



# Frame Assembly Instructions

PE

# Table of Contents

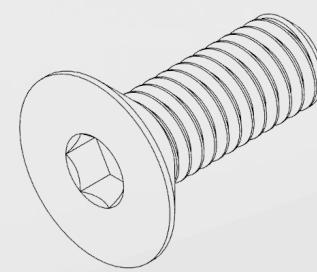
## Default Frame

Bill of Materials	3
Bill of Tools	5
3D Printed Parts	6
Blind Joints	8
Extrusion Sizes	10
Preparation	11
A&B Extrusions	12
C Extrusion	13
Skirt Assembly	14
Power Inlet	16
Completed Frame	17

# Bill of Materials

Default Frame

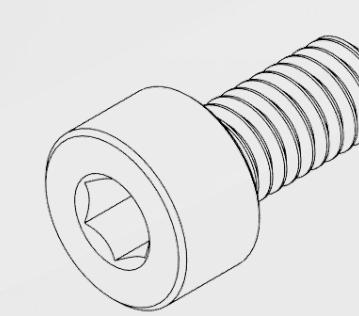
x2



**M3x8 FHCS**

A metric bolts for fixing power inlet to skirt .

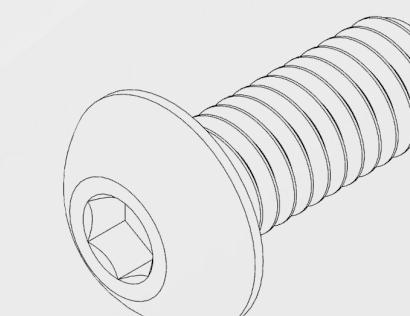
x8



**M4x8 SHCS**

A metric bolts for fixing the feet to the frame.

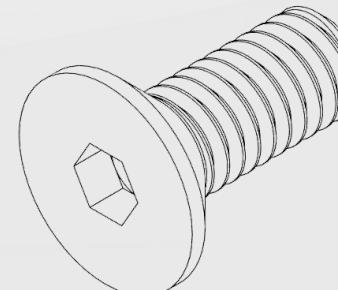
x8



**M4x10mm BHCS**

A metric bolts for fixing corner bracket .

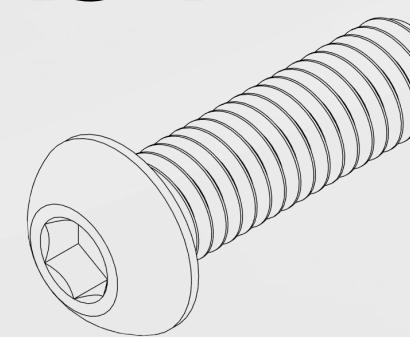
x24



**M4x10 FHCS**

A metric bolts for fixing the skirts.

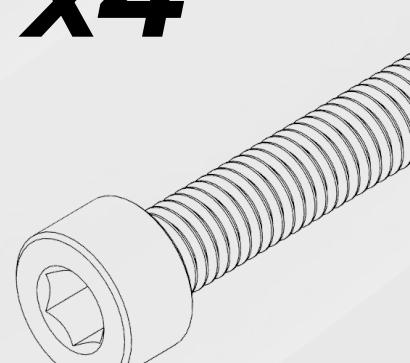
x34



**M5x16 BHCS**

A metric bolts for fixing extrusions via blind joint.

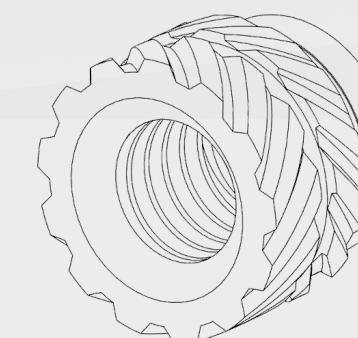
x4



**M5x25 SHCS**

A metric bolts for securing the rubber feet .

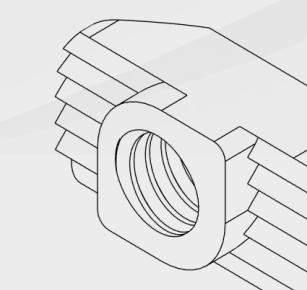
x2



**M3x4x5 Insert**

A insert nut to fix power inlet.

x40



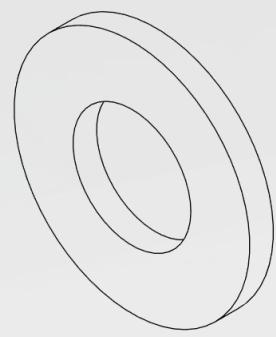
**M4 T-Nut**

A nut that can be inserted into the extrusion slot

# Bill of Materials

Default Frame

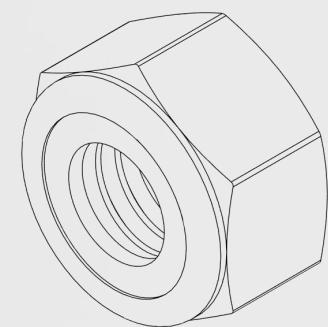
x4



## M5 Washer

A washer for fixing the rubber feet.

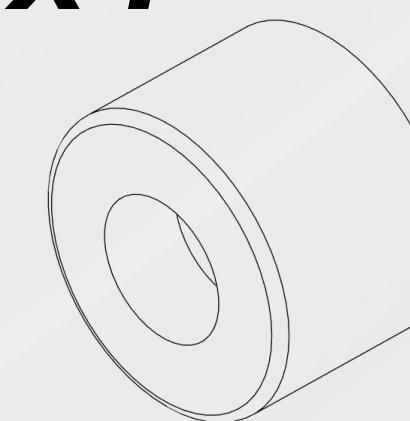
x4



## M5 Locknut

A nut to secure foot\_x4.stl

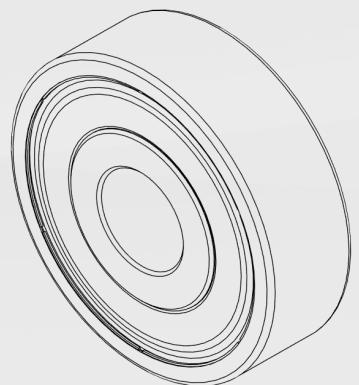
x4



## Rubber Feet

Rubber feet for dampening.

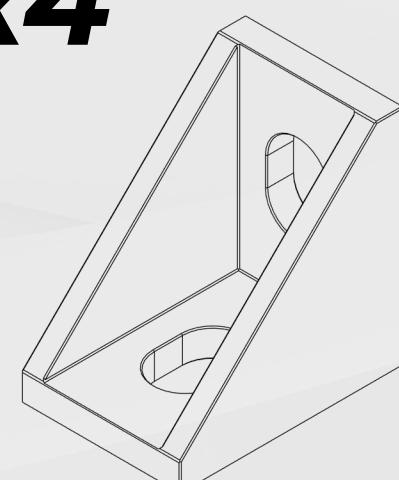
x3



## 625zz Bearing

A ball bearings used for drill jig.

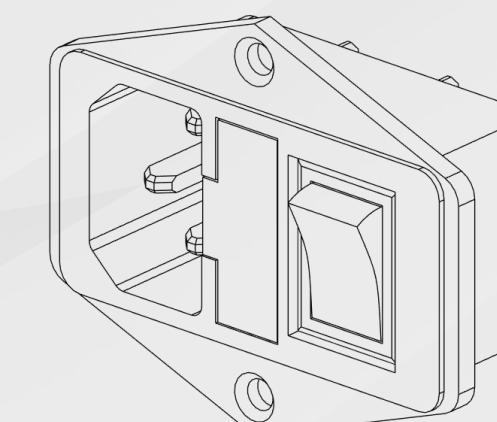
x4



## Corner Brackets

Corner joints are used for fixing the Z extrusion.

x1



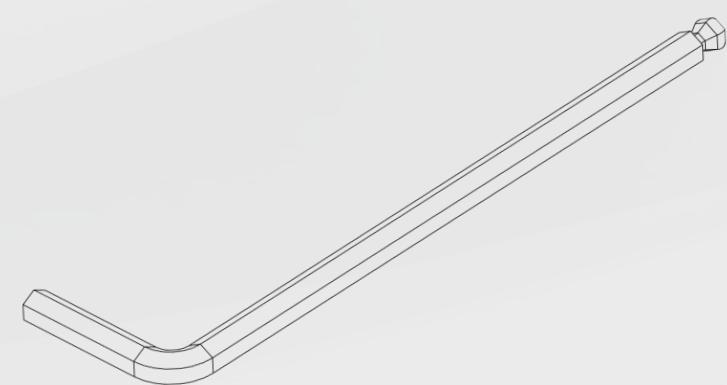
## Power Inlet

Power inlet for the electricity input.

