Sidepack Frame Assembly Instructions

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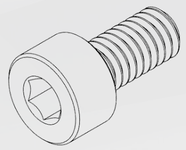
Sidepack Frame

Bill of Materials

Sidepack Frame

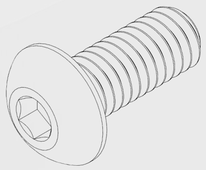
x12



M4x8 SHCS

A metric bolts for fixing the feet to the frame.

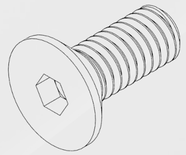
x16



M4x10mm BHCS

A metric bolts for fixing corner bracket .

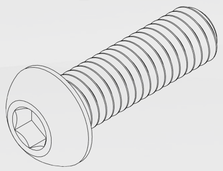
x28



M4x10 FHCS

A metric bolts for fixing the skirts.

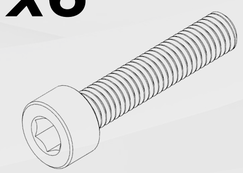
x40



M5x16 BHCS

A metric bolts for fixing extrusions via blind joint.

x6



M5x25 SHCS

A metric bolts for securing the rubber feet .

x6

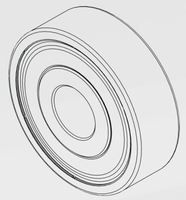
M5 Washer

A washer for fixing the rubber feet.

Bill of Materials

Sidepack Frame

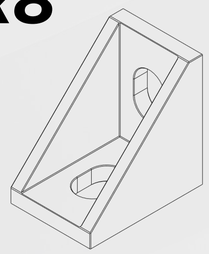
x3



625zz Bearing

A ball bearings used for drill jig.

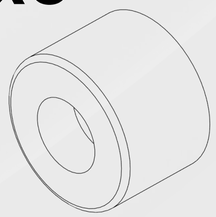
x8



Cornet Brackets

Corner joints are used for fixing the Z and sidepack extrusions.

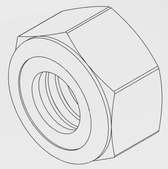
x6



Rubber Feet

Rubber feet for dampening.

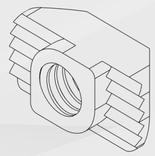
x6



M5 Locknut

A nut to secure foot_x4.stl

x56

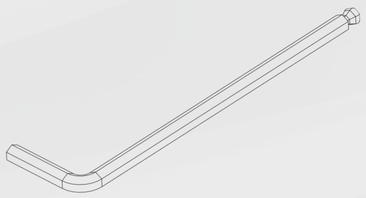


M4 T-Nut

A nut that can be inserted into the extrusion slot

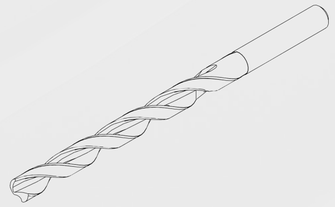
Bill of Tools

Default Frame



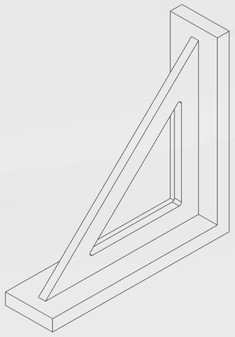
2mm
2.5mm
3mm Allen Key

Allen key for M5 BHCS.



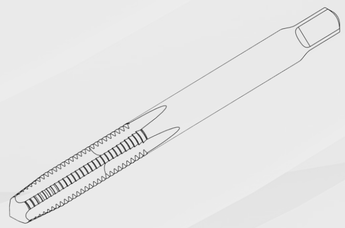
5mm Drill Bit

To drill acces holes.



Square

Square is used for aligning the frame.



M5 Tap

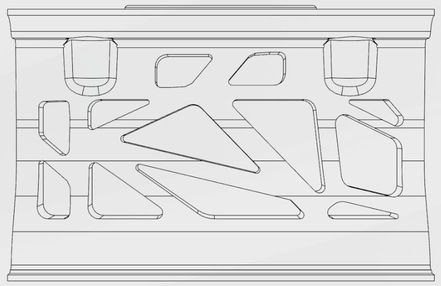
For tapping the extrusion holes.

3D Printed Parts

Default Frame

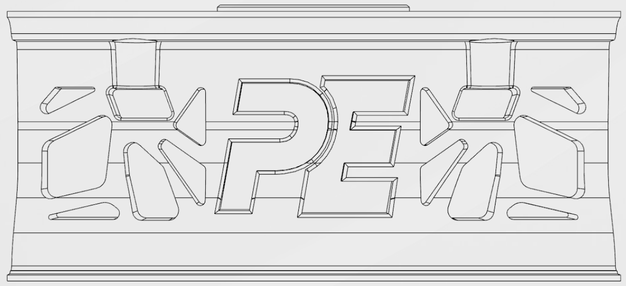
Print Settings

x3



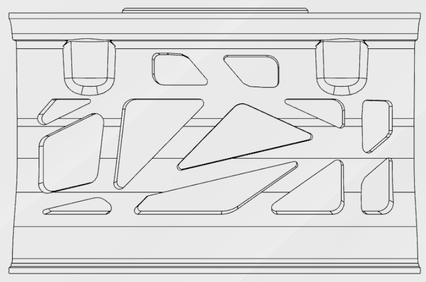
skirt_a_x5.stl

x4



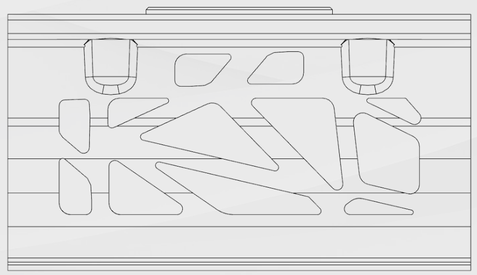
skirt_b_x5.stl

x4



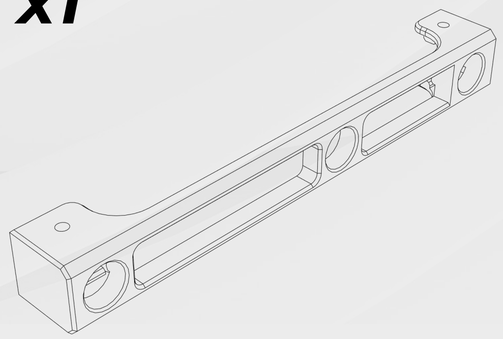
skirt_c_x5.stl

x1



skirt_d_x2.stl

x1



[o]_drilling_jig.stl

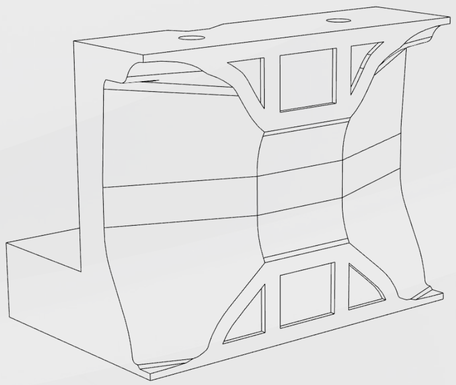
*You can click the part names to reach STL files.

3D Printed Parts

Default Frame

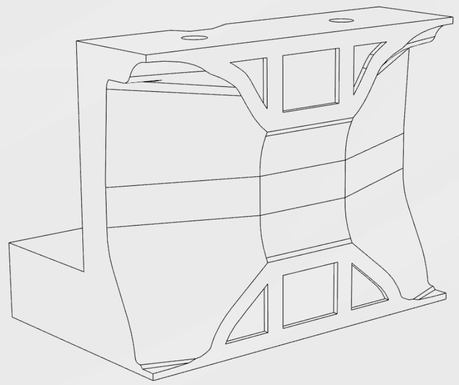
Print Settings

x4



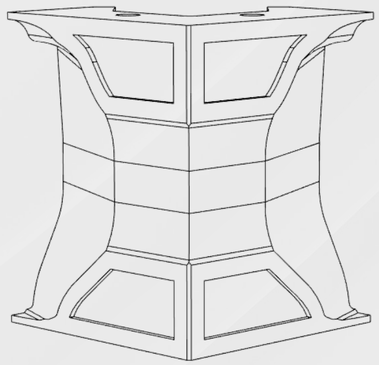
foot_a_x1.stl

x4



foot_b_x1.stl

x4

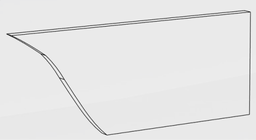


foot_c_x4.stl

x4

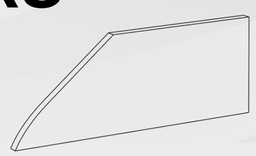
[a]_pe_insert_x4.stl

x8



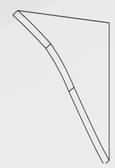
[a]_upper_accent_part_x8.STL

x8



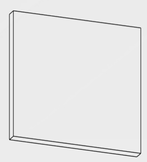
[a]_lower_accent_part_x8.stl

x8



[a]_sidepack_foot_accent_part_a_x4.STL

x8



[a]_sidepack_foot_accent_part_b_x4.STL

*You can click the part names to reach STL files.

