	1pc	wing A right part 4	1	0 3	0% Brim
FA5R	1pc	wing A right part 5	1	0 0	0% Brim
FA6R	1pc	wing A right part 6	1	3 0	0% Brim
FA7R	1pc	wing A right part 7	1	0 3	0% Brim
SA1R	1pc	Servo cover Flaps	1	2 2	0% no
SA2R	1pc	Servo cover Aileron	1	2 2	0% no
ALU	1pc	ALU tube length 150mm 9/8mm			
C3	2pcs	Round carbon rod 3mm 10mm			
C4	2pcs	Round carbon rod 4mm 40mm			
C64	1pc	Carbon fiber tube 6/4mm 1000mm			
MA	1pc	Neodymium magnet 10x5mm			
SUB		subpart when printing			

The left wing panel is built as a mirror image of the right half. Before gluing, remove the sub-components (labeled "SUB") using small pliers. When installing the aluminum tubes (labeled "ALU"), ensure that the root ribs of both wing panels are parallel. You may want to join both parts together using the 8mm carbon fiber rod to check that the leading and trailing edges are correctly aligned and spaced. Be careful not to accidentally glue the carbon fiber rod in place. If using olefin-based filament, remember to treat all bonding surfaces with a primer.

Pay attention to the modifiers and support blockers included in the 3MF files.

PAMPERO version 1.0	2026
Wing A	AeroPrint3D

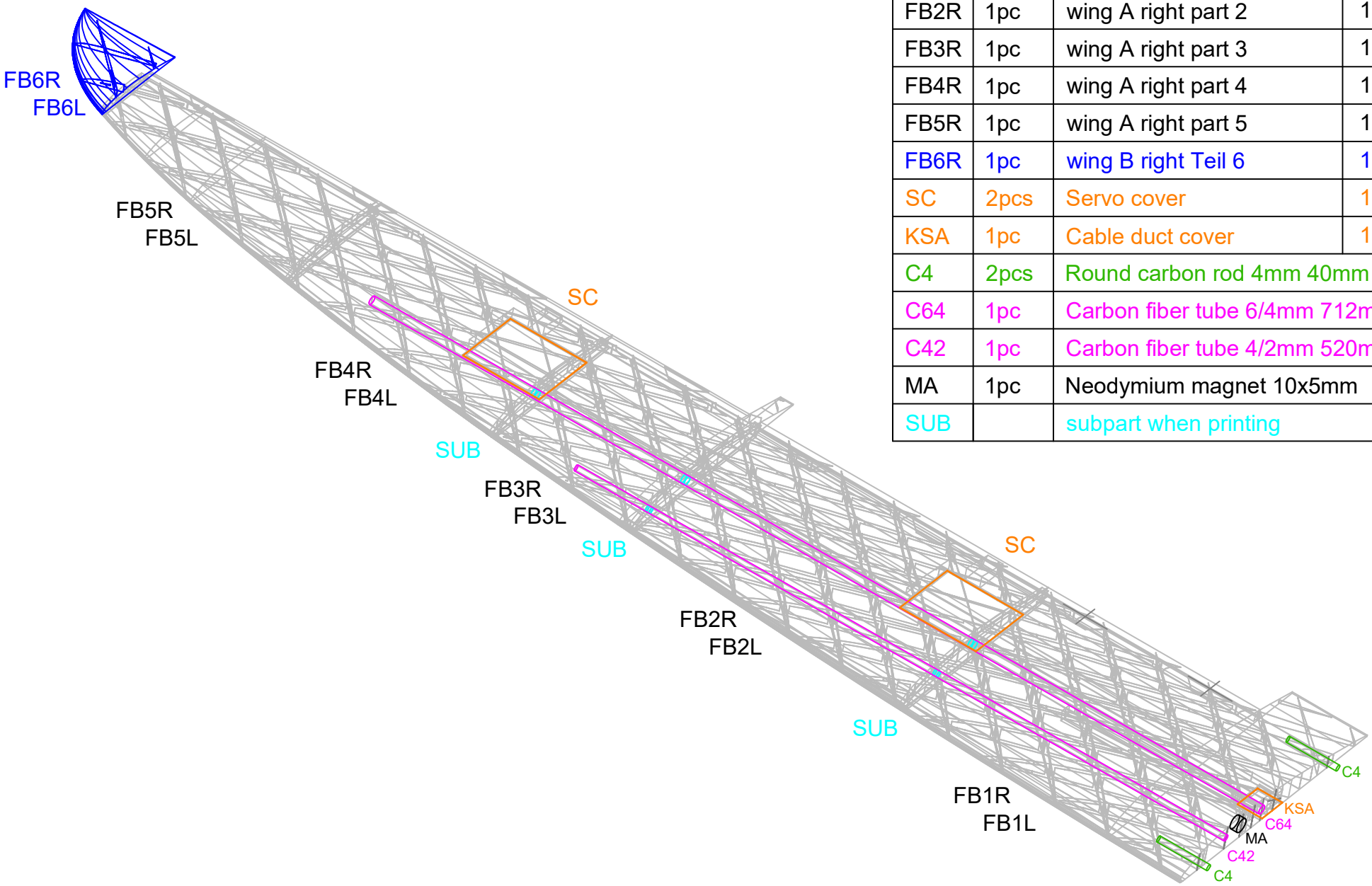
QA1R	1pc	Aileron A right part 1	1	0.3	0% Brim
QA2R	1pc	Aileron A right part 2	1	0.0	0% Brim
QA3R	1pc	Aileron A right part 3	1	0.3	0% Brim
WA1R	1pc	Flap A right part 1	1	0.3	0% Brim
WA2R	1pc	Flap A right part 2	1	0.0	0% Brim
WA3R	1pc	Flap A right part 3	1	0.3	0% Brim