# Bill of Tools

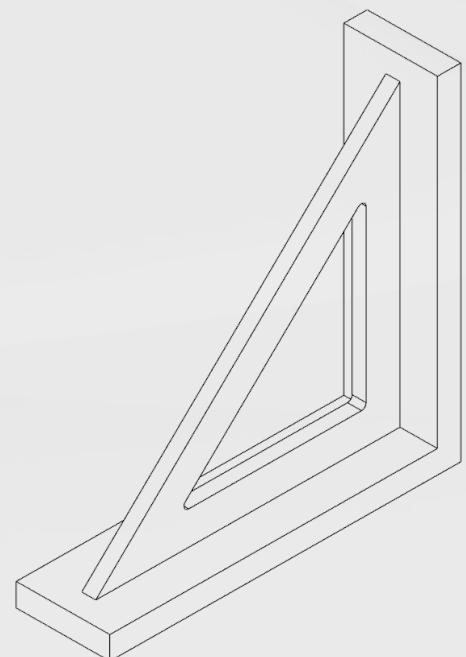
PE

Default Frame



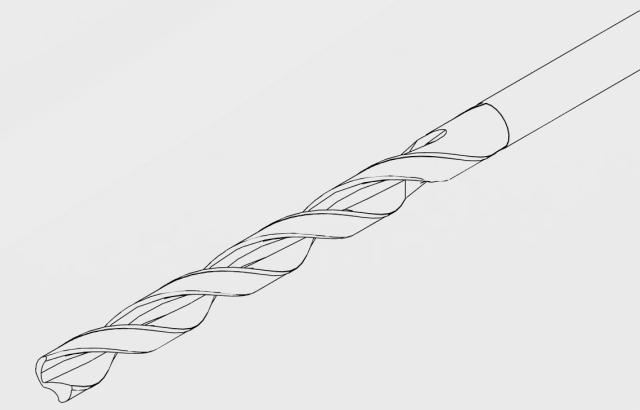
## 2mm 2.5mm 3mm Allen Key

Allen key for M5 BHCS.



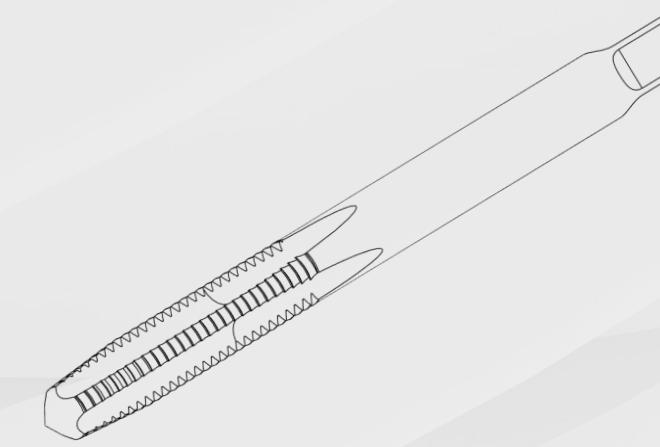
## Square

Square is used for aligning the frame.



## 5mm Drill Bit

To drill acces holes.



## M5 Tap

For tapping the extrusion holes.