Blind Joints

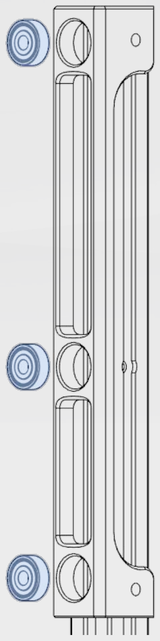
Default Frame

Blind joint provides an inexpensive, simple, sturdy, and aesthetically pleasing appearance. Click here to skip this part.

To create a blind joint, you need to tap metric threads into the extrusions and drill specific locations. A button head cap screw (BHCS) is placed into the tapped portion, and then the extrusion to be fixed is slid to align the head of the screw with the channel of the profile. Using an Allen key, the extrusions are fastened together through pre-drilled holes.

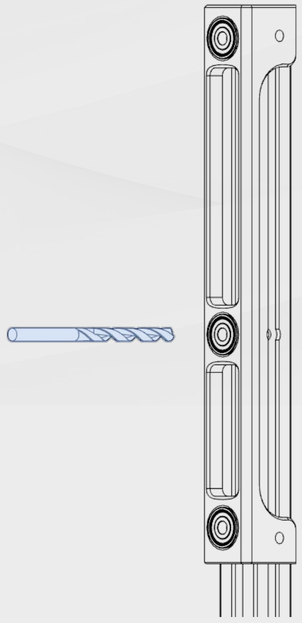
Step 1

First of all you need to place the 625zz bearings into their designated locations in the jig.



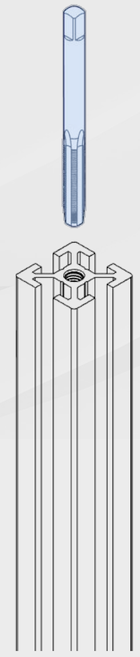
Step 2

Use drill and 5mm drill bit to drill holes. You need to drill to the end.



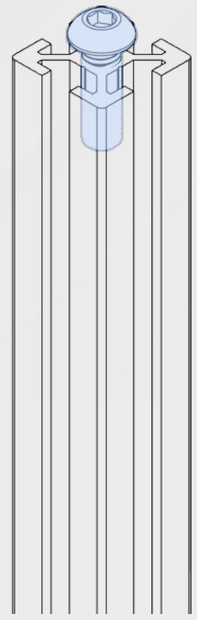
Step 3

Tap an M5 thread into the holes of the required profiles.



Step 4

Insert the M5x16 BHCS bolt into the tapped hole. Leave ~2mm gap between the bolt and extrusion.

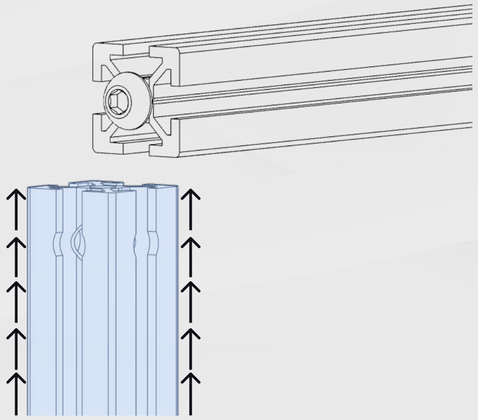


Blind Joints

Default Frame

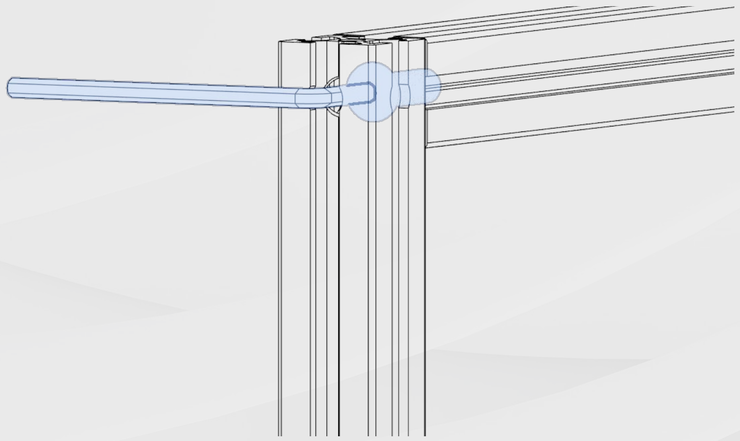
Step 5

Slide the extrusion and align the predrilled hole with the bolt.



Step 6

Use a 3mm Allen hex key to tighten the M5x16 button head cap screw.



You are all set!

I believe you have sufficient knowledge to assemble the Crossant235's frame.

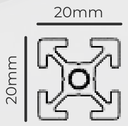
The frame assembly is critical for the printer, and proper assembly is essential. Please be patient and use a square while assembling the frame.

Square

Extrusion Sizes

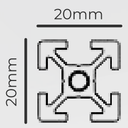
Default Frame

Here is the list of extrusions needed to build a frame without sidepack, click here to learn what these things “HFSB5-2020-530-AP10-BP115-CP190-DP520” and what you should understand from them.



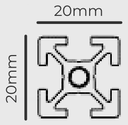
HFSB5-2020-530-AP10-BP115-CP190-DP520 **A Extrusions**

x4



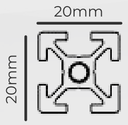
HFSB5-2020-530-AP10-BP520 **B Extrusions**

