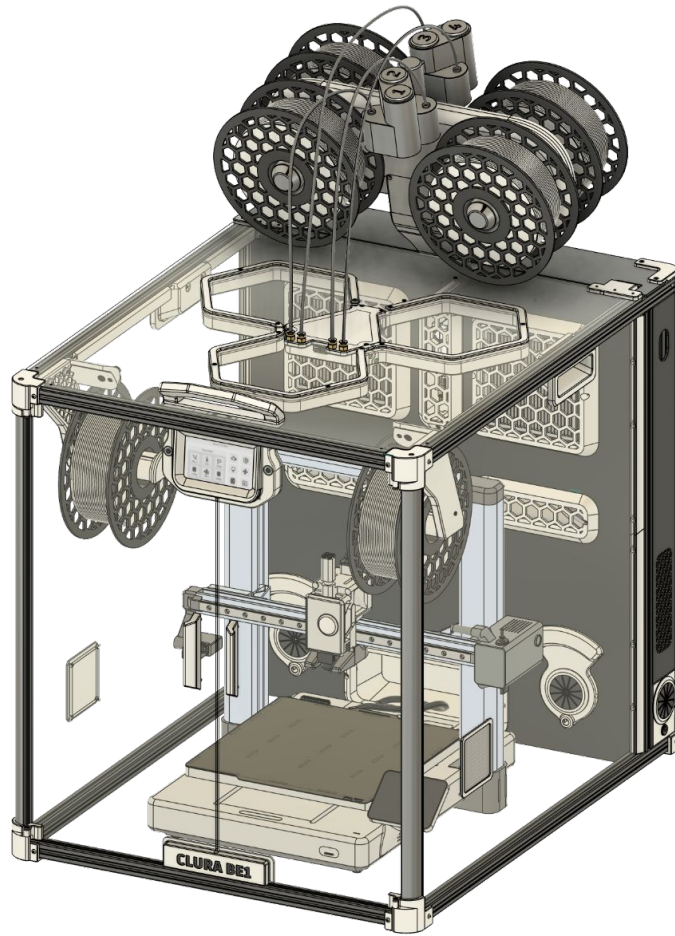


ASSEMBLY MANUAL

Clura BE1
Pro Series



INTRODUCTION (1-12)

FRAME (14-33)

PANELS (35-68)

ELECTRONICS (70-80)

AESTHETIC DETAILS (82-92)

SOFTWARE SETUP (92 - 100)

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- Tools
- Fasteners
- Good info to know

Frame ()

- Bottom section
- Top section
- Back section

Panels ()

- Front section
- Back section

Electronics ()

- Preparation
- Assembly
- Wiring

Aesthetic details ()

-
-
-

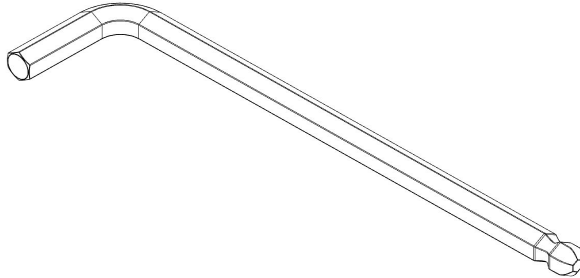
Software setup ()

- Structure
- Software
- Liftoff!

TOOLS

ALLEN KEYS

The most important tool for the assembly of the enclosure. The allen keys will be used in almost every step , and the ones provided in the kit are color coded according to their size. In each step the color of the allen key needed will be mentioned.



NOTE:

You will see these hexagons on each slide to let you know which allen key is needed for the step



2mm



2.5mm



3mm

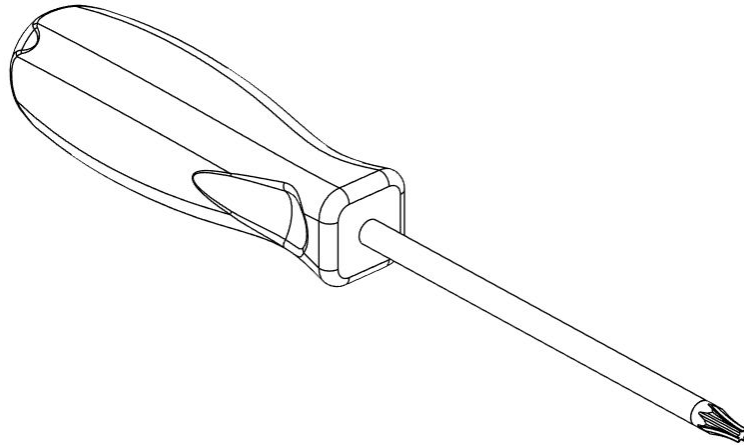


4mm

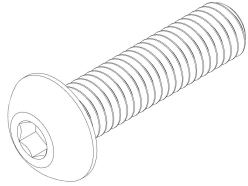
TOOLS

TORX DRIVER

Used in many occasions on the assembly, but very helpful for inserting the self tapping screws into plastic.

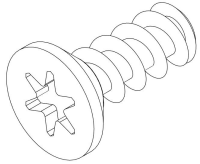


FASTENERS



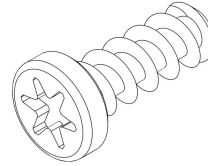
BUTTON HEAD CAP SCREW (BHCS)

Metric fastener with domed shape head. Uses an hex drive (allen key), and common throughout the build. Both M3 and M4 variants will be used throughout this guide.



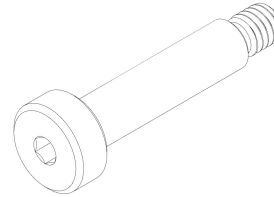
SELF TAPPING COUNTERSUNK SCREW (ST FHCS)

Metric fastener with cone shape head at 90°. Uses an hex drive (allen key), and common throughout the build. Both M3 and M4 variants will be used throughout this guide.



SELF TAPPING SCREW (ST BHCS)

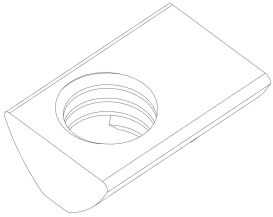
Metric fastener with domed shape head that screws directly into plastic. Uses a torx head



SHOULDER SCREW (SHSS)

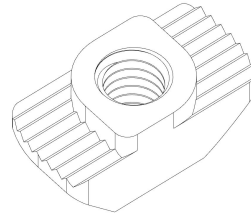
Metric fastener with cylindrical shaped head and precision ground section. Uses an hex drive (allen key). Common in motion components.

FASTENERS



T NUT

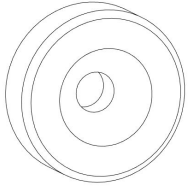
Nut that can be inserted into the slot of an aluminium profile. Used in M3 variant throughout this guide



HAMMER HEAD NUT

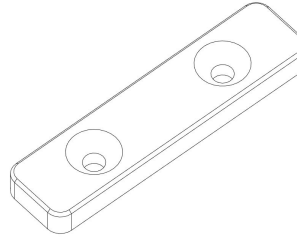
Metric nut that can be installed in the slot of an aluminium profile. Used in both M5 and M3 variants

EXTRA



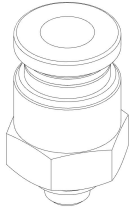
CIRCULAR 14mm MAGNET

This magnet is used to give you a satisfying click when closing the front doors and when attaching the side and back panels for the electronics



RECTANGULAR 40mm MAGNET

This magnet is used to give you a satisfying click when closing the top panel of the enclosure



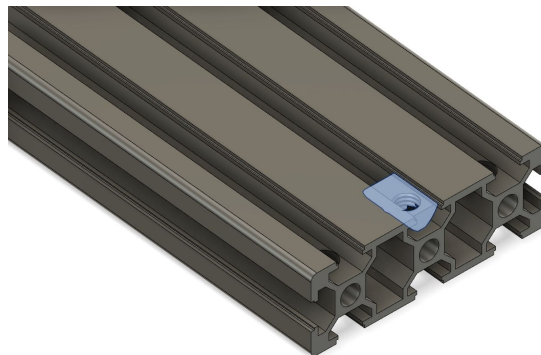
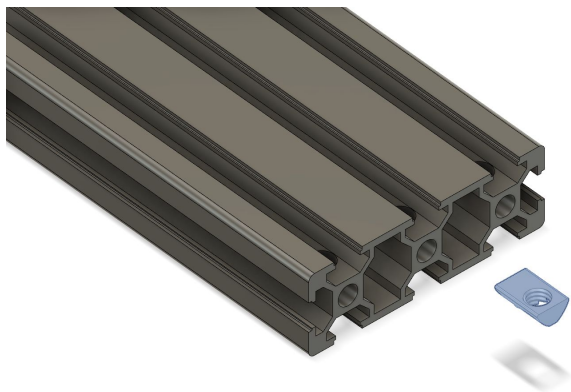
PNEUMATIC FITTING PC4 M6*1

Fitting for the ptfe tube that brings filament to the extruder.

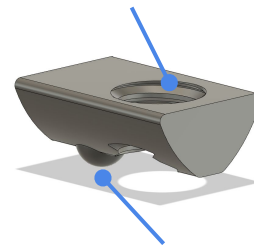
SOME BASICS



T-NUTS



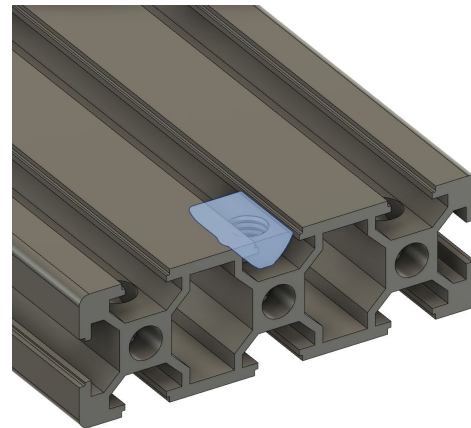
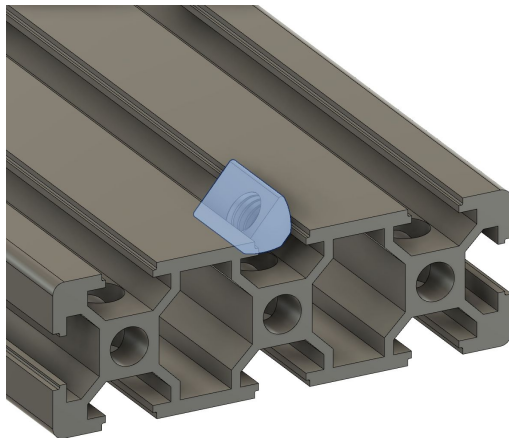
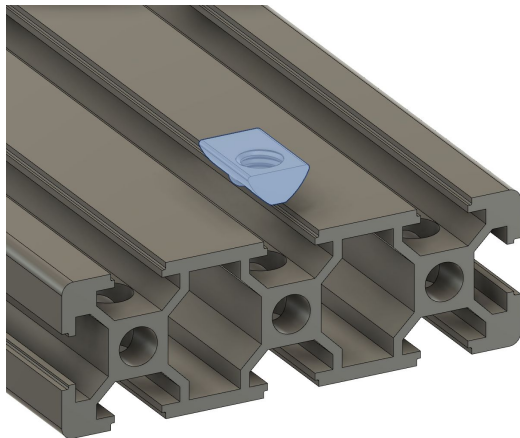
Thread - This side up



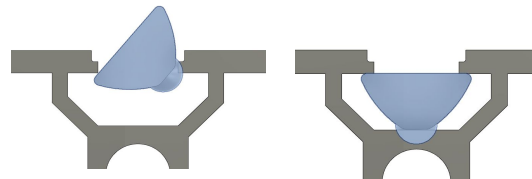
Spring Loaded Ball

Slide in the T-Nut into the groove of the extrusion. You will feel some resistance since the ball on the bottom is spring loaded to keep the T-Nut in place.

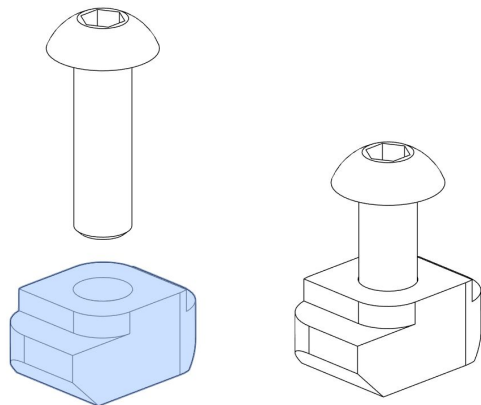
T-NUTS



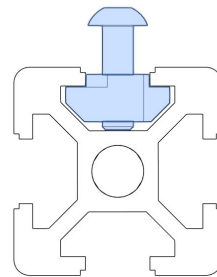
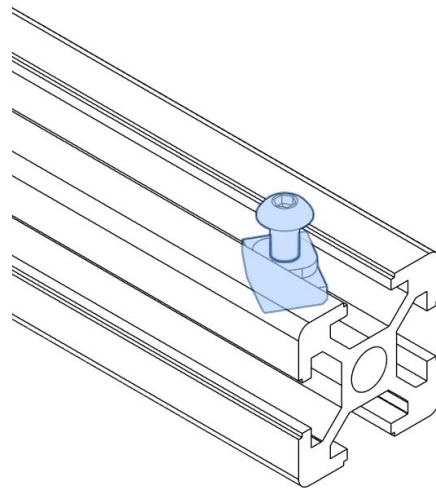
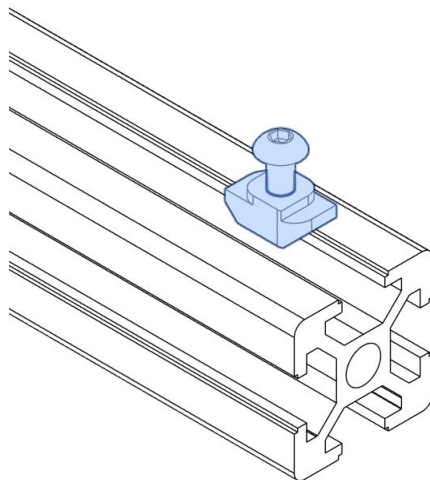
Another way to insert t nuts is by turning them into the extrusions and pushing them down. To make sure that they are properly inserted try to slide them around, there should be some resistance



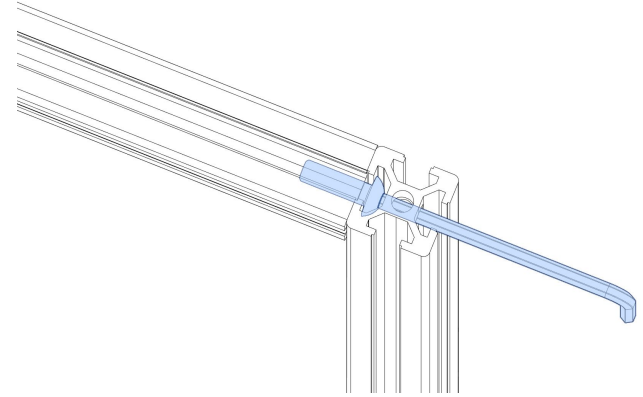
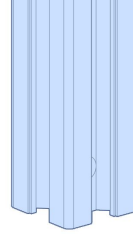
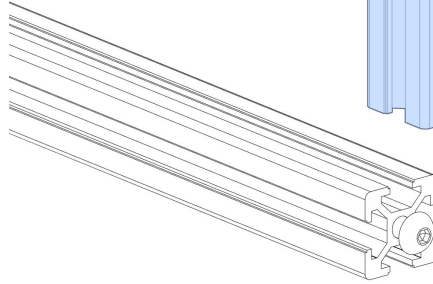
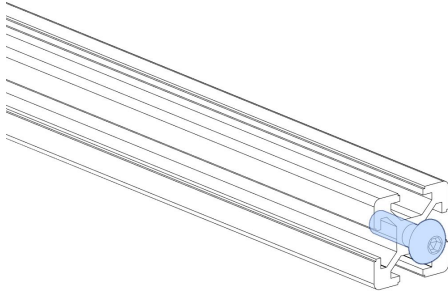
HAMMERHEAD - NUTS



To insert Hammerhead nuts you have to first thread them into a screw, then insert the nut in the extrusion and tighten the screw. This will automatically make the hammerhead nut turn to lock it in place. If this does not happen try to unscrew (not completely) the fasteners and then screw it back in.



BLIND JOINTS



Blind joints are an assembly method where the BHCS head (screw head) slides into one extrusion channel and is tightened through a small access hole. Watch the [linked guide](#) or scan the QR code if you're new to this process.



TIPS & TRICKS

It's highly recommended to assemble the enclosure on a level surface like a stone countertop, ceramic tile, etc... This ensures that the frame is square and sturdy.

Remember that all of the parts should fit together nicely. If you are having difficulty DON'T use brute force. Just go back in the manual and check the recommended pages for that step. If you are still facing issues after contact us on our site or on discord. We try to reply within 24h.

The assembly will teach you a lot on how the enclosure works giving you the knowledge necessary to fix it, improve it and develop new ideas.

ONE LAST THING!

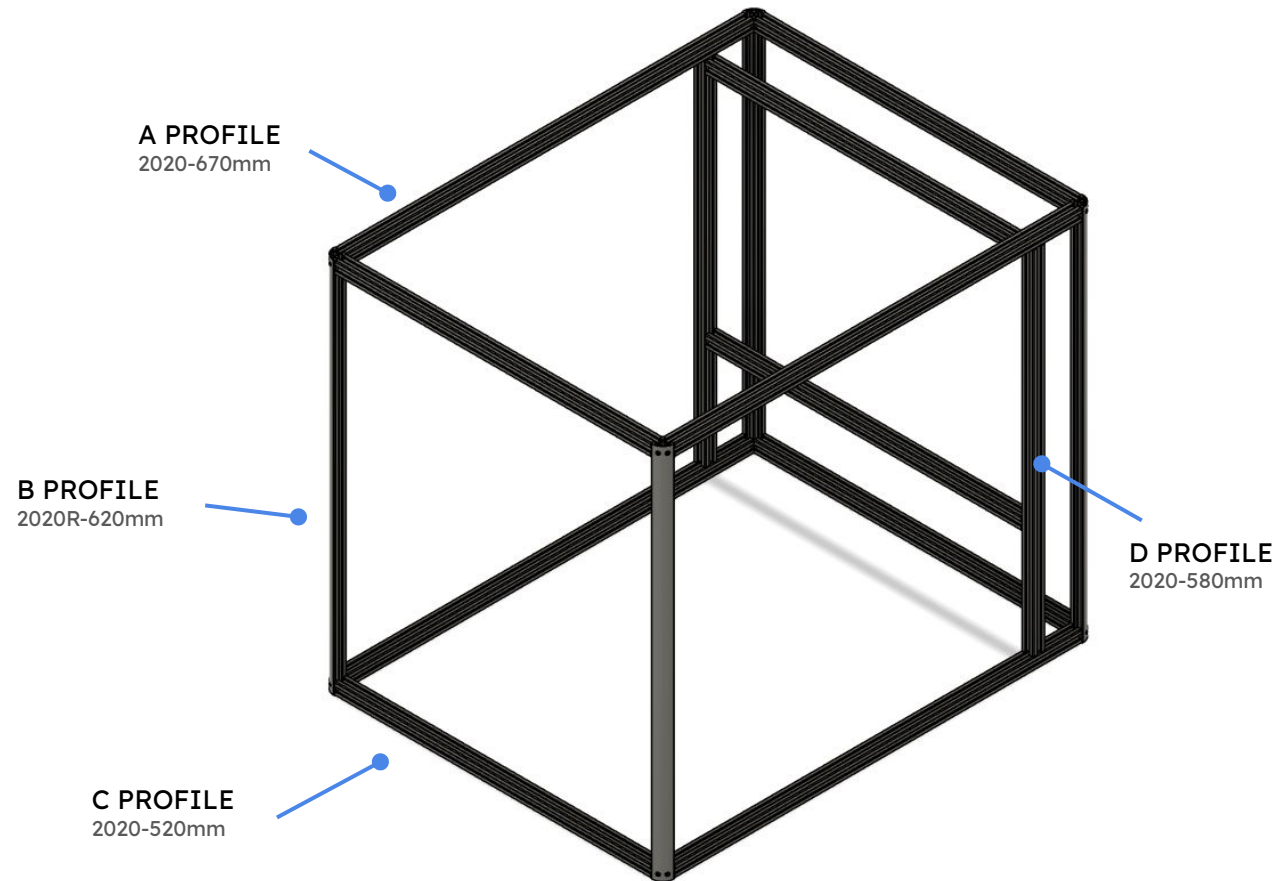
If there are text boxes on the slide, please READ THEM.
They usually give very useful information that is essential
for a smooth assembly!

With that out of the way,
Enjoy the assembly!

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Divider between sections

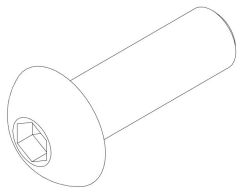


FRAME OVERVIEW

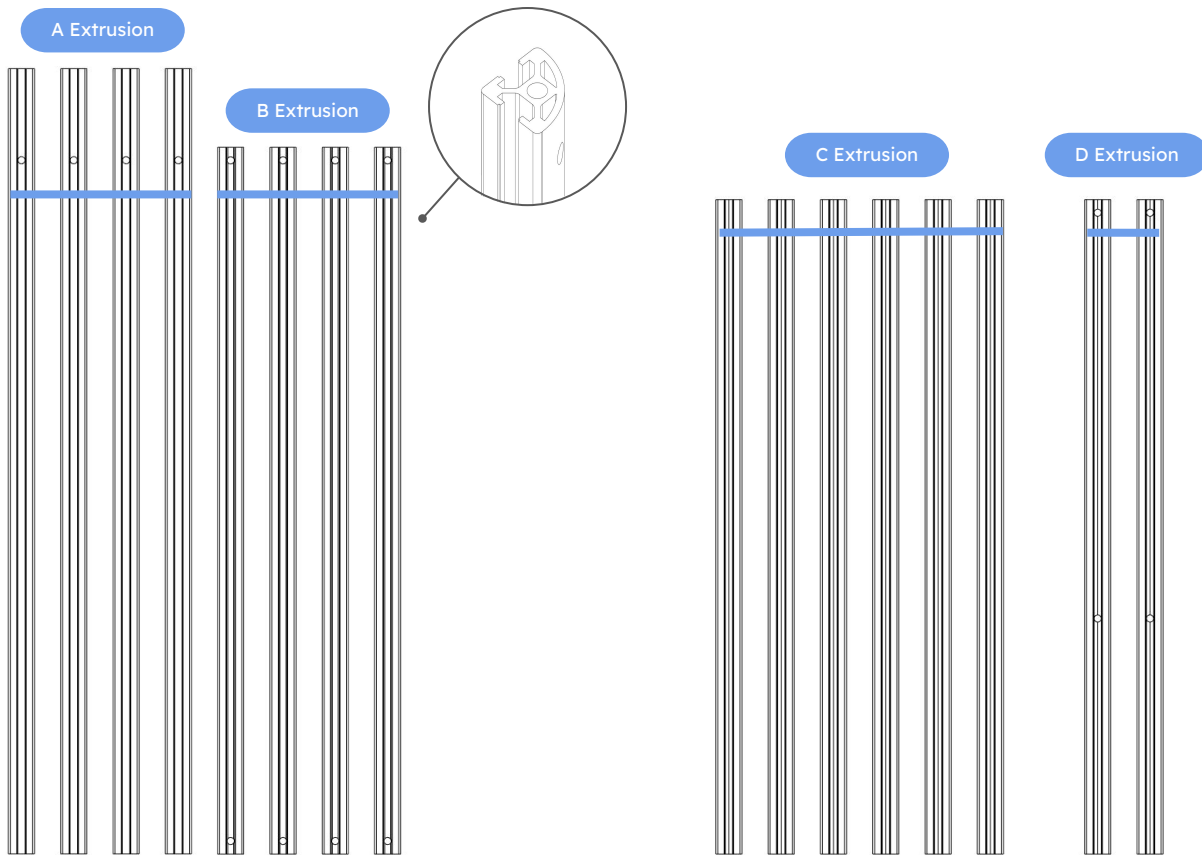


COMPONENTS

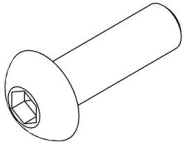
This is the list of materials needed in the assembly for this section. Note the position of the holes on each extrusion, it's important to align them correctly during the installation



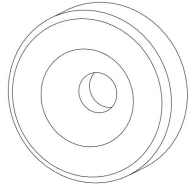
24 - M5x16 BHCS



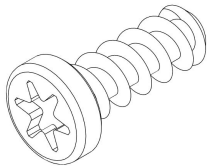
COMPONENTS



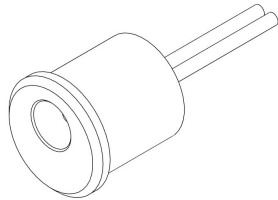
4 - M3x10 BHCS



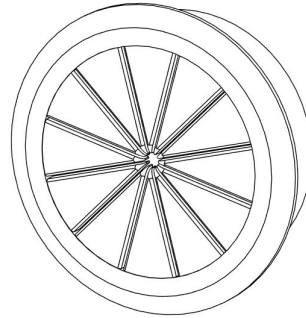
2 - 14mm Magnet



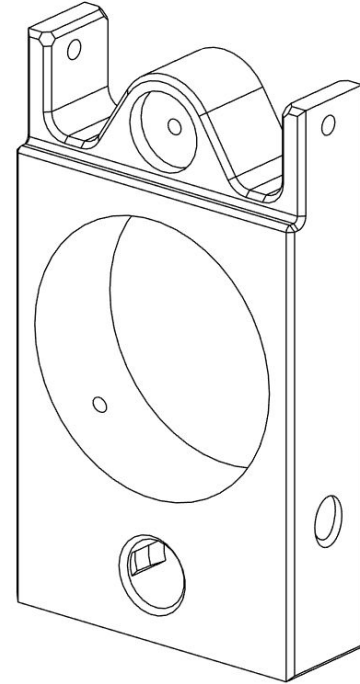
6 - M3x8 ST BHCS



2 - DC Jack



2 - Cable Passthrough



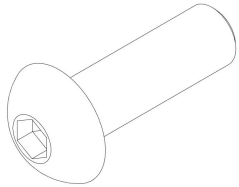
2 - Plugs Access

FRAME

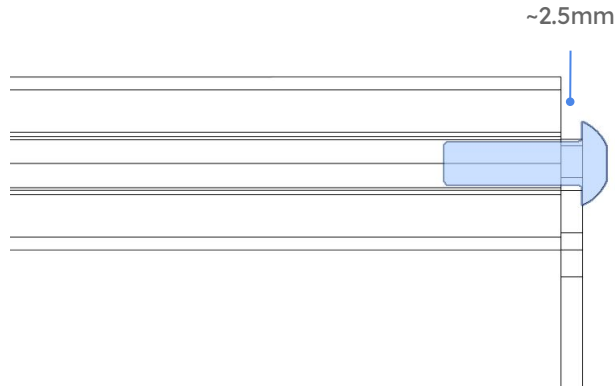
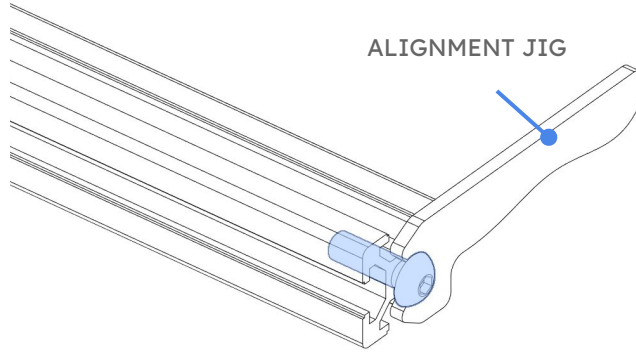
PREP WORK

As a first step we have to prep the extrusion for the blind joints by inserting fasteners on each end. You can use the 3d printed jig to leave the correct amount of space between the screw and the extrusion. It should be around 2.5mm (a bit less than the width of your allen key)

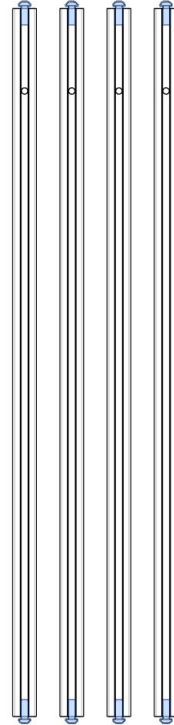
Insert the screws in both ends of extrusions: A and C.
In extrusions D insert the screws just on the side with the hole that is farther away.



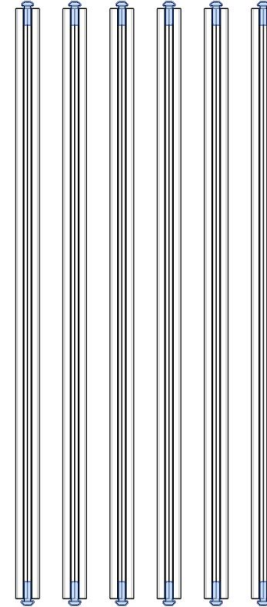
22 - M5x16 BHCS



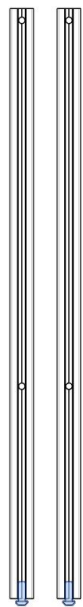
A Extrusion



C Extrusion



D Extrusion

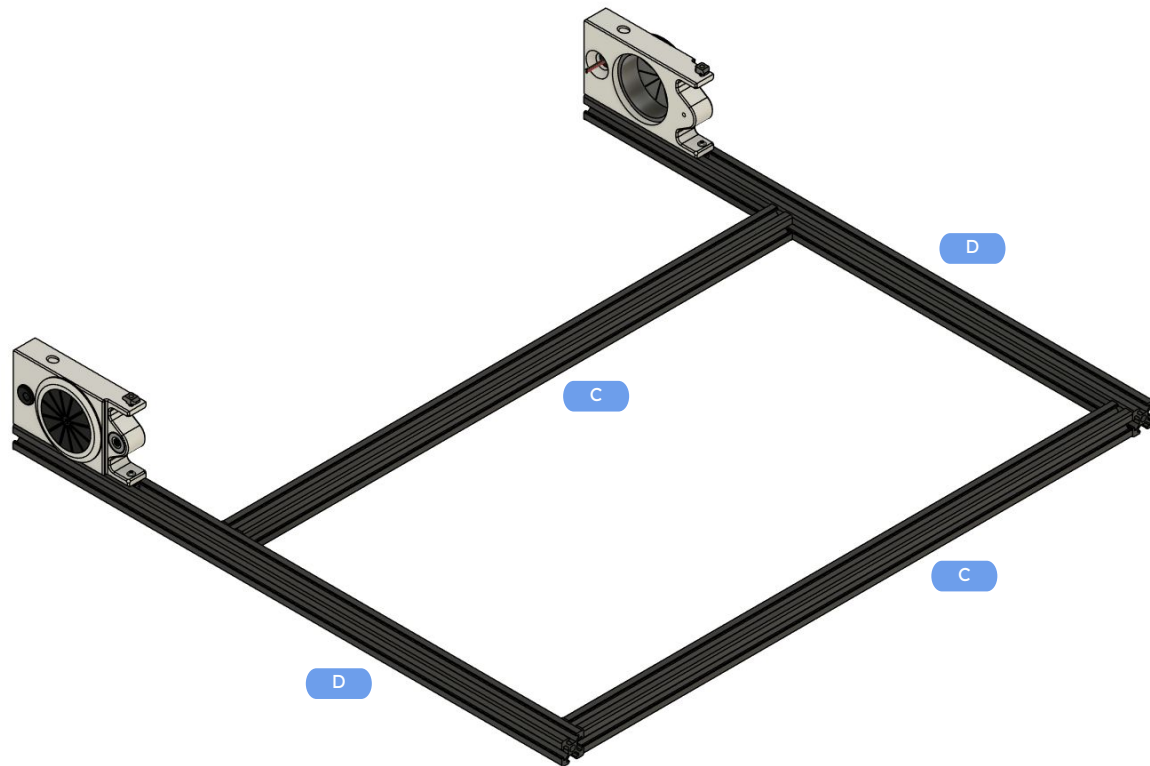
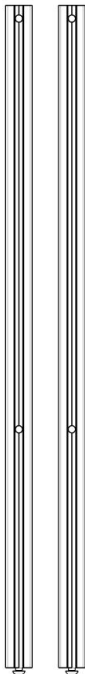
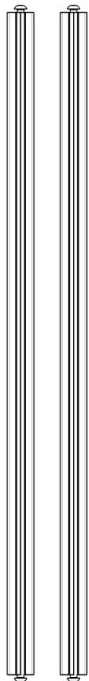


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BACK ASSEMBLY

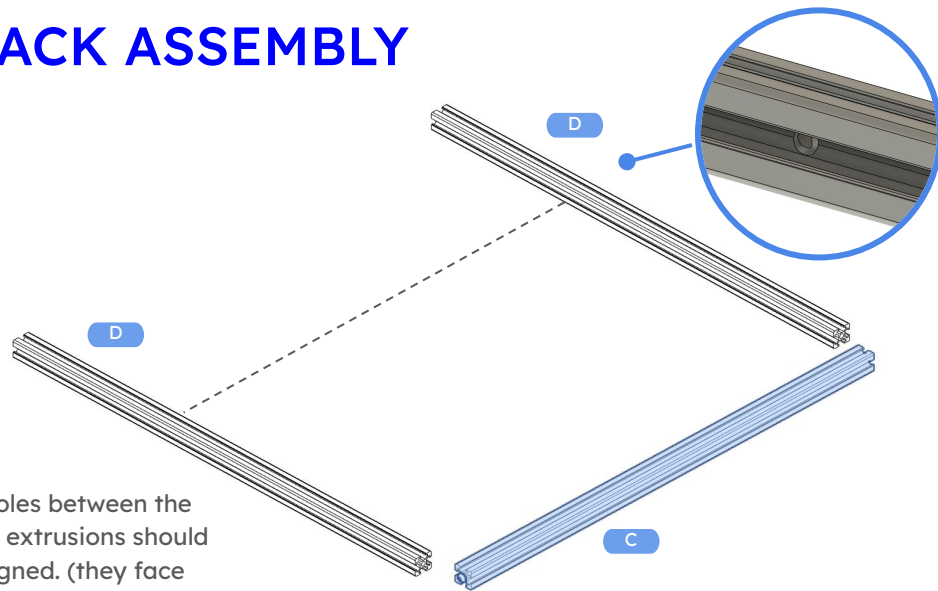
C

D

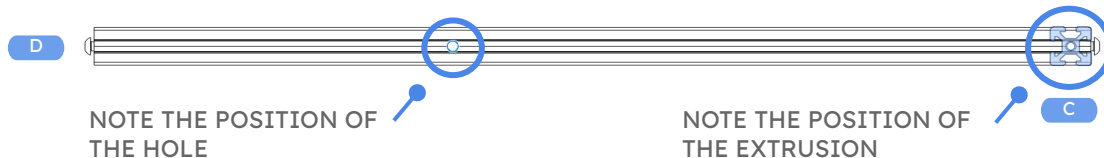
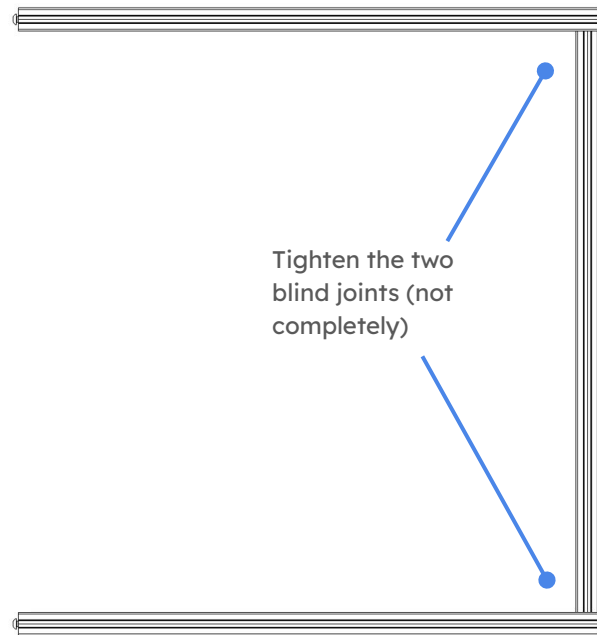


FRAME

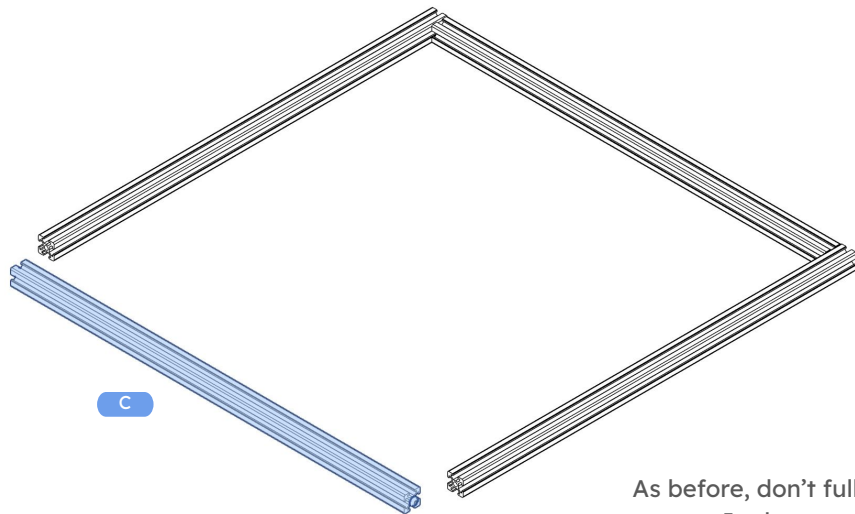
BACK ASSEMBLY



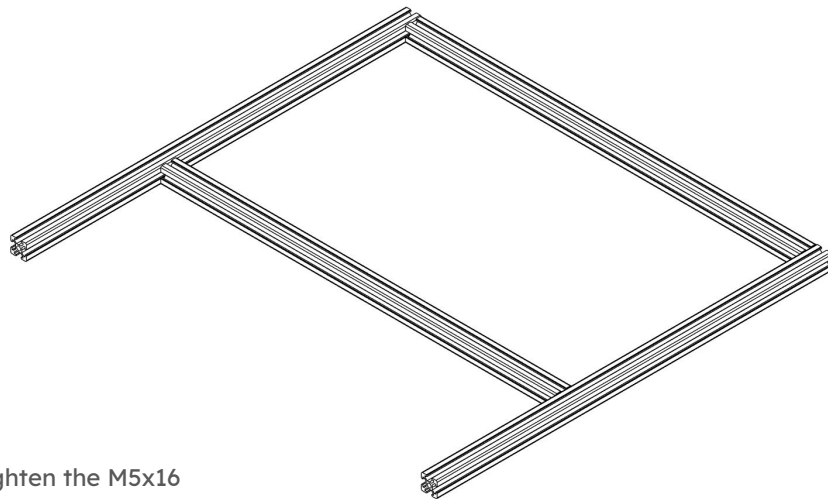
The holes between the two D extrusions should be aligned. (they face each other)



BACK ASSEMBLY

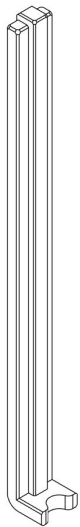


As before, don't fully tighten the M5x16 screws. In the next slide we will align the extrusion properly, for now just slide it in.