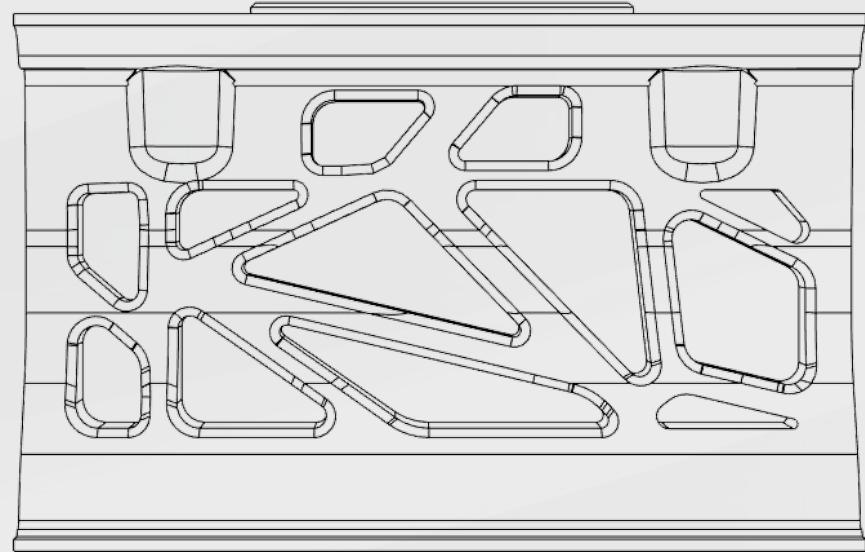
# 3D Printed Parts

PE

Default Frame

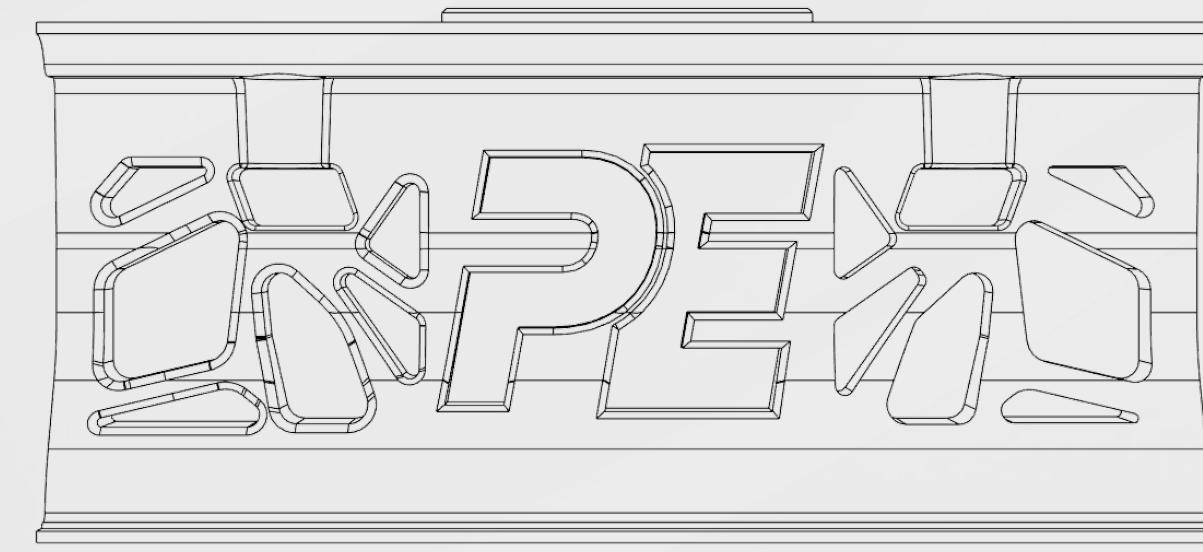
Print Settings

**x3**



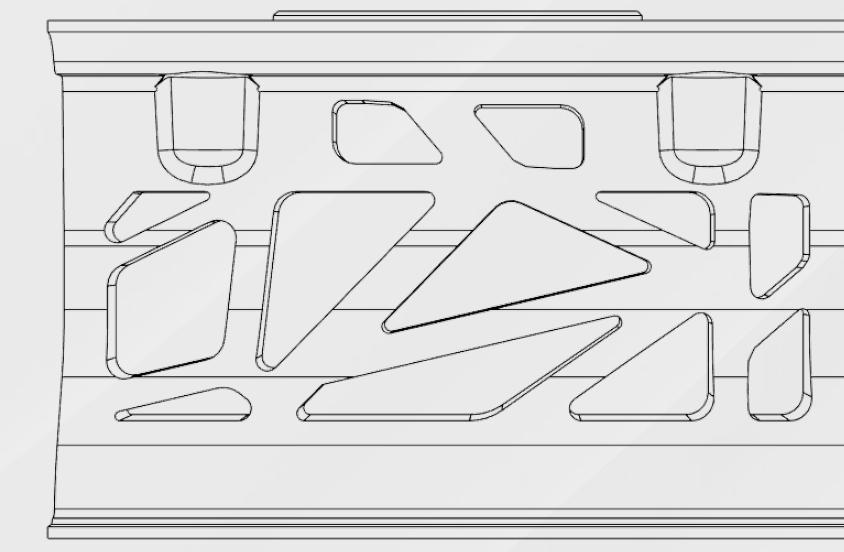
skirt\_a\_x3.stl

**x4**



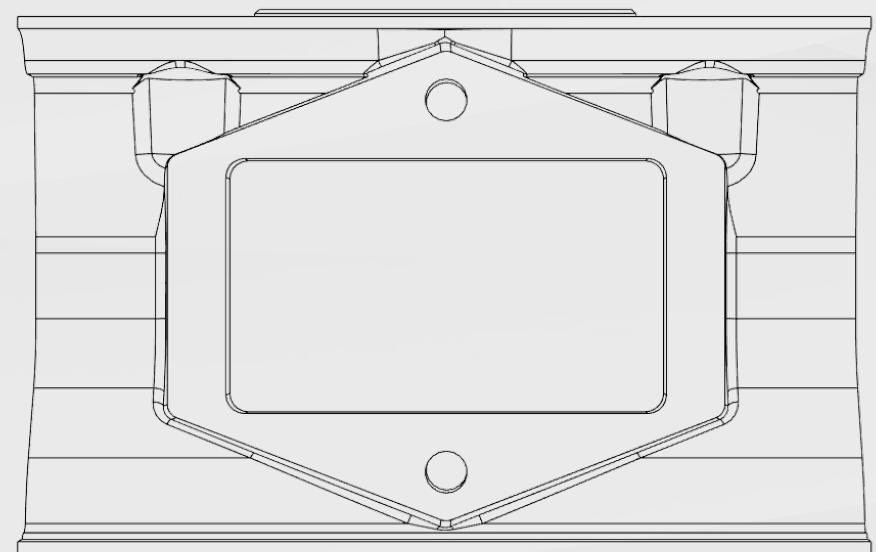
skirt\_b\_x4.stl

**x4**



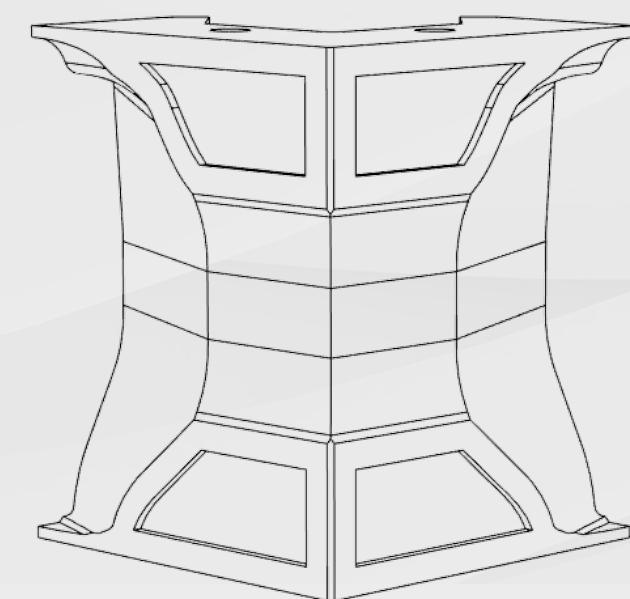
skirt\_c\_x4.stl

**x1**



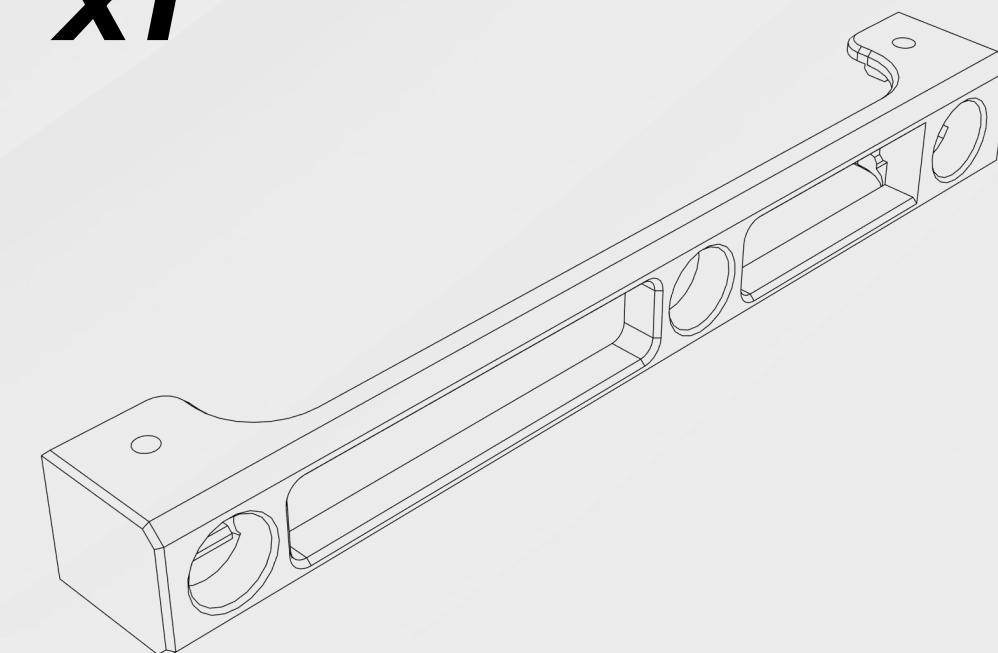
skirt\_power\_socket\_x1.stl

**x4**



foot\_x4.stl

**x1**



[o]\_drilling\_jig.stl

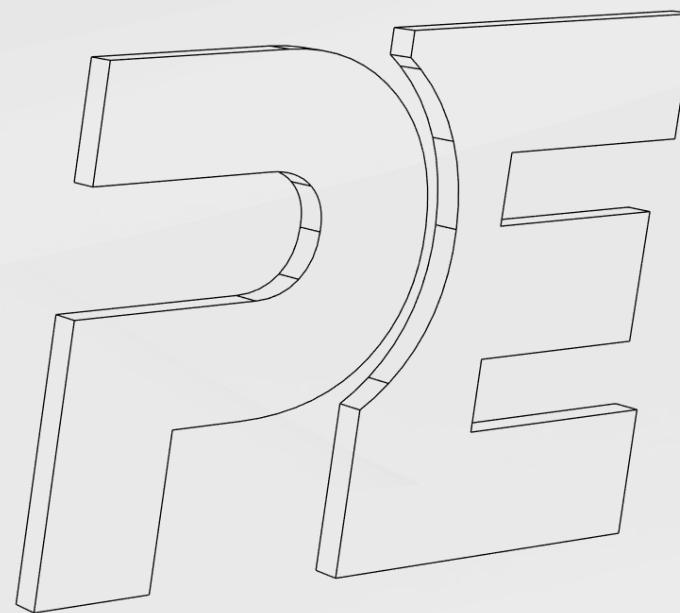
# 3D Printed Parts



Default Frame

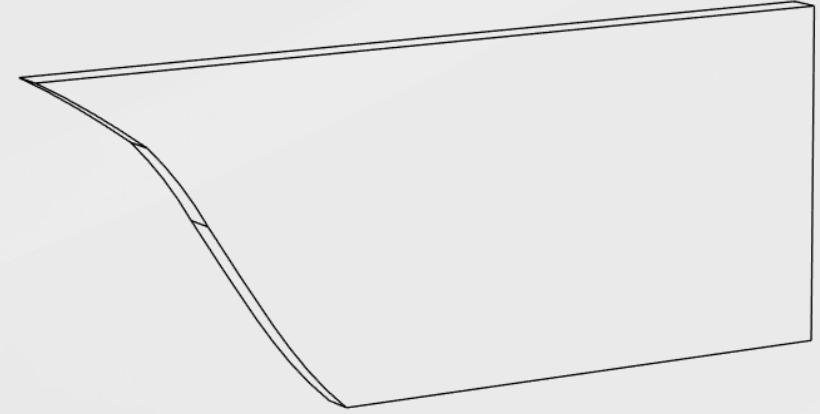
Print Settings

**x4**



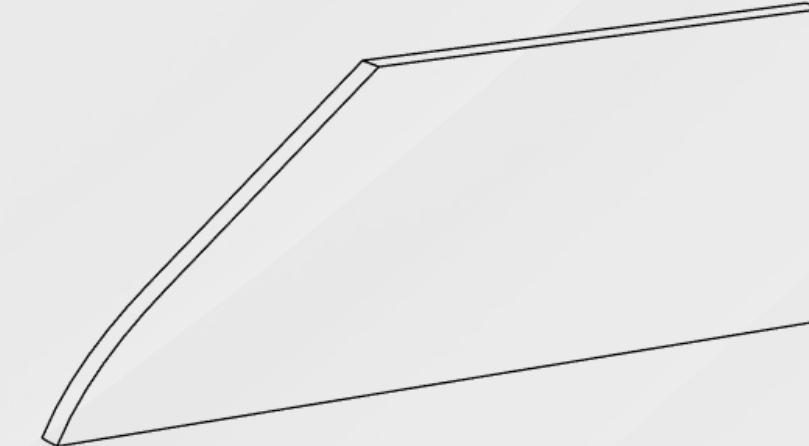
[\[a\]\\_pe\\_insert\\_x4.stl](#)

**x8**



[\[a\]\\_upper\\_accent\\_part\\_x8.STL](#)

**x8**



[\[a\]\\_lower\\_accent\\_part\\_x8.stl](#)

# Blind Joints

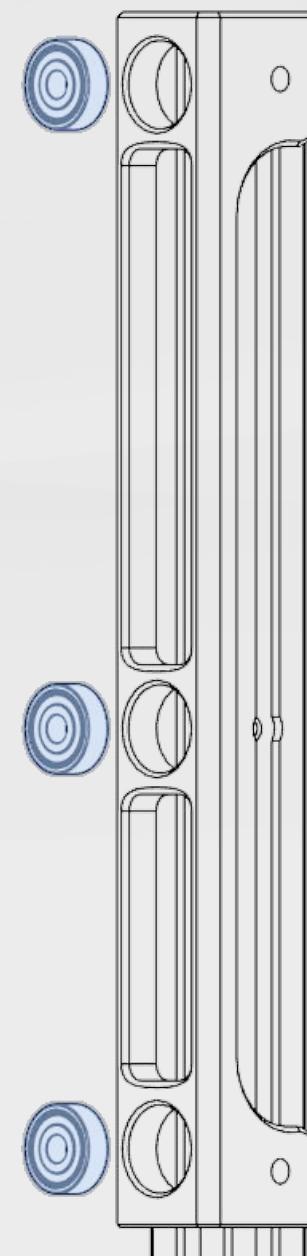
## Default Frame

Blind joint provides an inexpensive, simple, sturdy, and aesthetically pleasing appearance.