x2



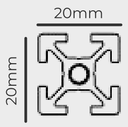
HFSB5-2020-350-TPW **C Extrusions**

x18



HFSB5-2020-310-TPW **D Extrusions**

x1



HFSB5-2020-150-TPW **E Extrusions**

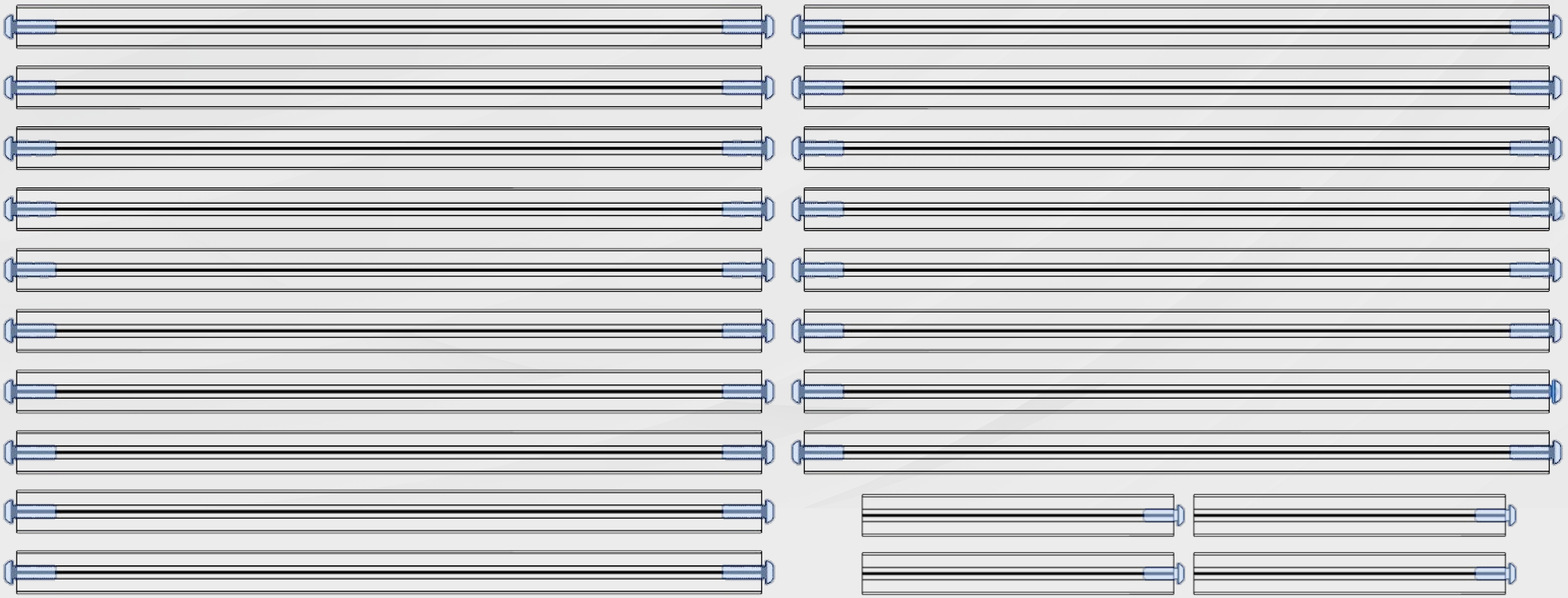
x4

Frame Asssembly

Default Frame

Preparation

Before starting the frame assembly, tap both ends of the 18 pieces of 350mm and tap only one ends of the 4 pieces of 150mm extrusions with a M5 tap and insert M5x16 BHCS screws to both ends.



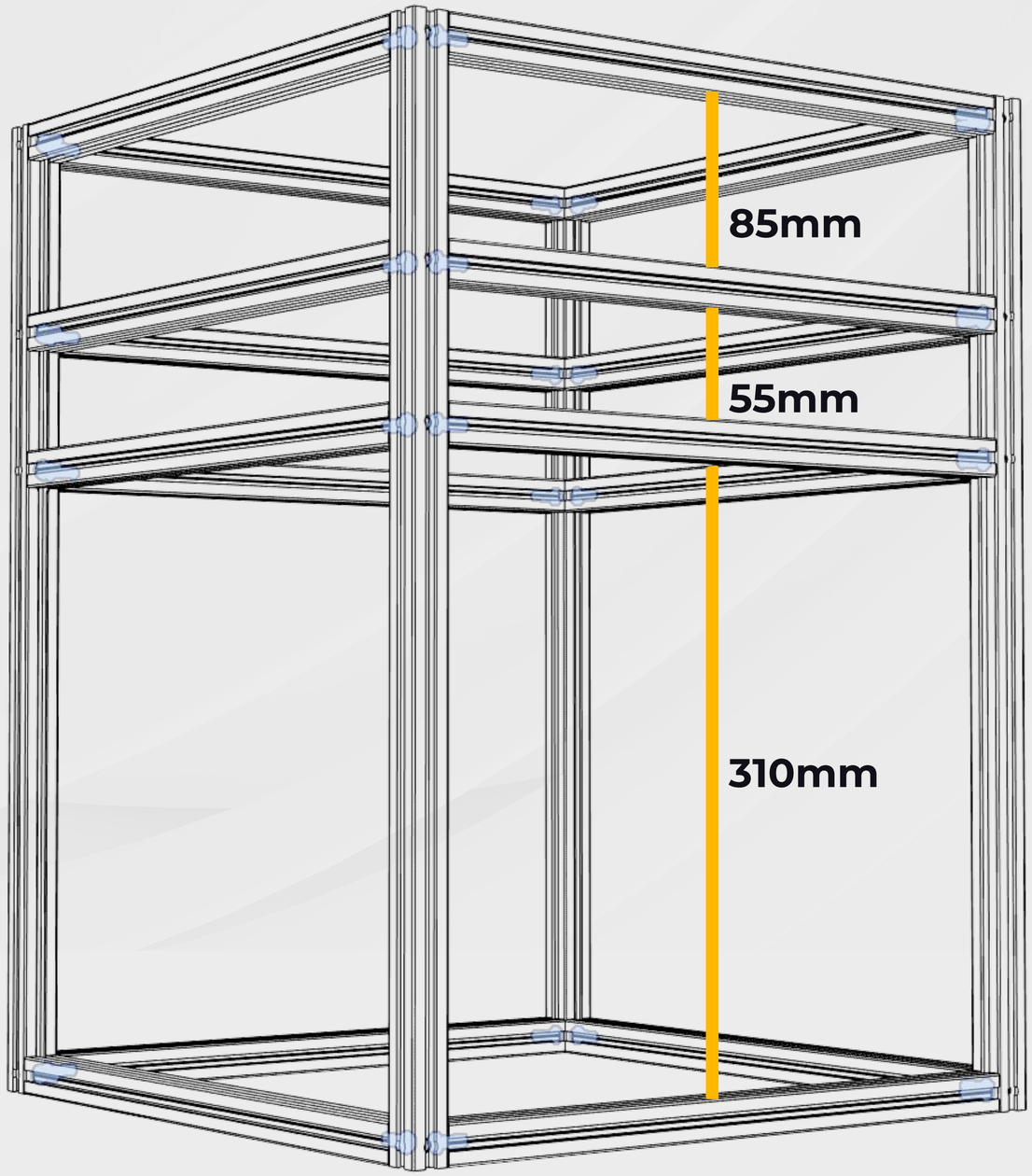
Frame Asssembly

Default Frame

A&C Extrusions

Slide the **C extrusions** into the slots of the **A extrusions** to the desired position. Then tighten the **M5x16 BHCS** screws using a 3mm Allen key.

The **distance between the extrusions** should be as shown in the second image.