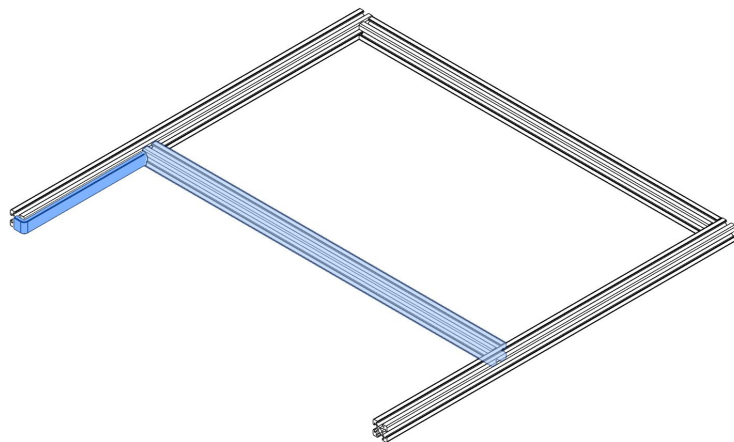
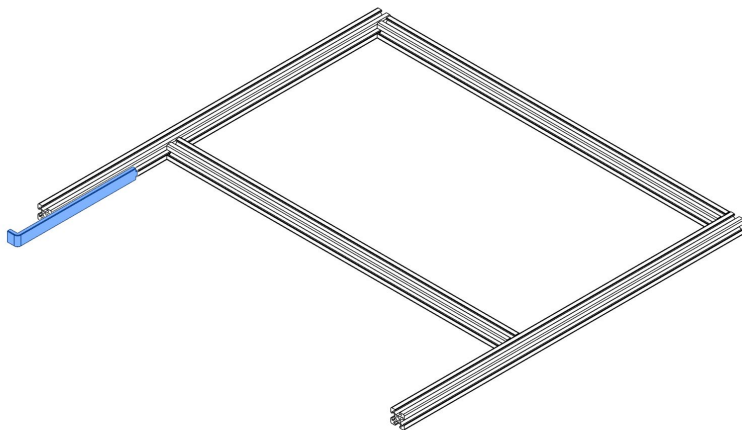


BACK ASSEMBLY

Slide the alignment jig into place as shown. Move the extrusion until it touches the jig, then lightly tighten it with an Allen key. Repeat for the other side. Double-check the extrusion position with the jig before fully tightening.

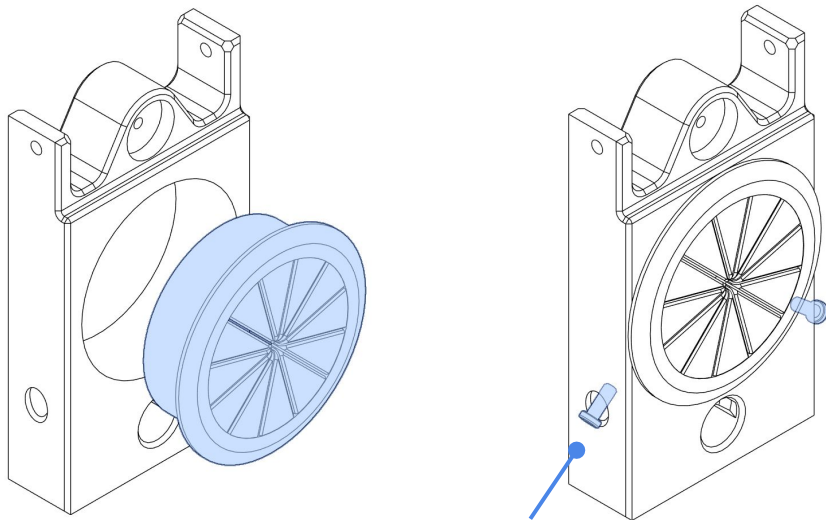


ALIGNMENT
JIG

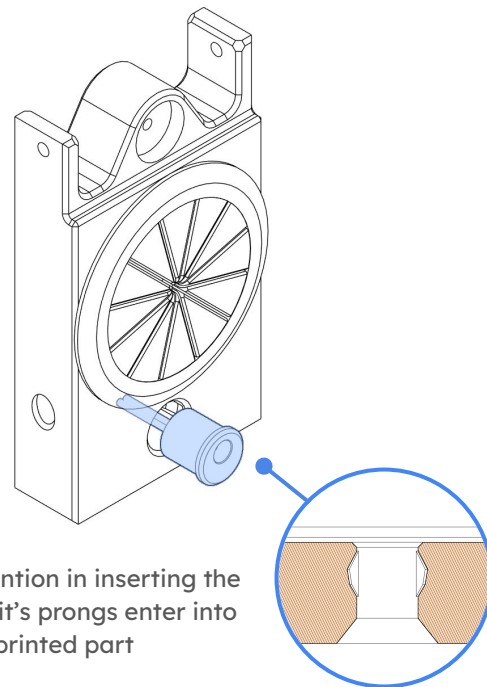


BACK ASSEMBLY

After inserting the cable passthrough tighten it in place with the two M3x8 Self tapping screws, (one on each side). Then insert the DC Jack into the plastic part.



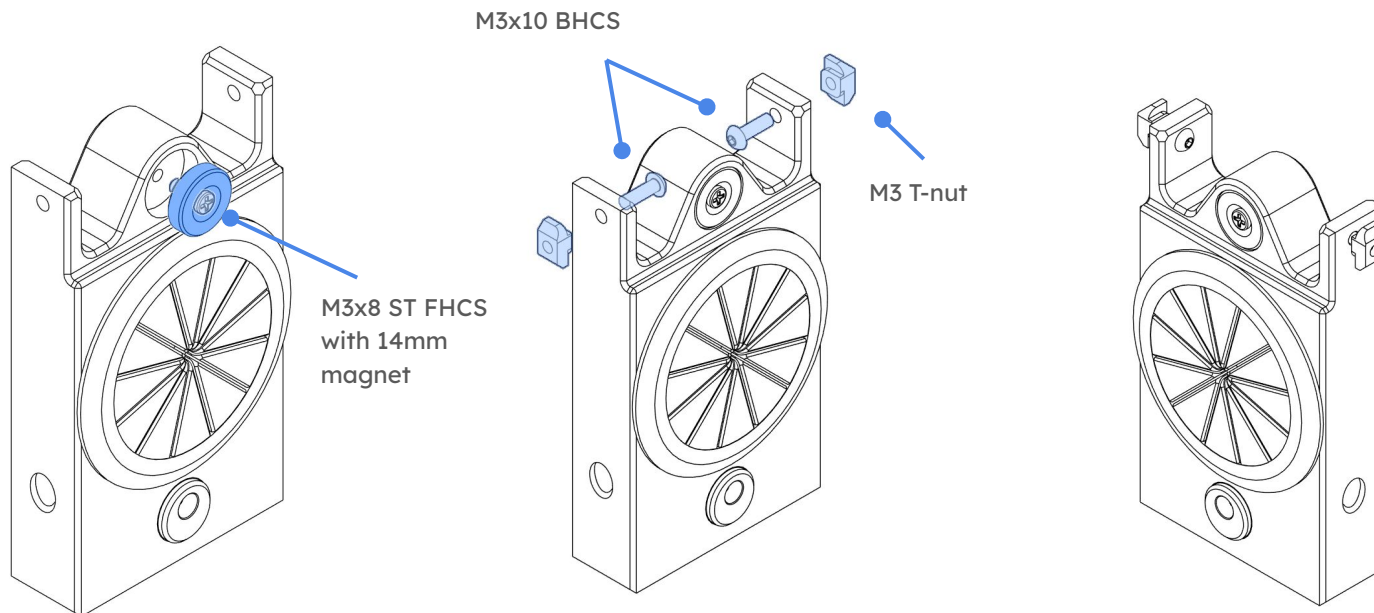
M3x8 Self Tapping



Pay careful attention in inserting the DC jack so that its prongs enter into the slots of the printed part

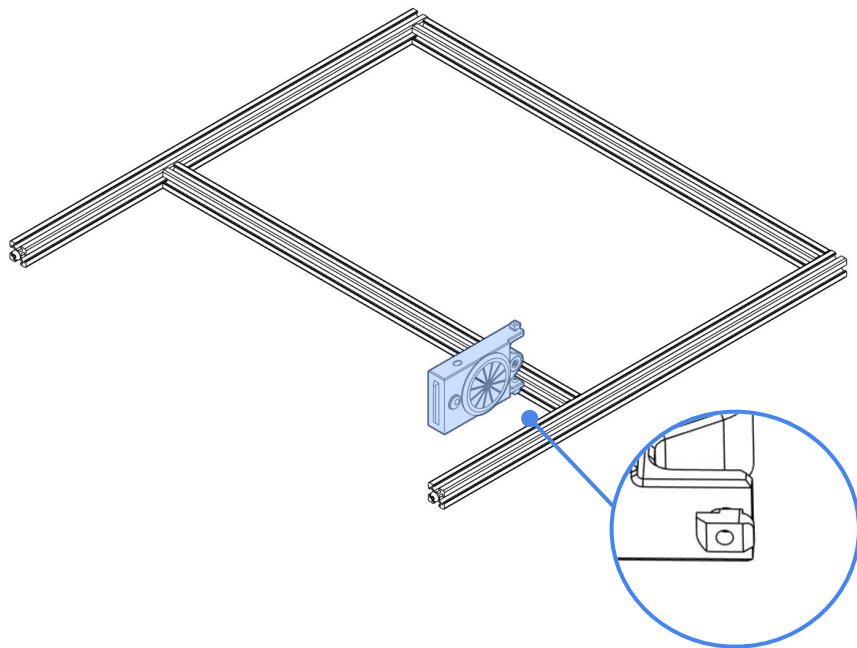
BACK ASSEMBLY

Insert a 14mm magnet in the hole shown and tighten it with an M3x8 self tapping screw. Then insert M3x10 screws on each side and tighten M3 t-nuts.

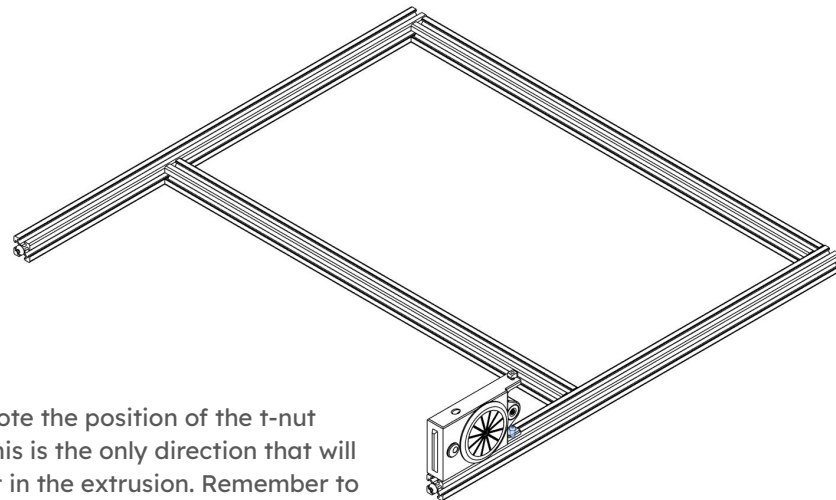


BACK ASSEMBLY

After placing the plugs access assembly onto the extrusion tighten it with an allen key. The bottom of the plugs access should be flush with the extrusion

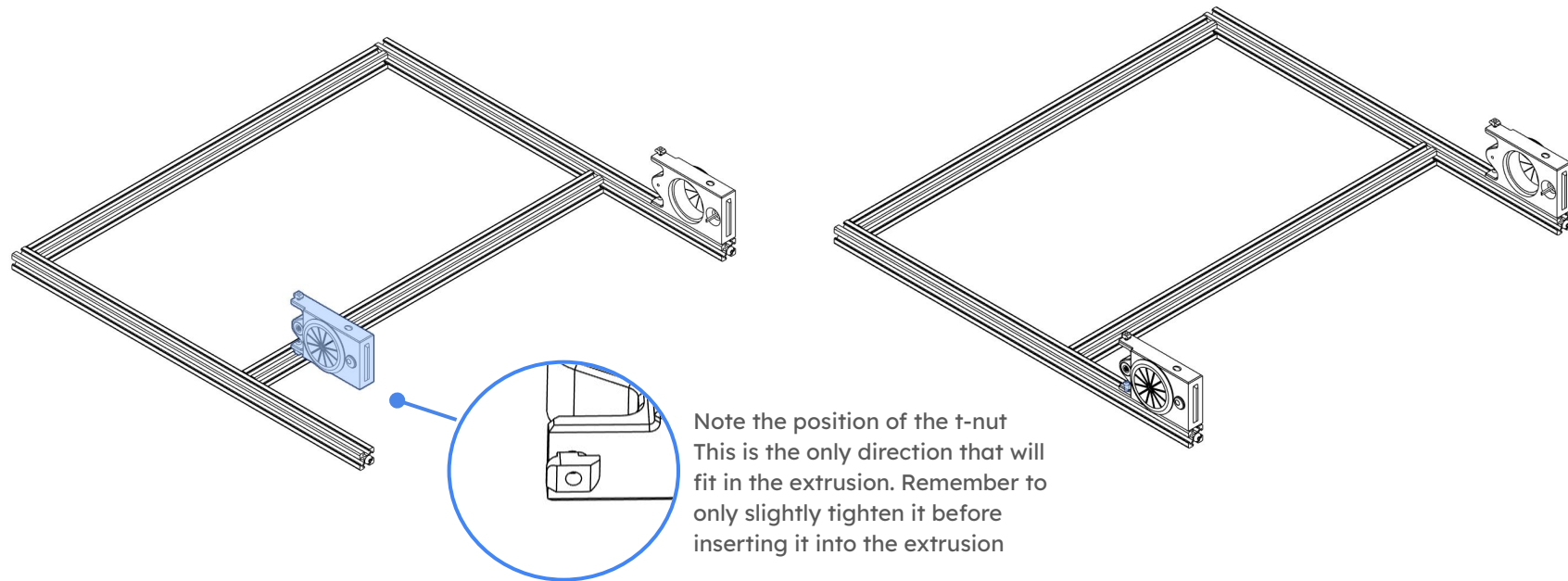


Note the position of the t-nut
This is the only direction that will
fit in the extrusion. Remember to
only slightly tighten it before
inserting it into the extrusion



BACK ASSEMBLY

Repeat the same steps as the last slide.

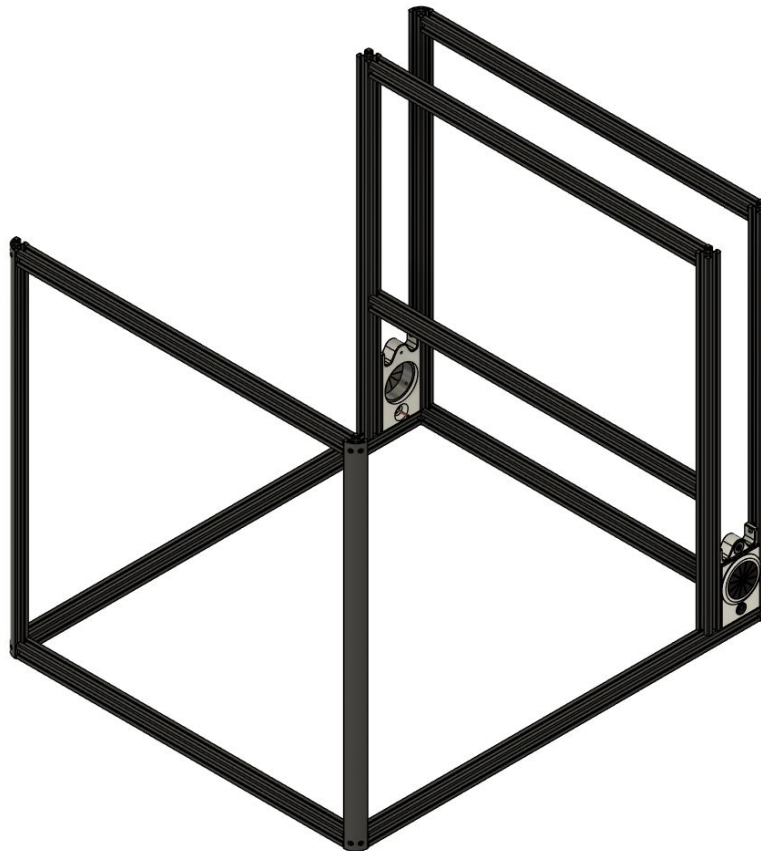


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MAIN ASSEMBLY OVERVIEW

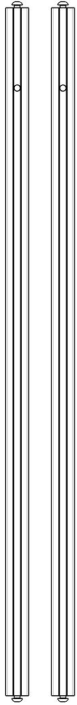
NOTE:

For the most precise and effortless assembly, perform the following steps on a level surface, such as a glass dining table, granite countertop, or ceramic tiles. If a level surface isn't available, don't worry—you'll just need to take extra care to ensure everything is properly squared.

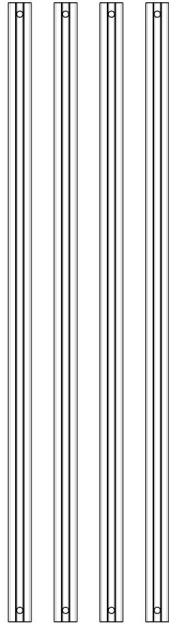


MAIN ASSEMBLY OVERVIEW

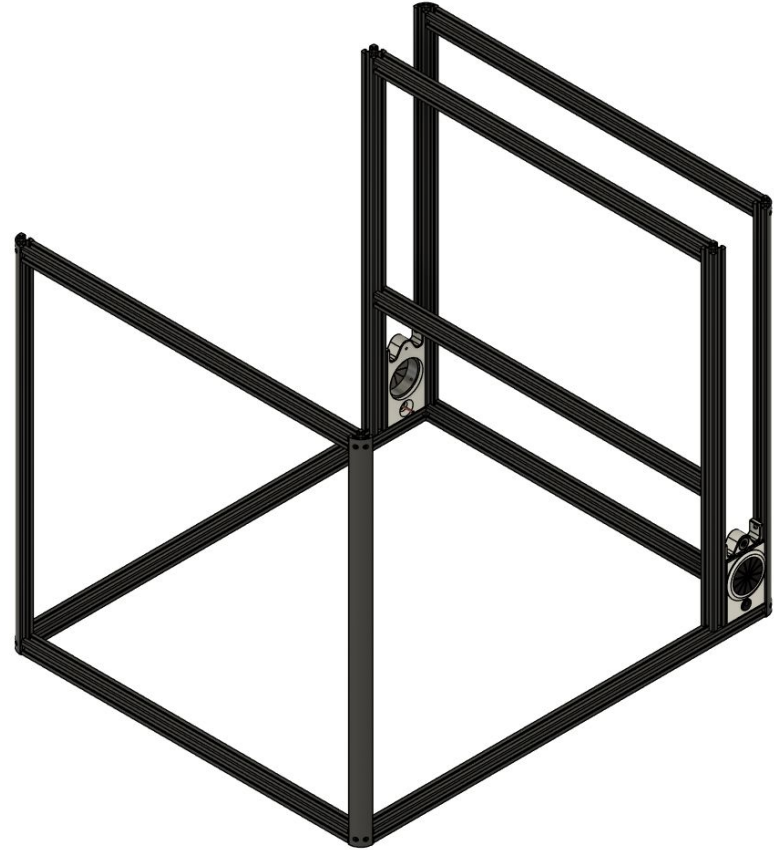
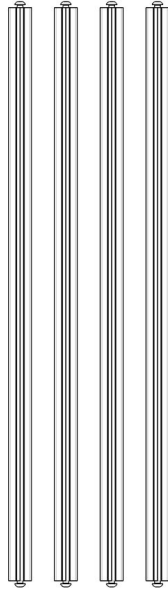
A Extrusion



B Extrusion

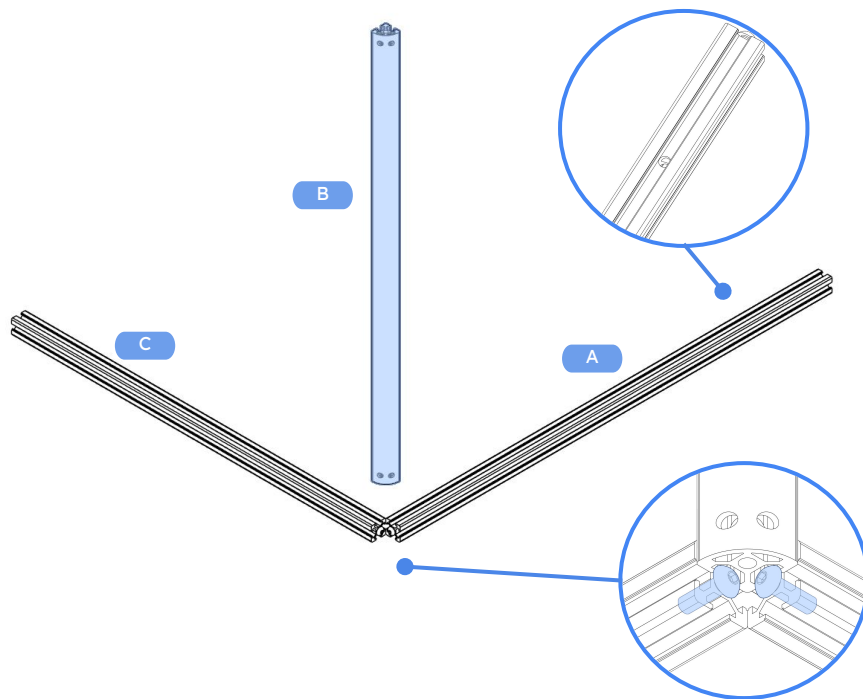


C Extrusion

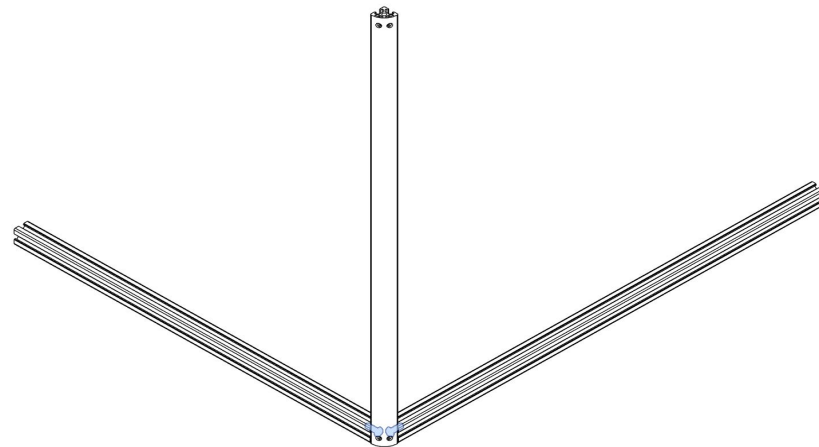


FRAME

MAIN ASSEMBLY

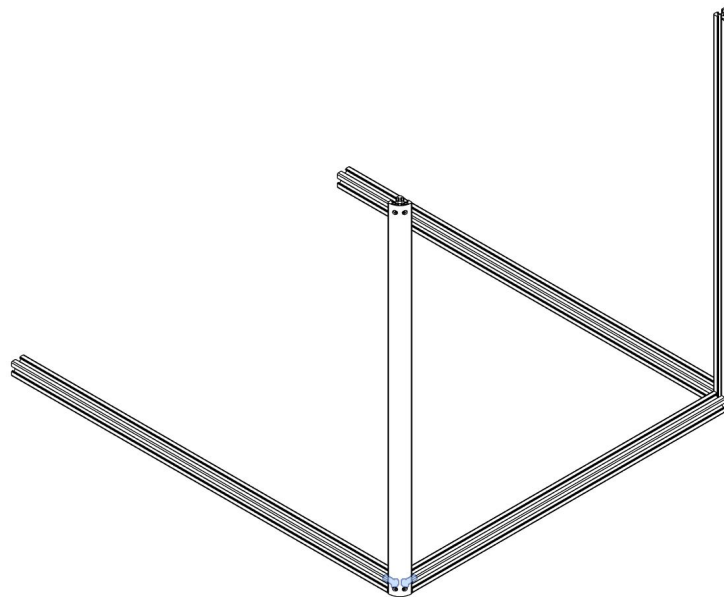
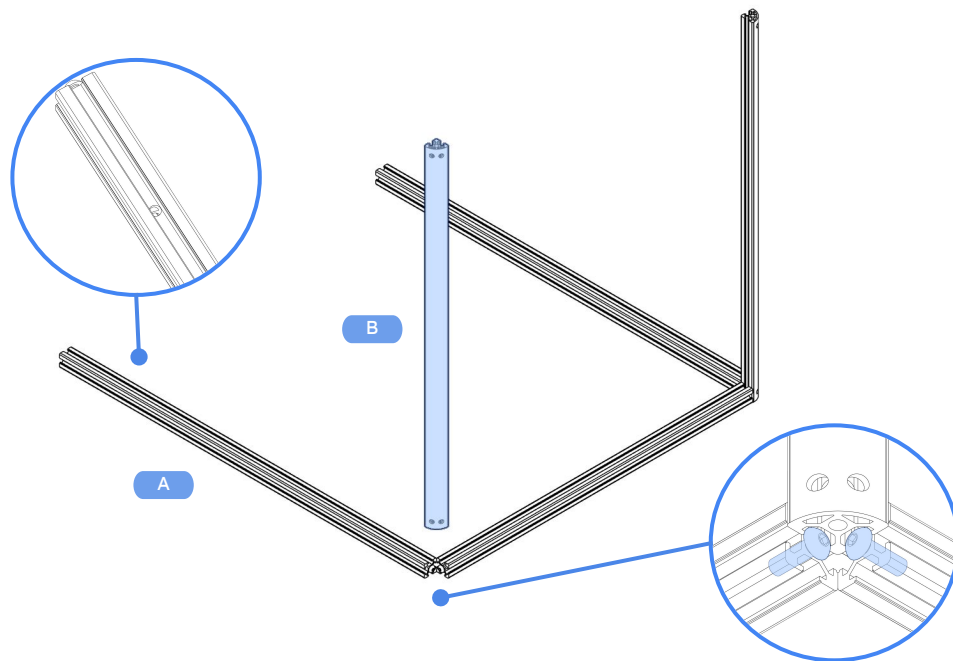


Place on a flat surface one A extrusion and one c extrusion as shown. Pay attention to the direction of the A extrusion, the hole should be on the opposite side of where you will place the B extrusion. Then place the B extrusion on top making sure that the two bolt heads slide into the channel of the extrusion. Finally tighten both bolts.



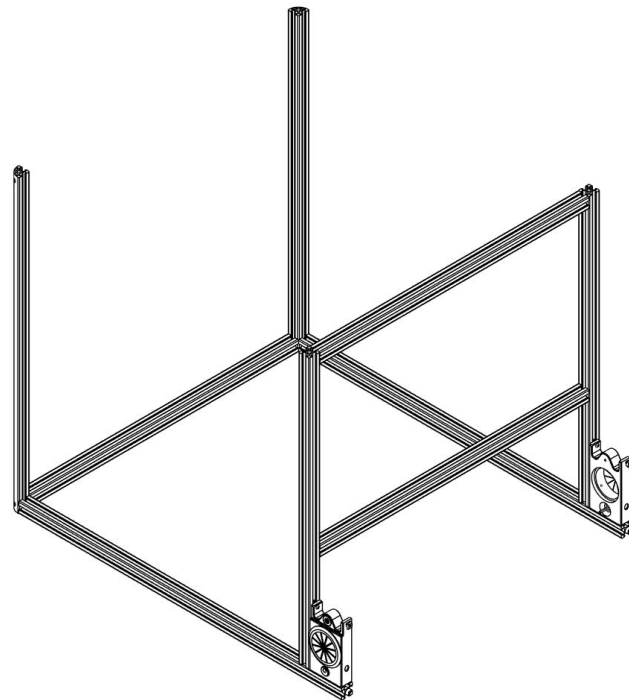
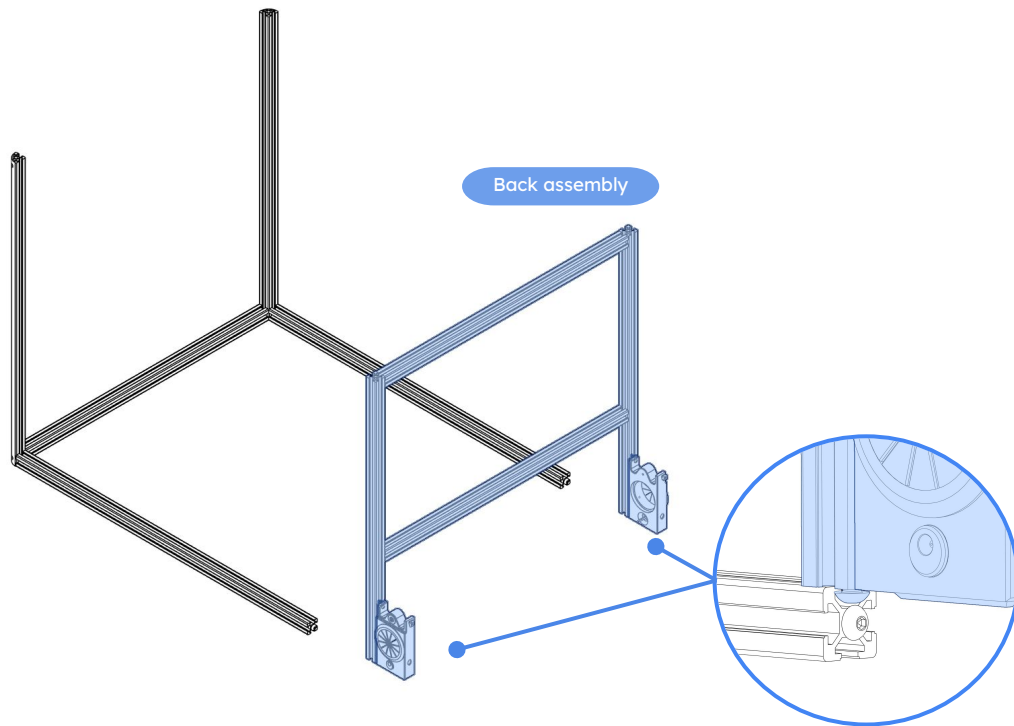
MAIN ASSEMBLY

Now place another extrusion A, this time on the opposite side, remember to check the direction carefully! After as before place extrusion B on top and tighten the bolts.

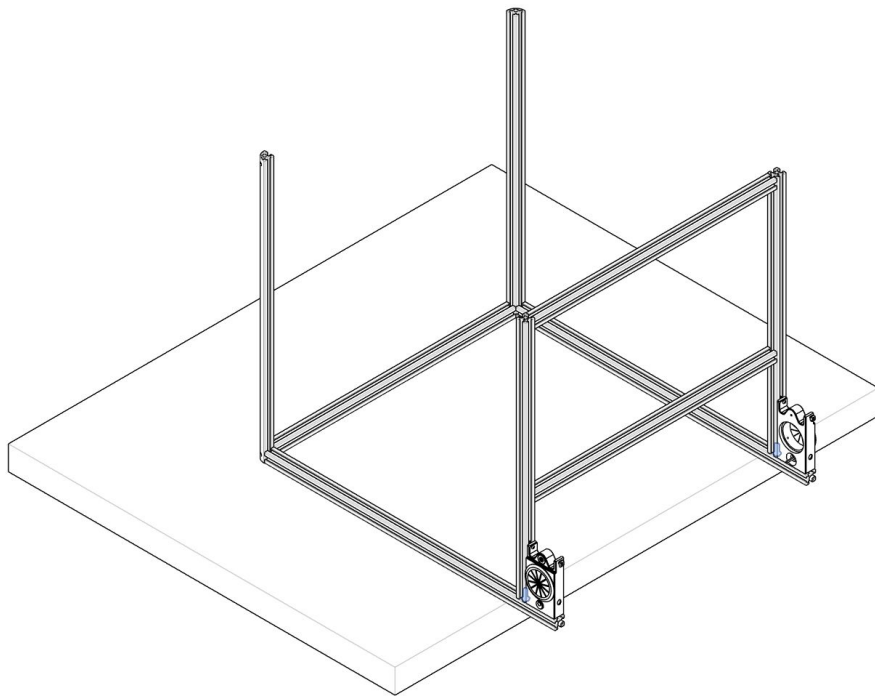


MAIN ASSEMBLY

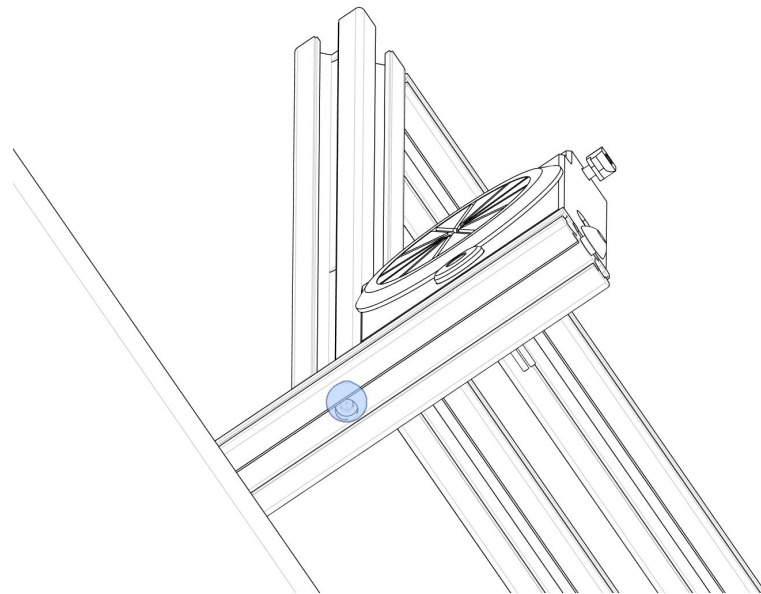
Now get the back assembly that we have made before, and slide it into the two A extrusions. The Plugs access should be flush with the ends of the A extrusions.