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.

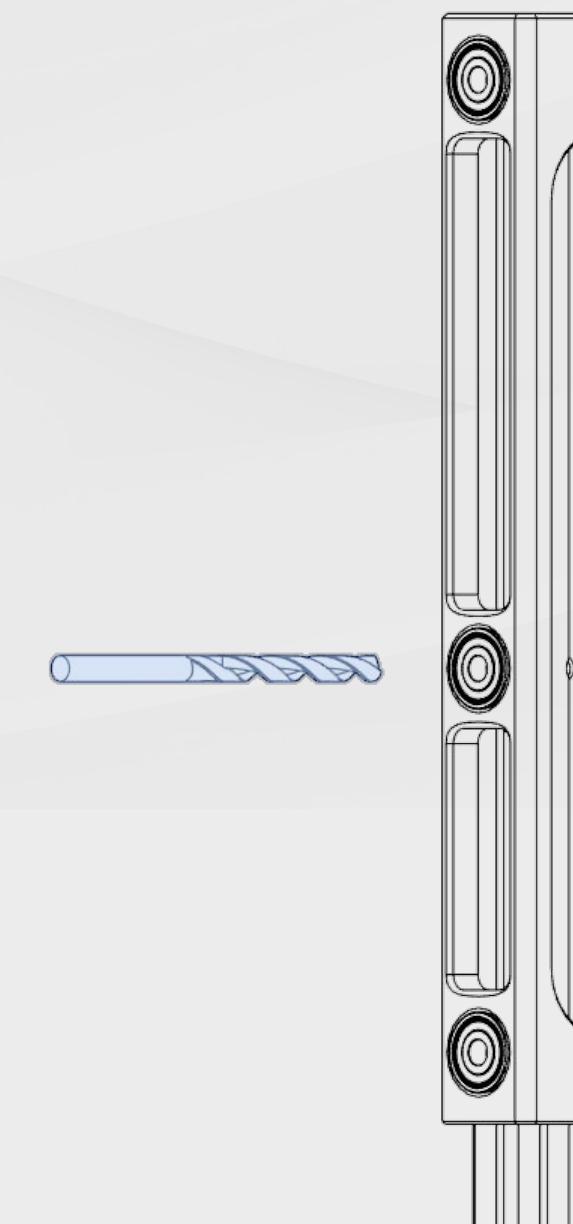
### Step 1

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



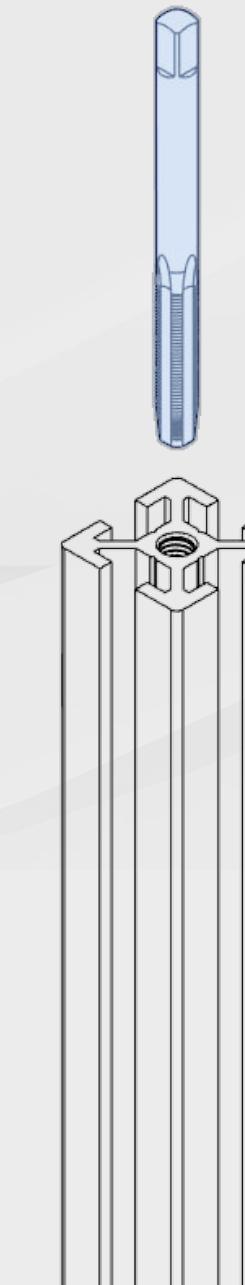
### Step 2

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



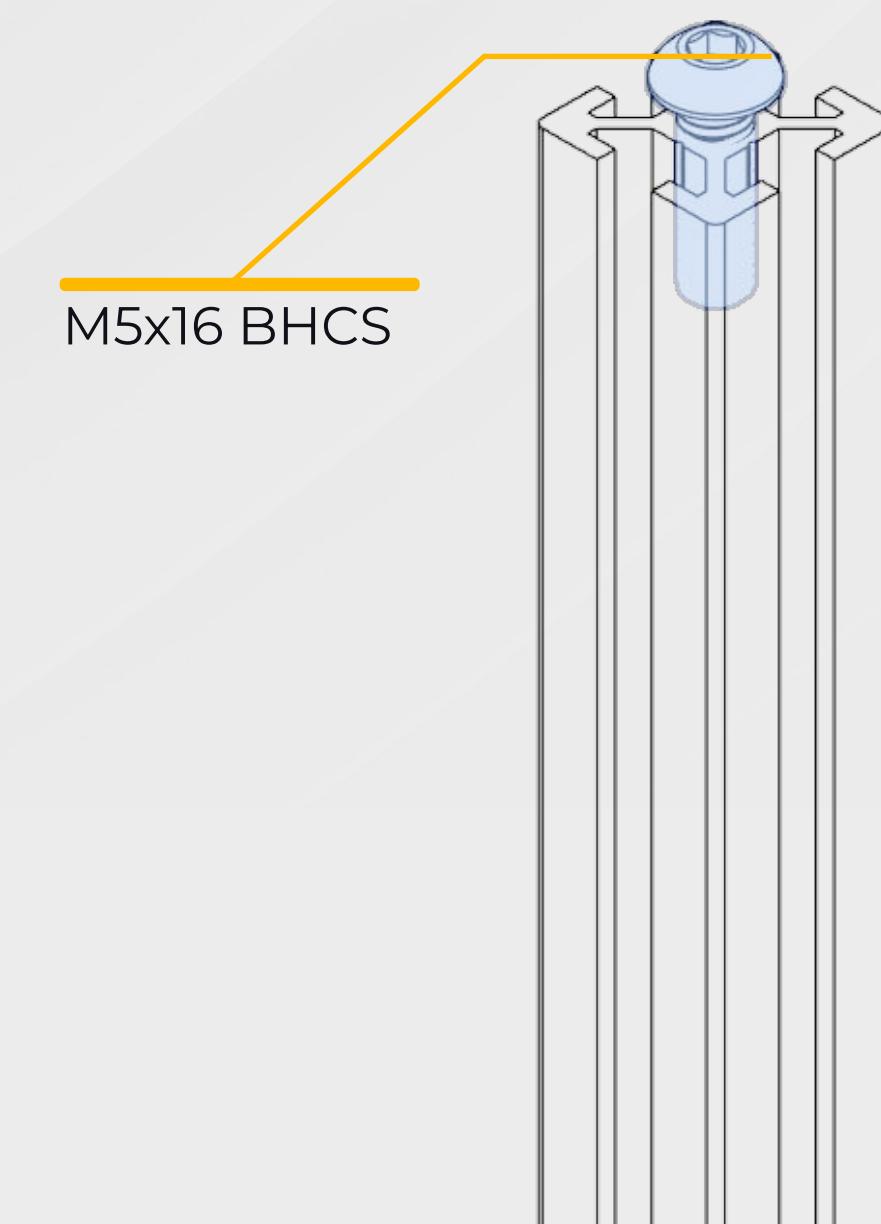
### Step 3

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.