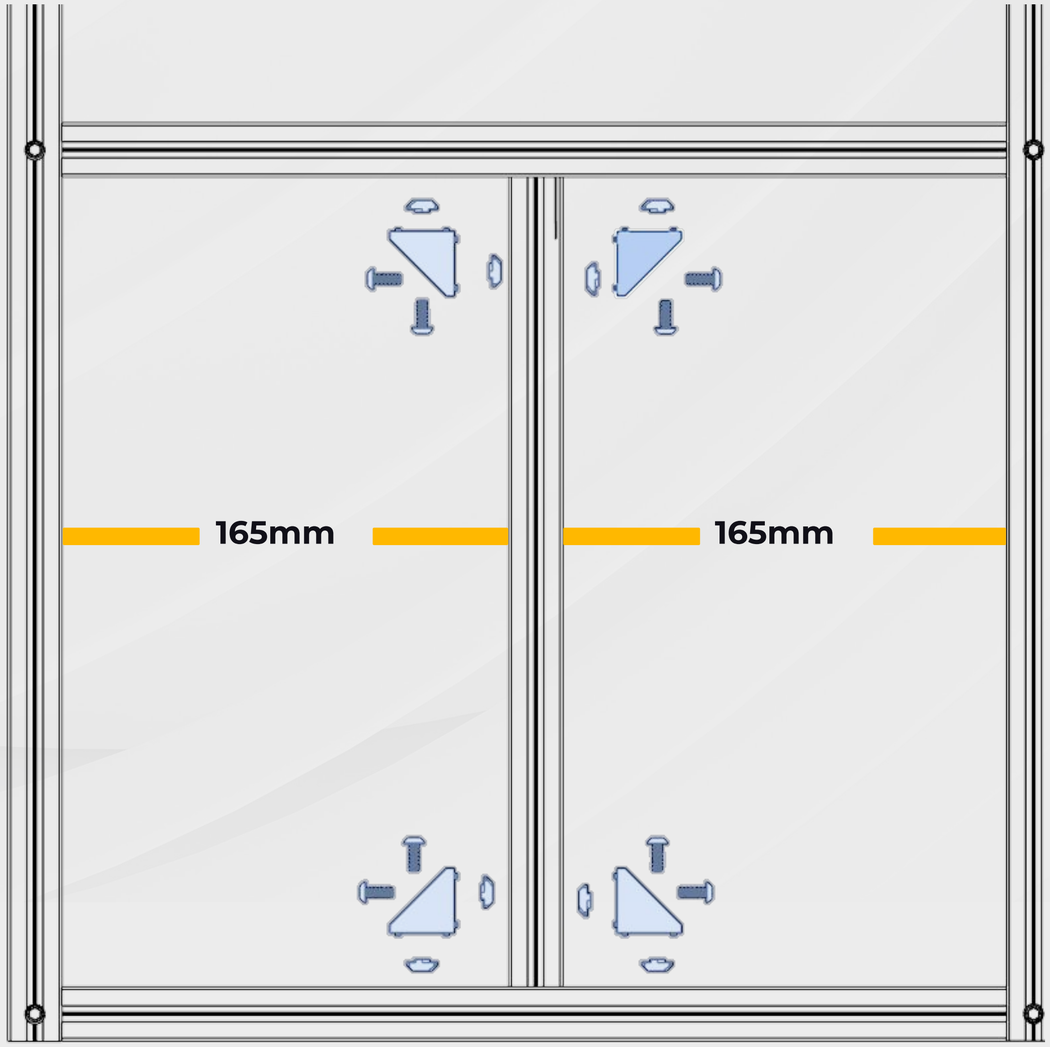
Frame Asssembly

Default Frame

D Extrusion

The D extrusion will hold the rear Z-rail extrusion. To secure it, you will need **8x M4 T-nuts, 8x M4x10mm BHCS or SHCS, and 4x corner brackets.**

The position of the C extrusion should be **exactly in the middle.**

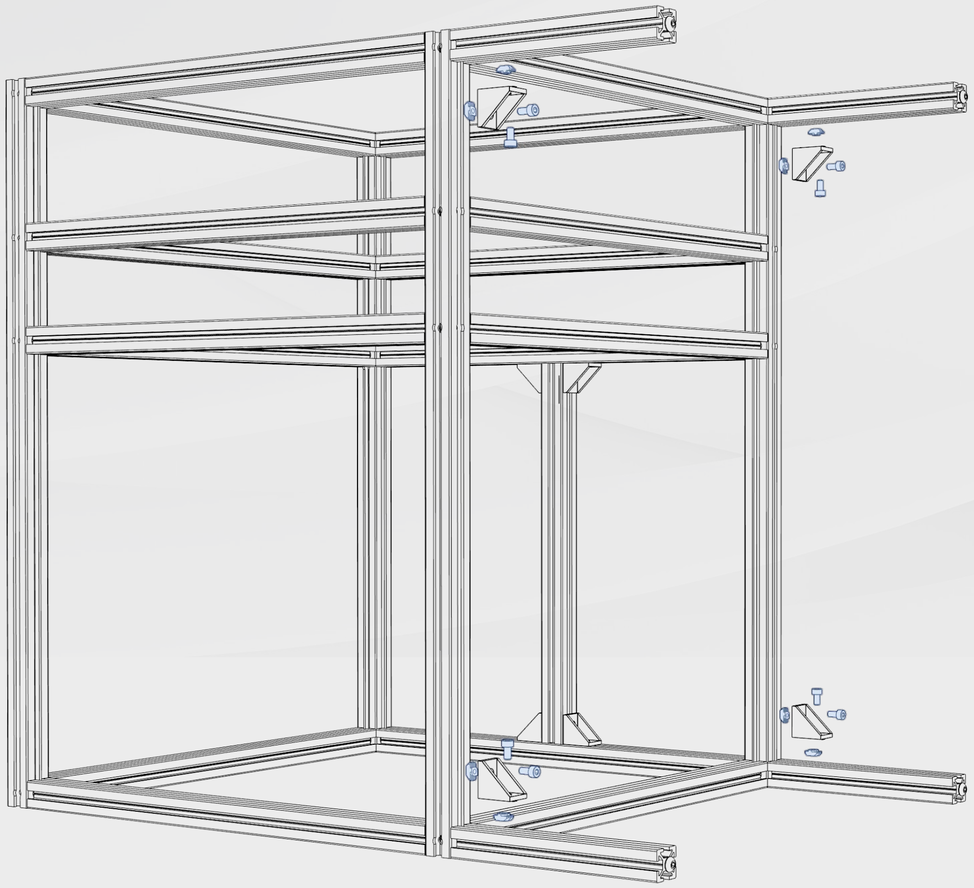


Frame Asssembly

Sidepack Frame

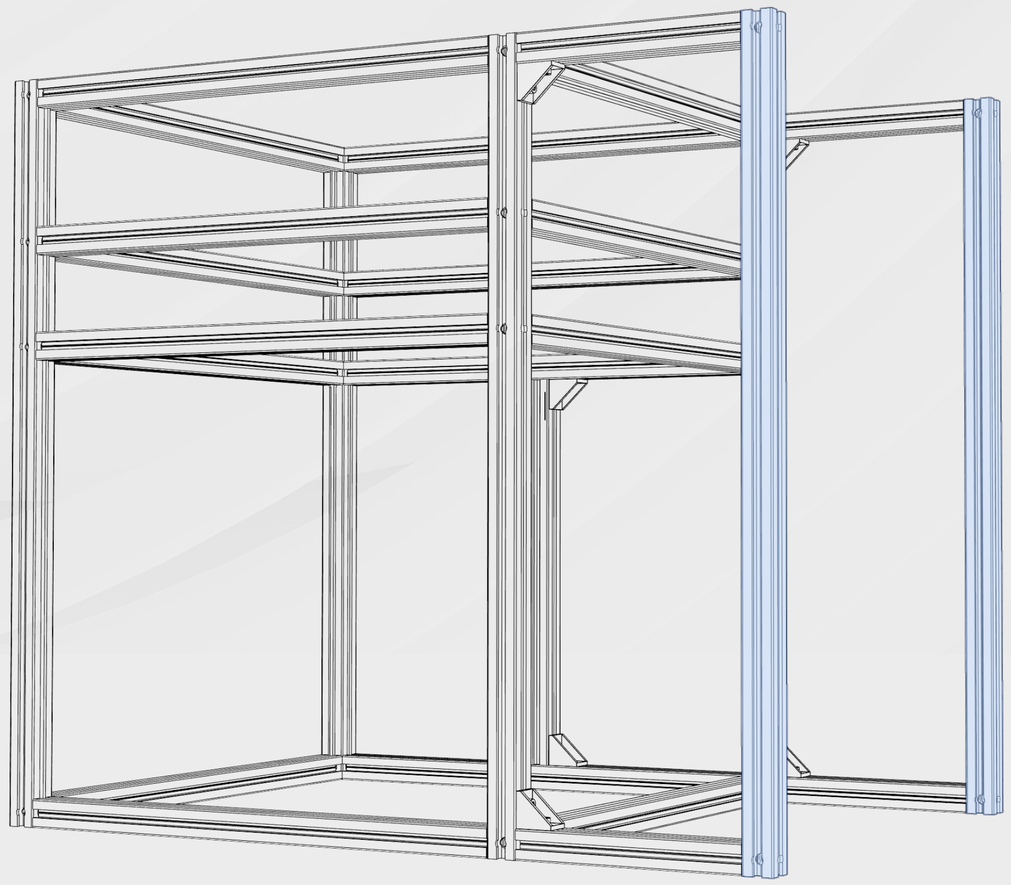
E Extrusions

Secure the E extrusions to the main frame using **corner brackets** as shown in the figure.



B Extrusions

Slide the B extrusions into place from top to bottom by aligning and sliding the M5x16 bolts into the channel. Then, **tighten the M5x16 bolts** using an allen wrench.