MAIN ASSEMBLY

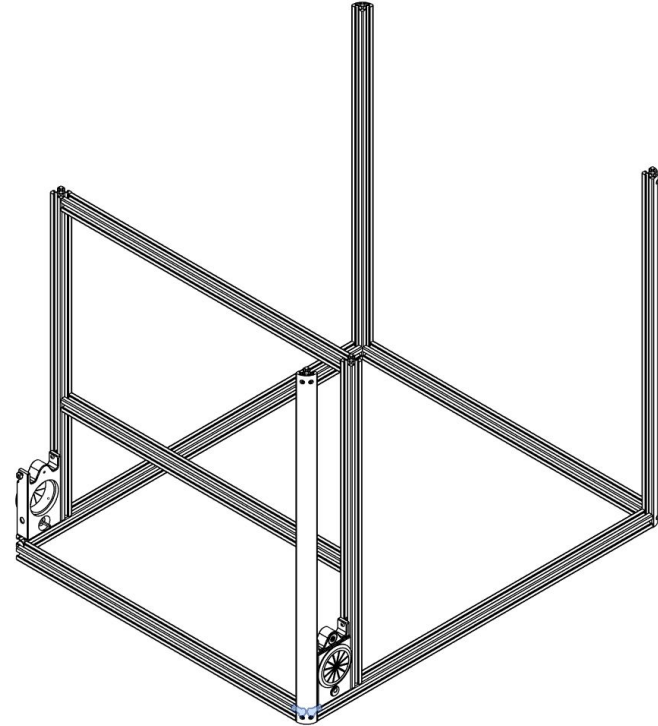
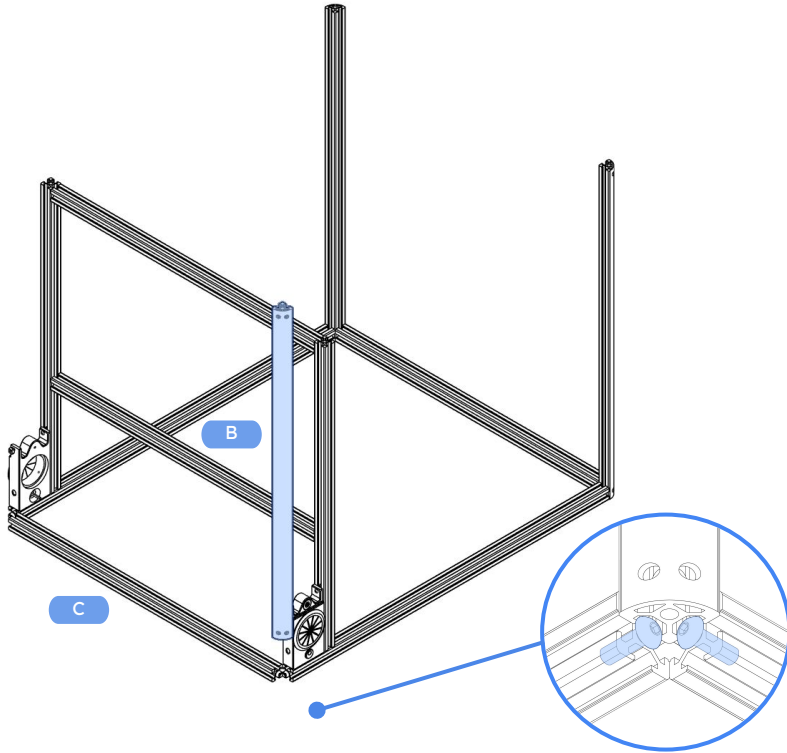


Now move the all assembly on the edge of a table, and tighten the bolt that you can see from the right picture. Repeat this step for the other side. (don't completely tighten them as we will need a bit of movement later for aligning the panels)



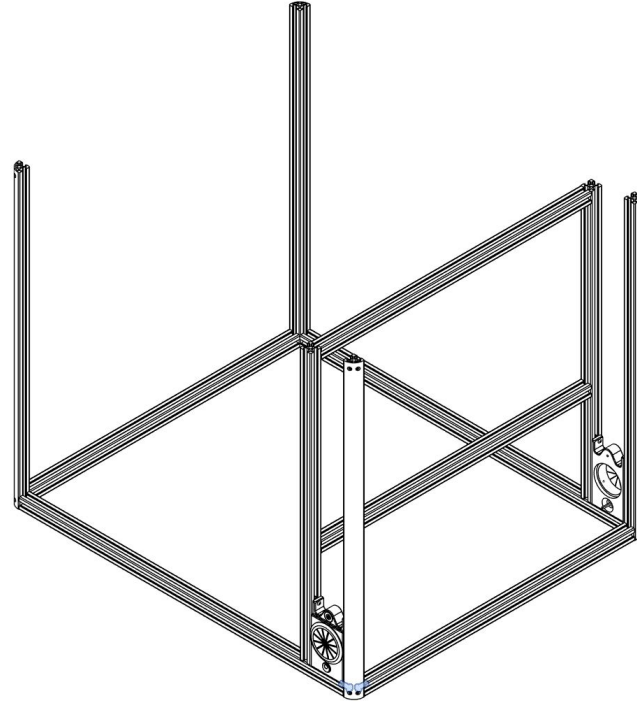
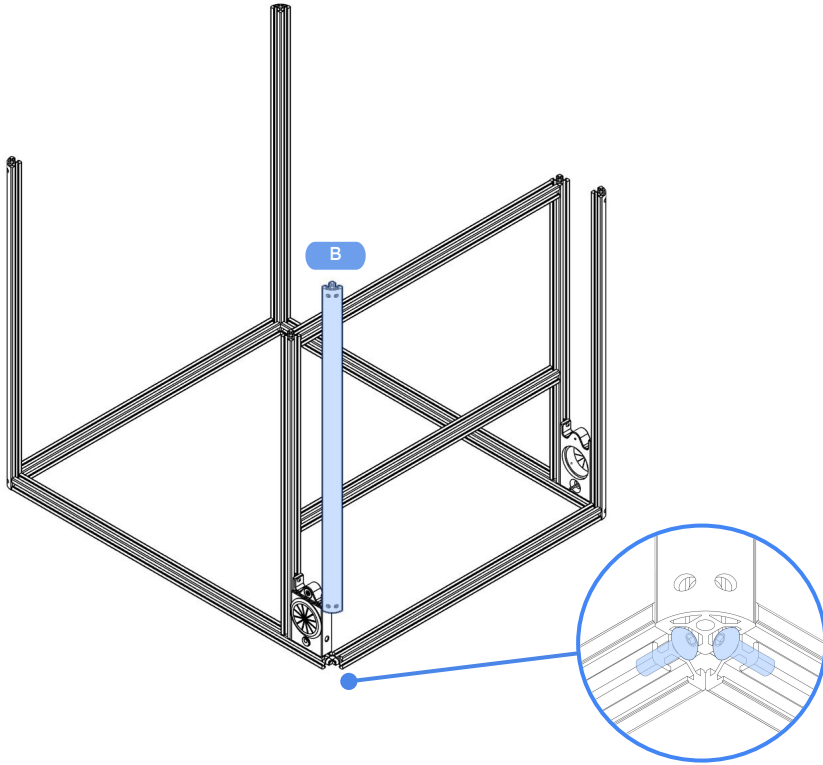
MAIN ASSEMBLY

Place a C extrusion as shown in the picture. Then lower a B extrusion on top and tighten the bolts on each side



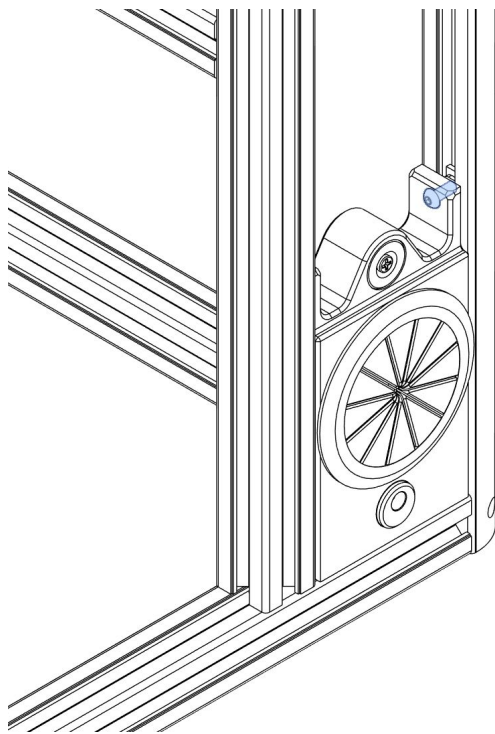
MAIN ASSEMBLY

Lower one B extrusion on top and tighten the bolts on each side.

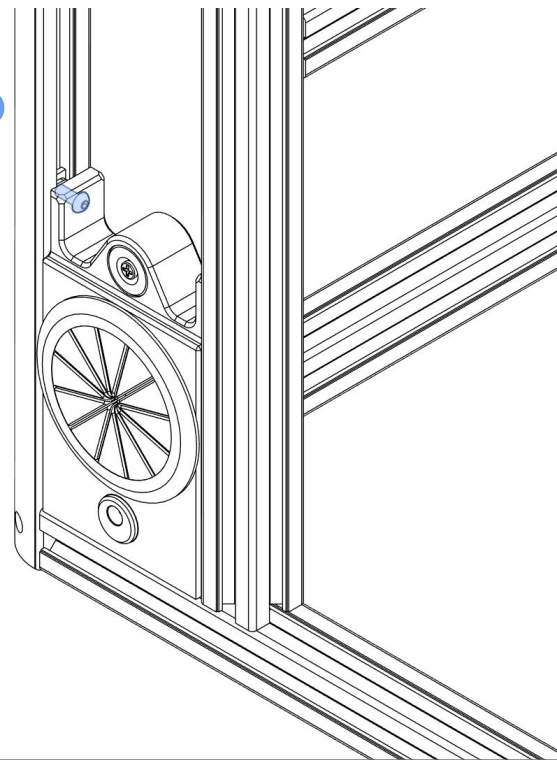
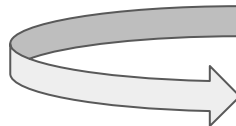


FRAME

MAIN ASSEMBLY

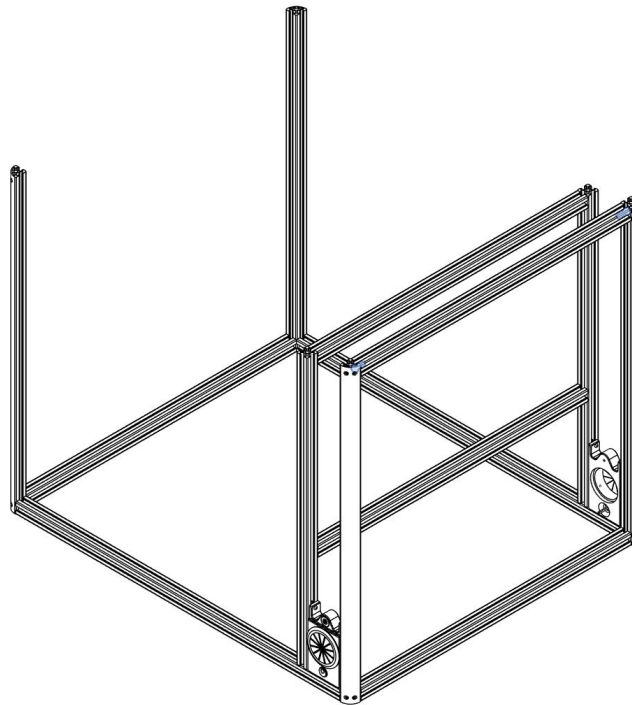
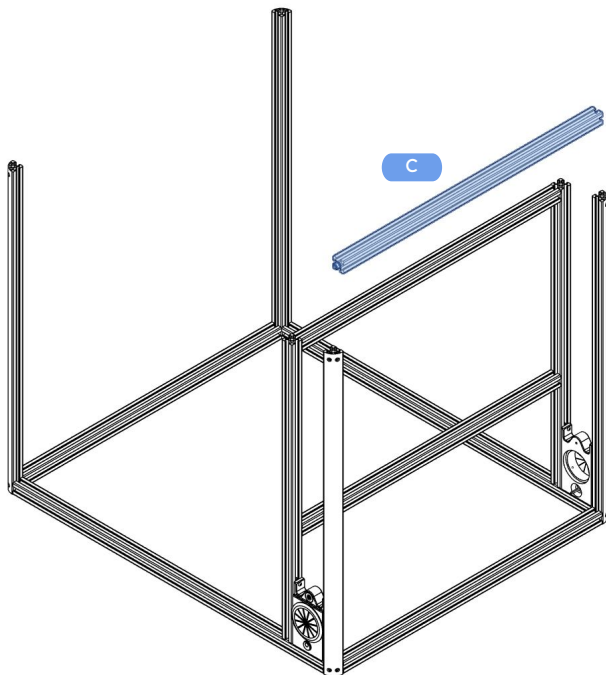


Tighten the highlighted M3x8 screw on both sides of the enclosure. (one for each of the plugs access). To facilitate the process push the back assembly toward the back of the enclosure, so that the plug access piece is fully touching the B extrusion



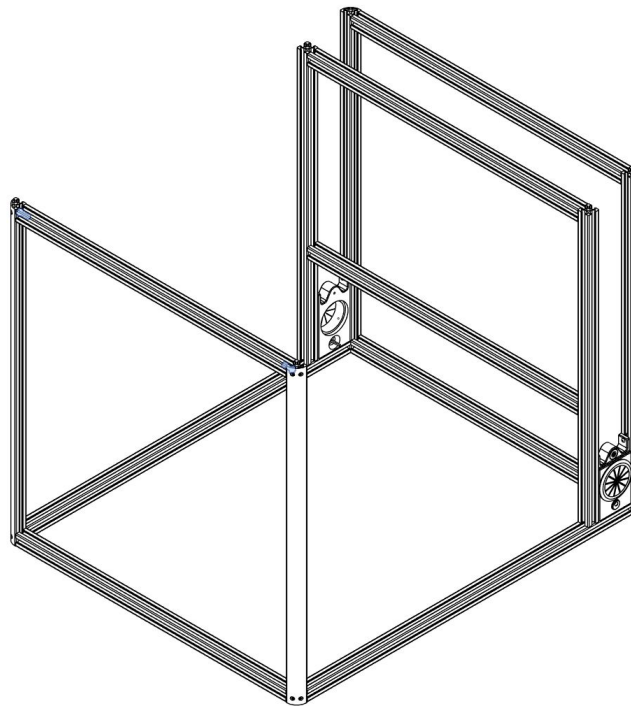
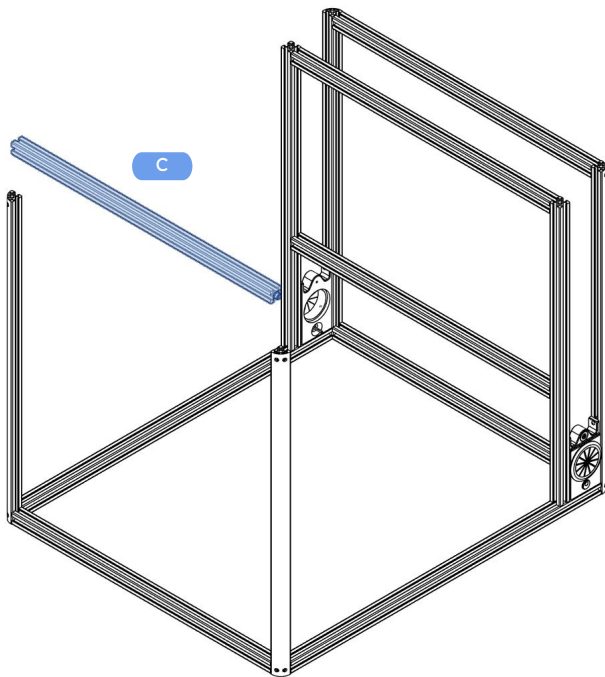
MAIN ASSEMBLY

Lower one C extrusion on top and tighten the bolts on each side. Make sure that it's flush and straight.



MAIN ASSEMBLY

Lower one C extrusion on top and tighten the bolts on each side. Make sure that it's flush and straight.



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Divider between sections

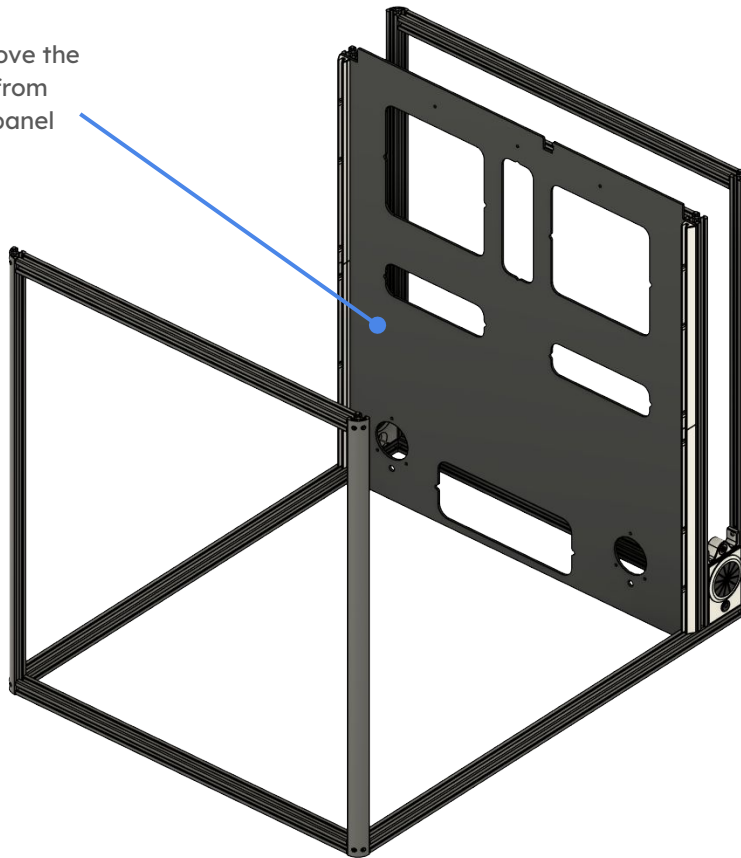
Congrats! You have finished the initial frame assembly. This is a great moment to take a break or to stop and resume at another time.

BACK PANEL OVERVIEW

NOTE:

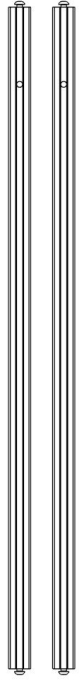
Take a moment now to peel off the protective plastic film that is placed on both sides of the acrylic panel used in this step as it will be difficult to do so later.

Remove the
film from
this panel

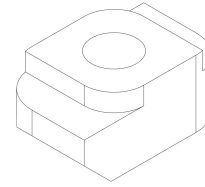
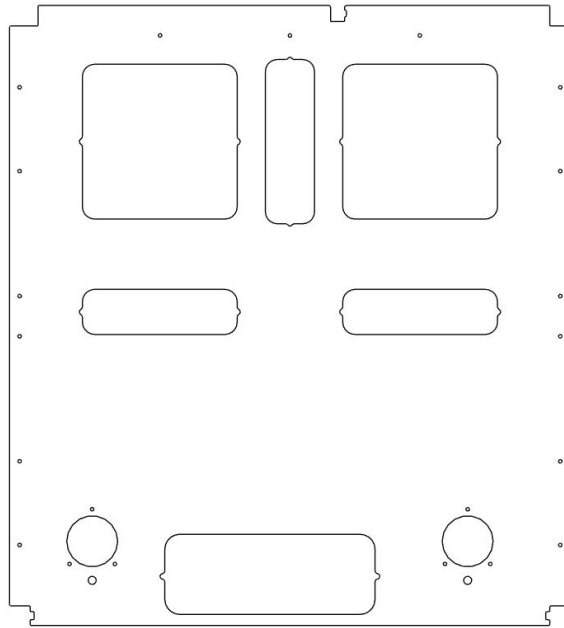


COMPONENTS

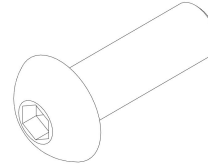
A Extrusion



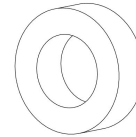
Back Panel



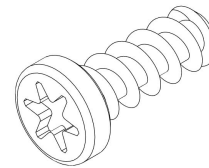
10 - M3 T-Nuts



10 - M3x10 BHCS



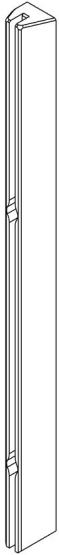
2 - M3 Spacer (3d printed)



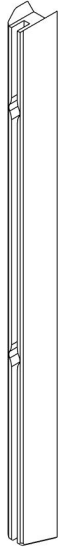
4 - M3x8 ST BHCS

COMPONENTS

A



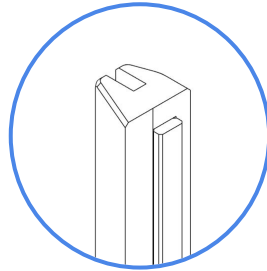
B



- 2 - Segment A extrusion guide
- 2 - Segment B extrusion guide
- 4 - Centering bars

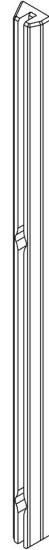


Centering bar

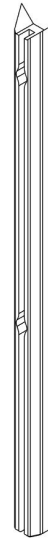


If you flip them you will see
the groove that slides into the
extrusion

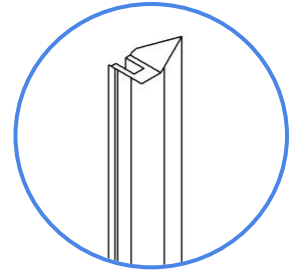
A



B

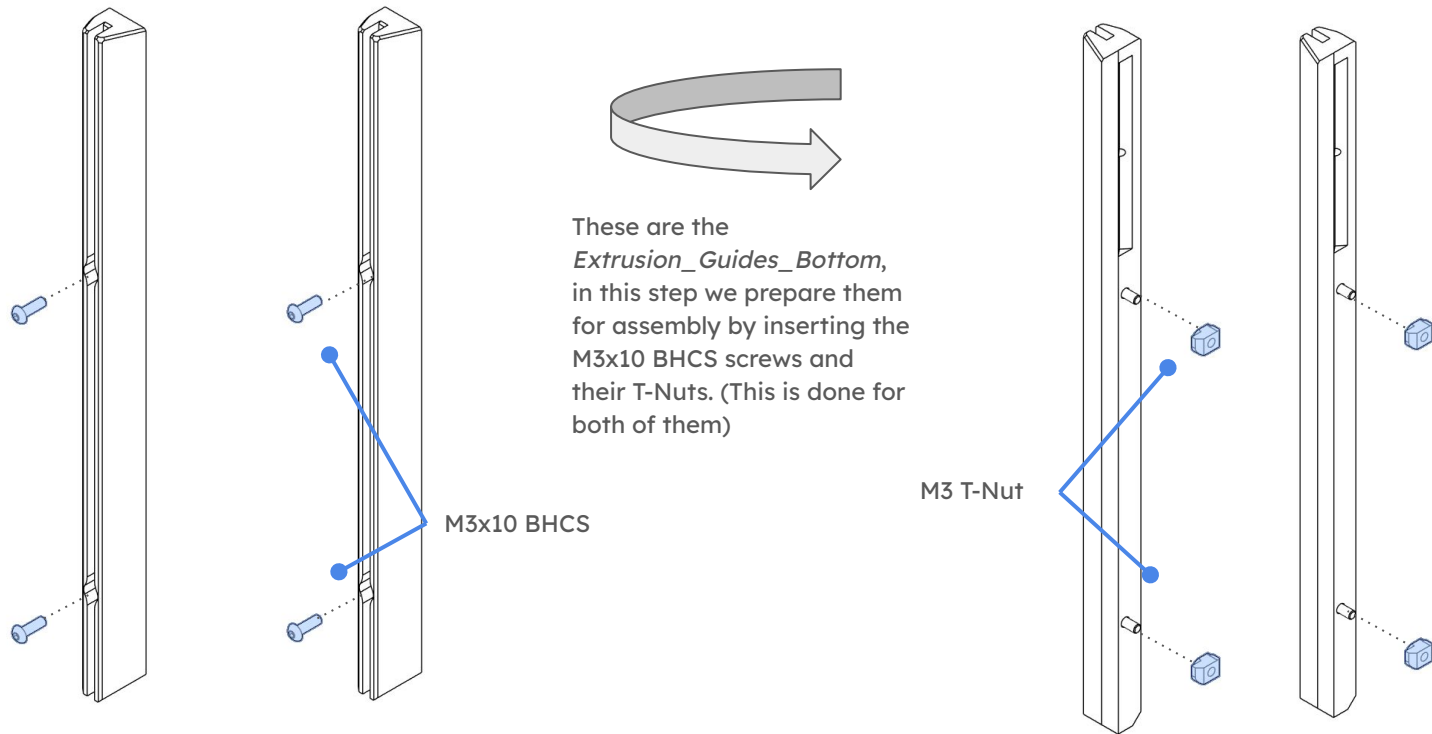


- 2 - Segment A acrylic guide
- 2 - Segment B acrylic guide

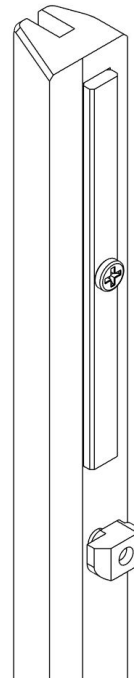
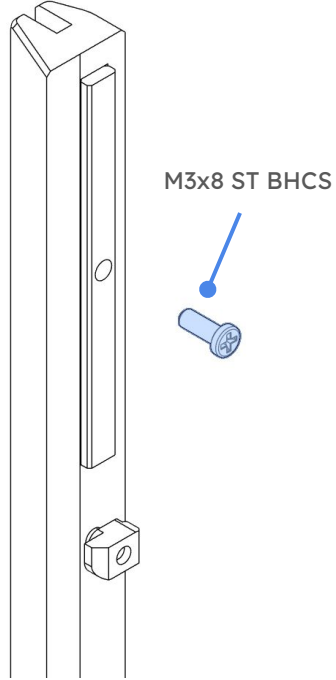
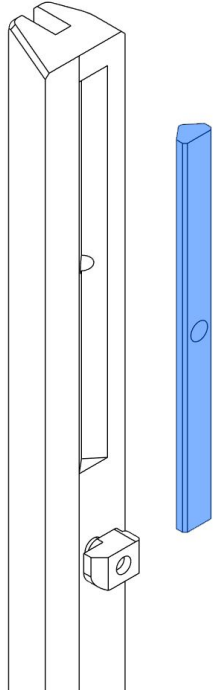


If you flip them you will see
the smooth surface that slides
onto the panel

PREP



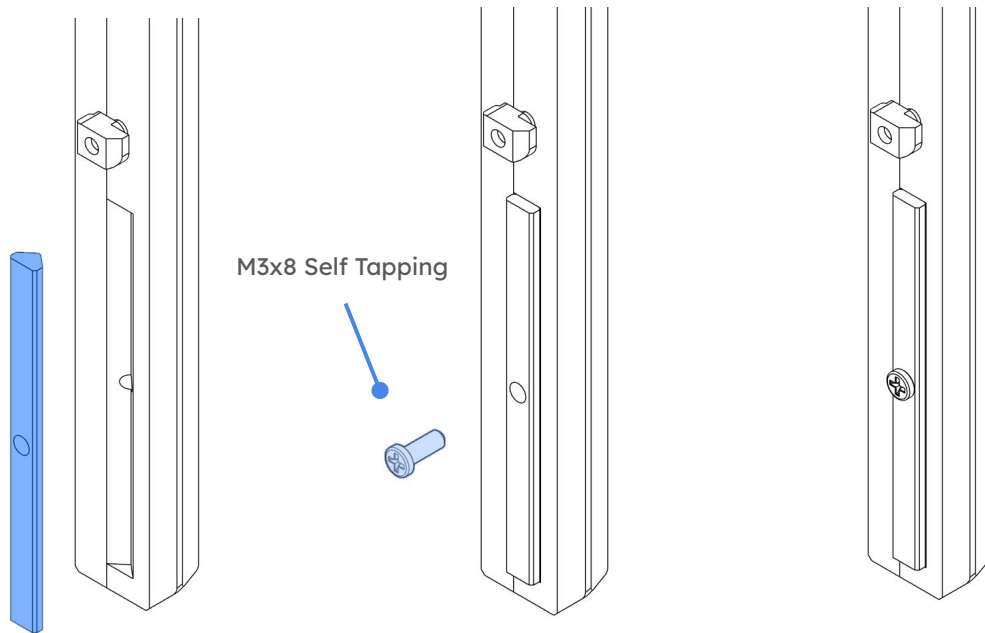
PREP



NOTE:

Repeat this step for the other identical part also.

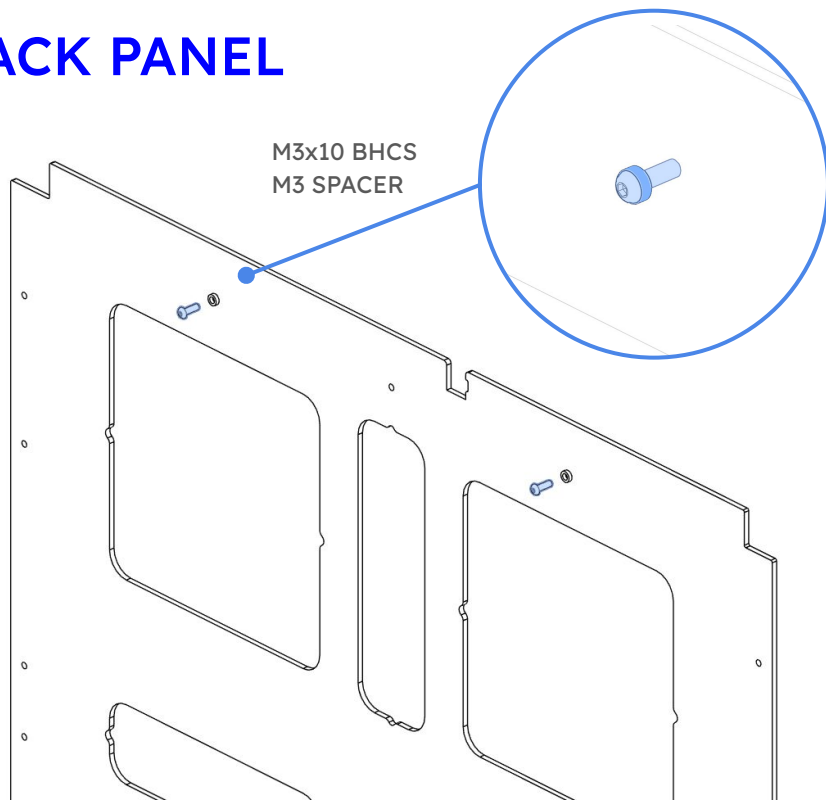
PREP



NOTE:

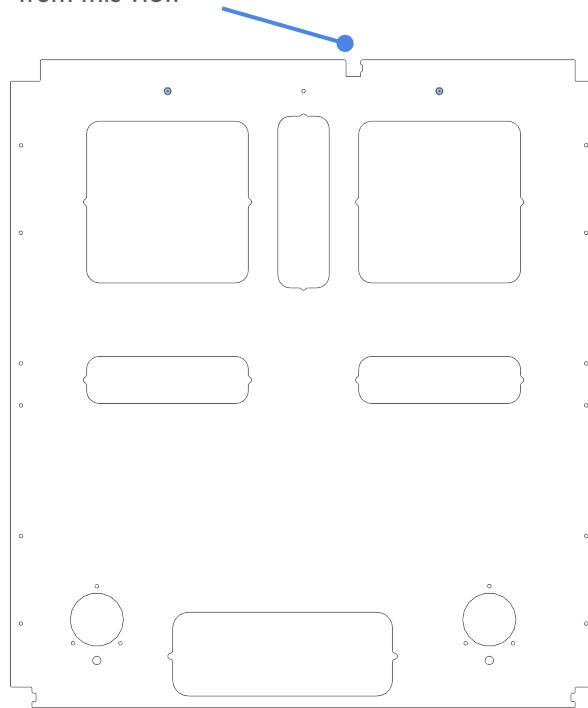
Repeat this step for the other identical part also.