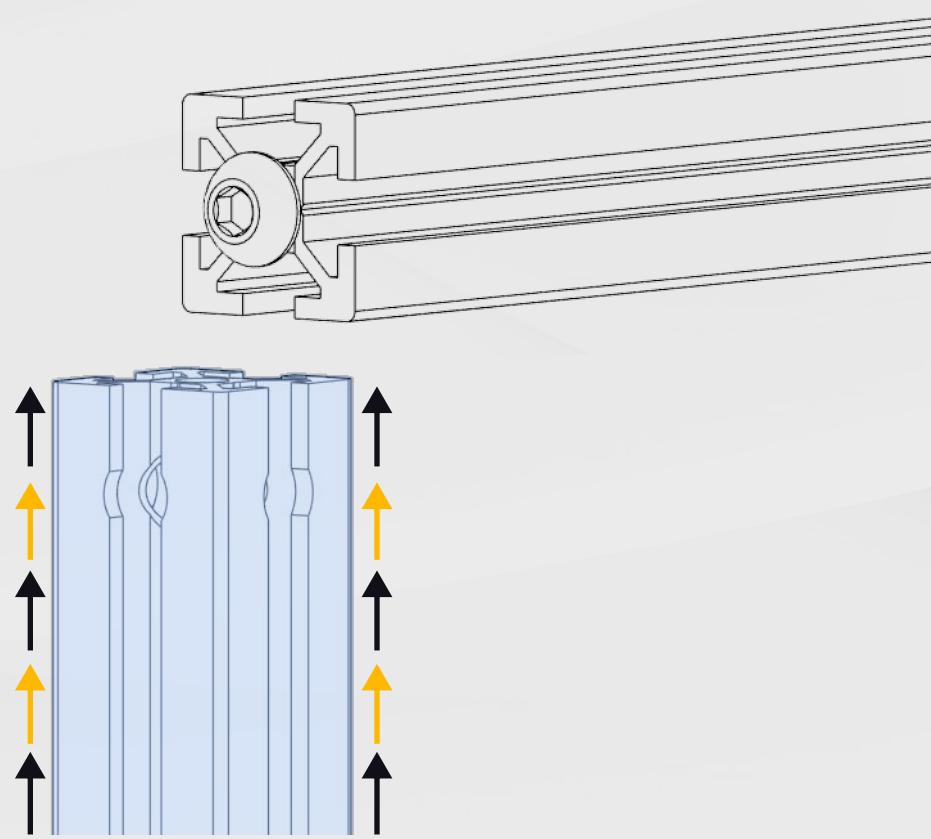


# Blind Joints

Default Frame

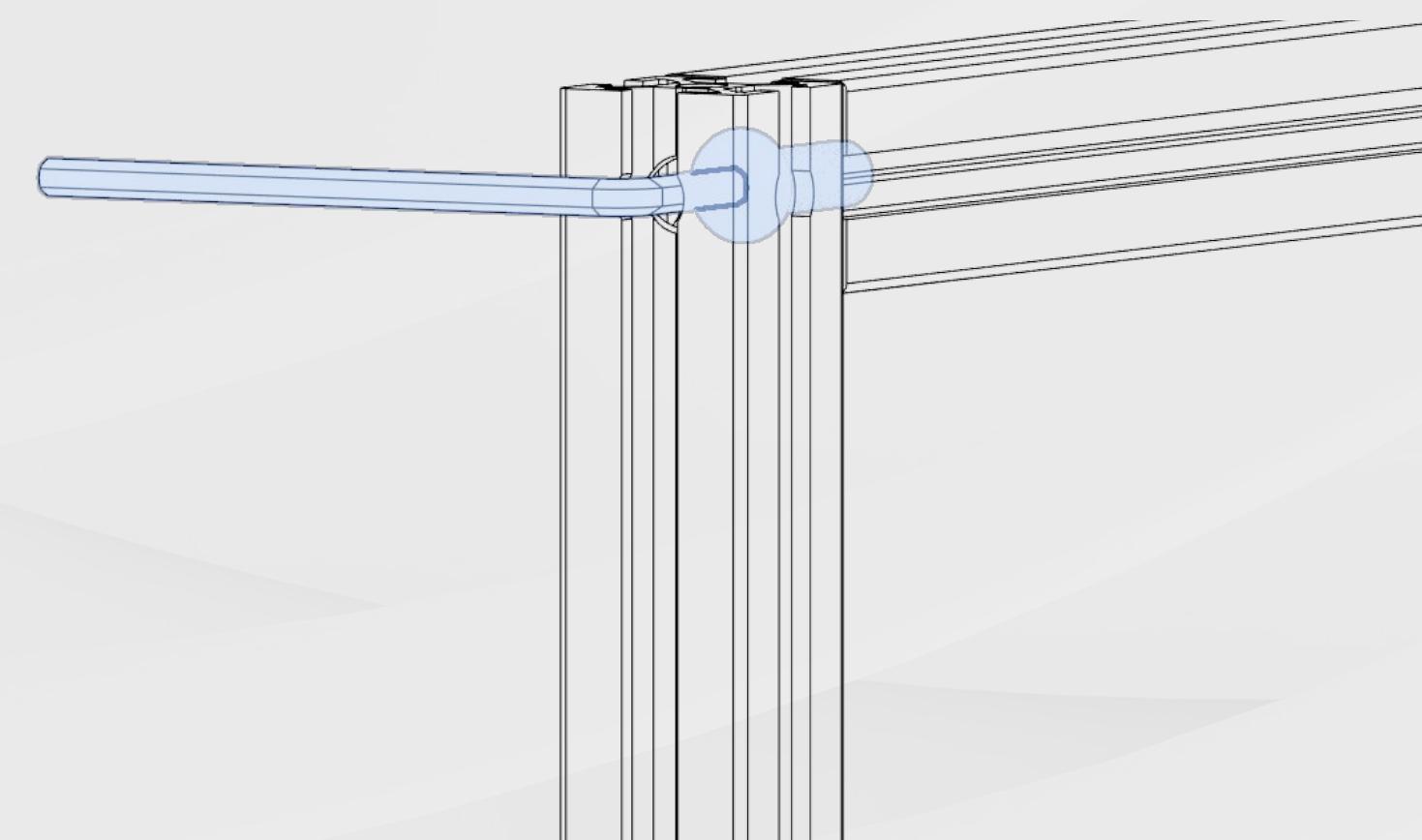
## Step 5

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



## Step 6

Use a 3mm Allen hex key to tighten the M5x20 button head cap screw.



## You are all set!

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

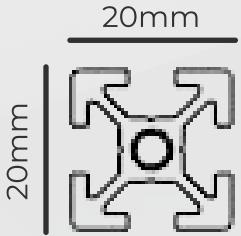
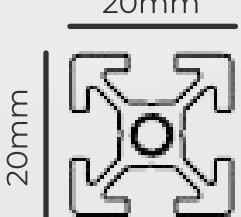
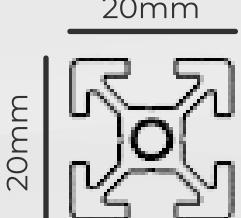
The frame assembly is critical for the printer, and proper assembly is essential. Please be patient and use a square while assembling the frame.



# 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.

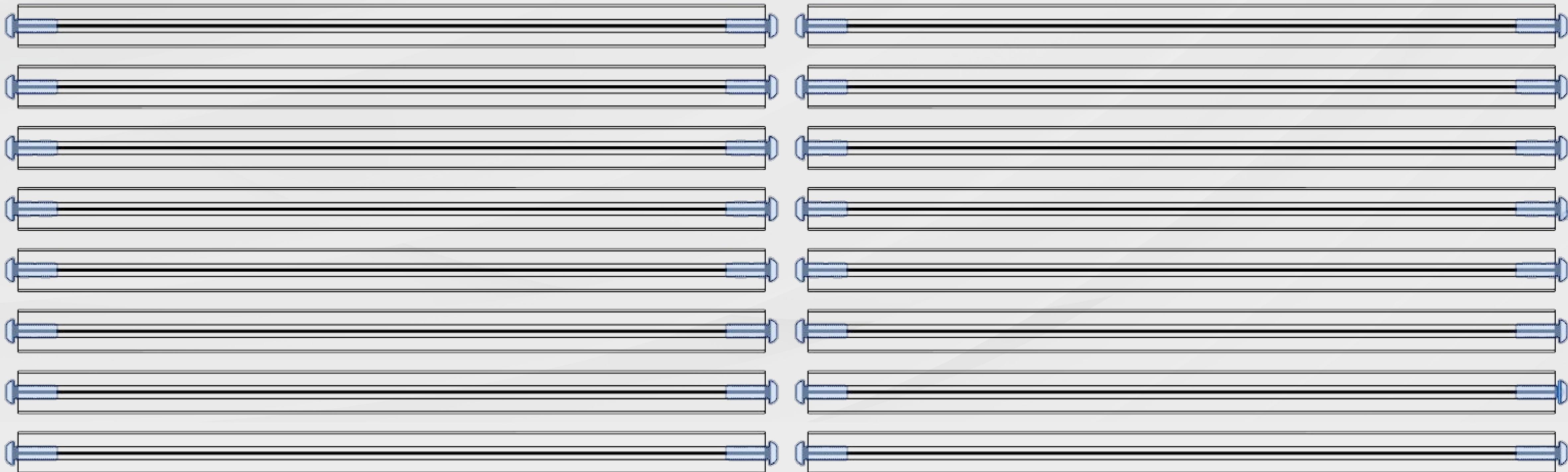
	HFSB5-2020-530-AP10-BP115-CP190-DP520	A Extrusions	x4
		530mm	
	HFSB5-2020-350-TPW	B Extrusions	x16
		350mm	
	HFSB5-2020-300-TPW	C Extrusions	x1
		310mm	

# Frame Assembly

Default Frame

## Preparation

Before starting the frame assembly, tap both ends of the 16 pieces of 350mm extrusions with an M5 tap and insert M5x16 BHCS screws to both ends.