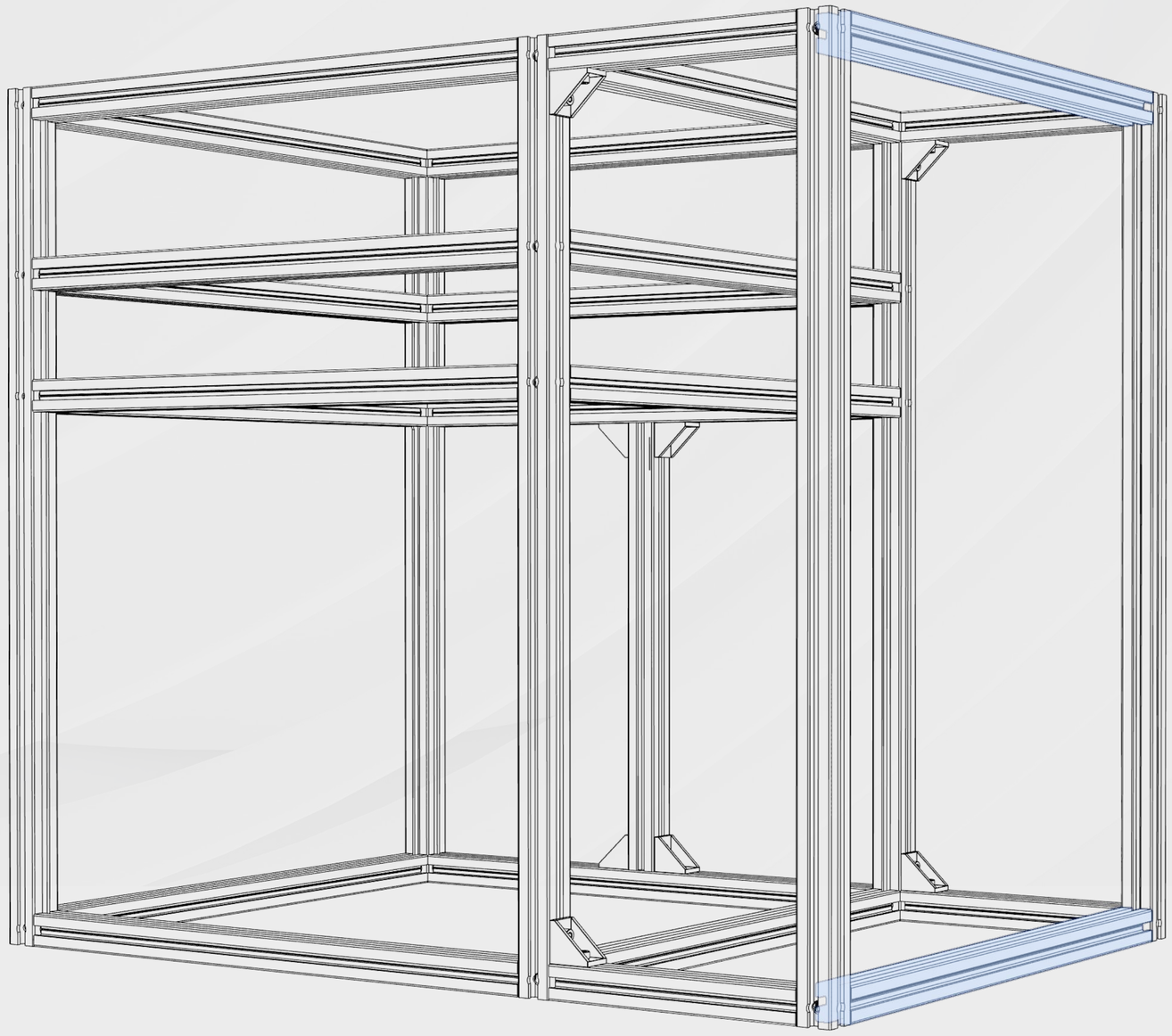


Frame Asssembly

Sidepack Frame

C Extrusions

Slide the C extrusions down into place and tighten the M5x16 BHCS.



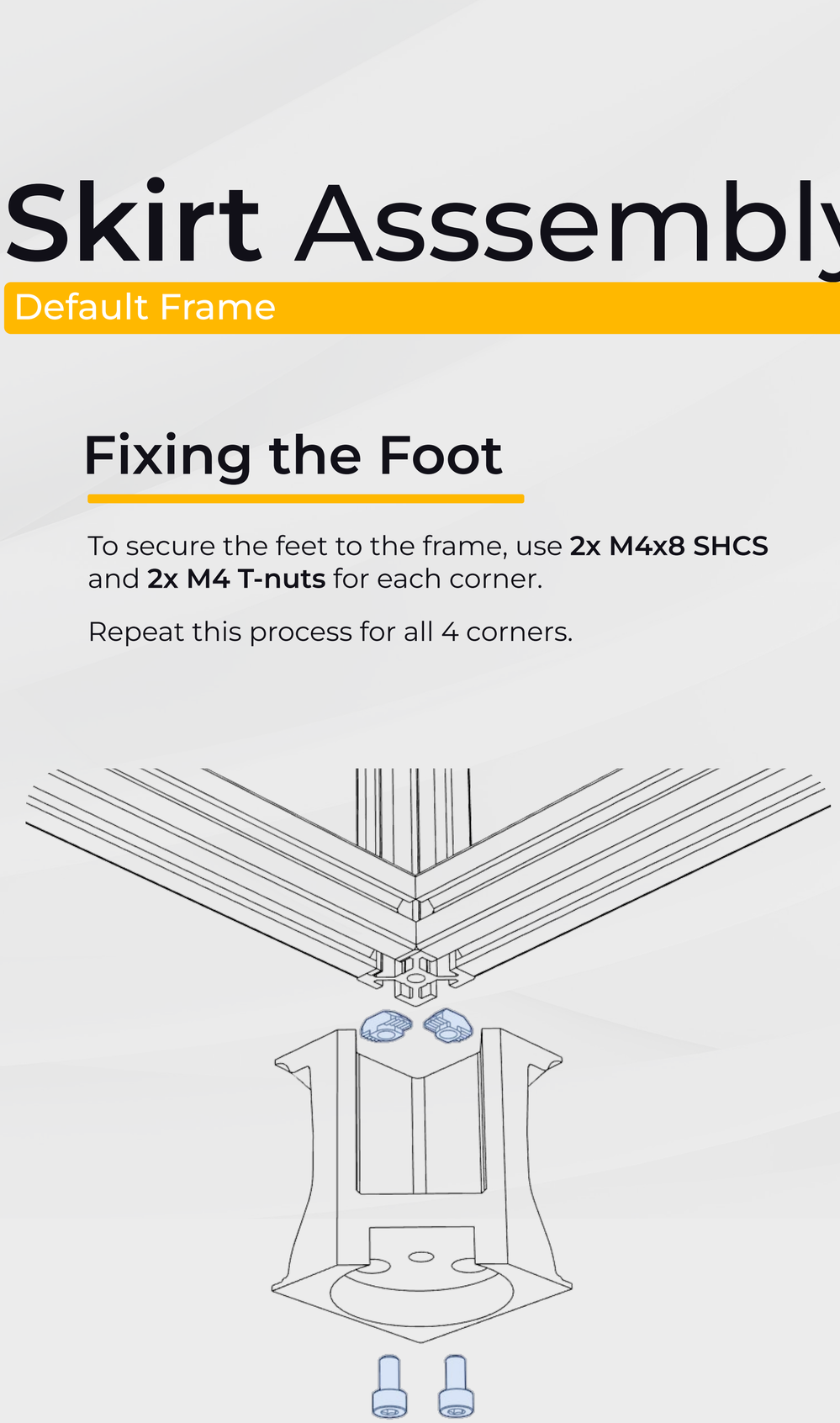
Skirt Asssembly

Default Frame

Fixing the Foot

To secure the feet to the frame, use **2x M4x8 SHCS** and **2x M4 T-nuts** for each corner.