For perfect alignment when gluing the ailerons and flaps, consider using a jig (building frame).

Pay attention to the modifiers and support blockers in the 3MF files.

PAMPERO version 1.0	2026
Wing A - Aileron and Flap	AeroPrint3D



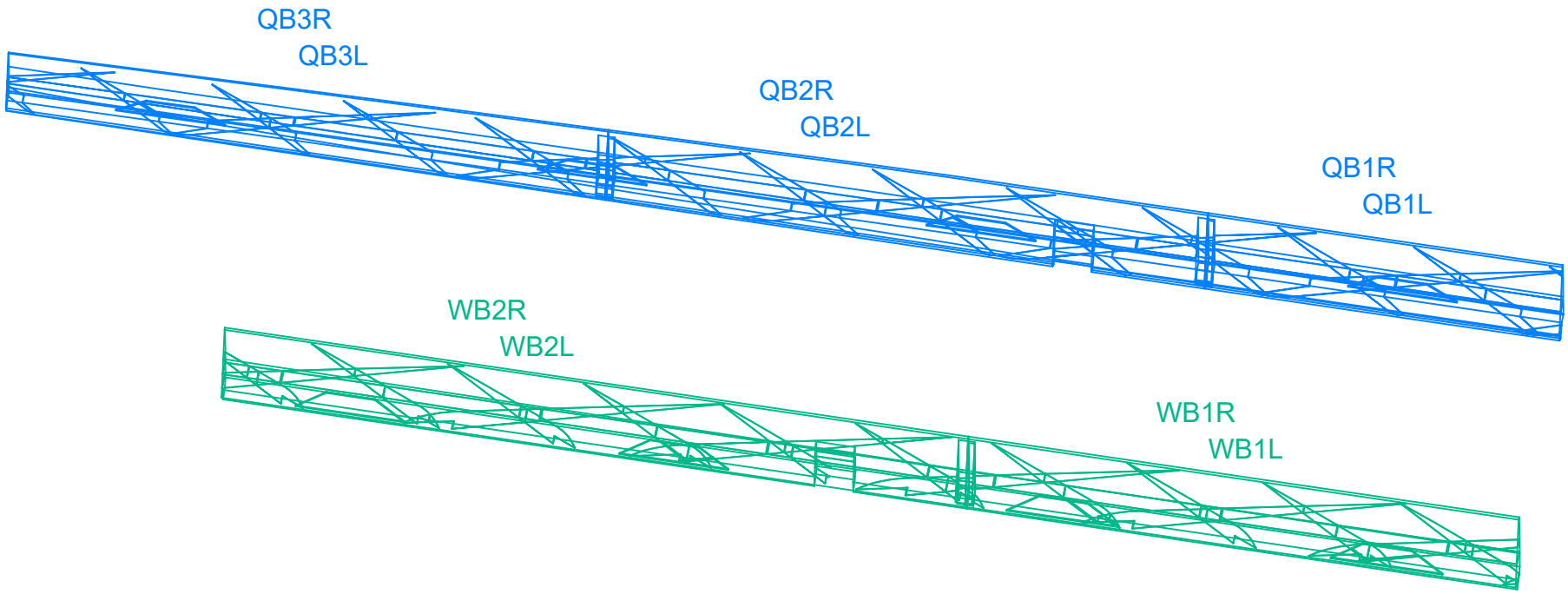
FB1R	1pc	wing A right part 1	1 $^{0}_{5}$	0%	Brim
FB2R	1pc	wing A right part 2	1 $^{0}_{0}$	0%	Brim
FB3R	1pc	wing A right part 3	1 $^{0}_{0}$	0%	Brim
FB4R	1pc	wing A right part 4	1 $^{0}_{0}$	0%	Brim
FB5R	1pc	wing A right part 5	1 $^{0}_{0}$	0%	Brim
FB6R	1pc	wing B right Teil 6	1 $^{0}_{0}$	0%	Brim
SC	2pcs	Servo cover	1 $^{2}_{2}$	0%	no
KSA	1pc	Cable duct cover	1 $^{2}_{2}$	0%	no
C4	2pcs	Round carbon rod 4mm 40mm			
C64	1pc	Carbon fiber tube 6/4mm 712mm			
C42	1pc	Carbon fiber tube 4/2mm 520mm			
MA	1pc	Neodymium magnet 10x5mm			
SUB		subpart when printing			

The left wing is built as a mirror image of the right half. Before gluing, remove the sub-components (labeled "SUB") using a small pair of pliers. If using olefin-based filament, remember to treat all bonding surfaces with the primer.

Pay attention to the modifiers and support blockers in the 3MF files.

PAMPERO version 1.0	2026
Wing B	AeroPrint3D

QB1R	1pc	Aileron A right part 1	1	0.3	0% Brim
QB2R	1pc	Aileron A right part 2	1	0.0	0% Brim
QB3R	1pc	Aileron A right part 3	1	3.0	0% Brim
WB1R	1pc	Flap A right part 1	1	0.3	0% Brim
WB2R	1pc	Flap A right part 2	1	3.0	0% Brim



For perfect alignment when gluing the ailerons and flaps, consider using a jig (building frame).

Pay attention to the modifiers and support blockers in the 3MF files.

PAMPERO version 1.0	2026
Wing B - Aileron and Flap	AeroPrint3D

Disclaimer and Copyright:

The files and information provided have been carefully compiled based on experience and insights gained from test flights. Failure to follow the printing recommendations may result in the model not meeting expectations, or only partially meeting them. Despite meticulous implementation of a 3D-printed model aircraft idea, design flaws can never be completely ruled out. This is especially true when using a slicer other than "Bambu Studio," different print settings, or filaments.

We assume no liability for the production (3D printing) and operation of any model aircraft purchased from AeroPrint3D.

In Austria, liability insurance is mandatory for operating model aircraft with a takeoff weight exceeding 250g (https://aeroclub.at). Furthermore, registration with Austro-Control and passing the "drone license" exam are required (https://www.dronespace.at/modellflug/allgemeine_informationen).

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