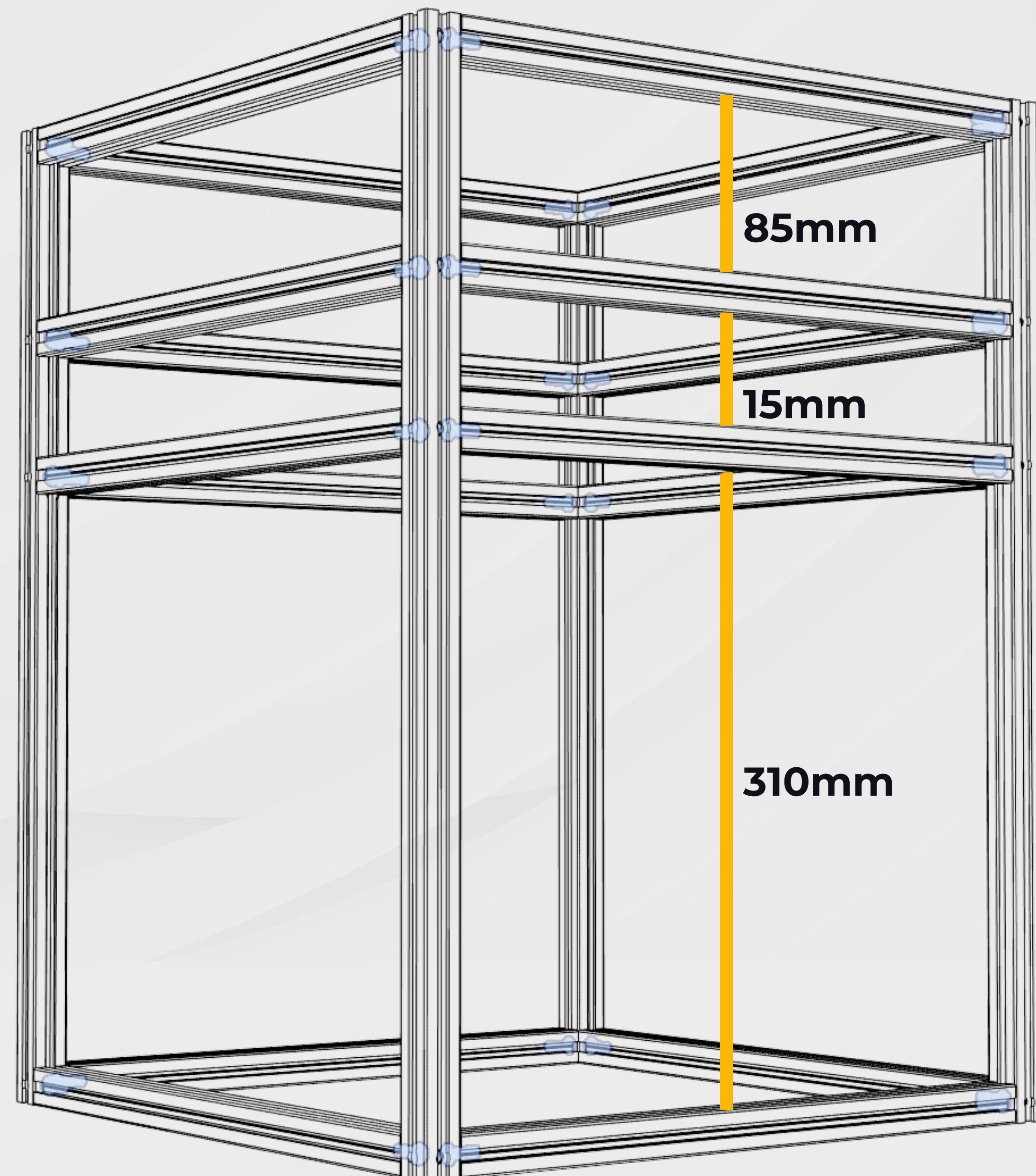
# Frame Assembly

Default Frame

## A&B Extrusions

Slide the **B 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.



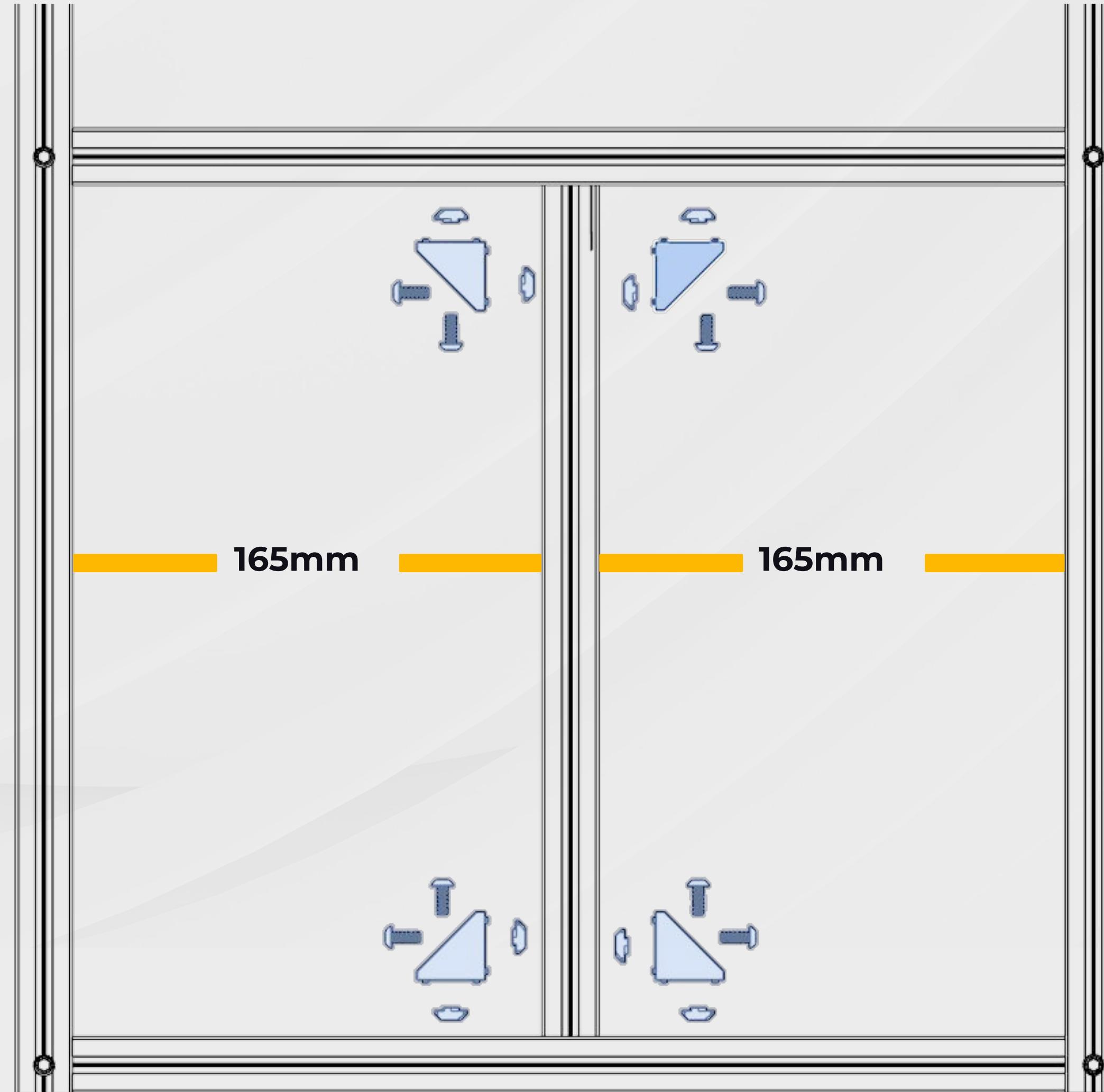
# Frame Assembly

Default Frame

## C Extrusion

The C 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**.