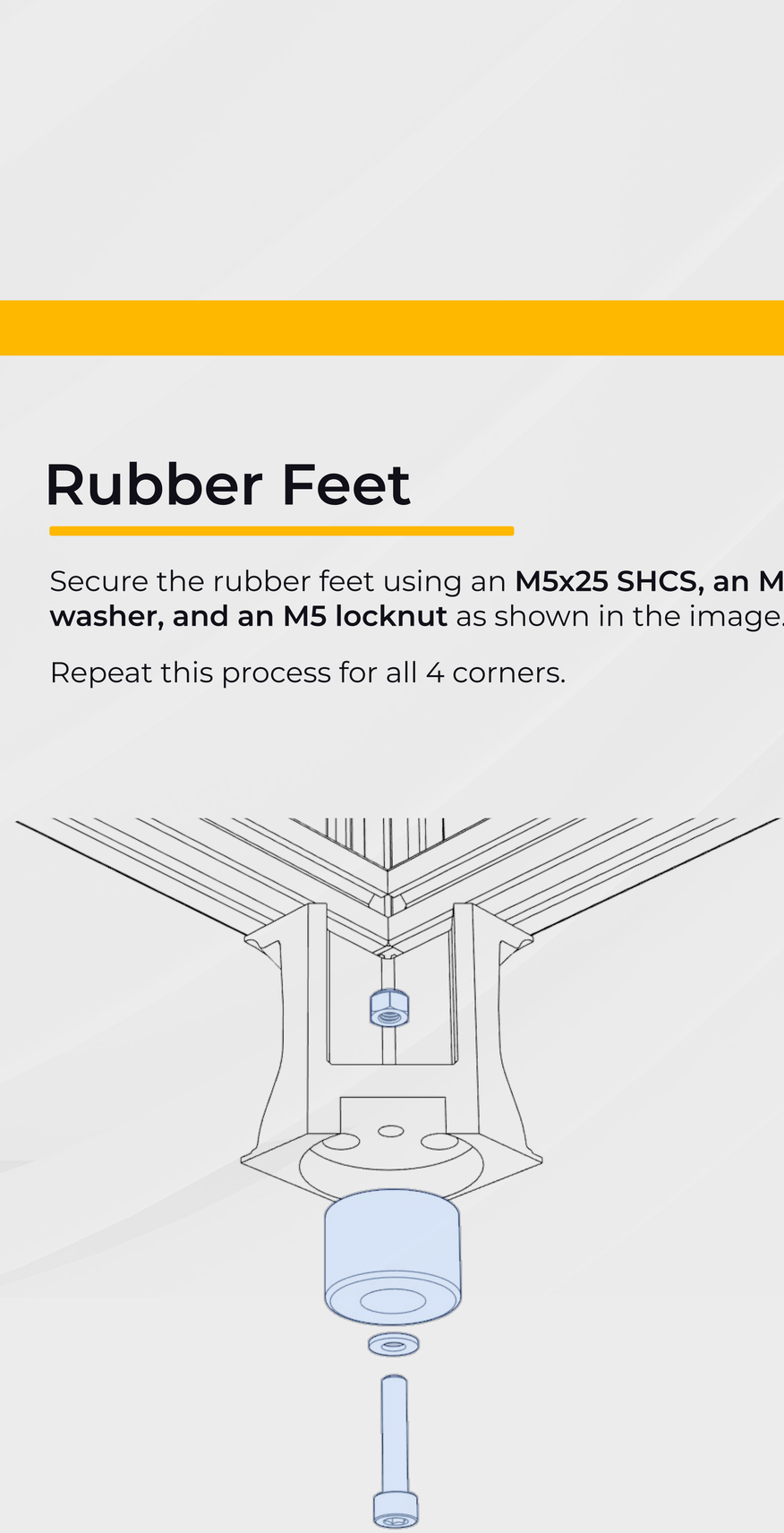
Repeat this process for all 4 corners.



Rubber Feet

Secure the rubber feet using an **M5x25 SHCS, an M5 washer, and an M5 locknut** as shown in the image.

Repeat this process for all 4 corners.



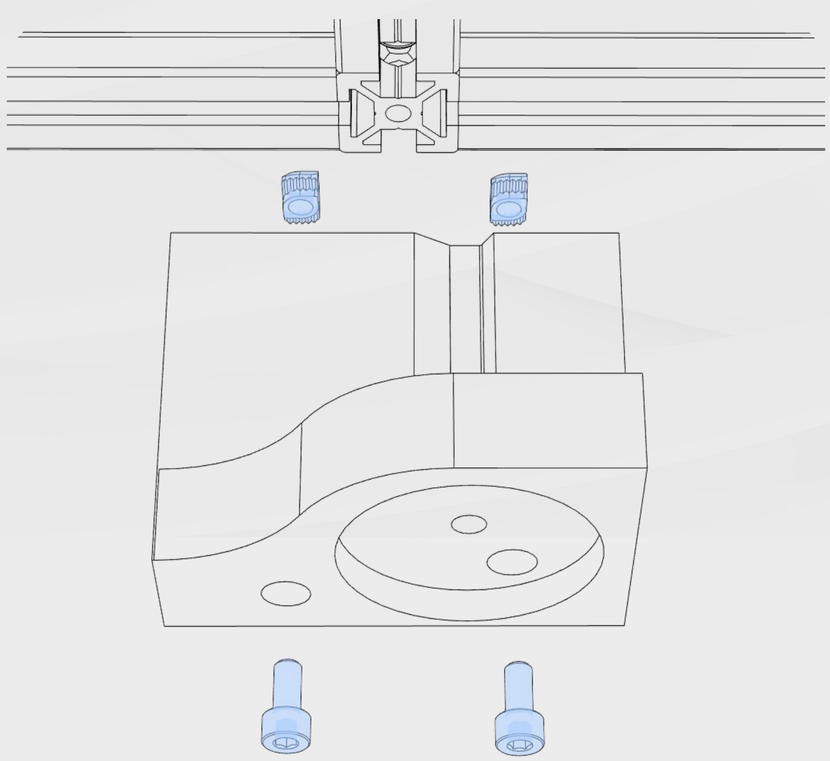
Skirt Asssembly

Default Frame

Fixing the Foot

To secure the middle feet to the frame, use **2x M4x8 SHCS** and **2x M4 T-nuts** for each sides.

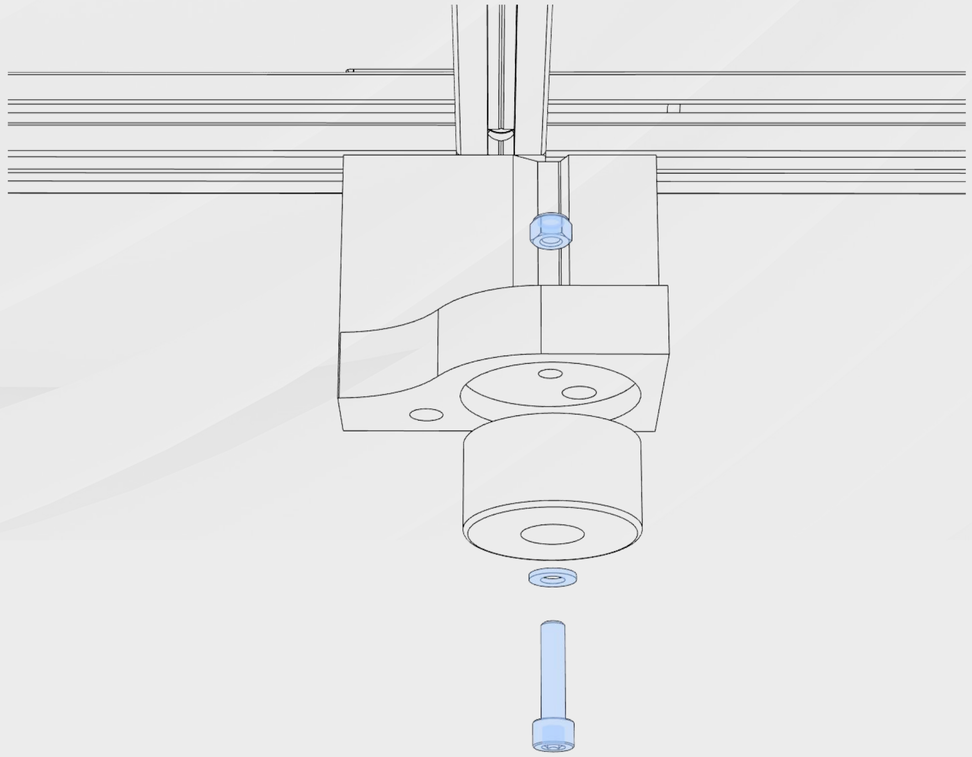
Remember that the middle feet are mirror versions of each other. **Foot A will be secured to the front of the printer, while Foot B will be secured to the back.**



Rubber Feet

Secure the rubber feet using an **M5x25 SHCS, an M5 washer, and an M5 locknut** as shown in the image.

Repeat this process for both sides.