BACK PANEL

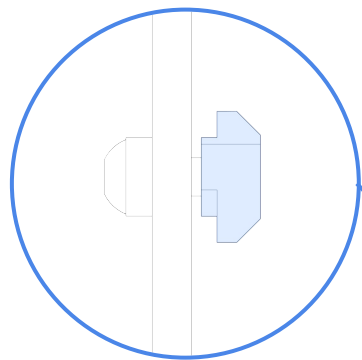


NOTE:

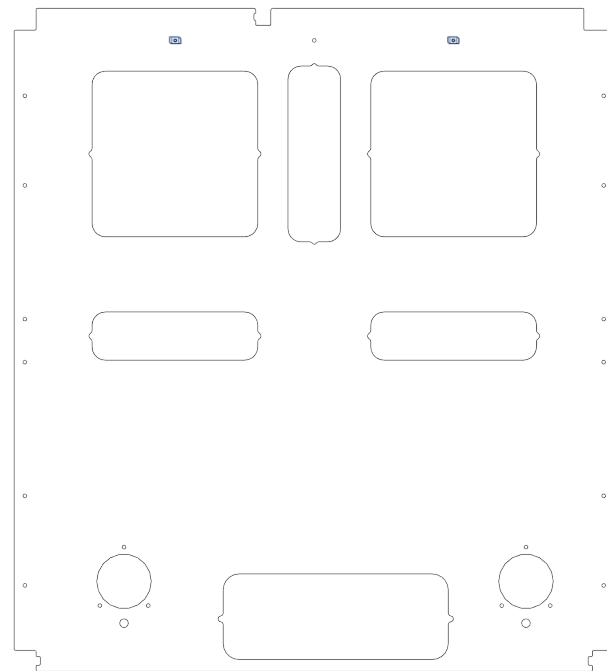
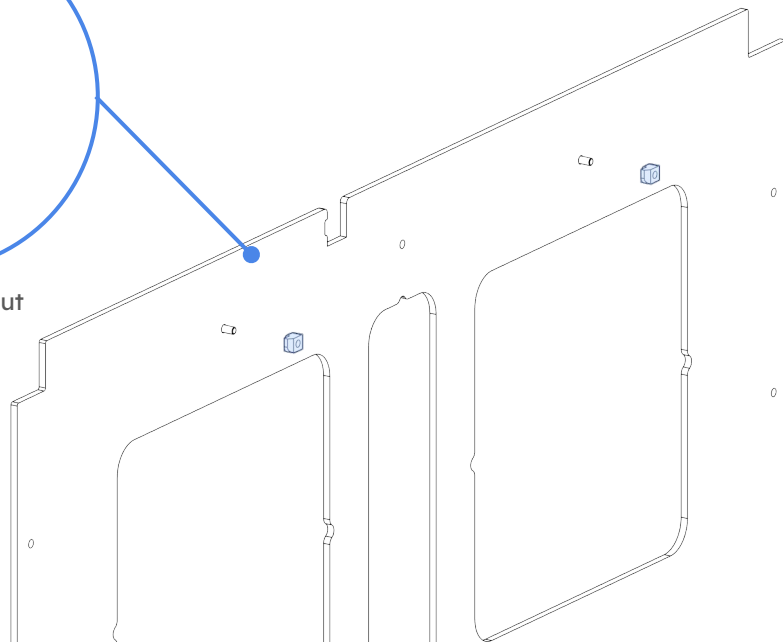
Pay very close attention to the direction the panel.
The notch on top should be off centered to the right
from this view



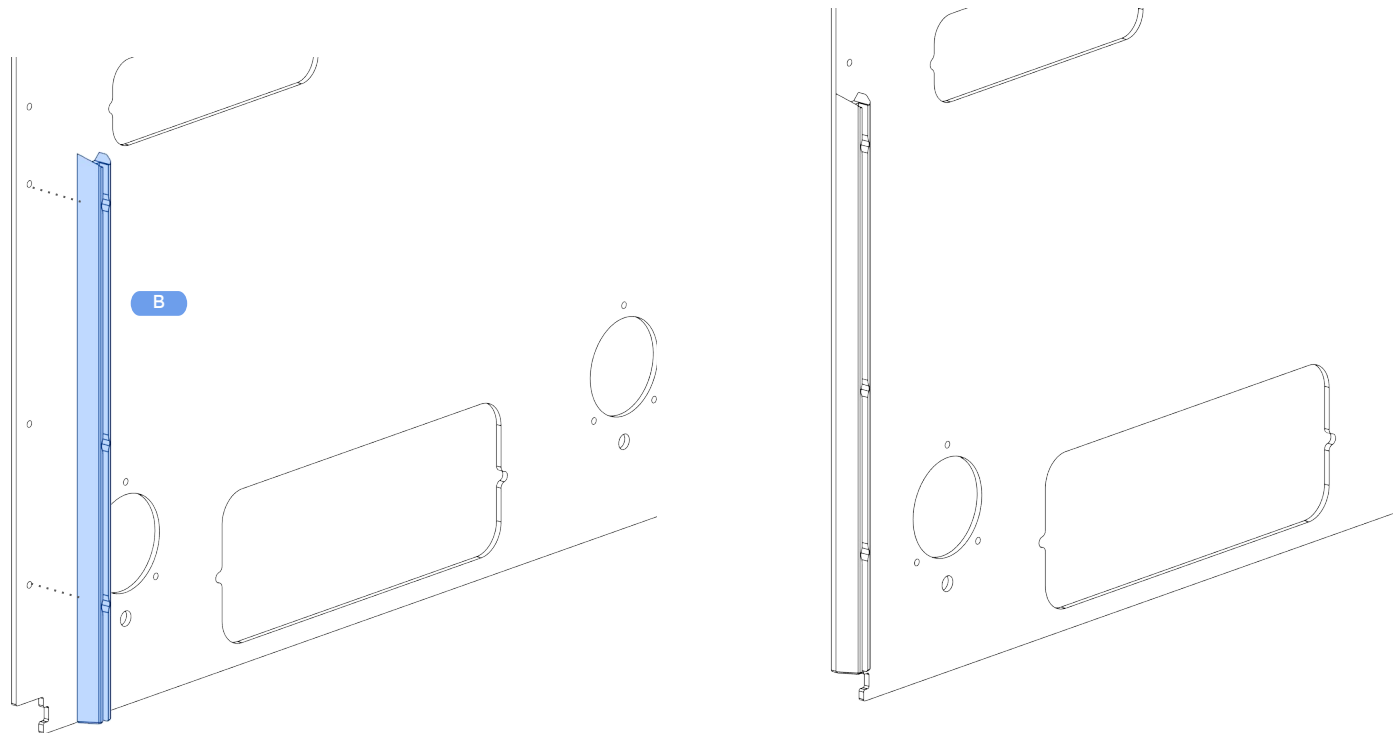
BACK PANEL



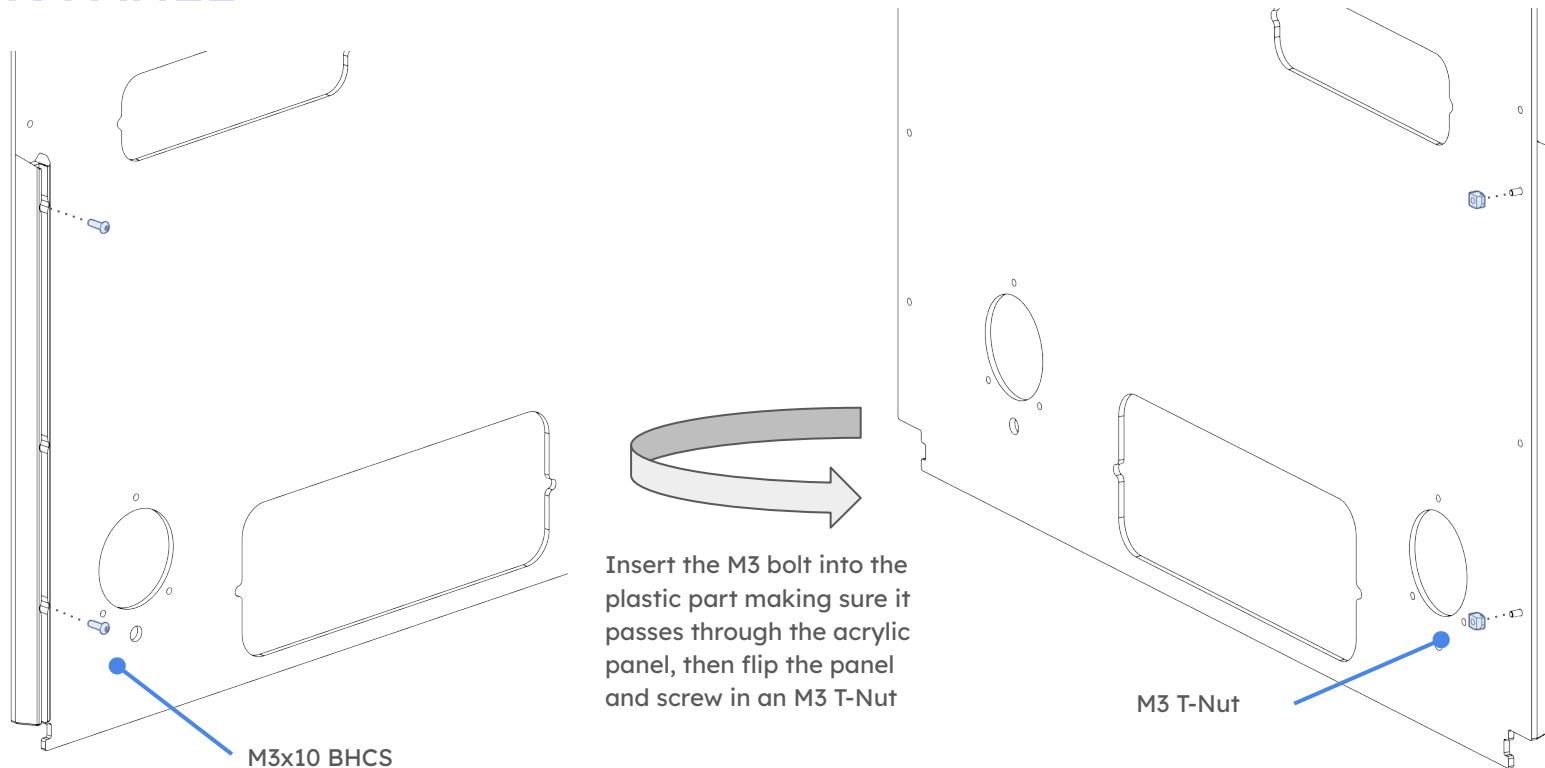
M3 Hammerhead nut



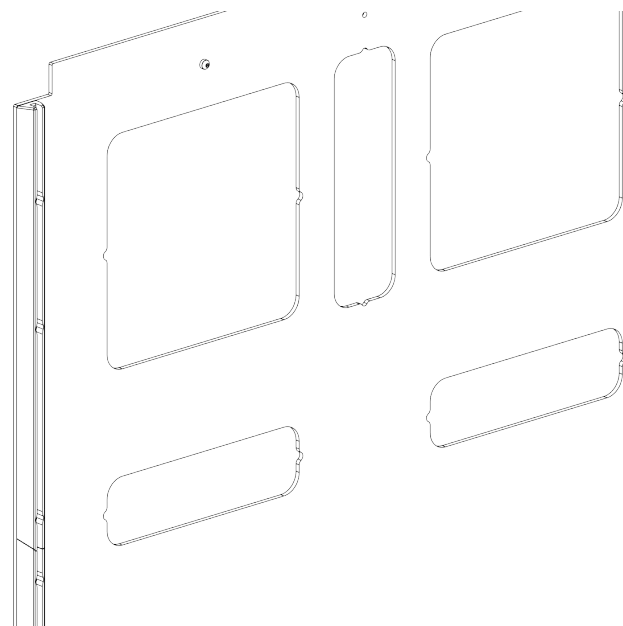
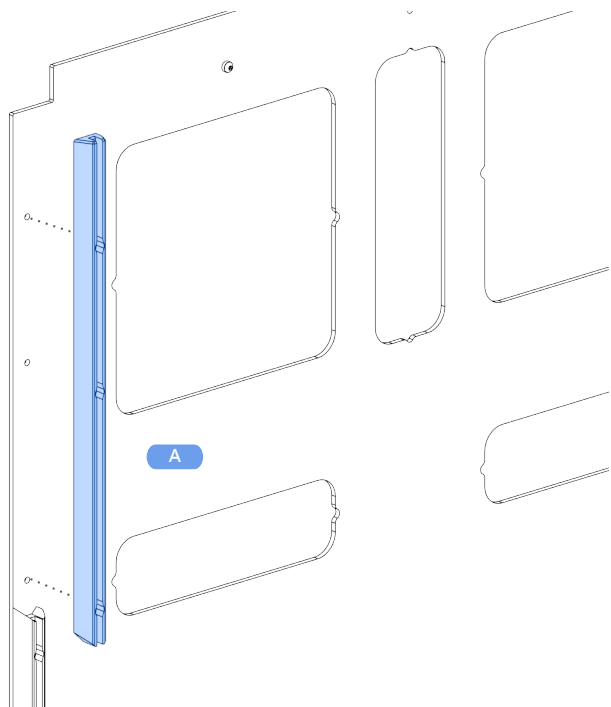
BACK PANEL



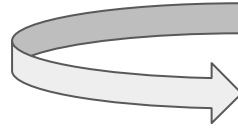
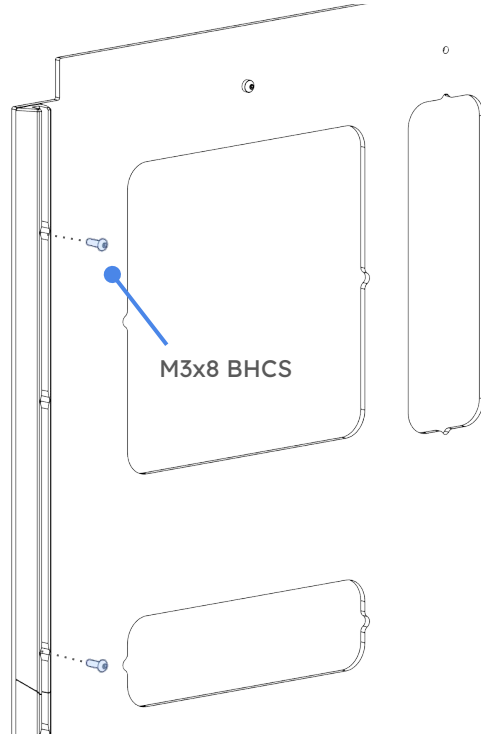
BACK PANEL



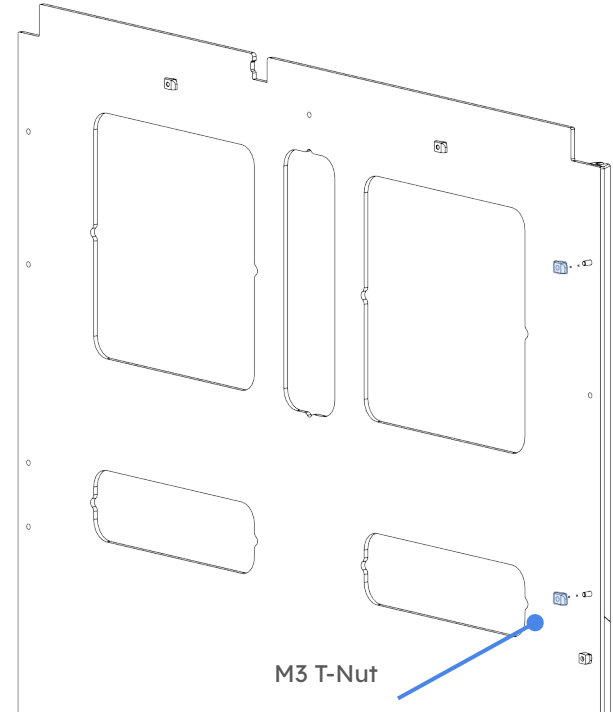
BACK PANEL



BACK PANEL

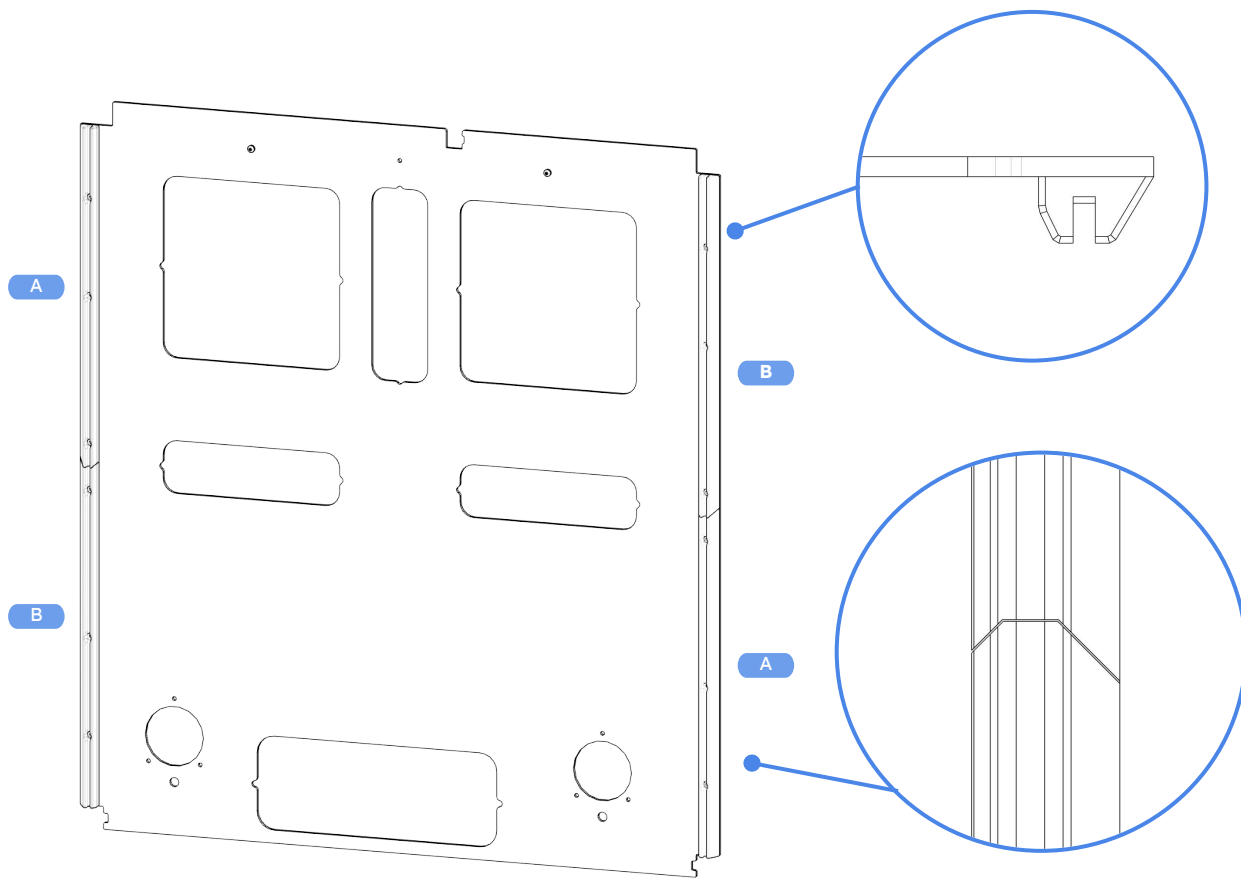


Insert the M3 bolt into the plastic part making sure it passes through the acrylic panel, then flip the panel and screw in an M3 T-Nut

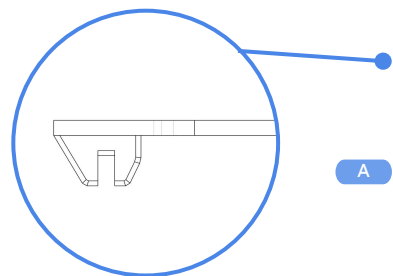


BACK PANEL

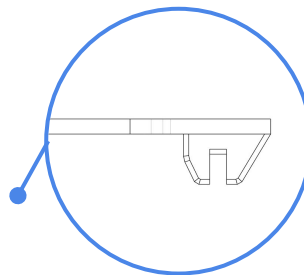
Now you have to install the same acrylic guides on the other side. This time the order will be opposite, so Segment a goes on the bottom, and Segment B goes on the top



BACK PANEL

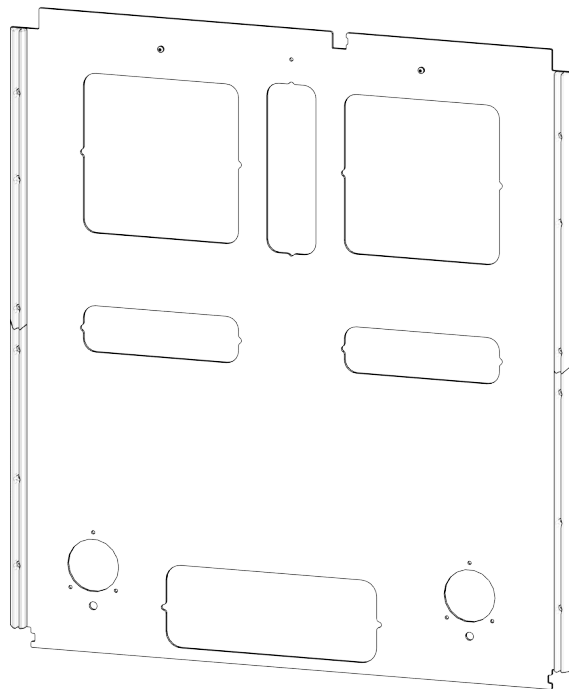


A



B

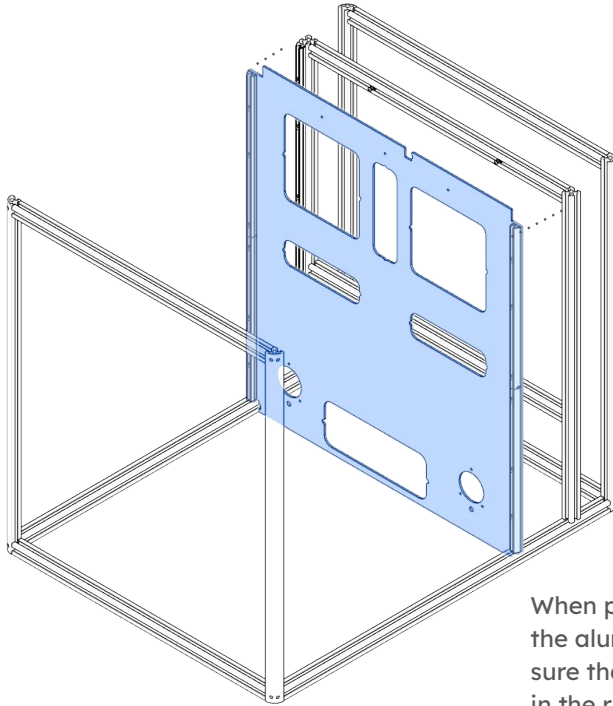
B



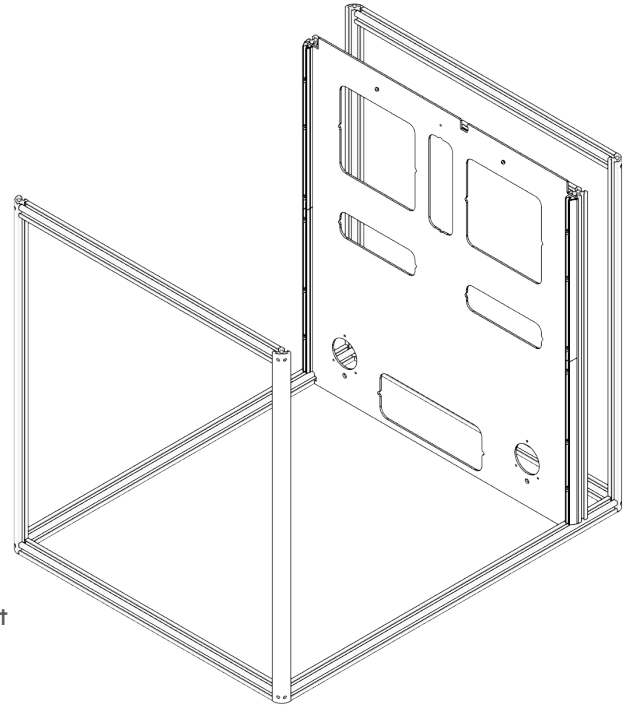
A

Take a moment to check that your back panel looks just like this one. It's very important that on the back of the panel there are 6 T-Nuts. (Two on each sides, two on the top)

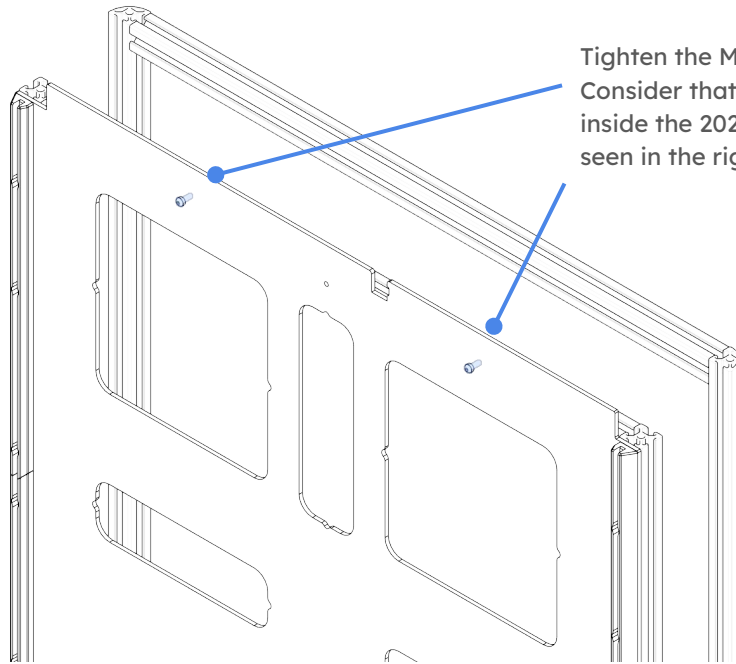
BACK PANEL



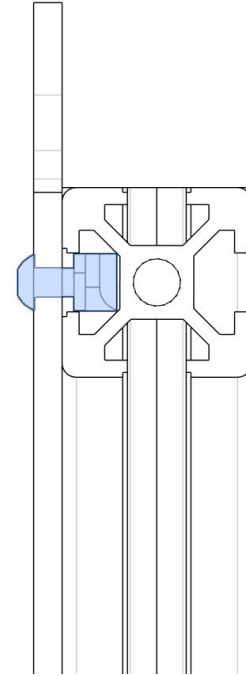
When pushing the panel against the aluminum extrusions, make sure that the T-nuts are facing in the right direction. (Parallel to the grooves in the extrusion)



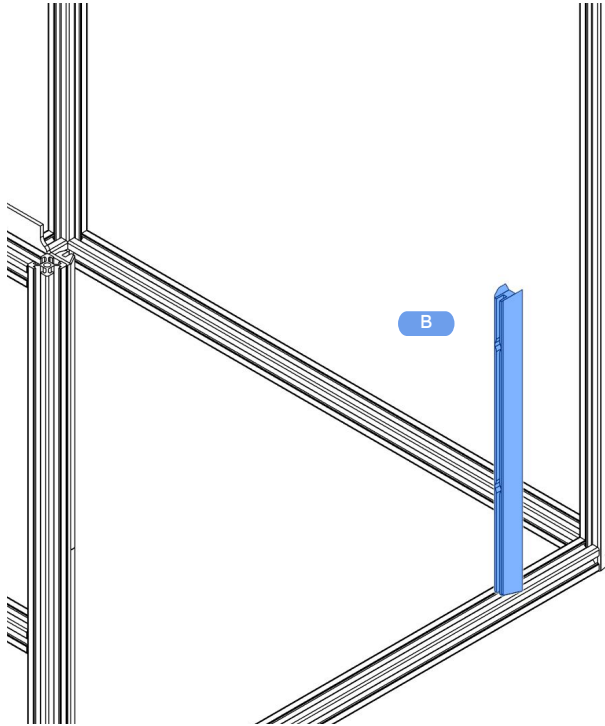
BACK PANEL



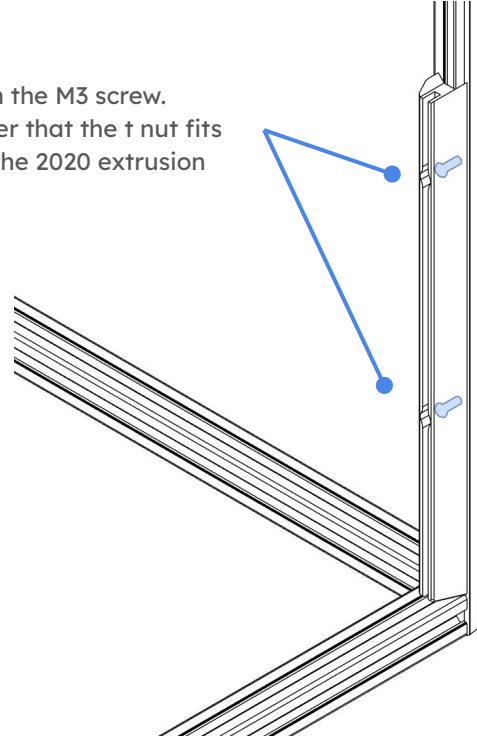
Tighten the M3 screws.
Consider that the t nut fits
inside the 2020 extrusion, as
seen in the right picture.



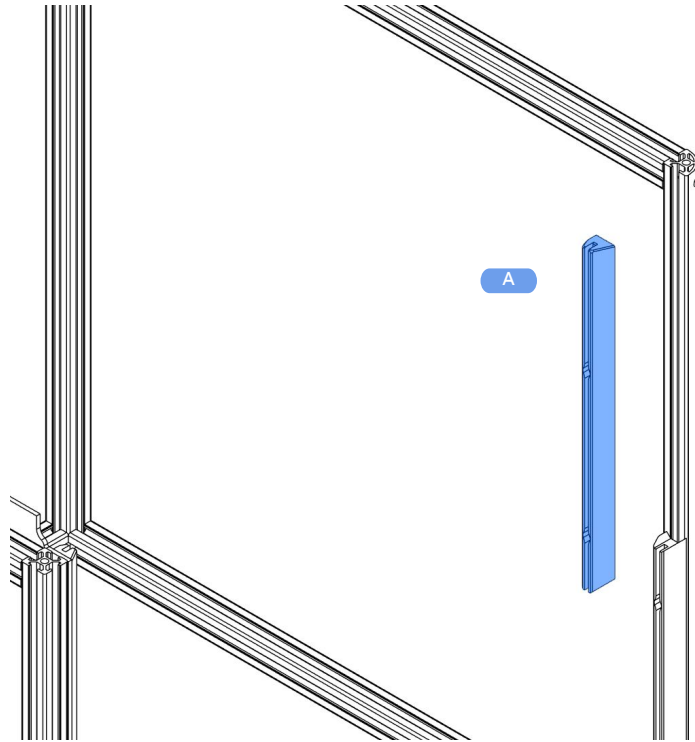
PUTTING EVERYTHING TOGETHER



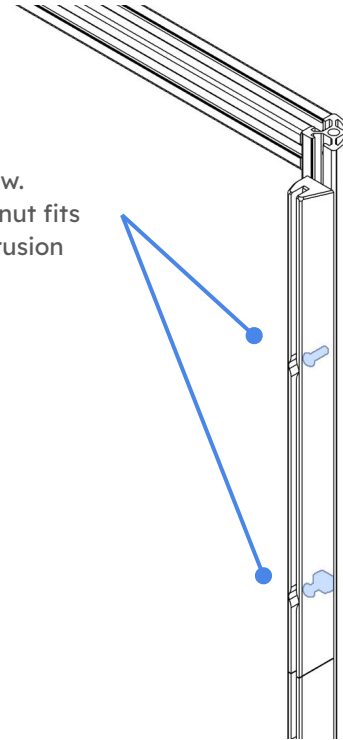
Tighten the M3 screw.
Consider that the \dagger nut fits
inside the 2020 extrusion



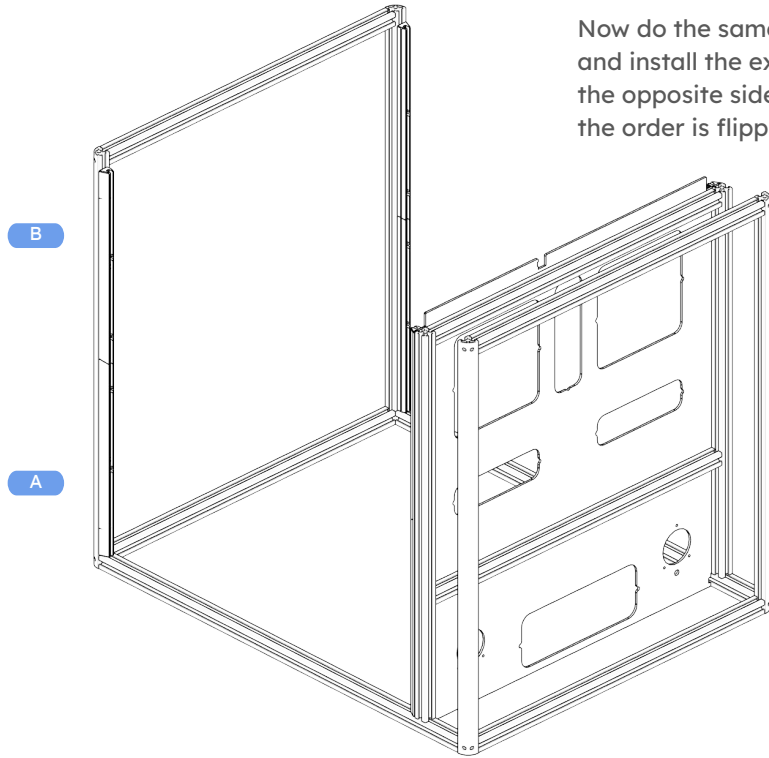
PUTTING EVERYTHING TOGETHER



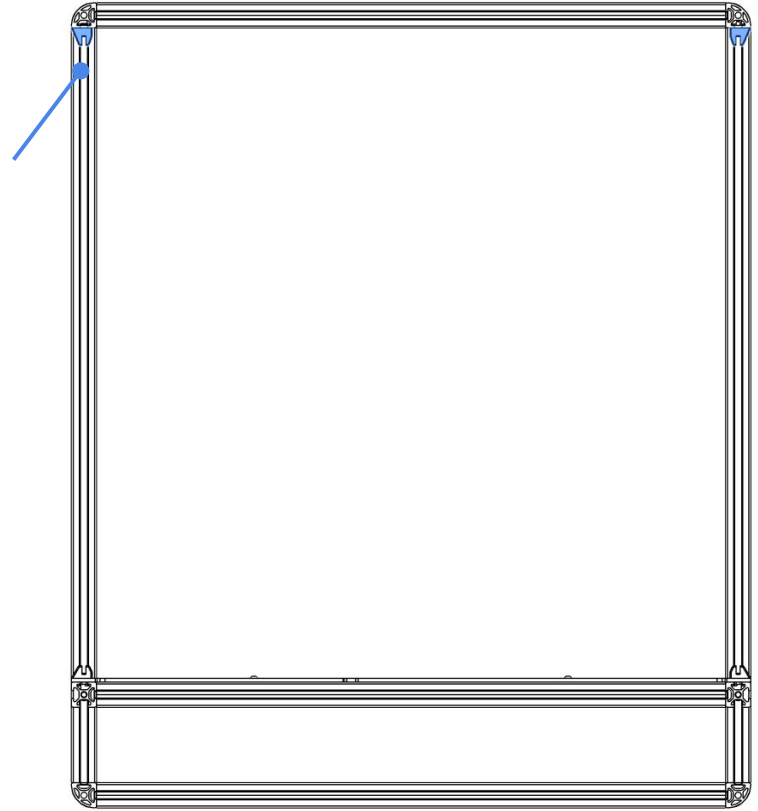
Tighten the M3 screw.
Consider that the t nut fits
inside the 2020 extrusion



PUTTING EVERYTHING TOGETHER



Now do the same thing as before and install the extrusion guide on the opposite side. Remember that the order is flipped!

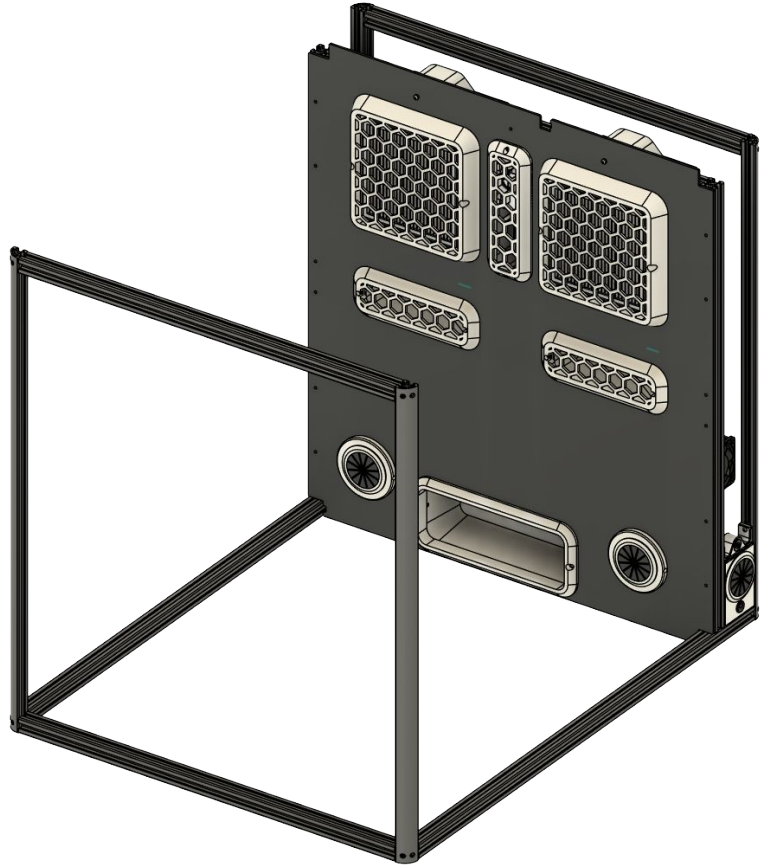


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Divider between sections

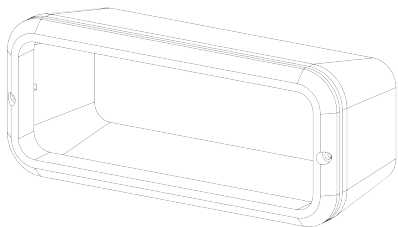


BACK PANEL ACCESSORIES OVERVIEW

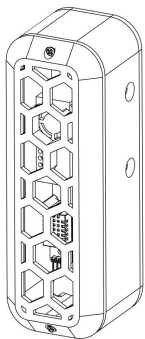
This step is where you assemble what you want to have on your enclosure. In the manual i will cover all of the possible accessories for now, but if there is something that you don't want to install you can just print the corresponding hole cover.