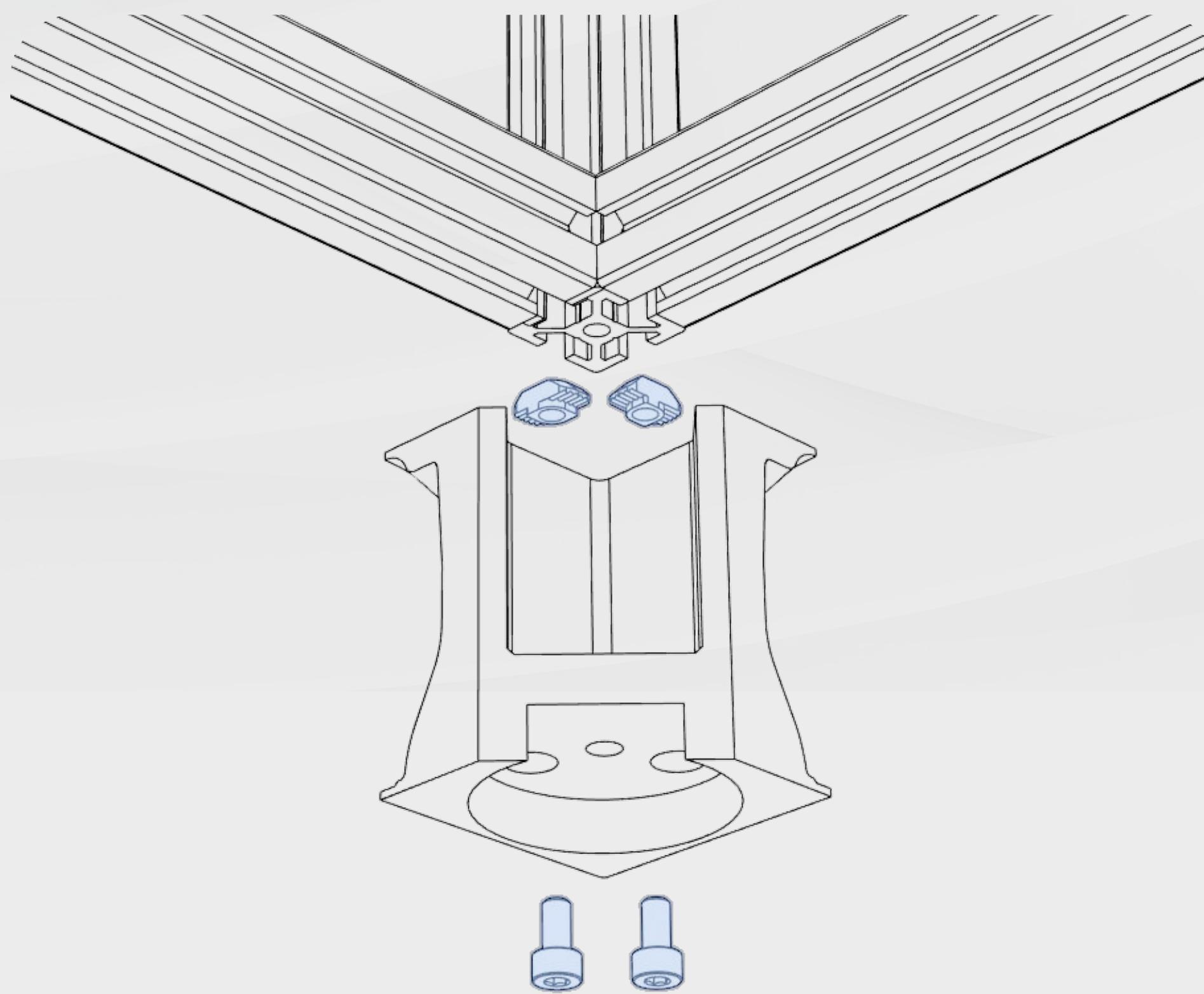
# Skirt Assembly

Default Frame

## Fixing the Foot

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

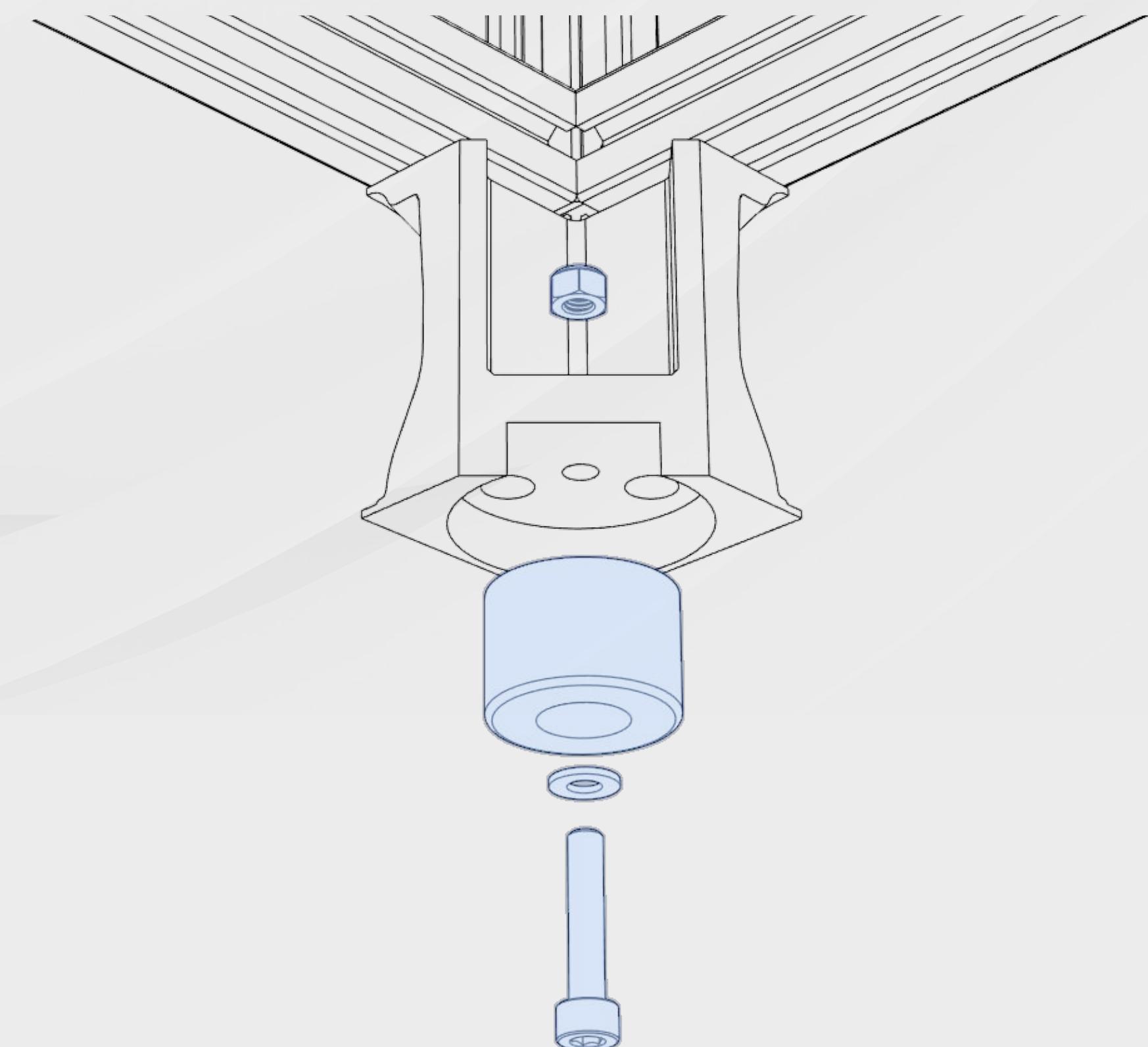
Repeat this process for all 4 corners.