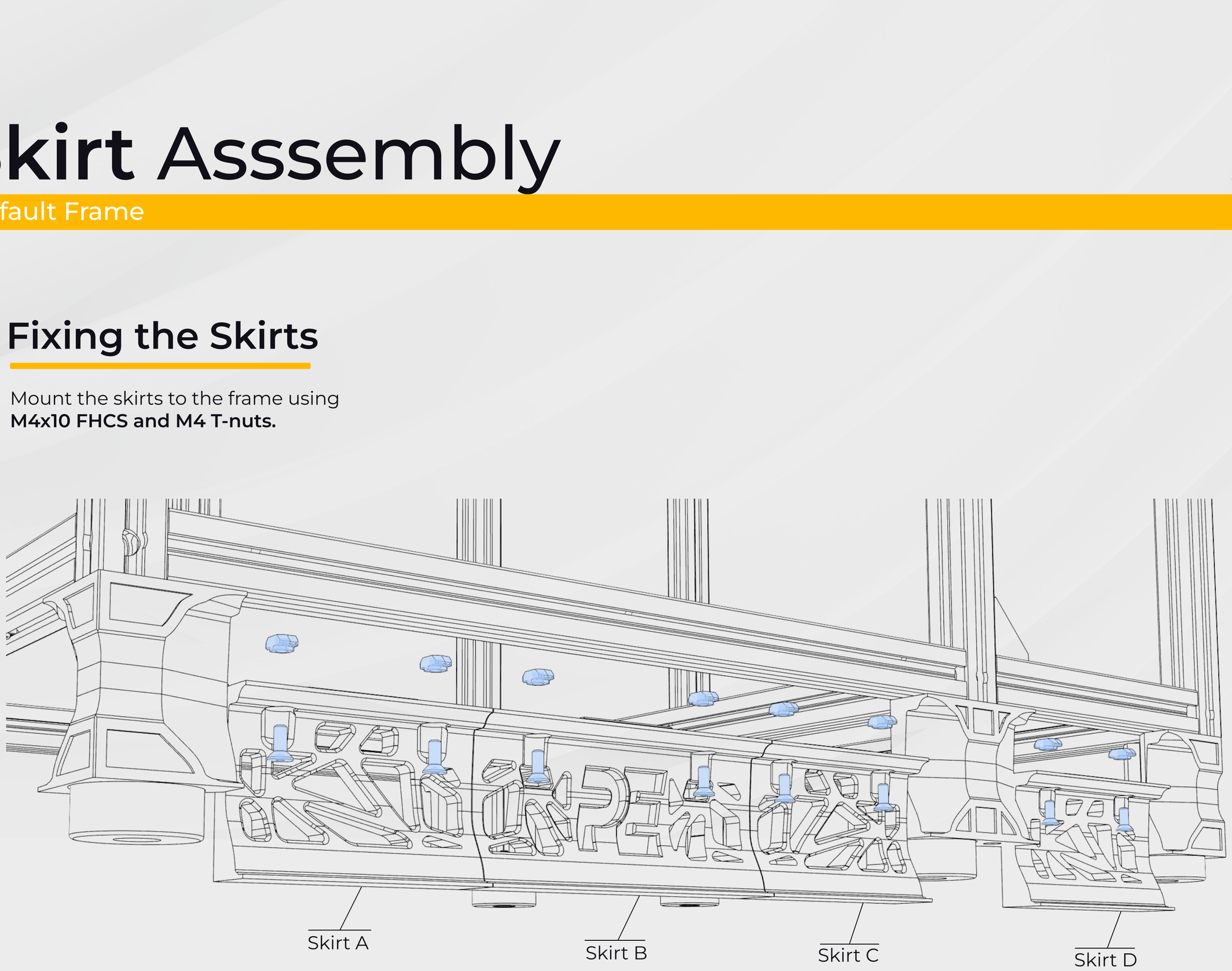


Skirt Asssembly

Default Frame

Fixing the Skirts

Mount the skirts to the frame using
M4x10 FHCS and M4 T-nuts.



Skirt Asssembly

Default Frame

Fixing the Skirts

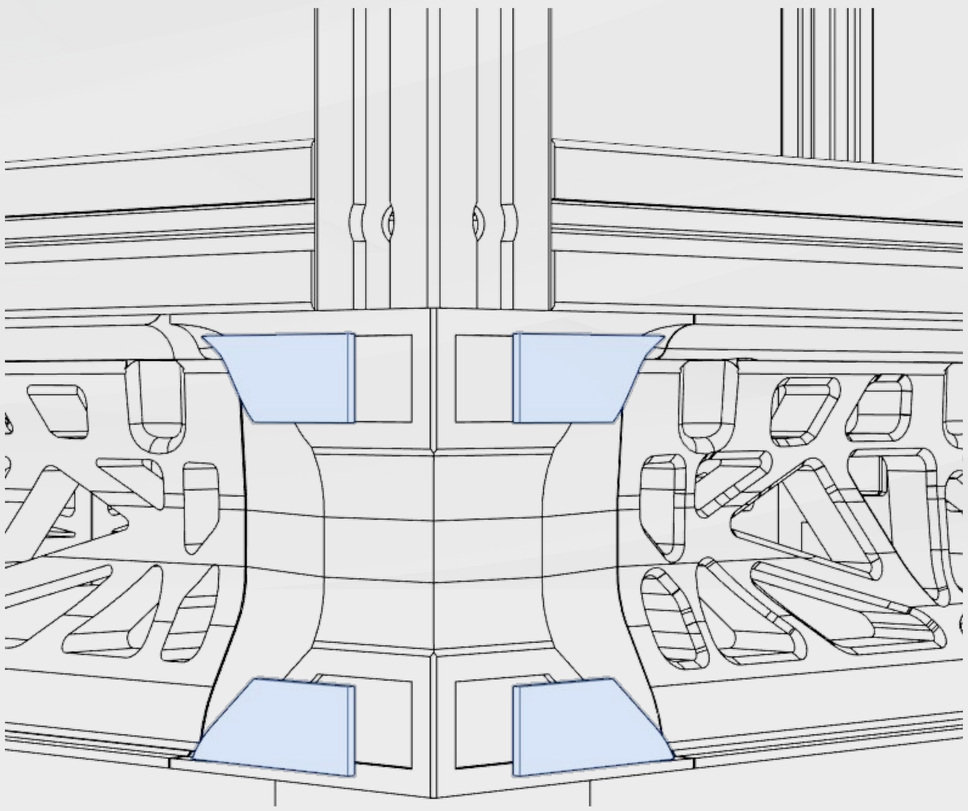
Repeat the same process for all 4 sides.

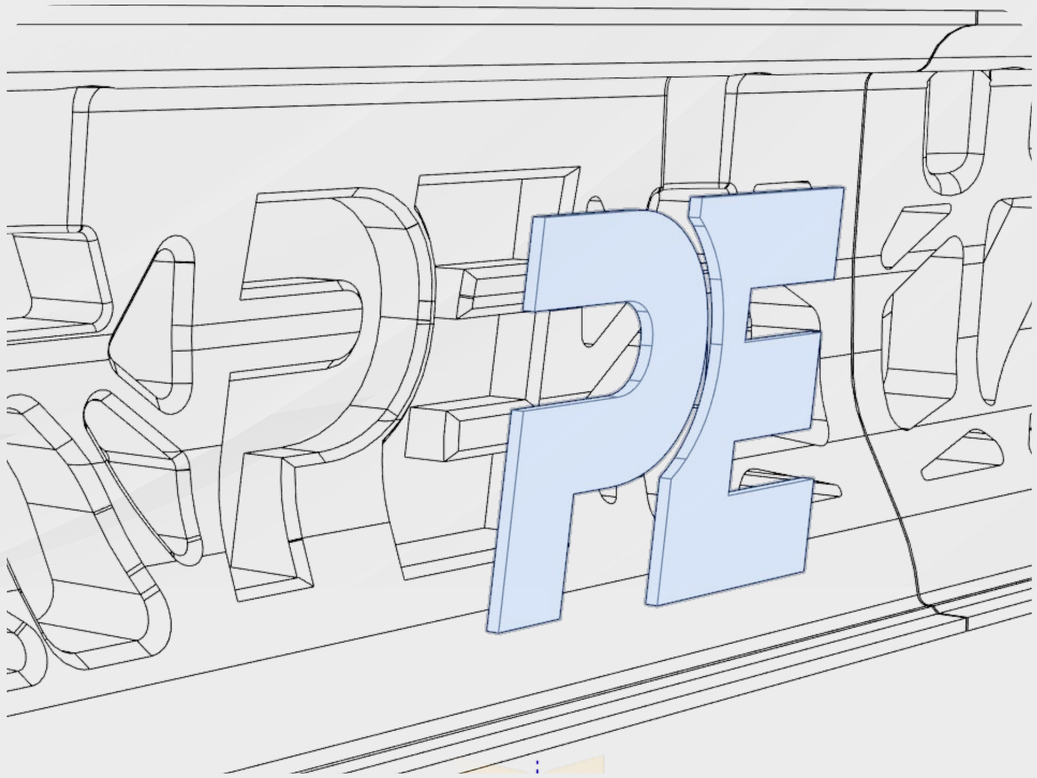
Skirt Asssembly

Default Frame

Accent Parts

Fix the accent parts to desired locations using super glue.