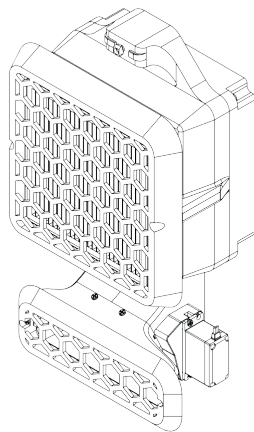
THE ACCESSORIES to be installed



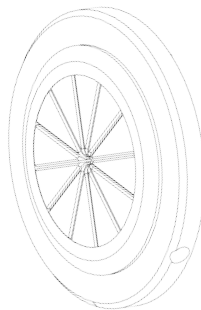
1 - Bed cable channel



1 - Sensor box



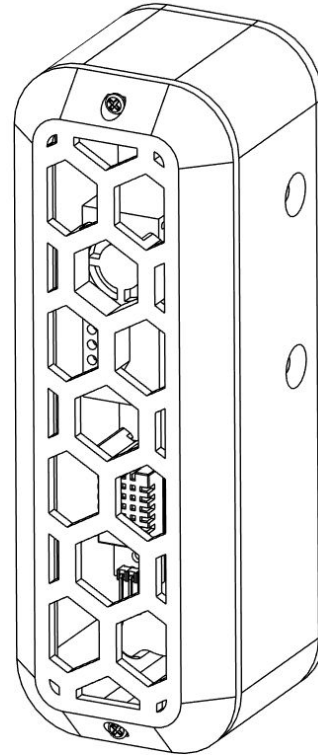
2 - Air quality filters



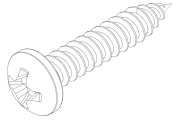
1 - Power cable
passthrough

SENSOR BOX INSTALLATION

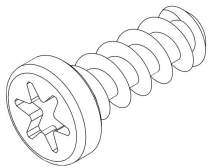
This accessory measure the air quality using a PMS5003 sensor.



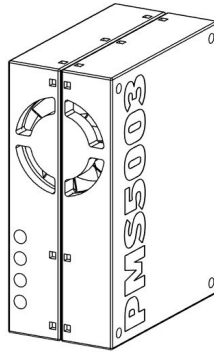
COMPONENTS SENSOR BOX



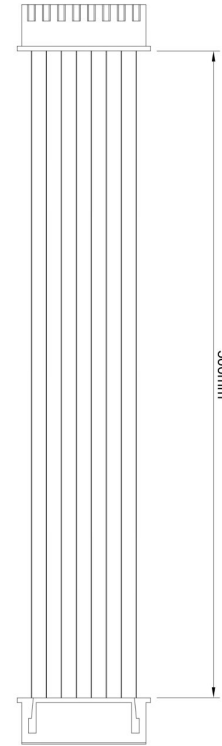
2 - M2x8 ST BHCS



4 - M3x8 ST BHCS

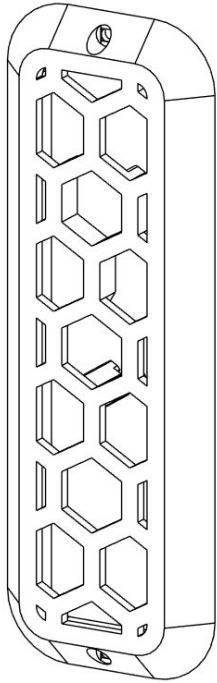


1 - PMS5003

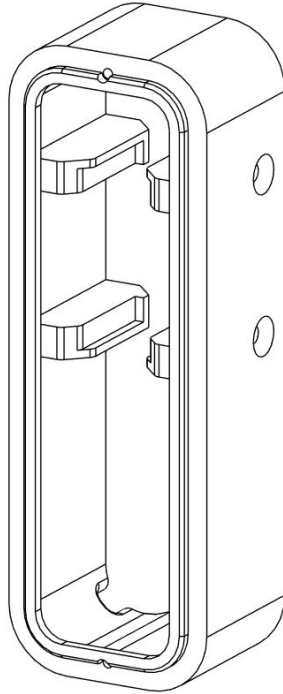


1 - PMS Cable

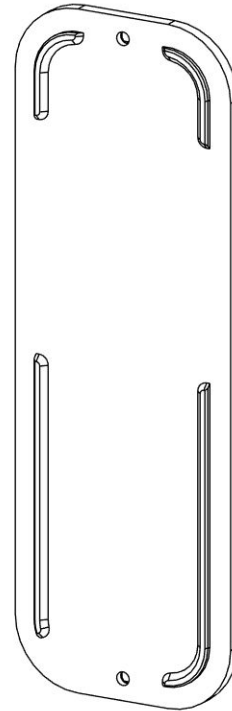
COMPONENTS SENSOR BOX



1 - Cover



1 - Main body

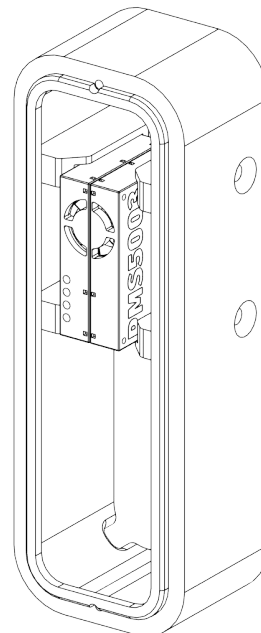
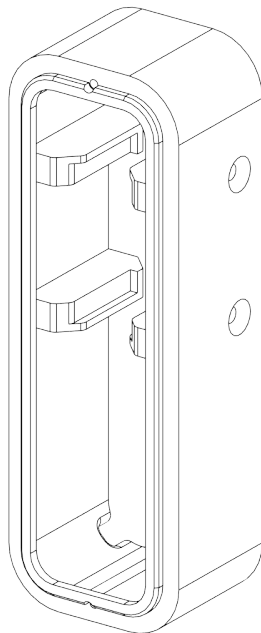
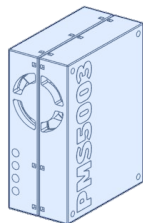


1 - Back panel



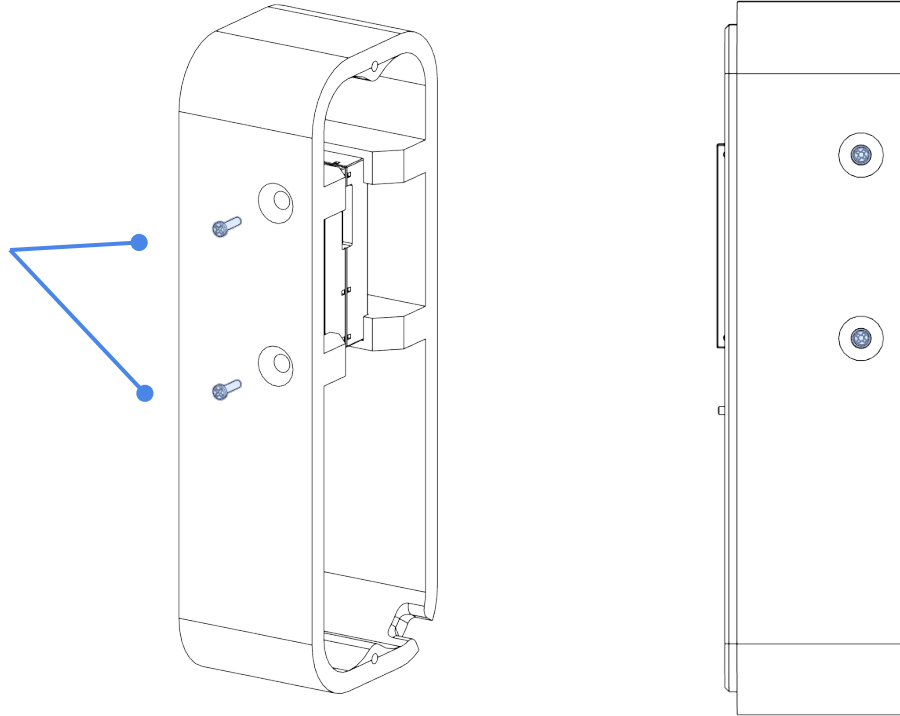
SENSOR BOX

PMS 5003 Module

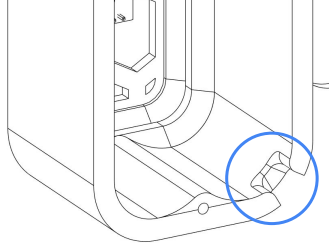
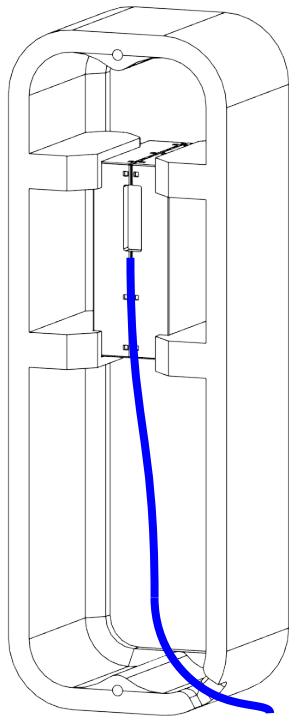


SENSOR BOX

M2x8 Self Tapping



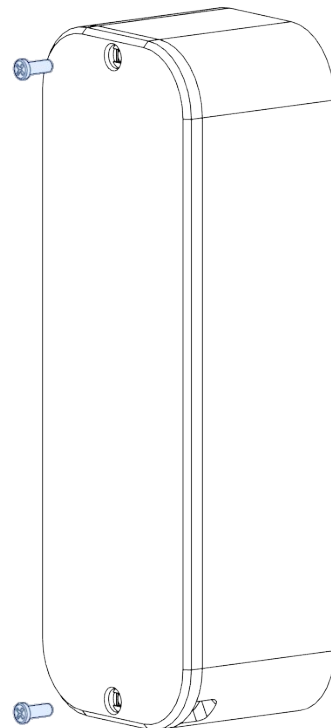
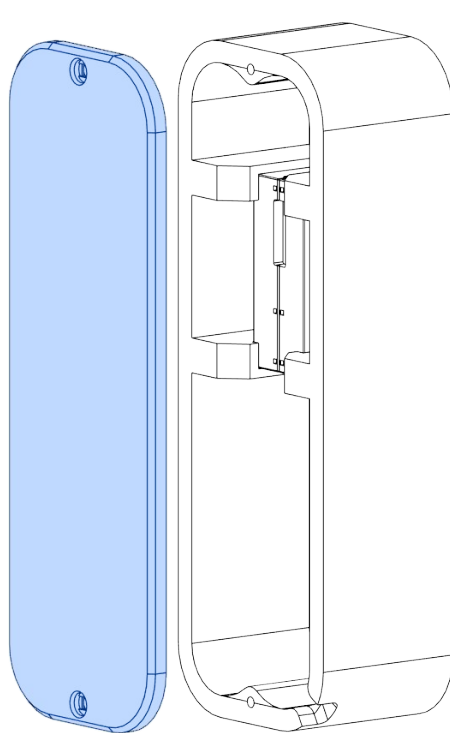
SENSOR BOX



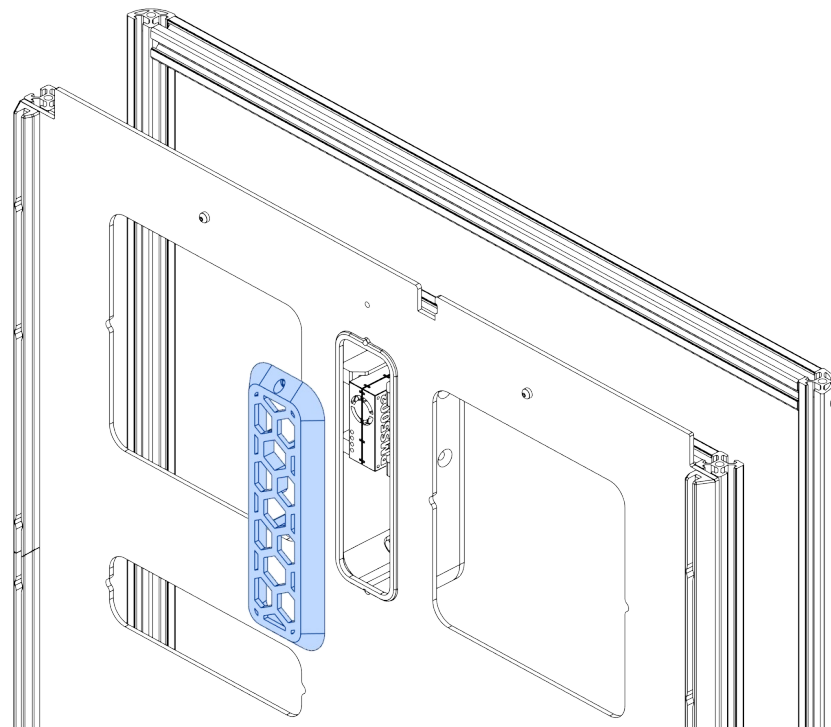
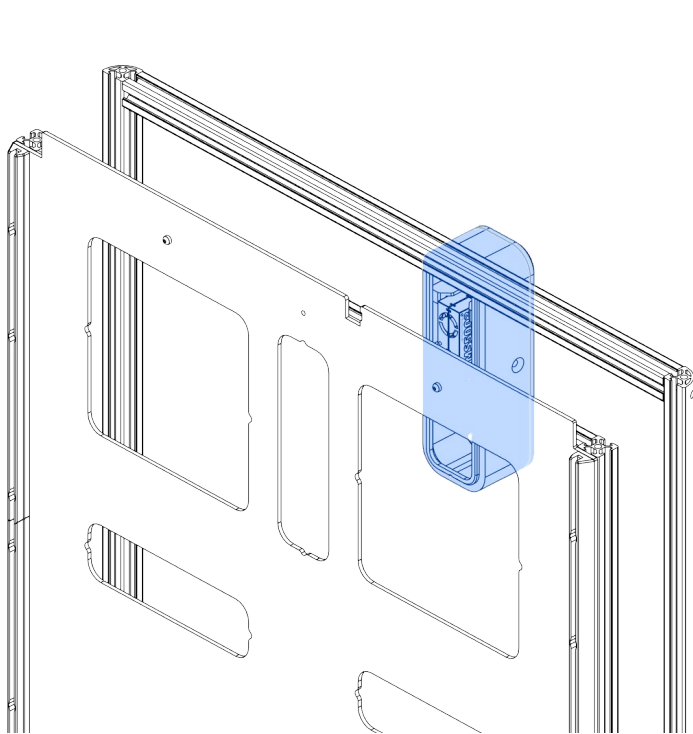
NOTE:

Connect the PMS 5003 cable to the sensor. Pay close attention to the direction of the connector

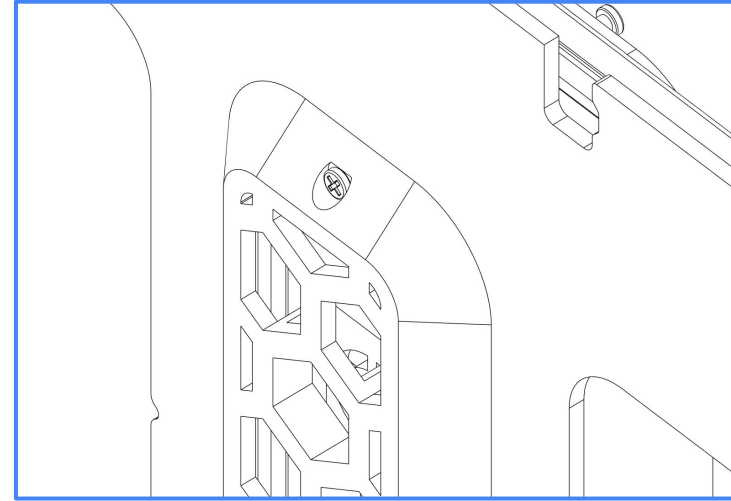
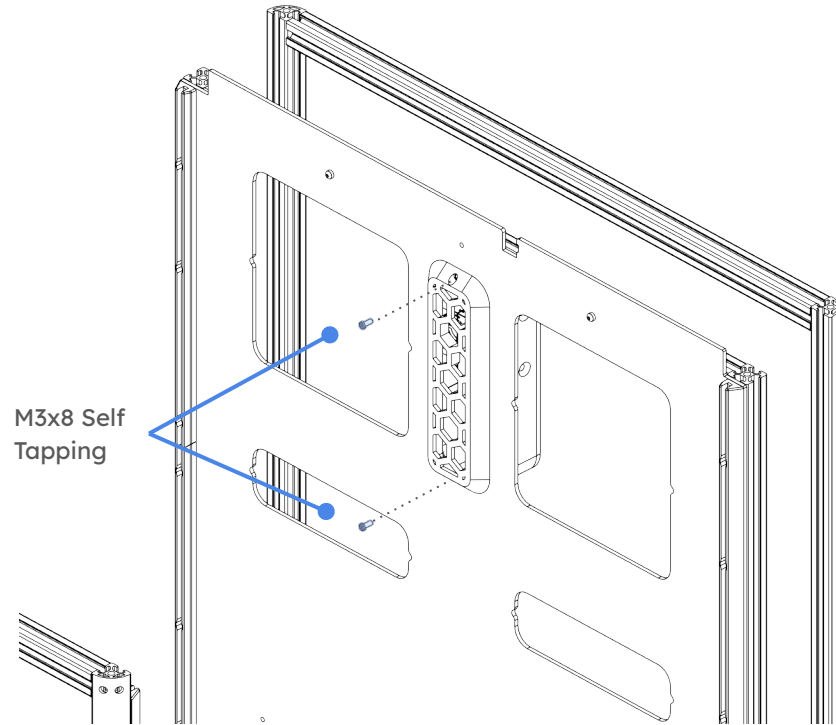
Make sure to pass the cables of the PMS5003 in the slot highlighted in the picture above before bolting on the lid!



SENSOR BOX



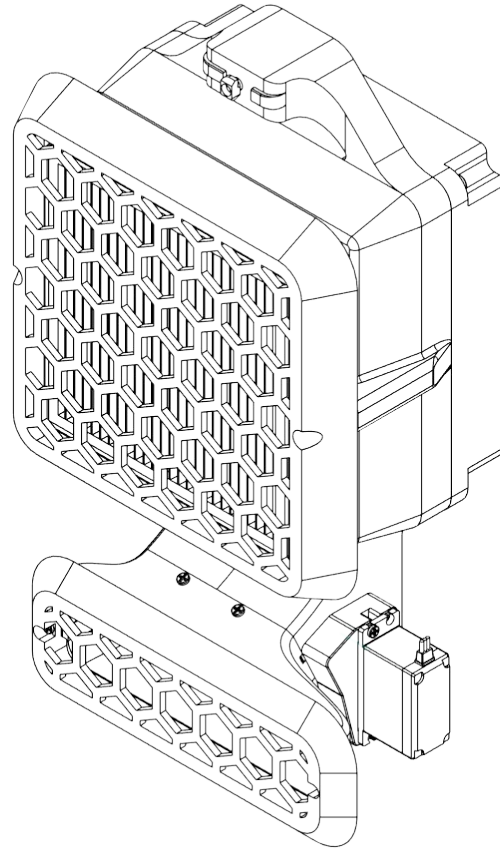
SENSOR BOX



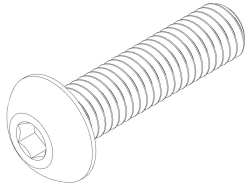
FILTRATION SYSTEM INSTALLATION

This accessory filters the air inside the enclosure. It uses a 12032 fan combined with a hepa carbon filter to remove all of the harmful particulates from the air.

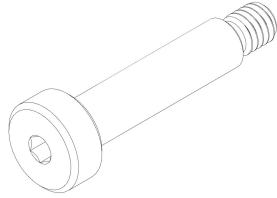
There is also the option to use a servo to control the flap mechanism which can direct the filtered air back into the enclosure or outside of it.



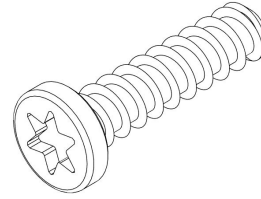
COMPONENTS FILTRATION SYSTEM



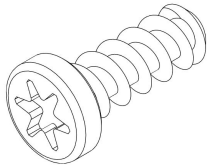
2 - M5x16 ST BHCS



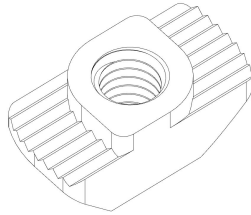
2 - M3x8 ST BHCS



16 - M4x16 ST BHCS

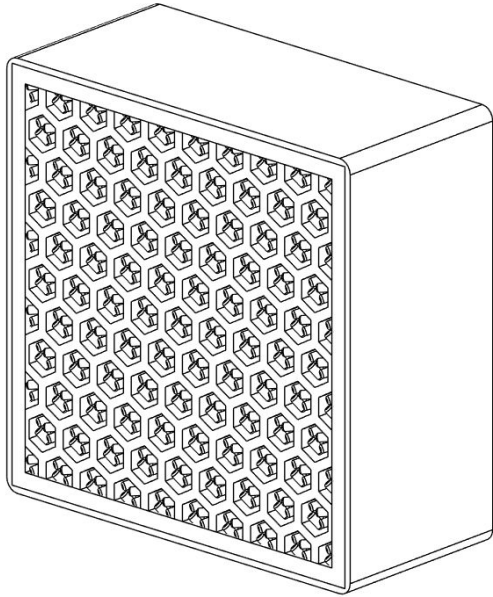


38 - M3x8 ST BHCS

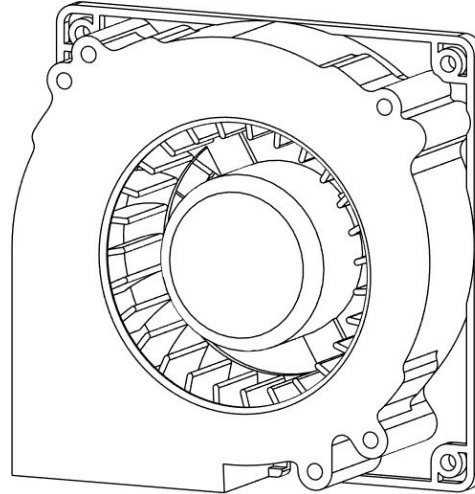


2 - M5 Hammerhead

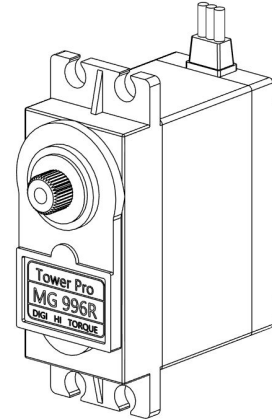
COMPONENTS FILTRATION SYSTEM



2 - Air filters



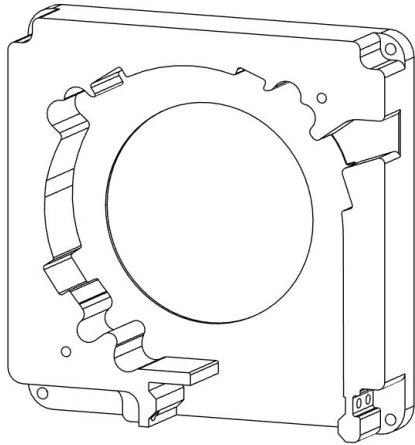
2 - 12032 fan



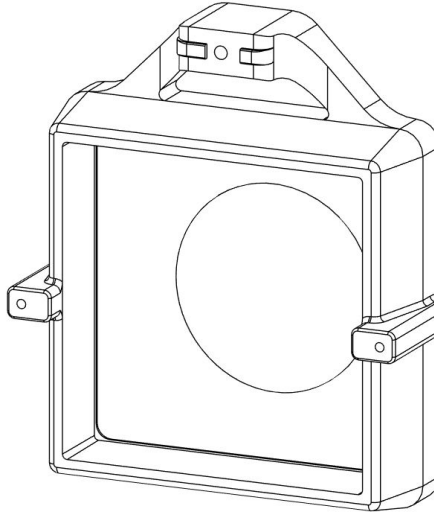
2 - MG996 Servos



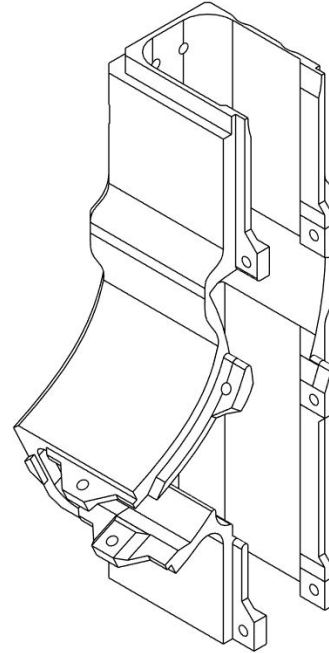
COMPONENTS FILTRATION SYSTEM



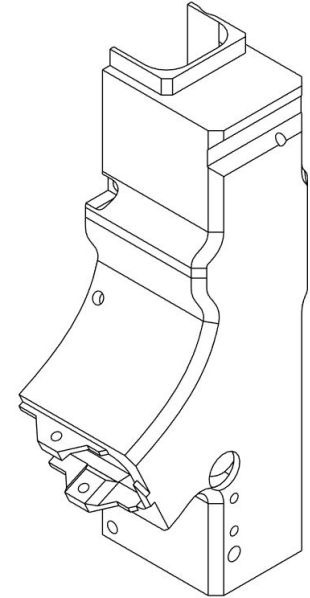
2 - 12032 Bracket



2 - Filter Holder



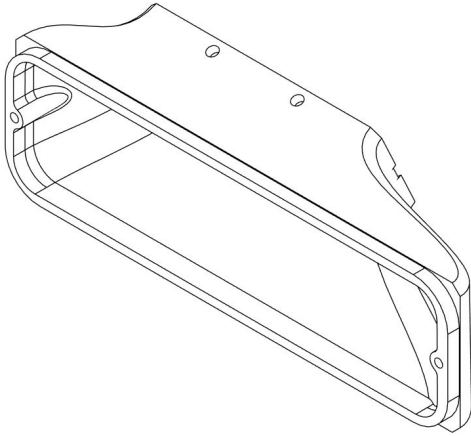
2 - LeftSide_Duct



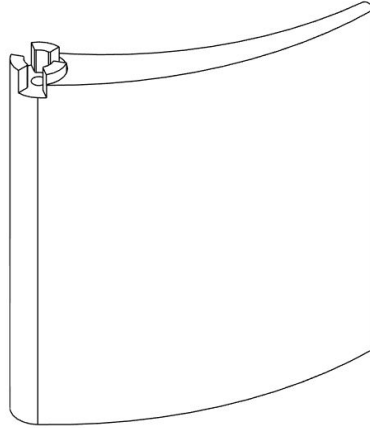
2 - RightSide_Duct



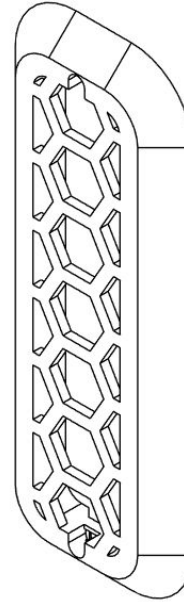
COMPONENTS FILTRATION SYSTEM



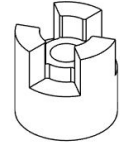
2 - Front_Duct



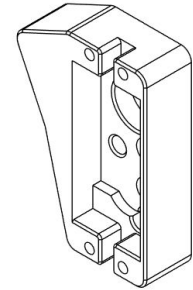
2 - Flap



2 - Front_Grill

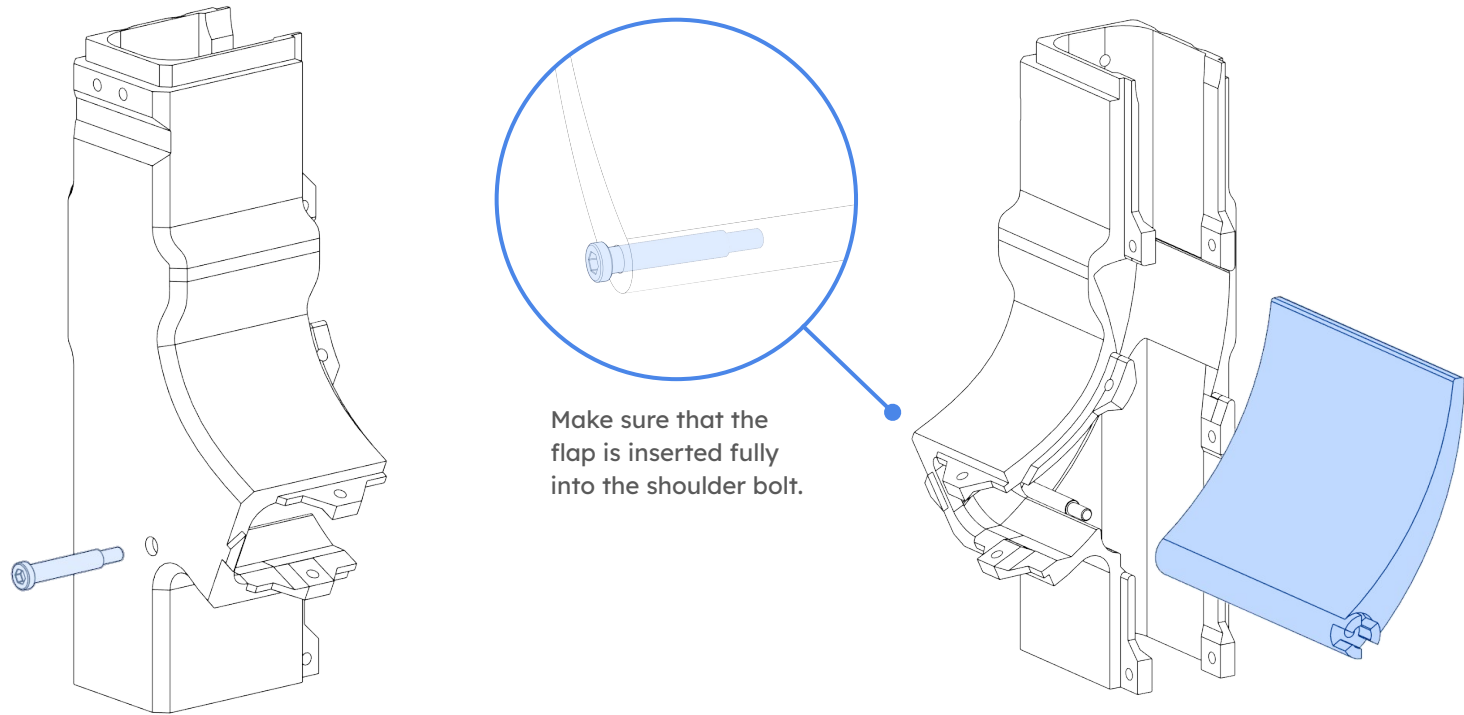


2 - Servo_Gear

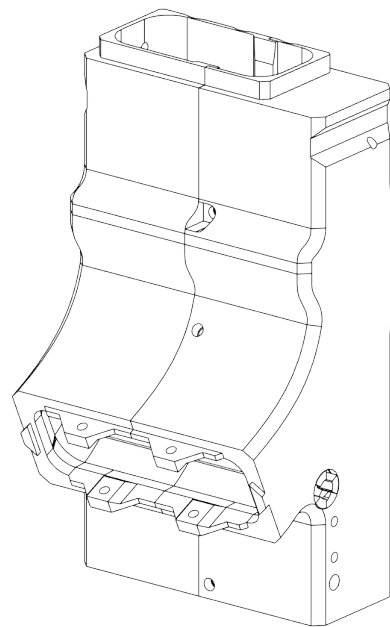
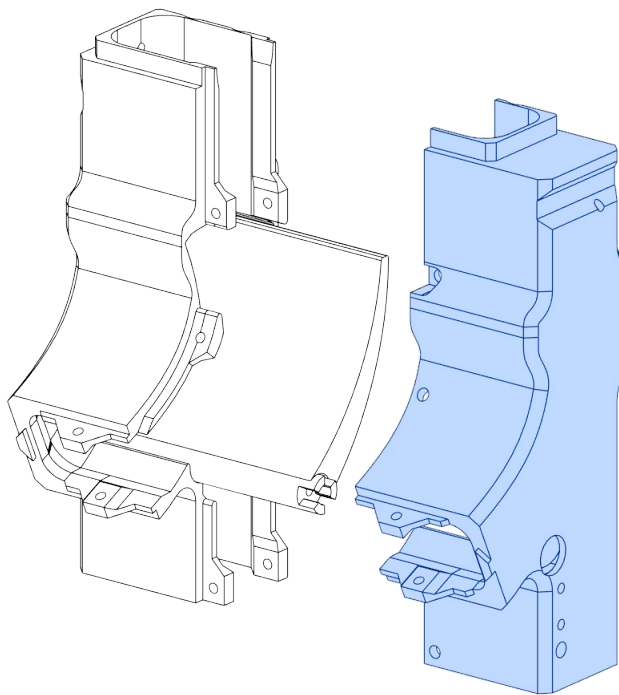


2 - Servo_Bracket

FILTERS

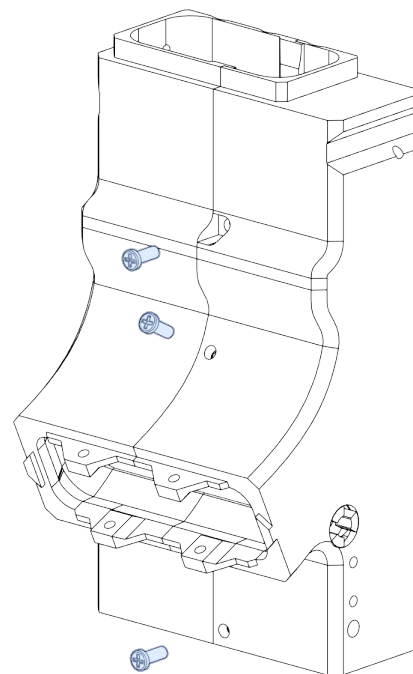


FILTERS



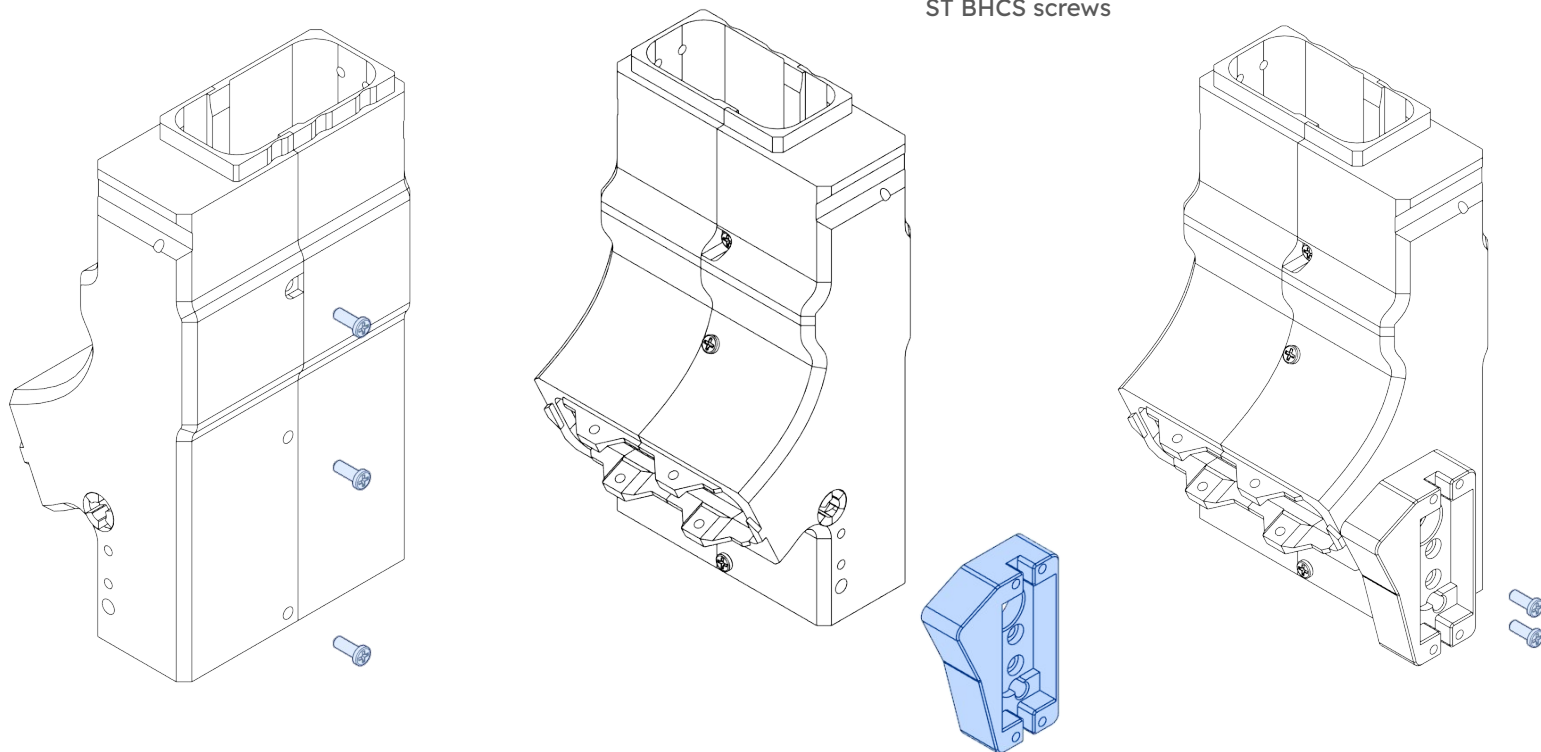
FILTERS

Insert the M3x8 ST
BHCS screws

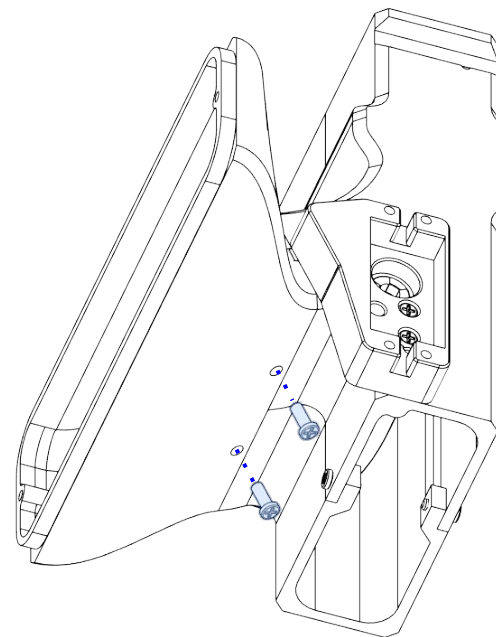
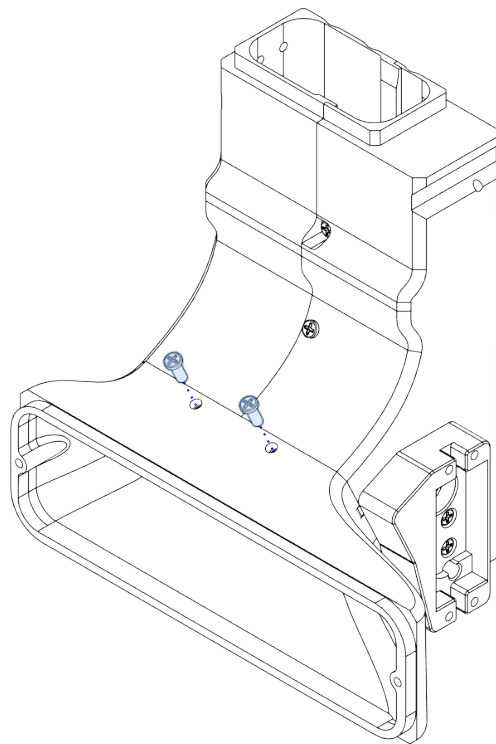
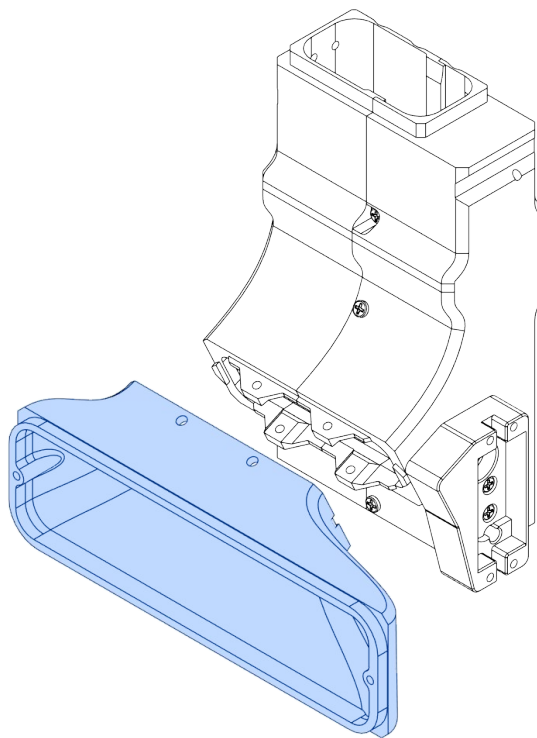