## 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.

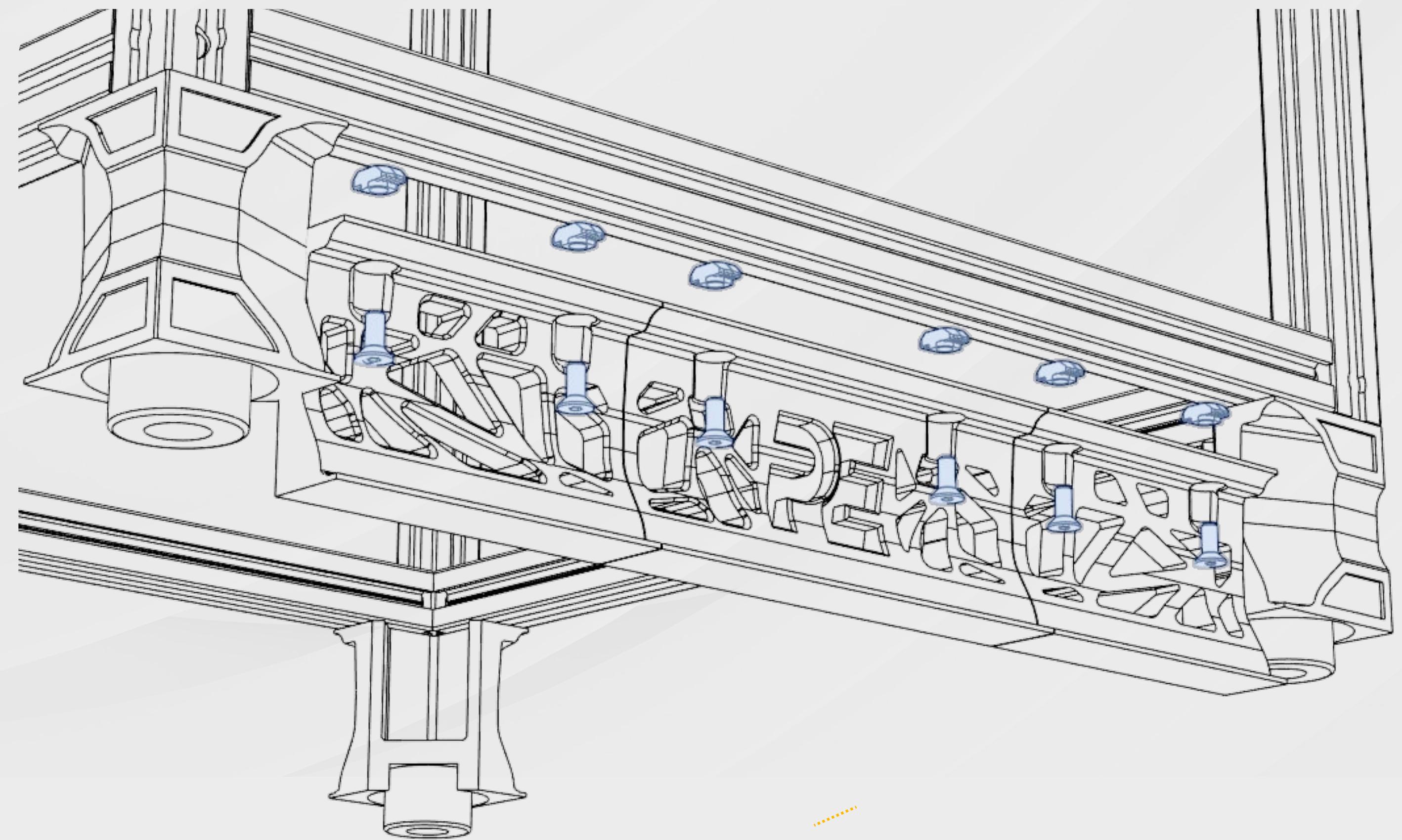


# Skirt Assembly

Default Frame

## Fixing the Skirts

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



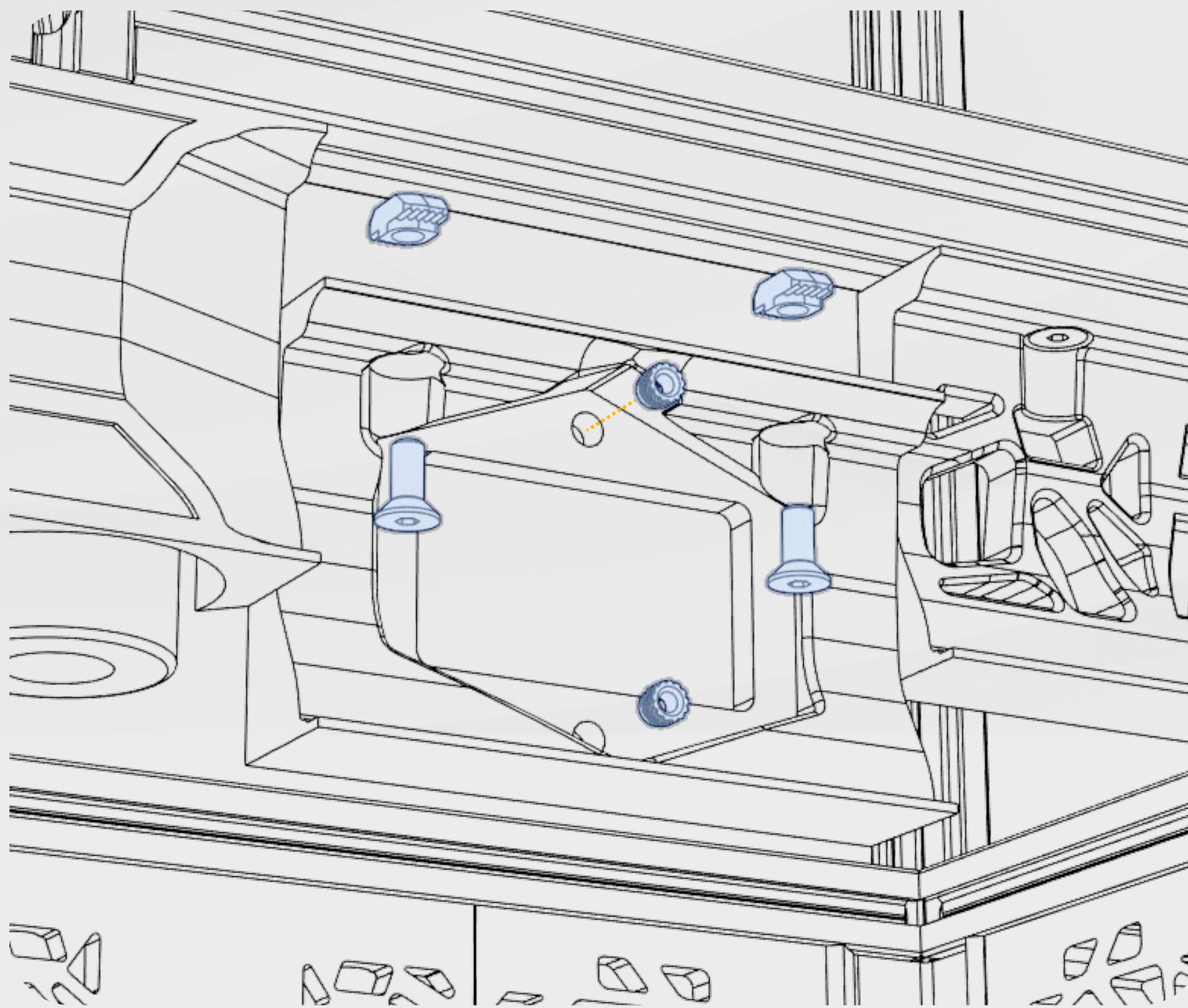
# Skirt Assembly

Default Frame

## Skirt w/Power Inlet

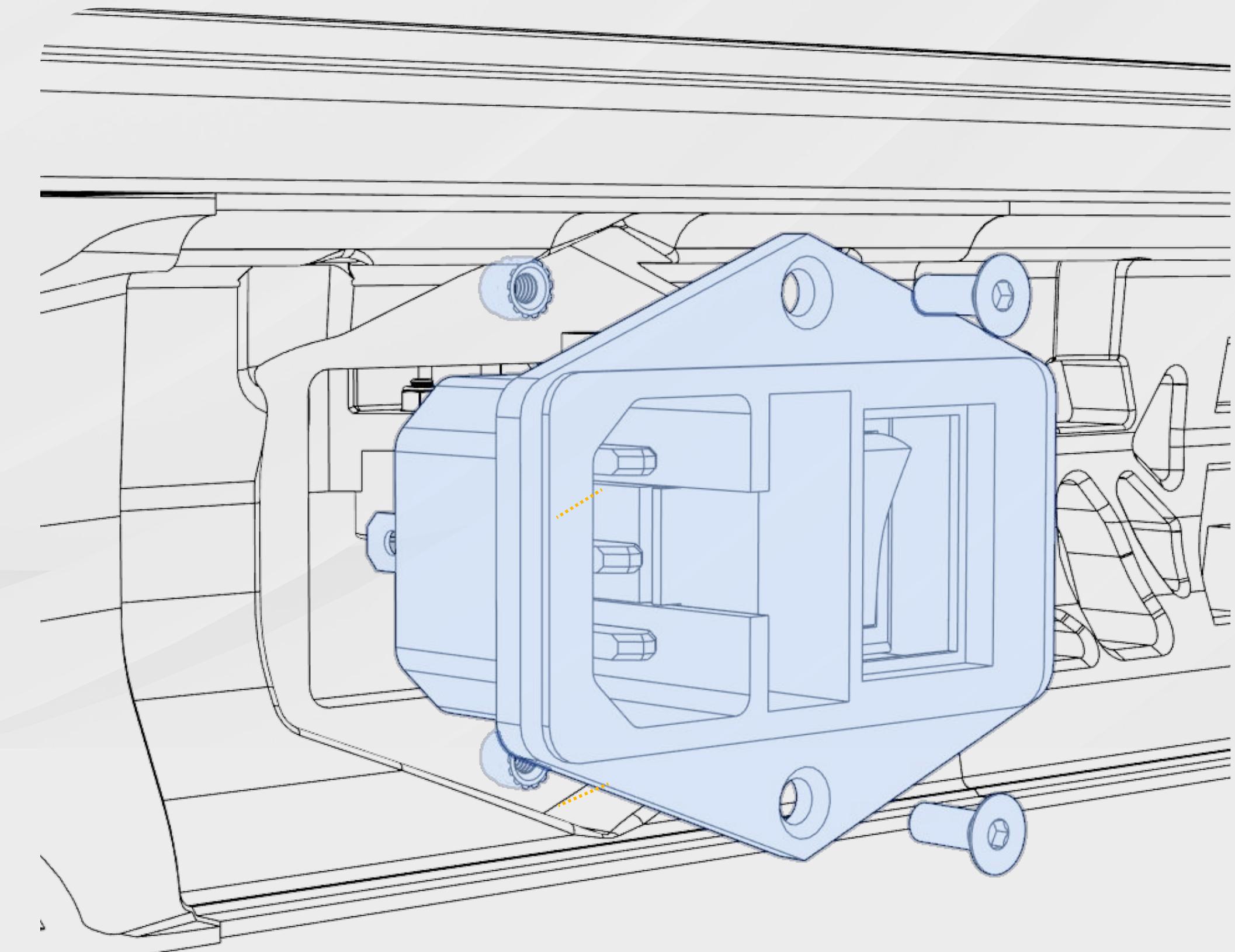
Mount the skirt with the power inlet to the right rear corner of the frame using **M4x10 FHCS** and **M4 T-nuts**.

Don't forget to insert **M3 inserts** into the two holes on the skirt.



## Power Inlet

Mount the power inlet with 2x M3x8 FHCS.





Completed  
Frame

PE