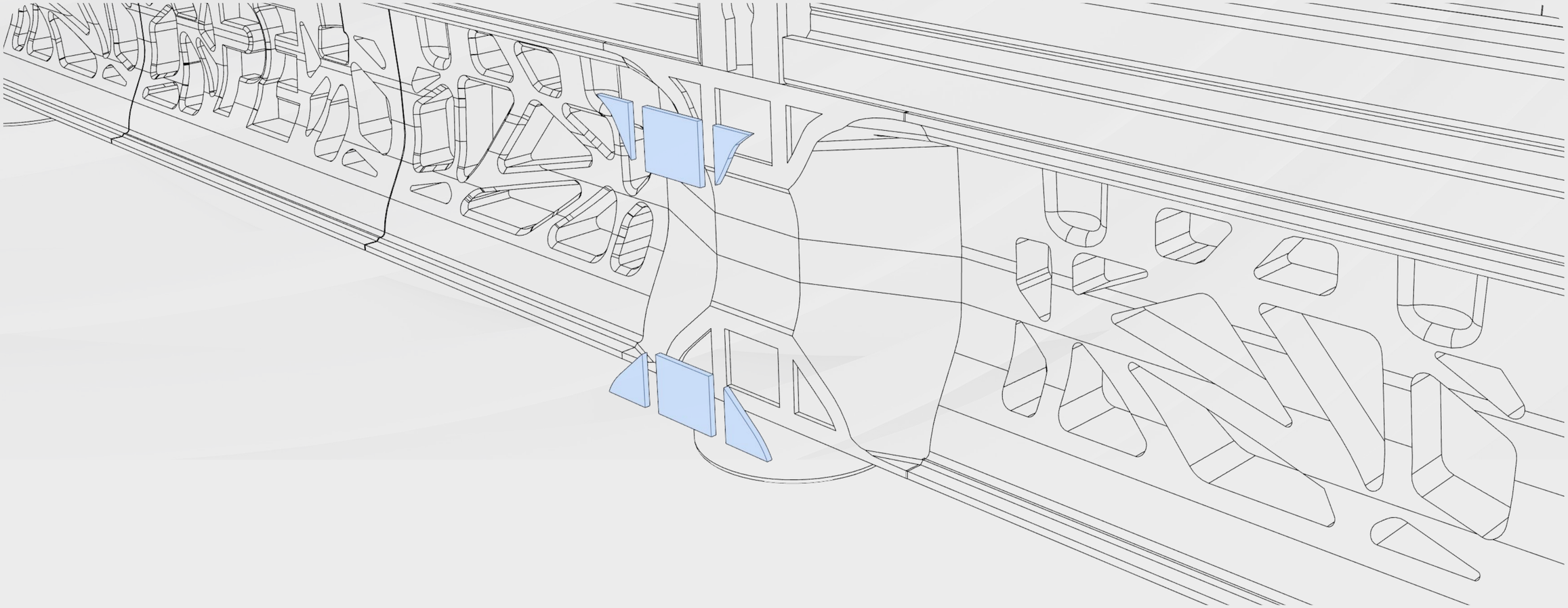


Skirt Asssembly

Default Frame

Accent Parts

Fix the accent parts to desired locations using super glue.

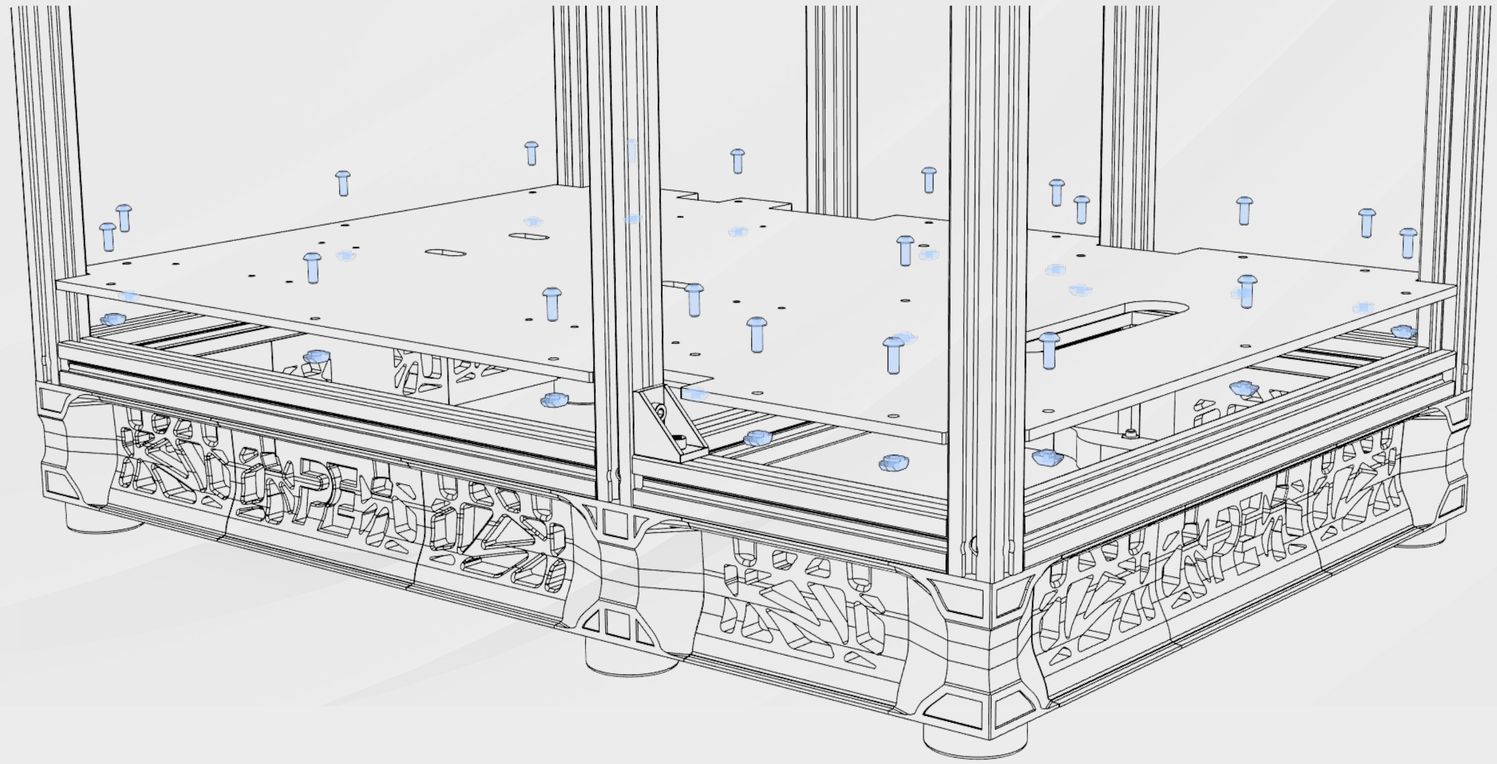


Bottom Panel

Default Frame | Optional

Fixing the Panel

Secure the bottom panel for the Z-axis you will be using (leadscrew or belted) with **M4x10 bolts and M4 T-nuts.**



Completed Frame