FILTERS

Insert all of the M3x8
ST BHCS screws

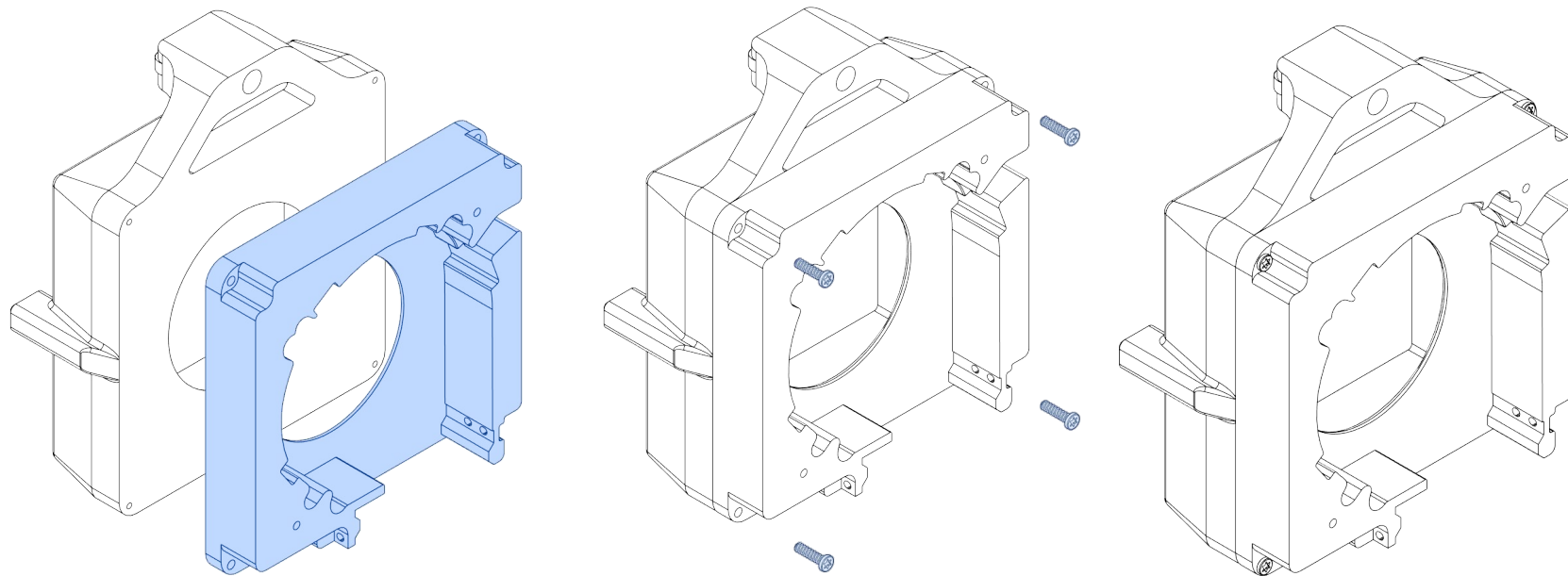


FILTERS



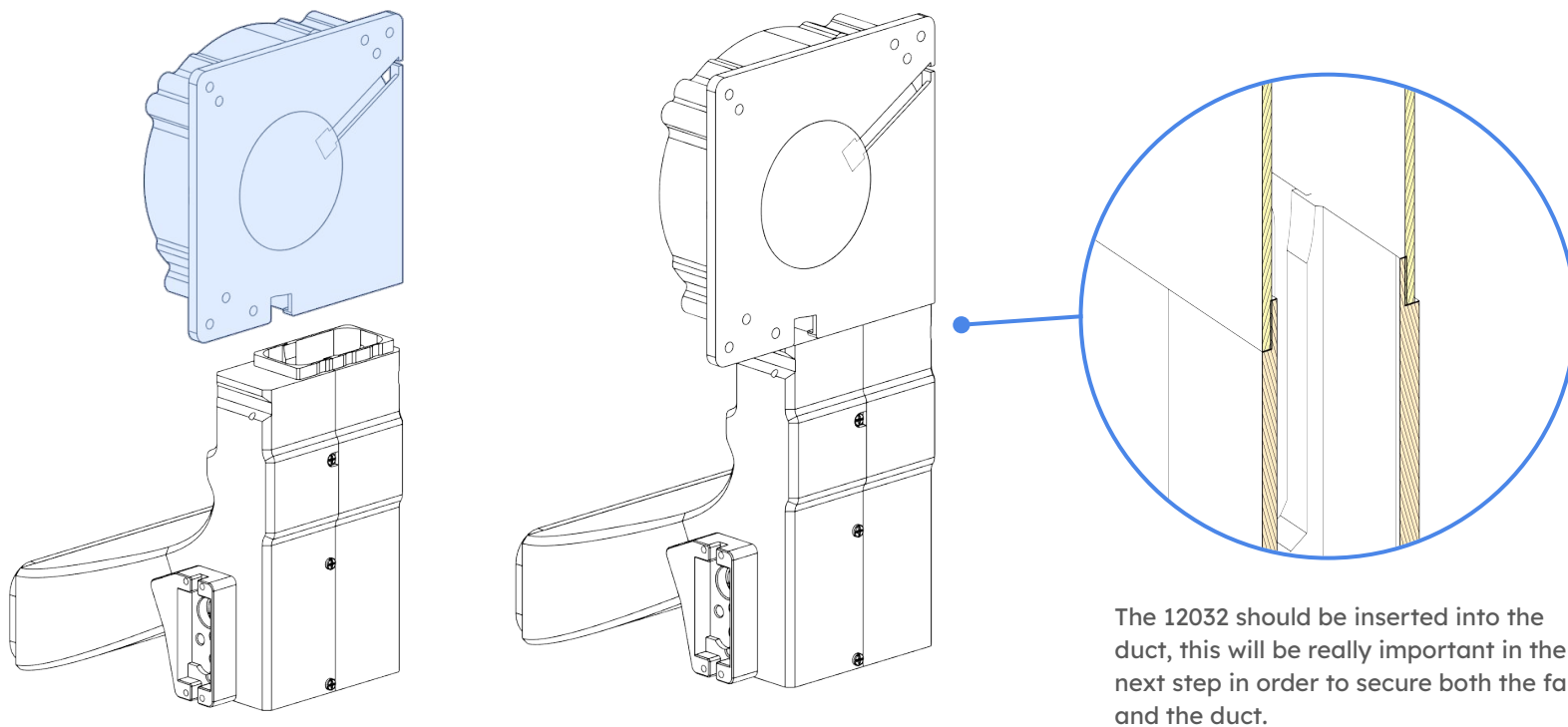
Insert all of the M3x8
ST BHCS screws

FILTERS



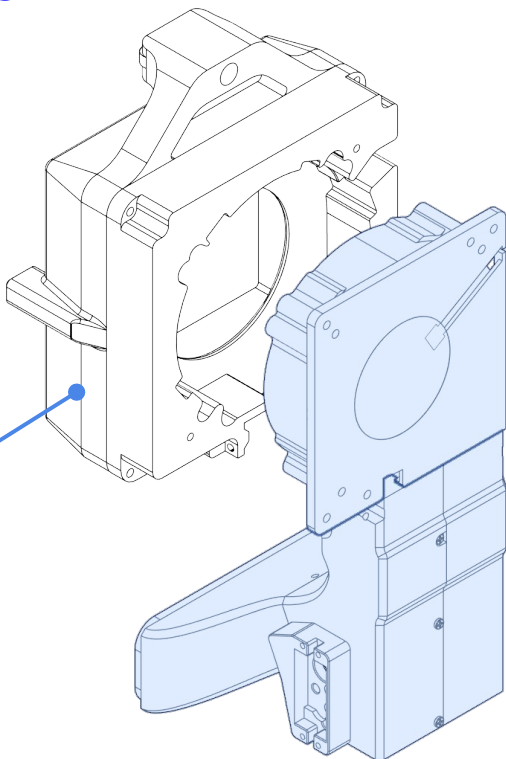
Insert the M4x16 BHCS

FILTERS



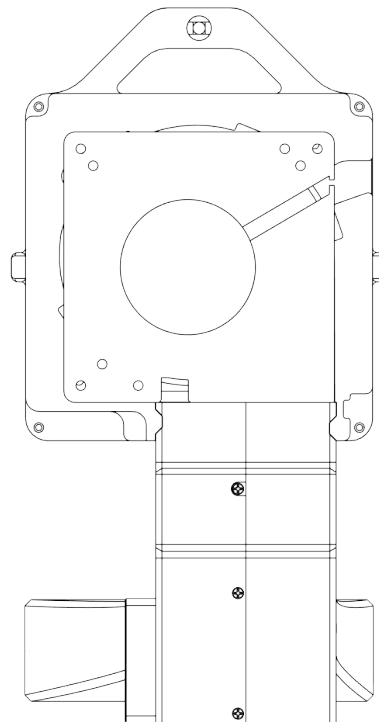
FILTERS

Filter
Holder



Make sure to keep the
12032 attached to the duct
while you insert it into the
filter holder.

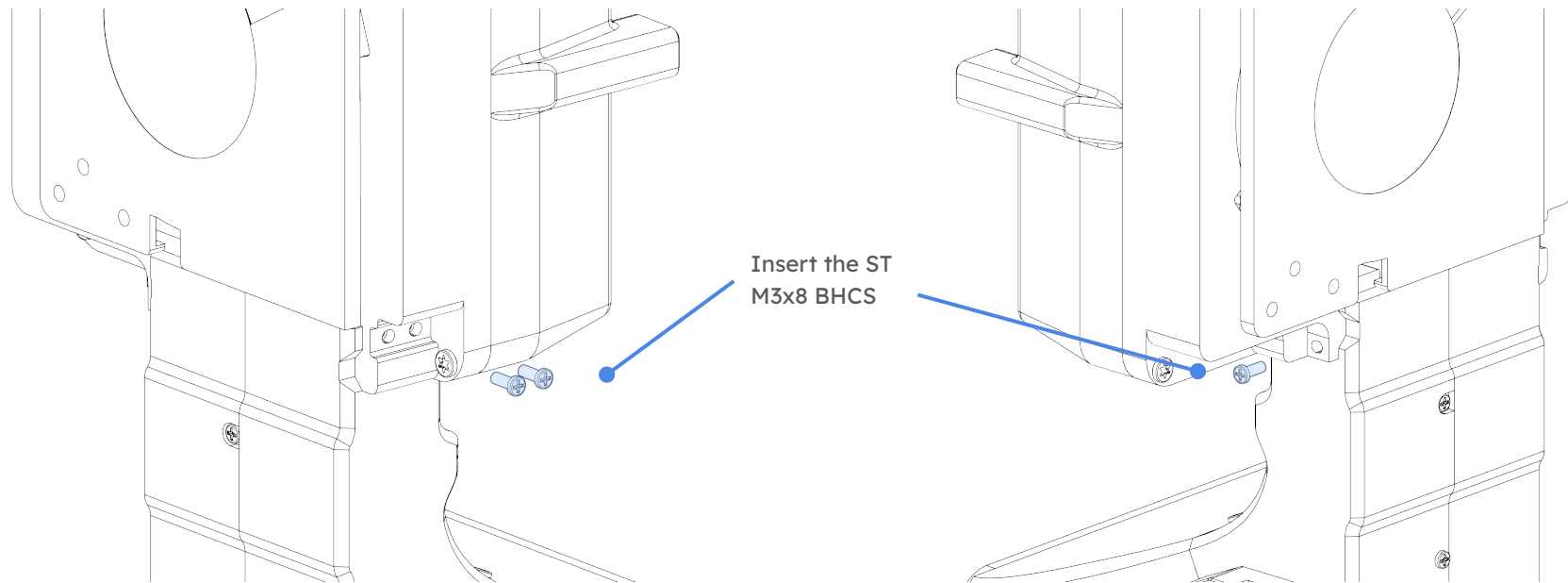
12032 & duct
assembly



12032 & duct
assembly

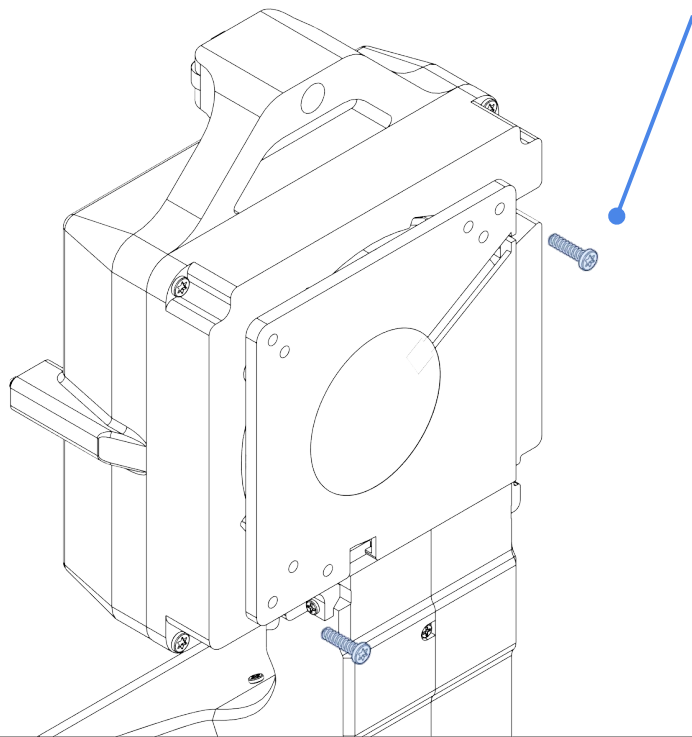


FILTERS

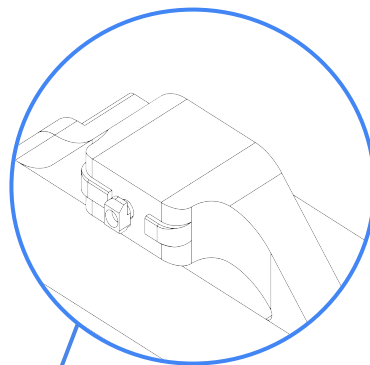
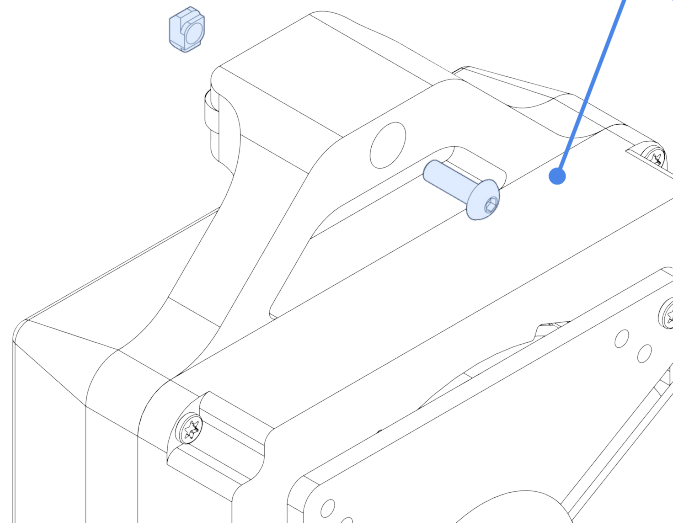


FILTERS

Insert the M4x16 ST BHCS

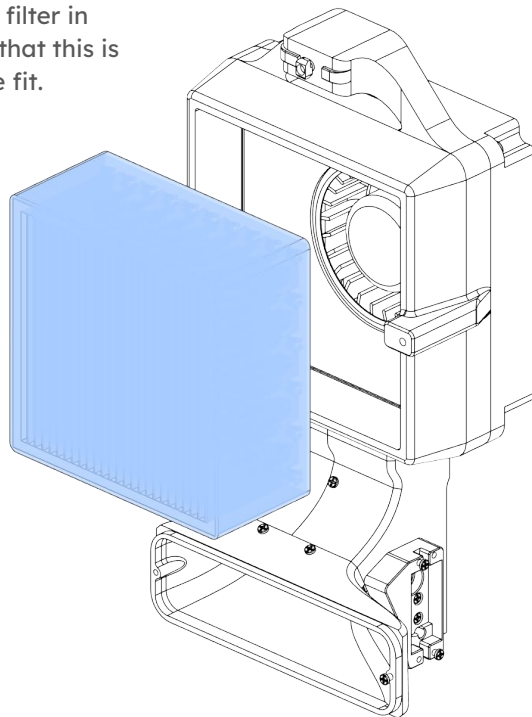


Insert the M5x16 BHCS and screw in the hammerhead nut. The image to the right is the final result

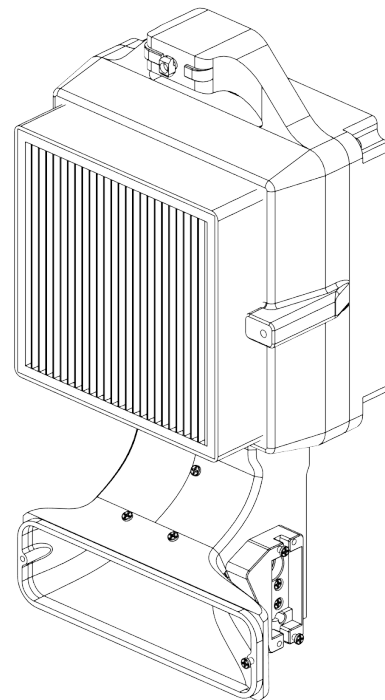


FILTERS

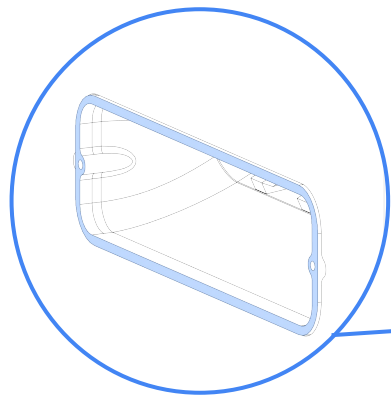
Insert the 130x130x60mm filter in the filter holder. Consider that this is supposed to be a pressure fit.



NOTE: The direction of the filter. The hepa side should face outside.

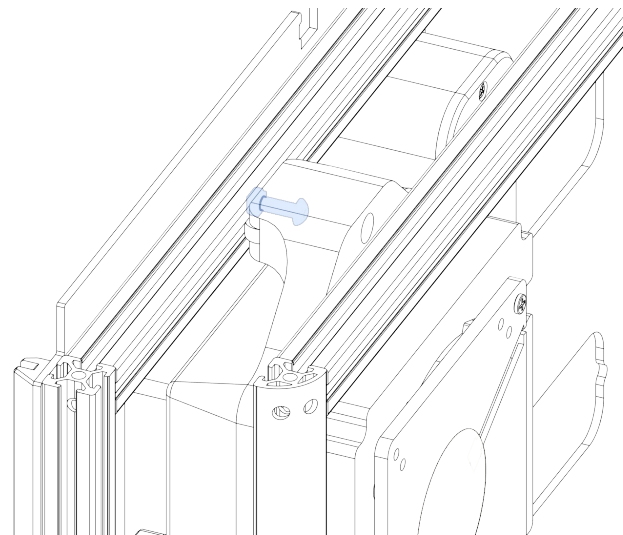
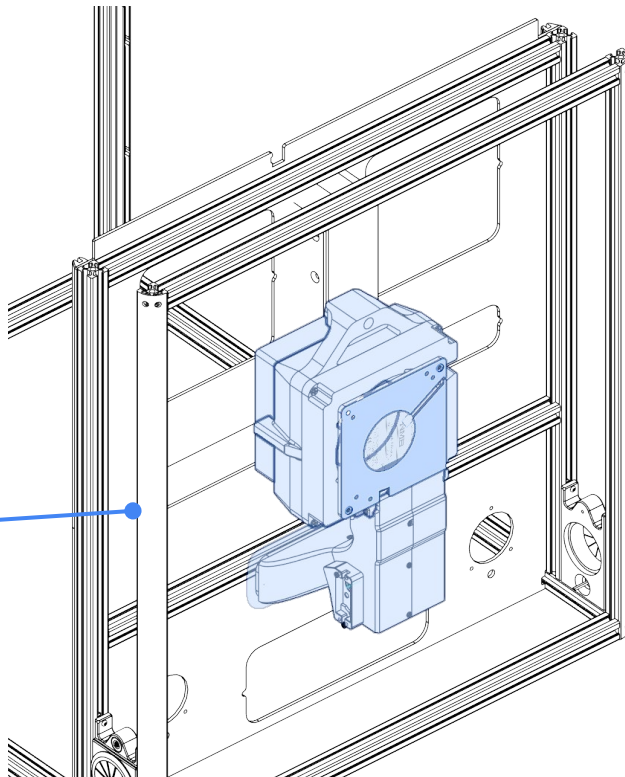


FILTERS



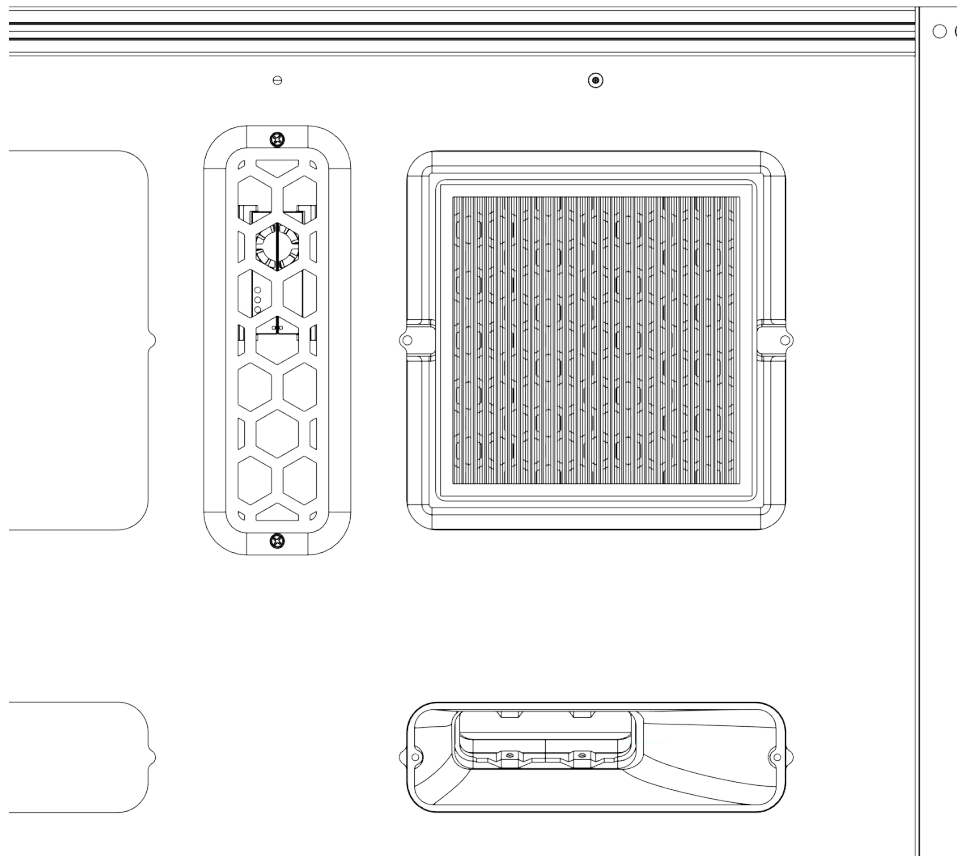
NOTE:

The Duct should enter into the opening as shown.



Get the filter assembly and install it as shown on the top extrusion of the back assembly. To fix it in place tighten the M5 bolt, so that the T-nut rotates into place.

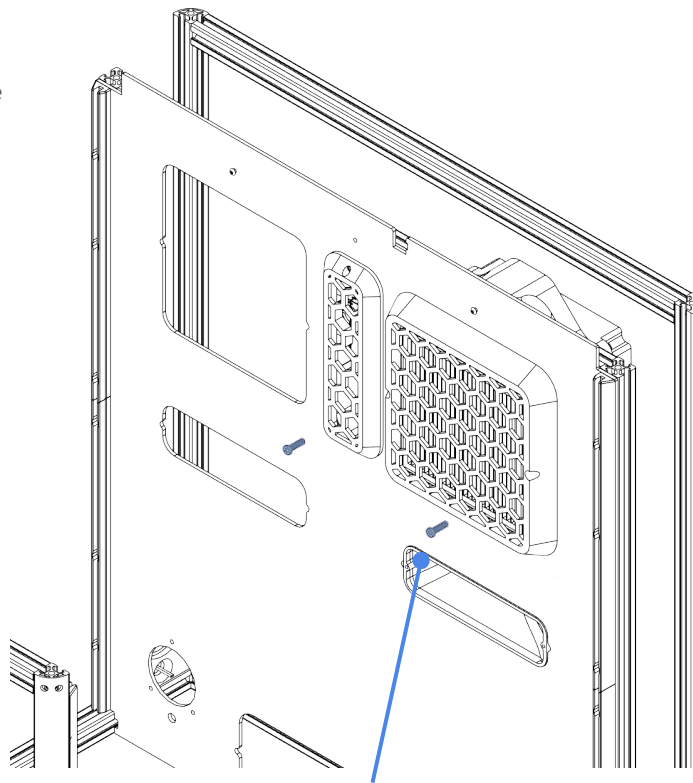
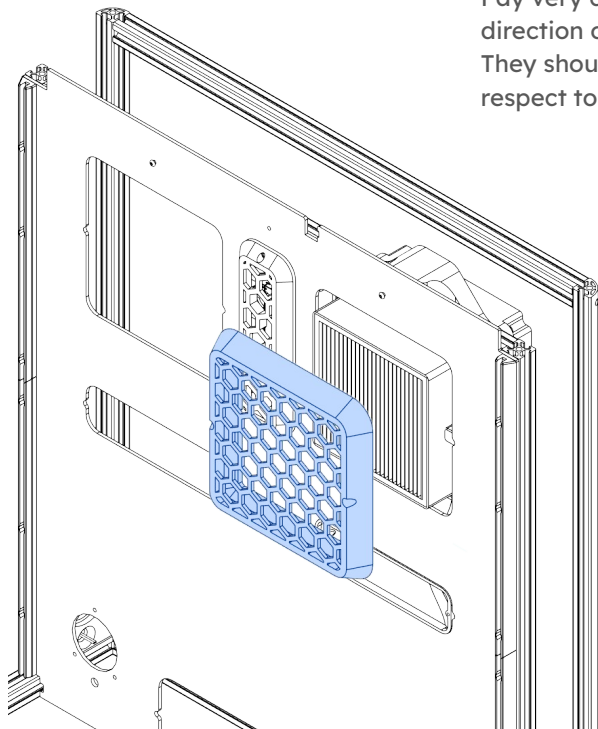
FILTERS



NOTE: take a moment to align the filter assembly as shown. The filter should be approximately in the middle of the opening. This is very important for the next step!

FILTERS

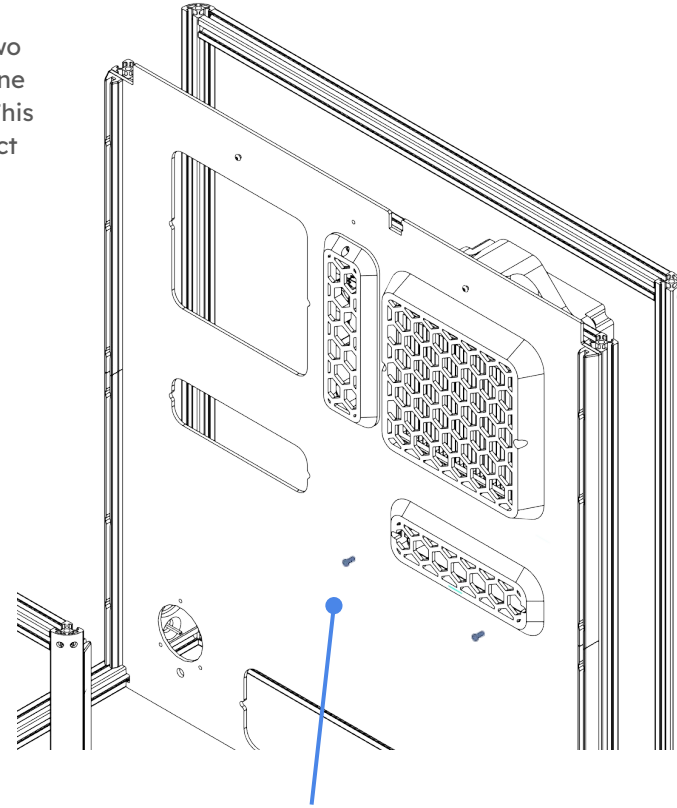
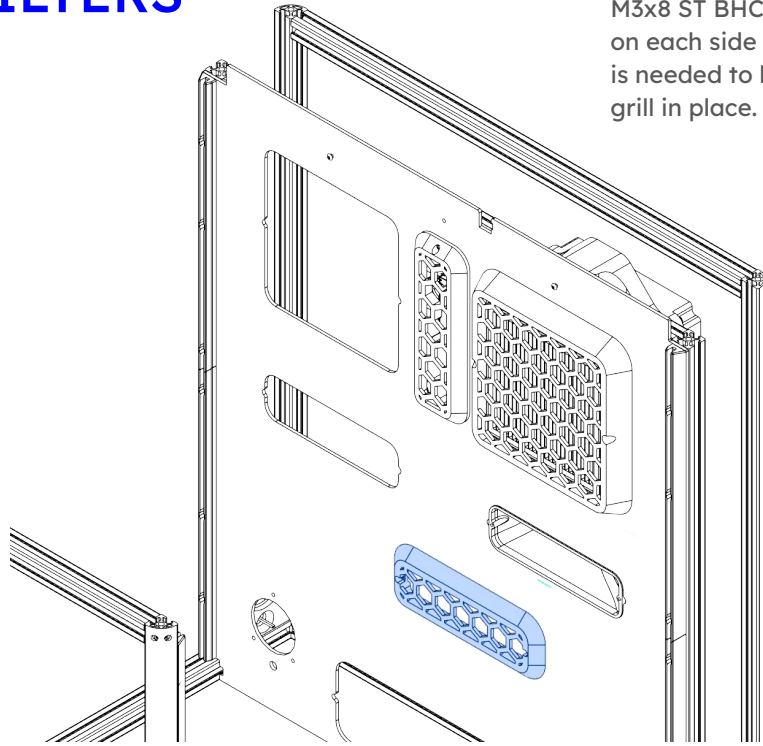
Insert as shown the filter grill.
Pay very close attention to the
direction of the screw holes.
They should be horizontal with
respect to each other.



Insert the M4x16 ST BHCS

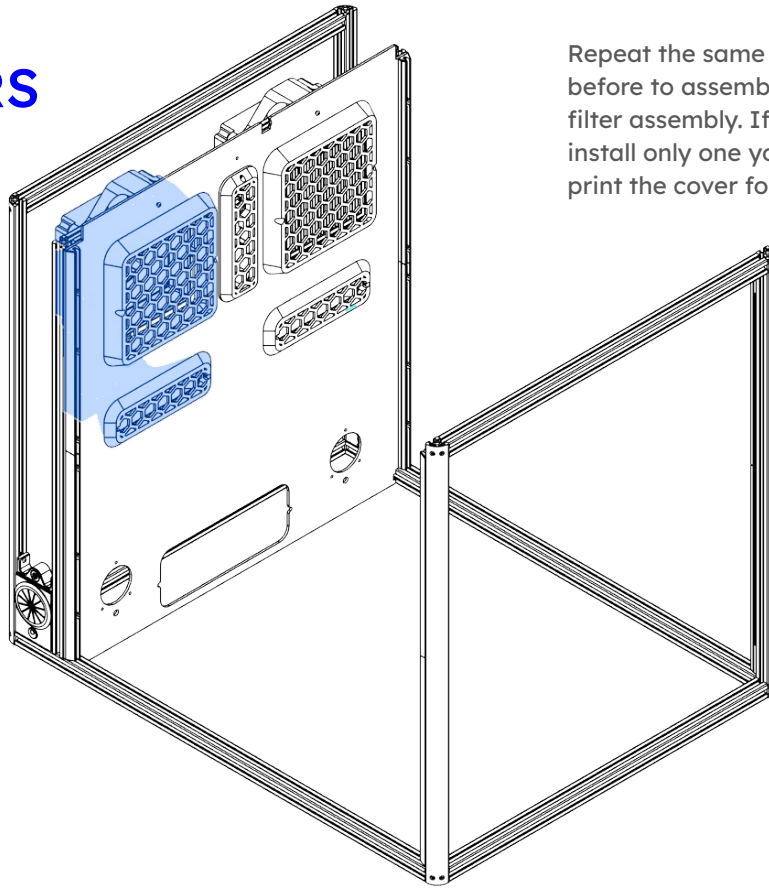
FILTERS

Insert and tighten the two M3x8 ST BHCS screws, one on each side as shown. This is needed to hold the duct grill in place.

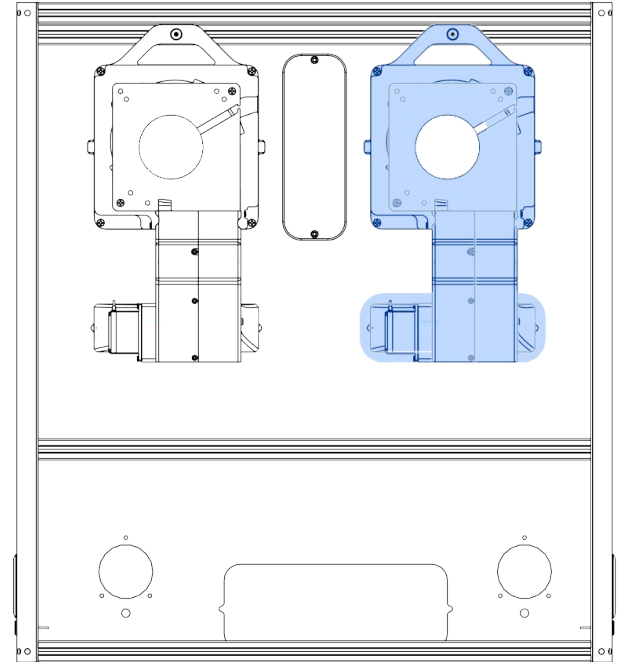


Insert the M3x8 ST BHCS

FILTERS

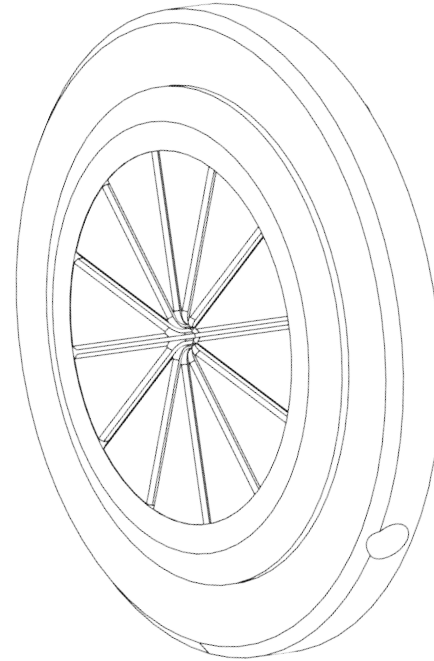


Repeat the same steps as before to assemble the second filter assembly. If you wish to install only one you can opt to print the cover for this hole.



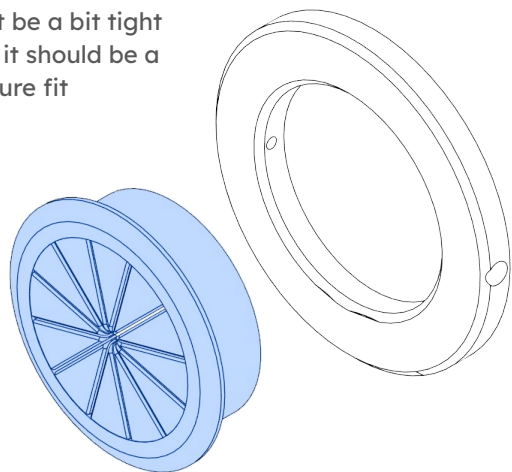
POWER CABLE PASSTHROUGH INSTALLATION

This accessory allows the power cables to pass through the enclosure's back panel.

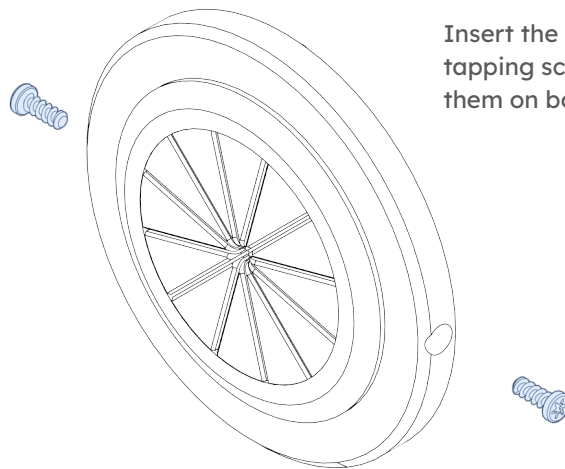


CABLE PASSTHROUGH

Insert the cable access plug in the hole. It might be a bit tight since it should be a pressure fit

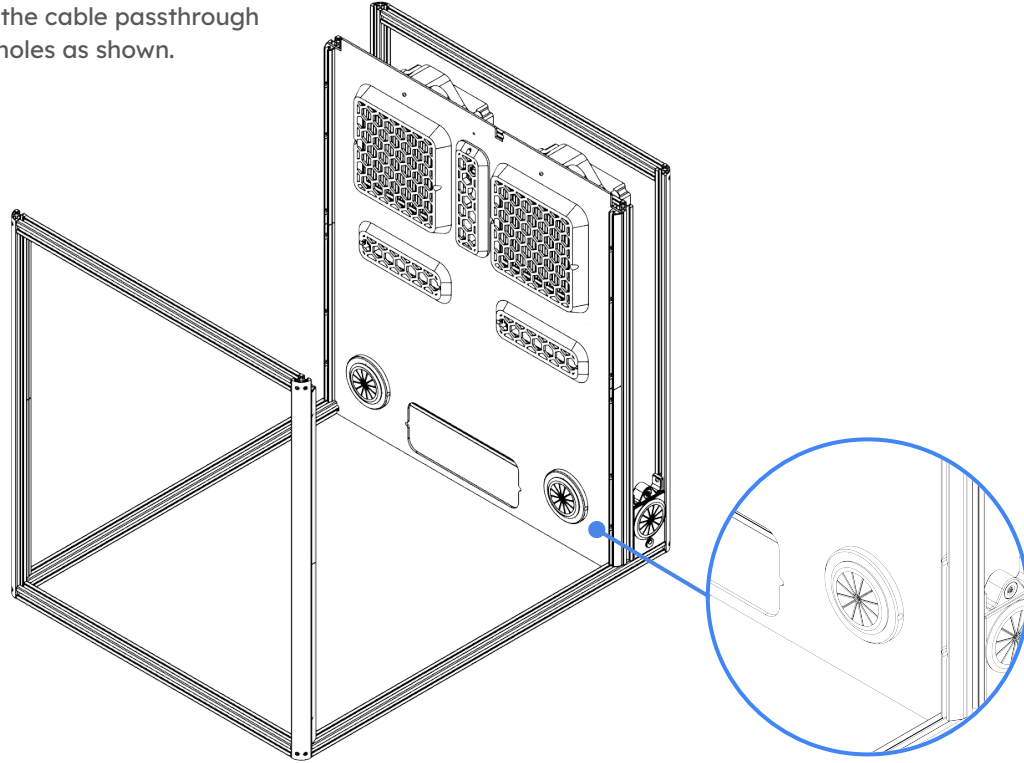
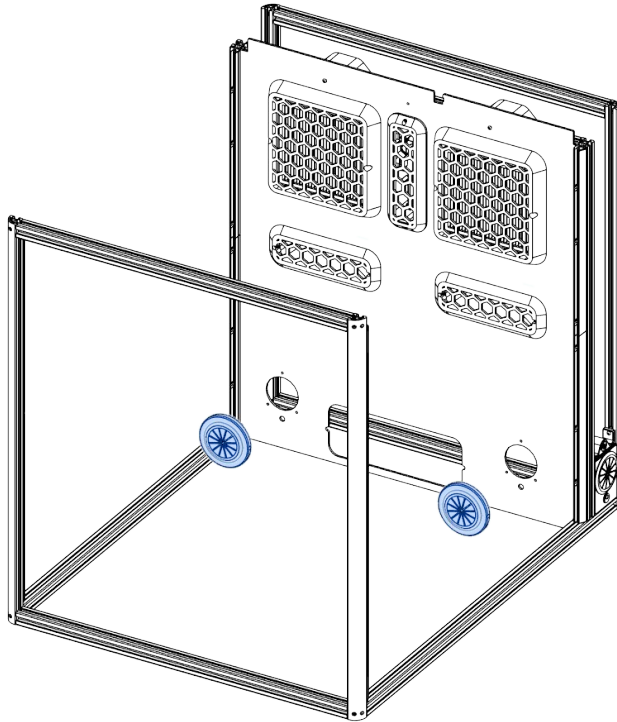


Insert the two M3x8 self tapping screws and tighten them on both sides.

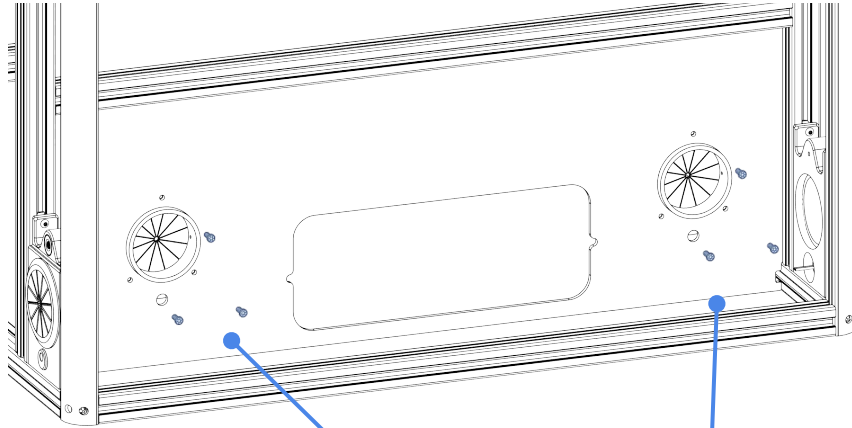


CABLE PASSTHROUGH

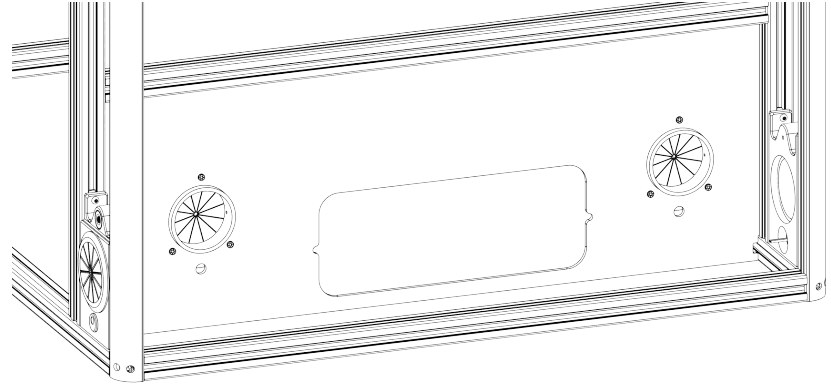
Insert the cable passthrough in the holes as shown.



CABLE PASSTHROUGH

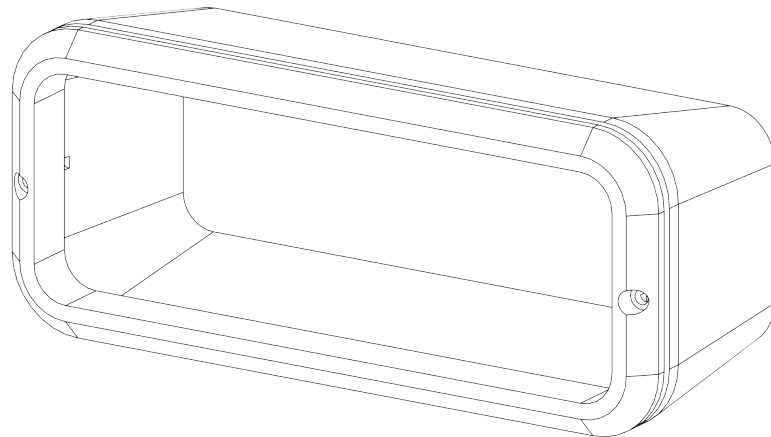


Tighten each of the
three M3x8 ST BHCS



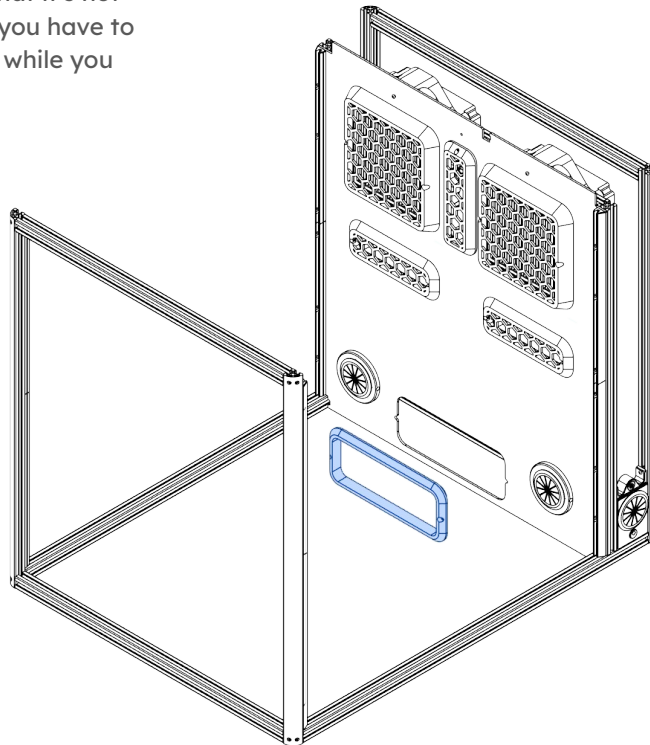
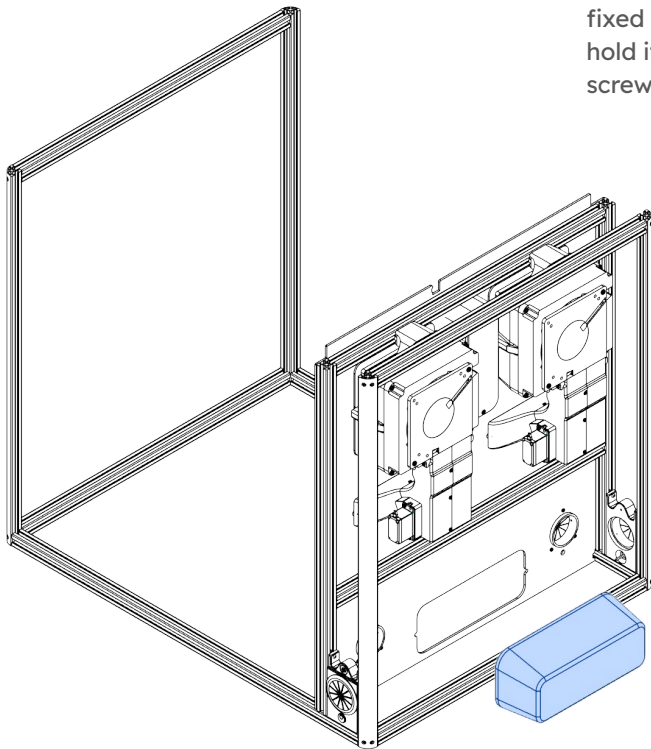
BED CABLE CHANNEL INSTALLATION

This accessory allows the bed cable of the printer to pass through the acrylic back panel in order to optimize the space use.

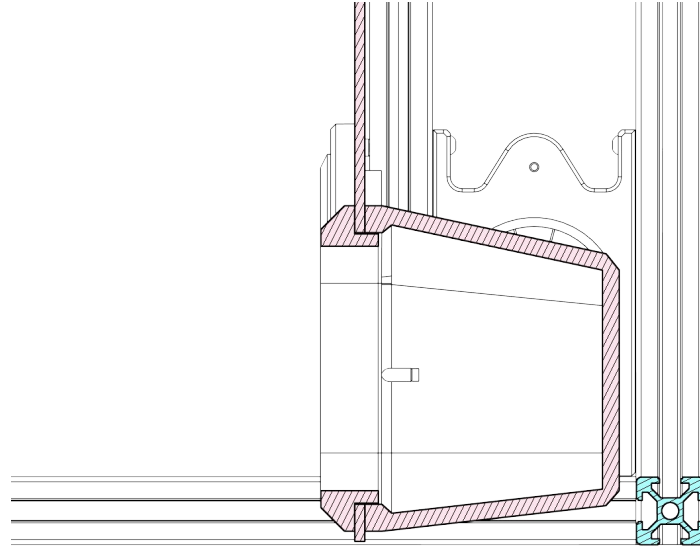
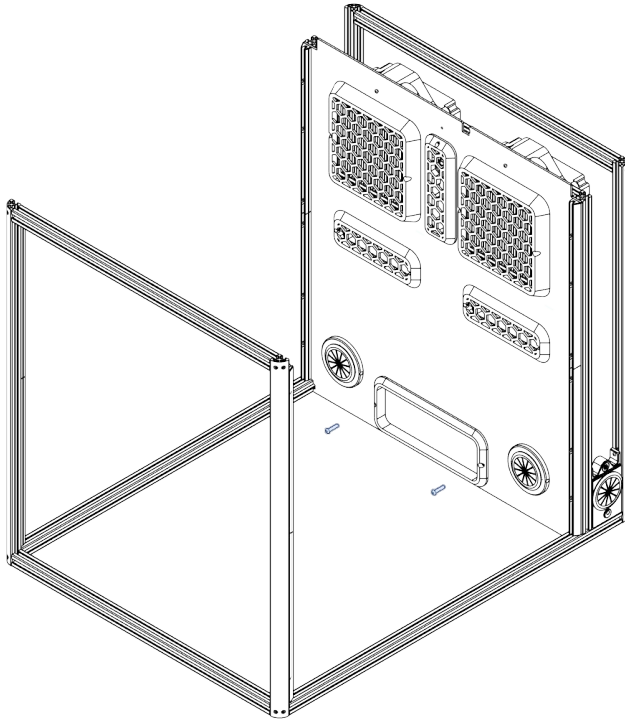


BED CABLE CHANNEL

Place the bed cable channel where it's shown. Consider that it's not fixed in place yet, so you have to hold it with one hand while you screw it in



BED CABLE CHANNEL



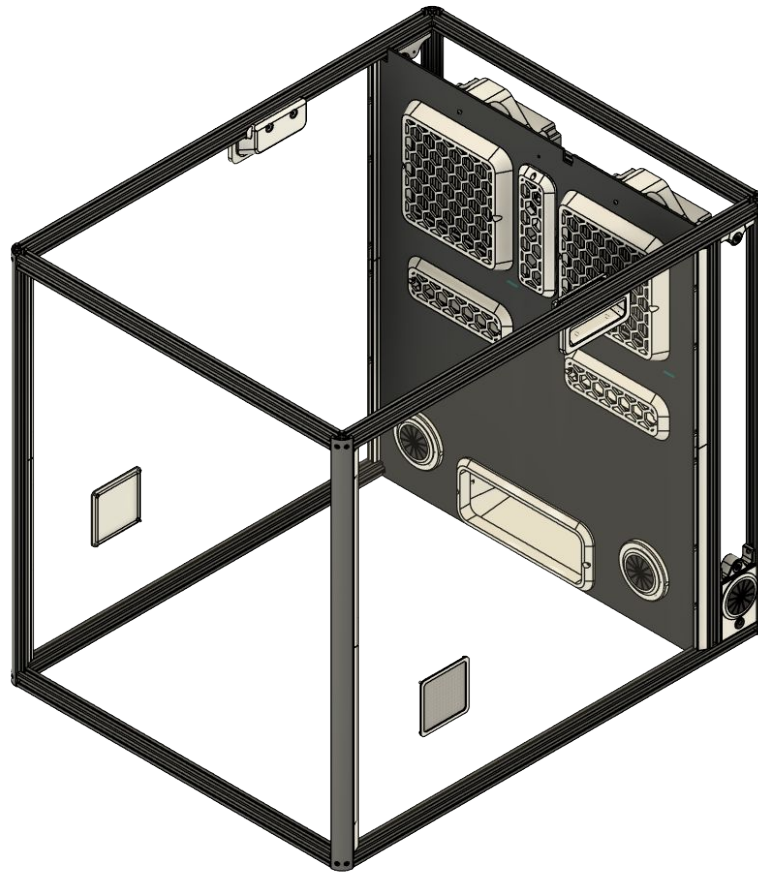
Now secure the two parts with
M4x16 ST BHCS screws.

Page intentionally left blank
Divider between sections



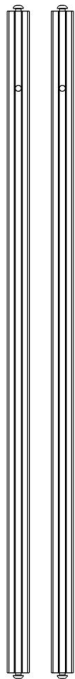
SIDE PANELS

Now we are starting to see the enclosure taking shape...
In this step the most important thing is taking things slowly and aligning things right.

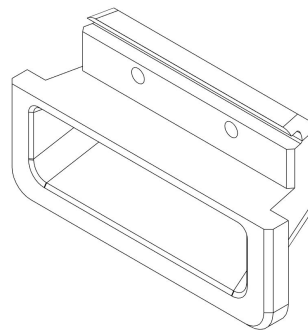
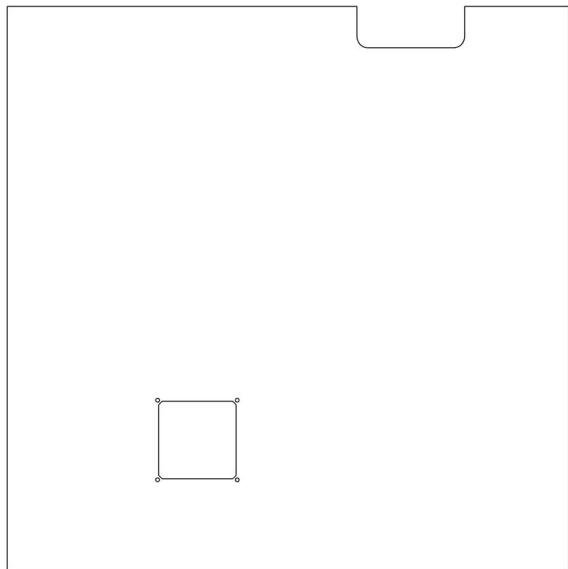


COMPONENTS

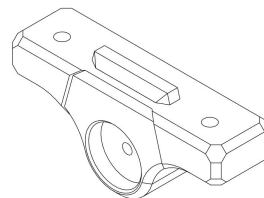
A Extrusion



Side Panel - 2x

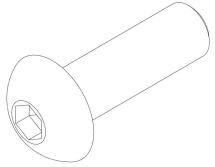


2 - Side Handles

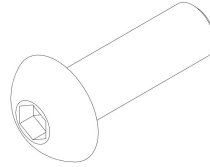


2 - Back panel electronics
magnet mount

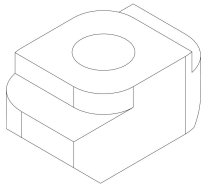
COMPONENTS



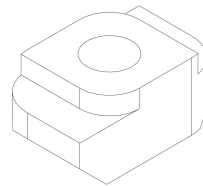
3 - M5x16 BHCS



2 - M3x10 BHCS

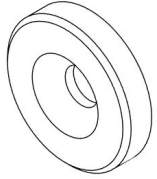


2 - M5 T-Nuts

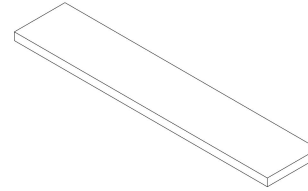


2 - M3 T-nuts

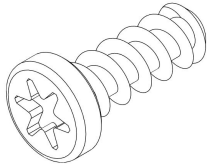
COMPONENTS



2 - 14mm Circular magnets



A Roll of 10x1.5mm foam

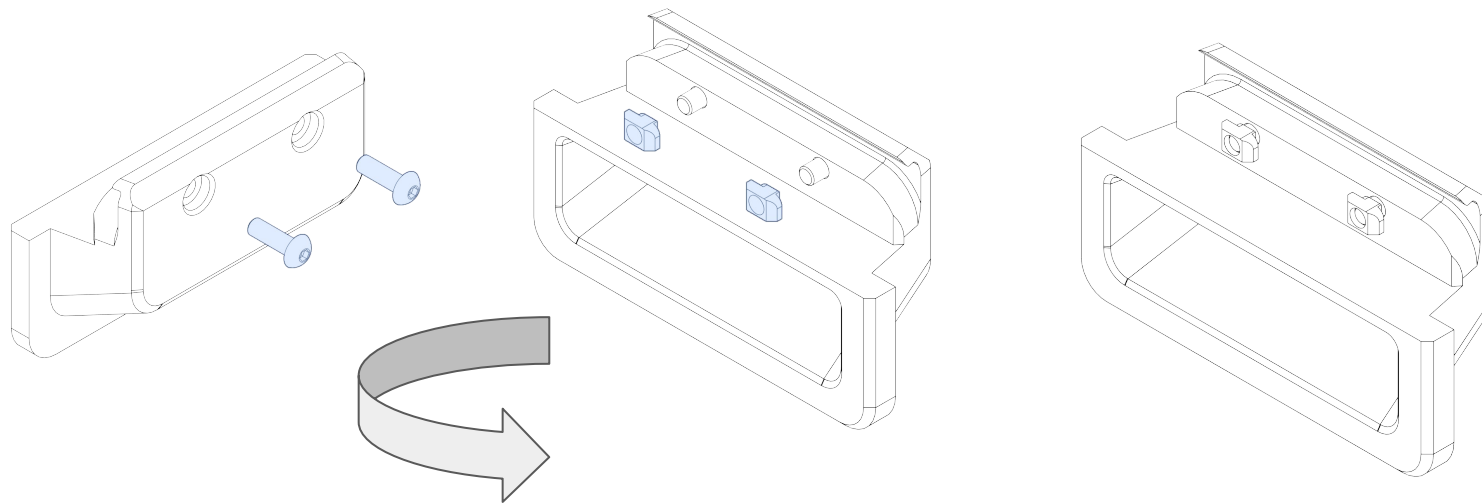
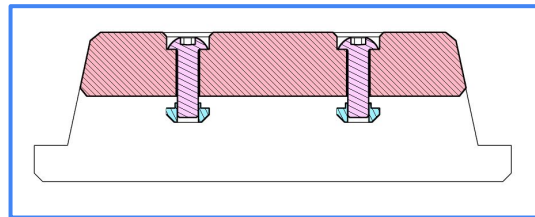


2 - M3x8 Self tapping screw



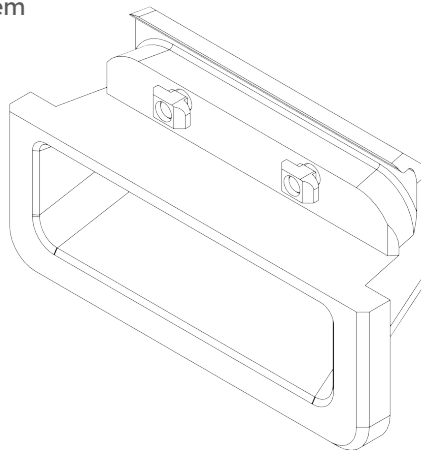
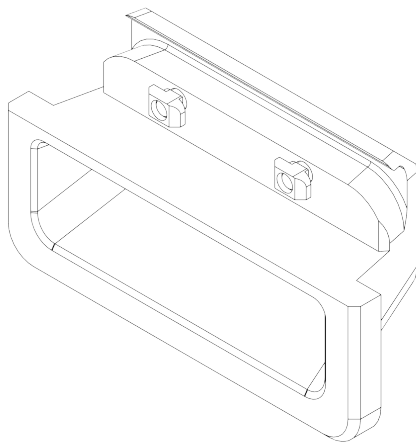
SIDE PANELS

Insert the M5x16 BHCS screws in the holes, then install the M5 T-Nuts



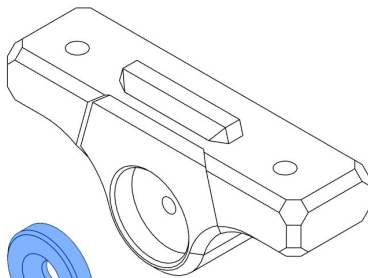
SIDE PANELS

Do the same steps onto the second handle. In the end you should have 2 handles that look like this. Set them aside for later.

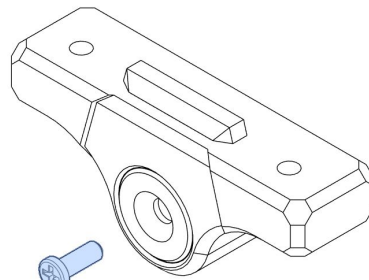


SIDE PANELS

Now screw in place the
magnet with the M3x8 ST
BHCS



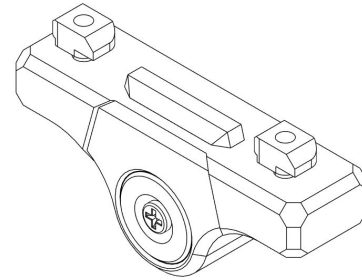
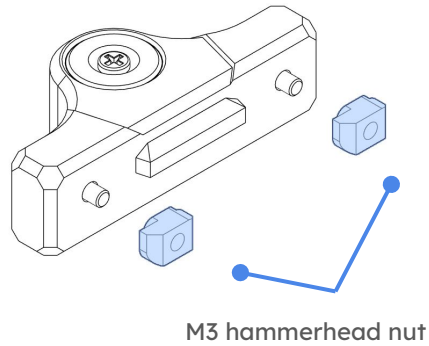
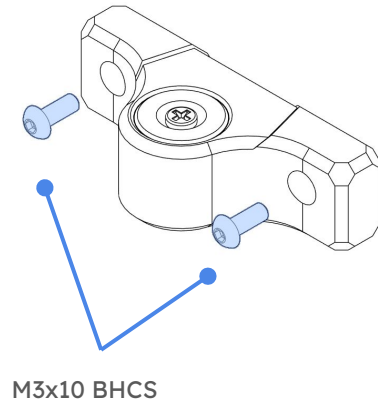
14mm Magnet



M3x8 ST BHCS

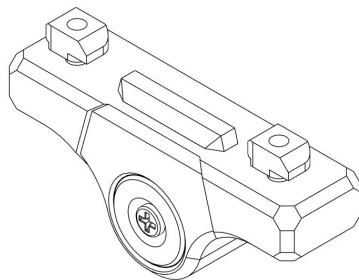
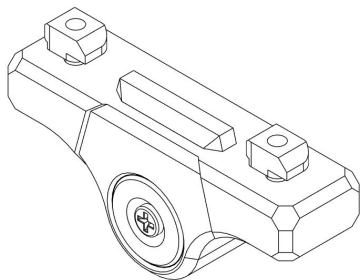
SIDE PANELS

Now install the M3x10 BHCS together with the M3 hammerhead nuts on the magnet holder.

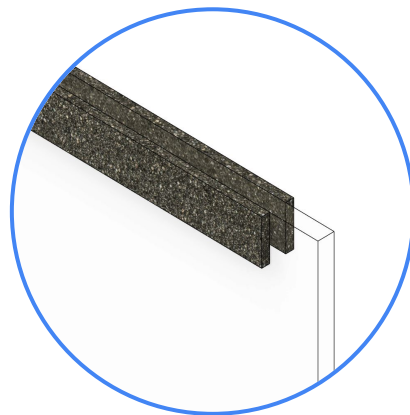
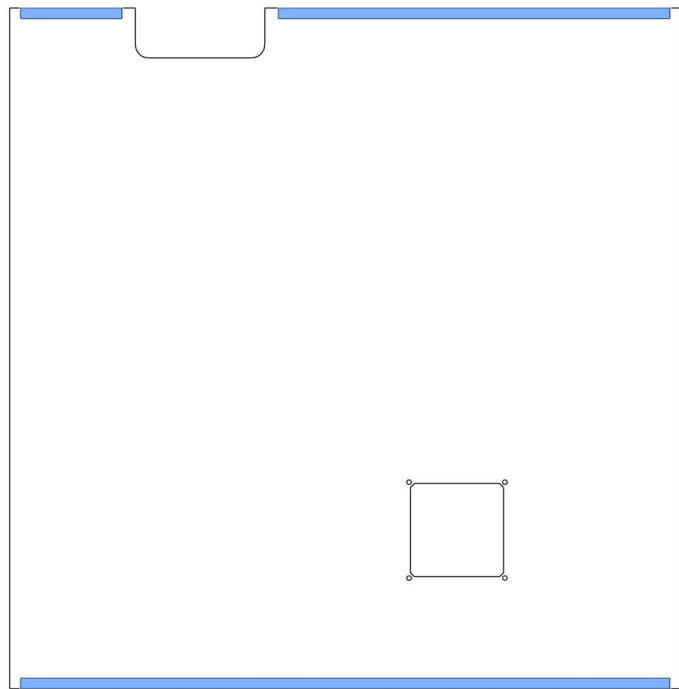


SIDE PANELS

Do the same steps onto the second magnet mount. In the end you should have 2 magnet that look like this. Set them aside for now.

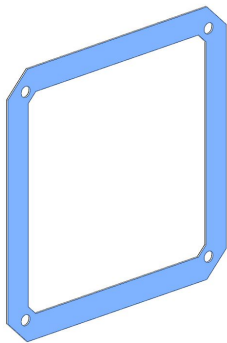


SIDE PANELS

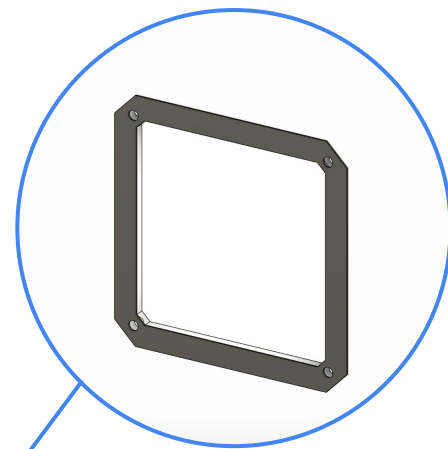
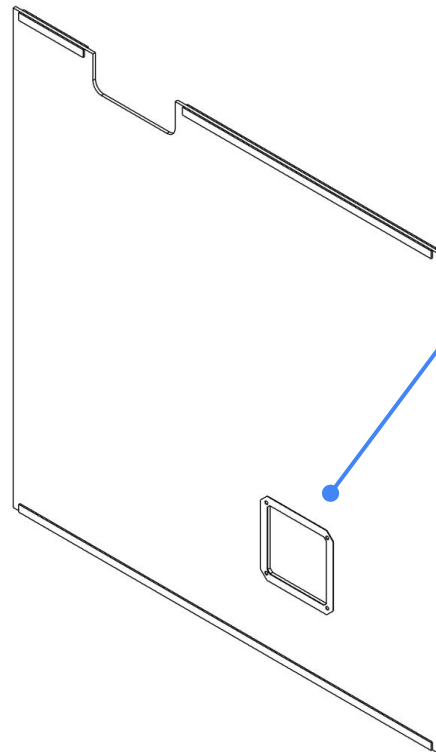
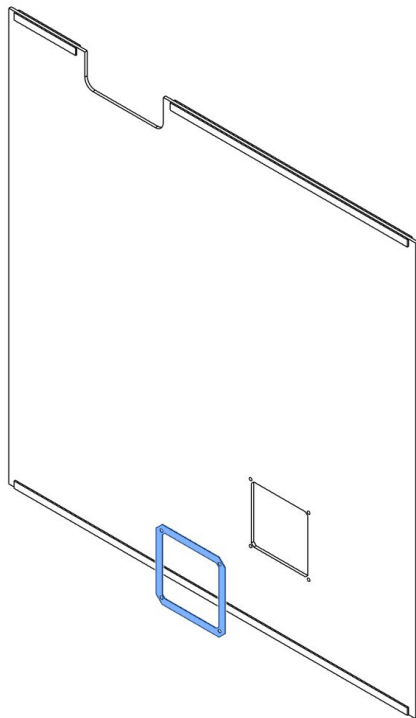


Install the window foam on both sides of the side panels as shown. Leave approximately 10mm without the foam on each end

SIDE PANELS

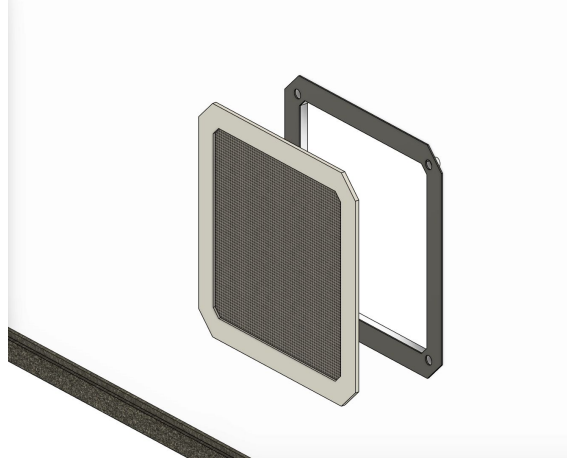
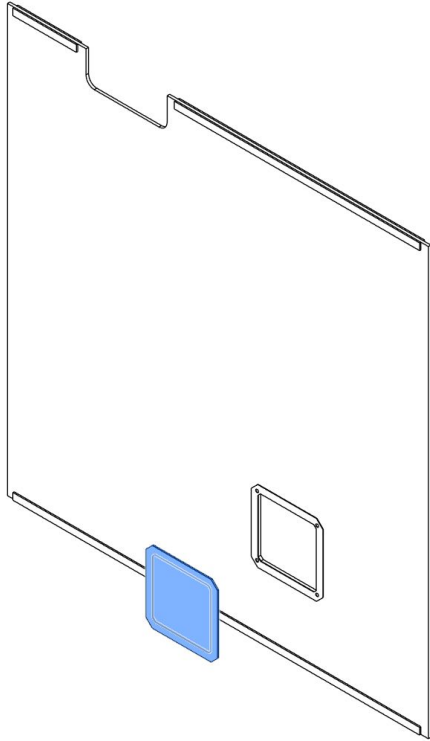


Remove the double sided tape cover from the metal plate that will eventually hold the dust filter



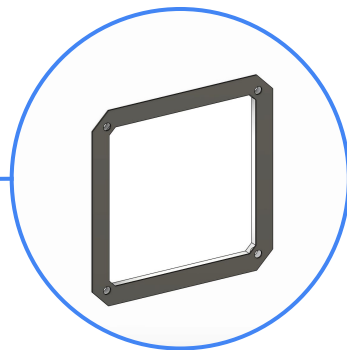
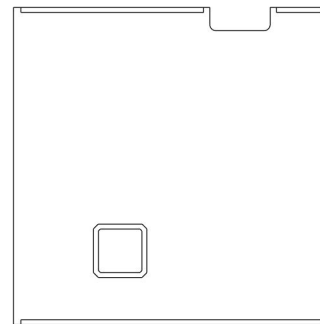
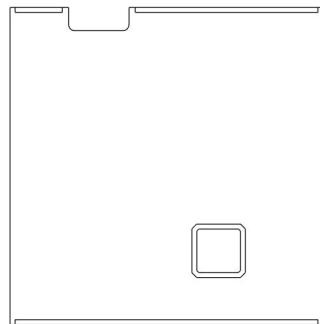
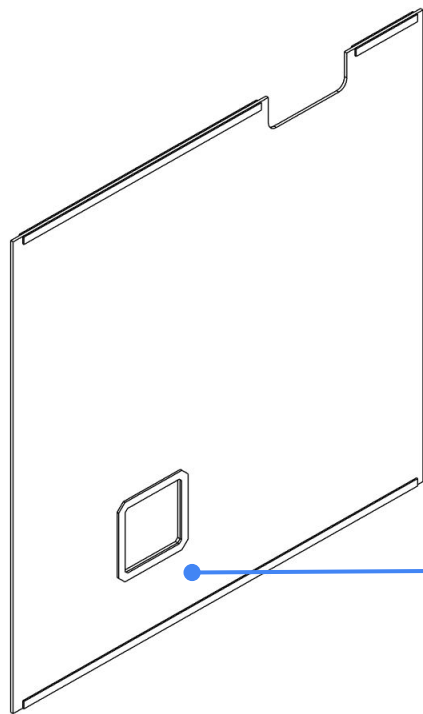
Stick the metal plate on the panel as shown, keep in mind the orientation! The metal face should be on the side shown. (Left Facing)

SIDE PANELS



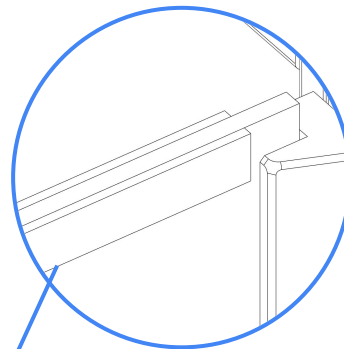
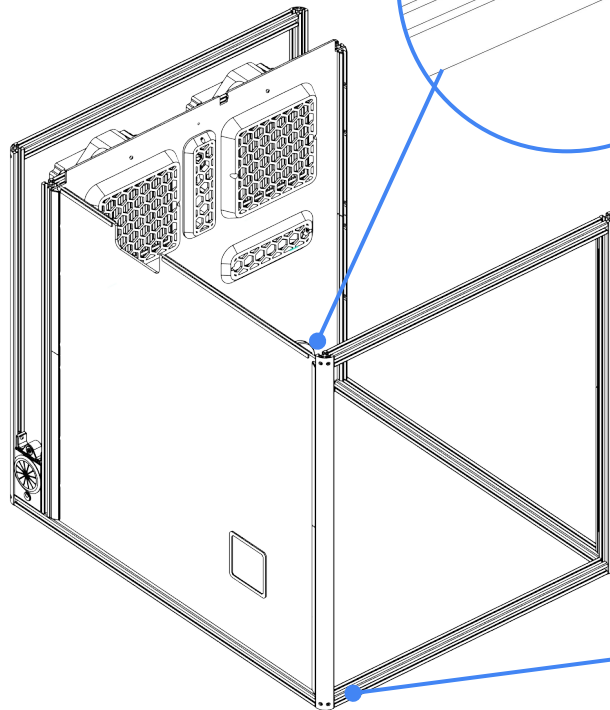
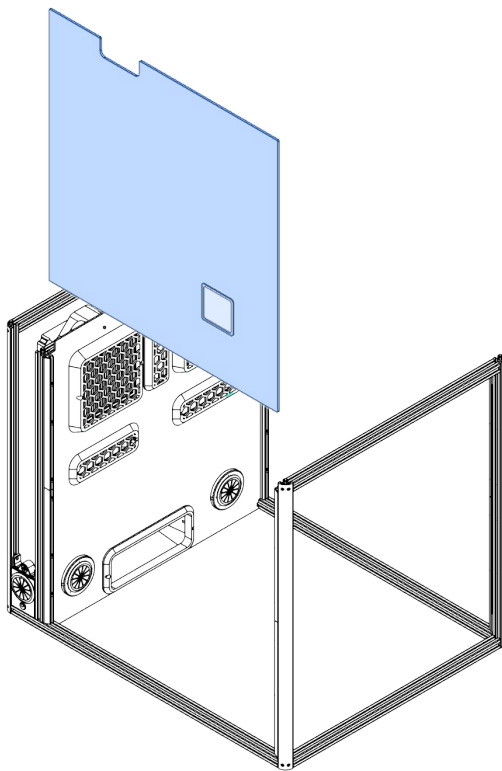
You can attach the dust filter covers now. They are magnetic, so you can just bring them close to the metal bracket and they should snap into place. (make sure to align them though)

SIDE PANELS

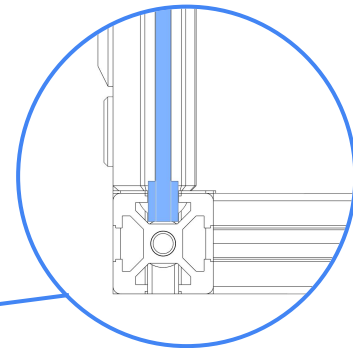


Repeat the same steps on the other side panel. Note just that the side onto which the metal bracket is attached and therefore the dust filter is opposite compared to the first one.

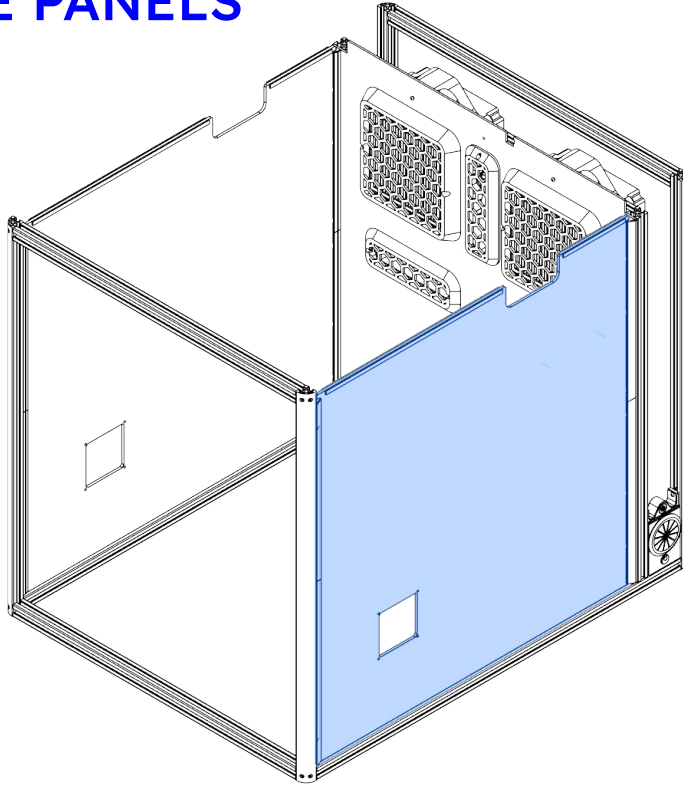
SIDE PANELS



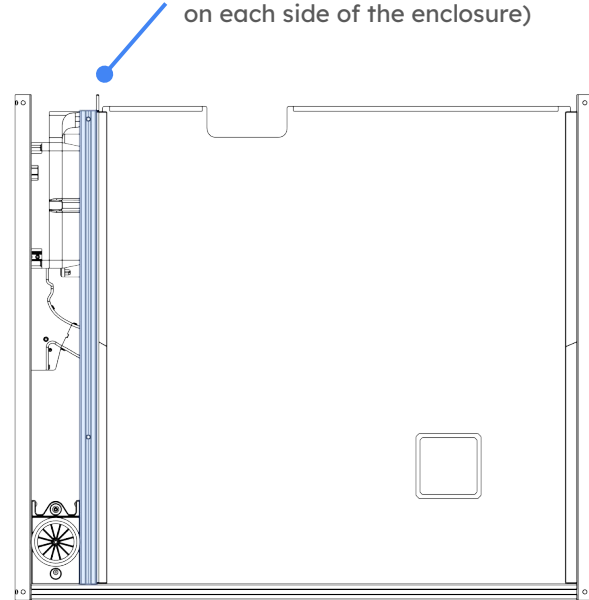
This is a very important step! Carefully lower the panel inside the guide rails that we installed earlier. Make sure that it's fully seated into the bottom extrusion as shown in the detail picture below. If the panel doesn't fit, don't worry. Just move slightly the back extrusion assembly. This is shown in the next step



SIDE PANELS

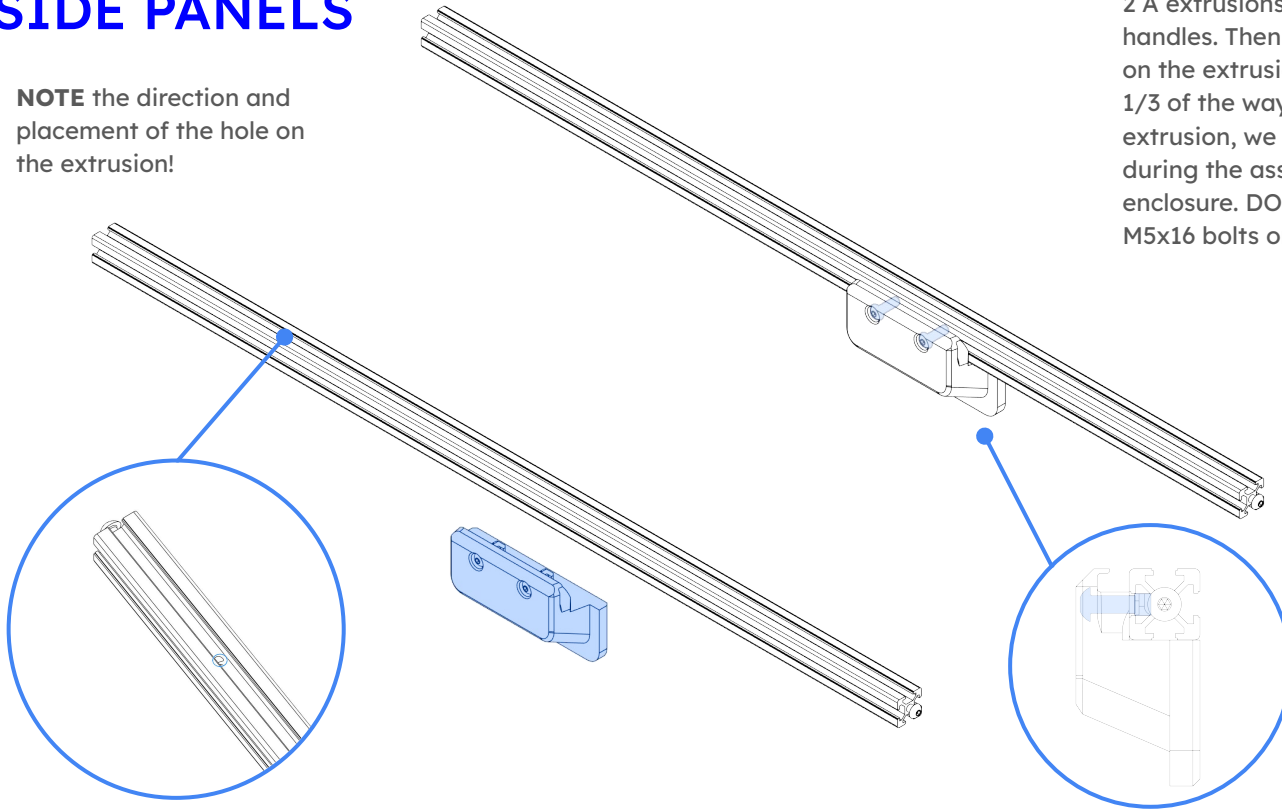


If the panels don't fit try to move slightly the back extrusion assembly. (We did not fully tighten it before for a reason.) If by mistake you fully tightened it, just unscrew a bit the two bolts that secure the back extrusion assembly in place, one on each side of the enclosure)



SIDE PANELS

NOTE the direction and placement of the hole on the extrusion!



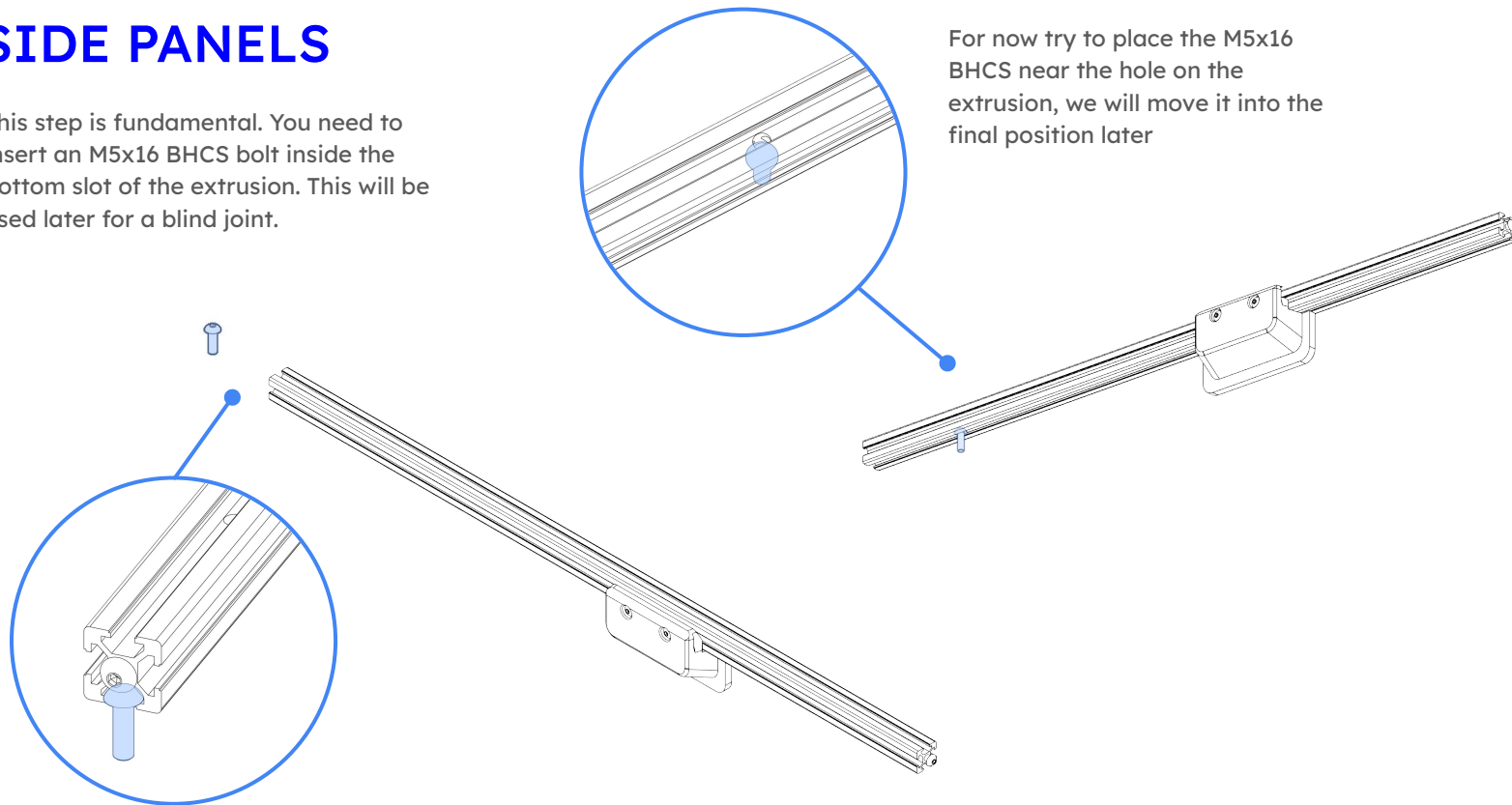
Put the enclosure aside, and grab 2 A extrusions and the two handles. Then install the handles on the extrusions approximately $\frac{1}{3}$ of the way from the end of the extrusion, we will move them later during the assembly onto the enclosure. DON'T fully tighten the M5x16 bolts on the handles



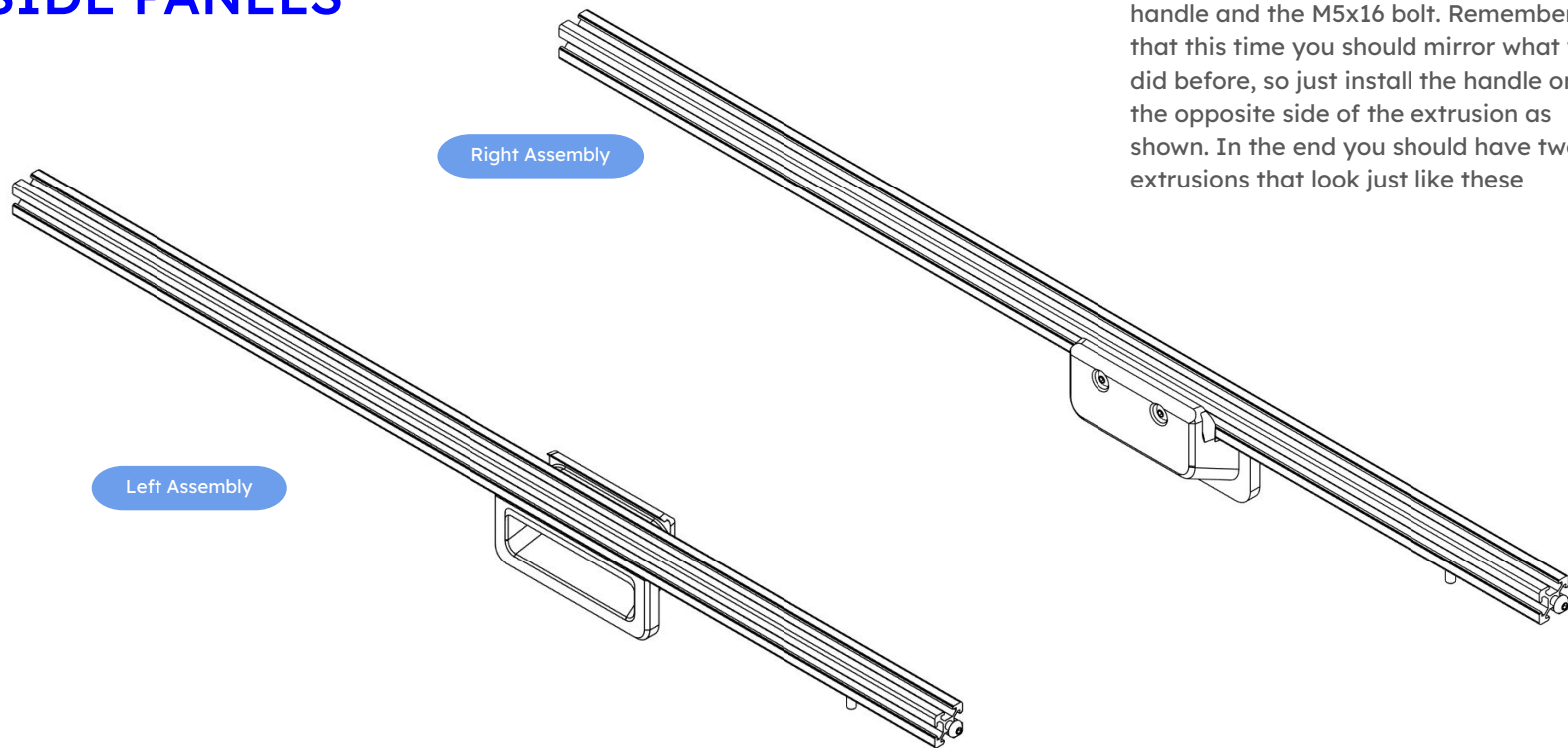
SIDE PANELS

This step is fundamental. You need to insert an M5x16 BHCS bolt inside the bottom slot of the extrusion. This will be used later for a blind joint.

For now try to place the M5x16 BHCS near the hole on the extrusion, we will move it into the final position later

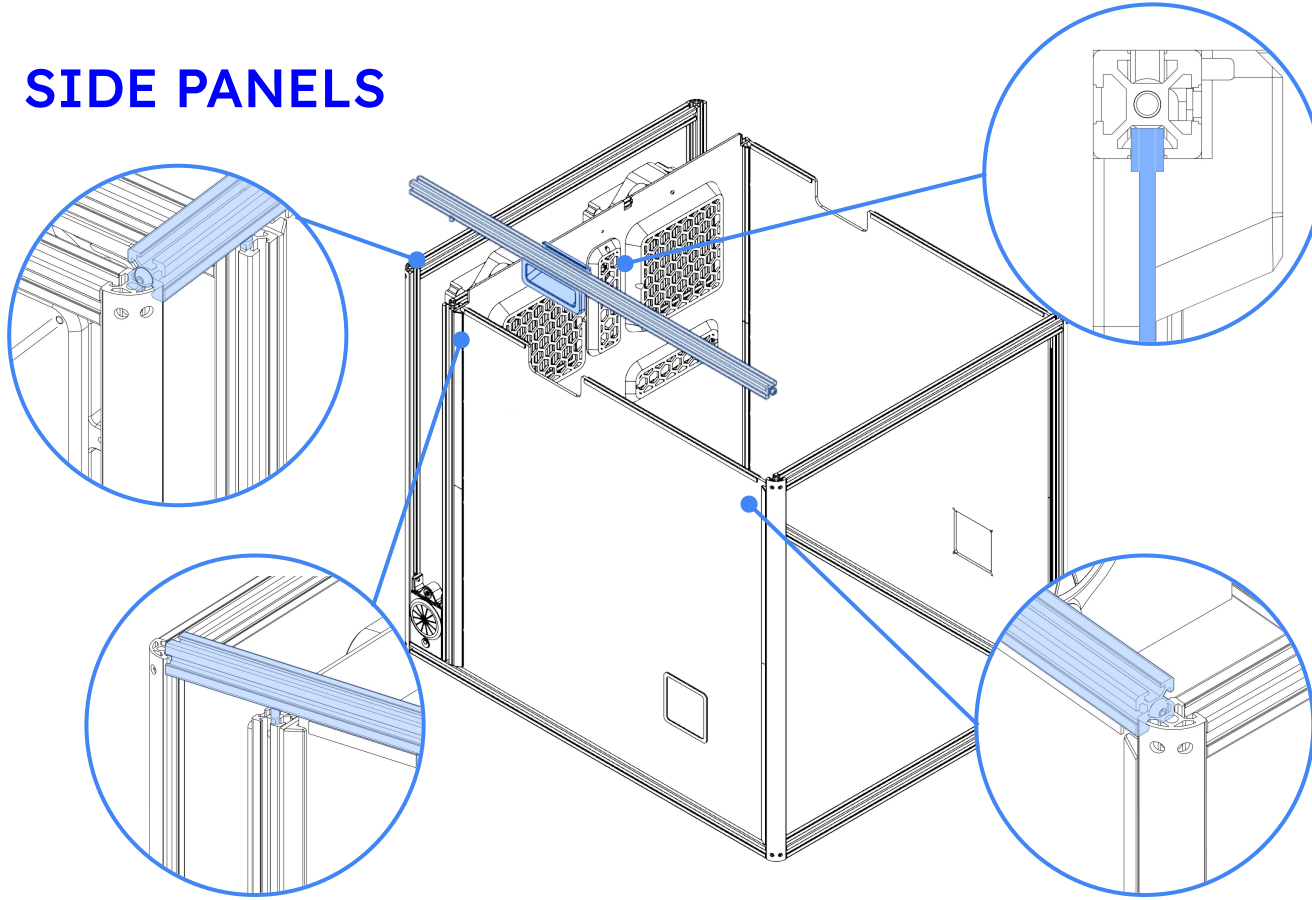


SIDE PANELS



Repeat the same steps as before but with the remaining **A** extrusion, the handle and the M5x16 bolt. Remember that this time you should mirror what we did before, so just install the handle on the opposite side of the extrusion as shown. In the end you should have two extrusions that look just like these

SIDE PANELS

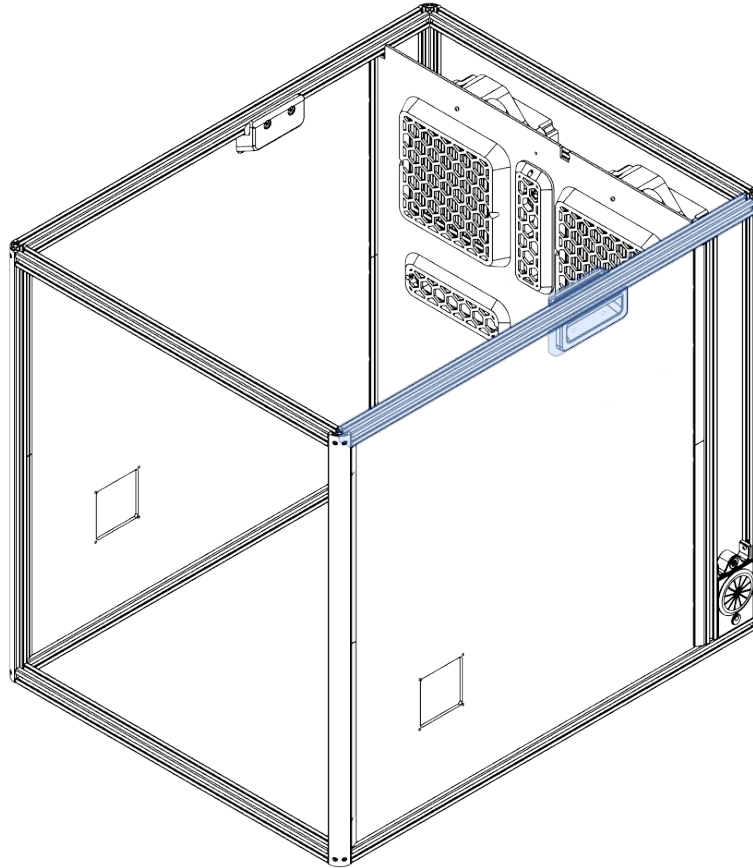


In this step pay attention to 3 things:

1. Make sure on both ends of the extrusion the M5x16 Bolt enters into the slot of the extrusion
2. Make sure the M5x16 bolt that is underneath the A extrusion enters into the threads of the vertical extrusion as shown. (You should tighten this bolt with an allen key until the two extrusions are flush)
3. Make sure that the side panel enters into the extrusion as shown

After having checked and done these things you just need to tighten the M5x16 bolts on each end of the extrusion.

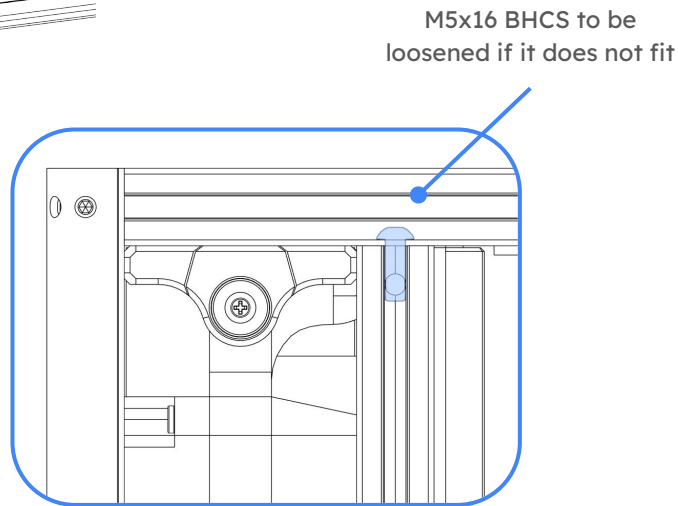
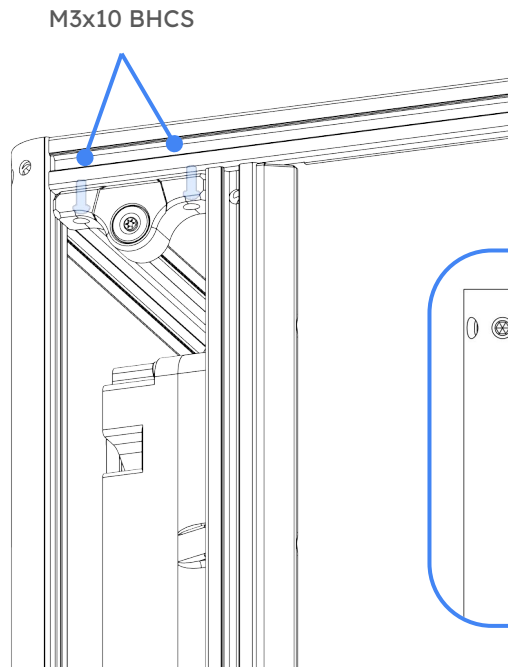
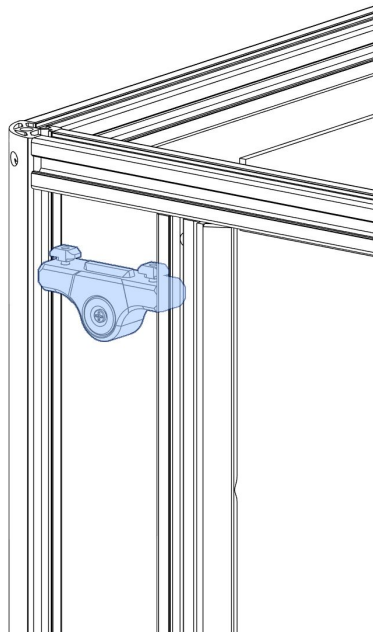
SIDE PANELS



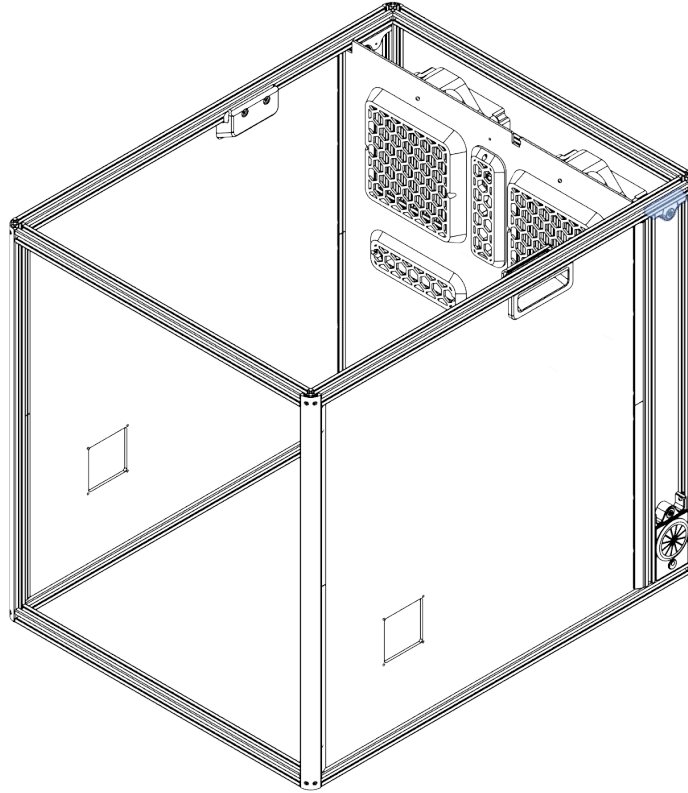
Repeat the previous step
for the opposite side

SIDE PANELS

Tighten the M3x10 screws so that the side panel mount magnet mount is fixed in place. If it's does not fit, loosen the bolt shown below.



SIDE PANELS

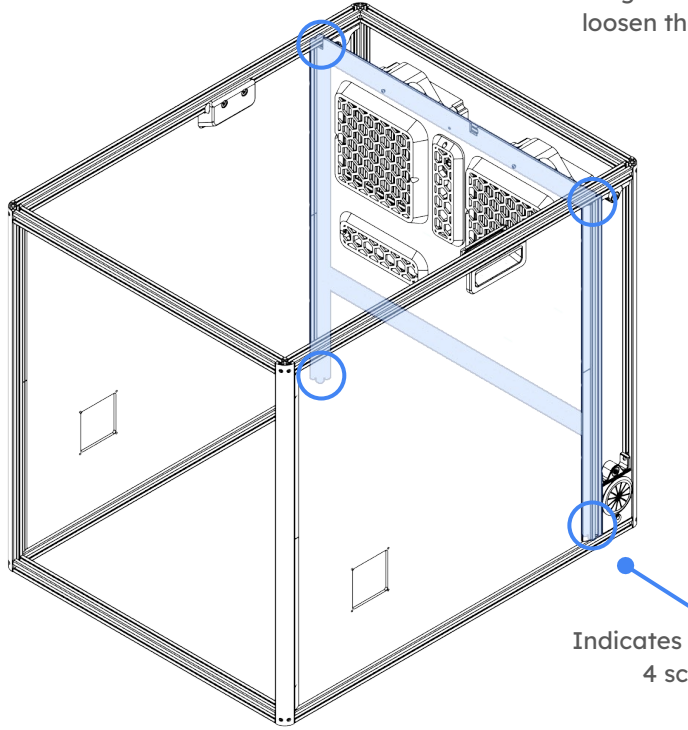


Repeat the previous step for
the opposite side

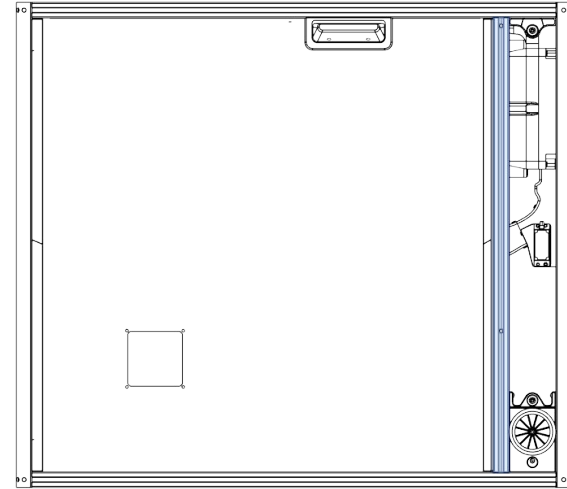


SIDE PANELS

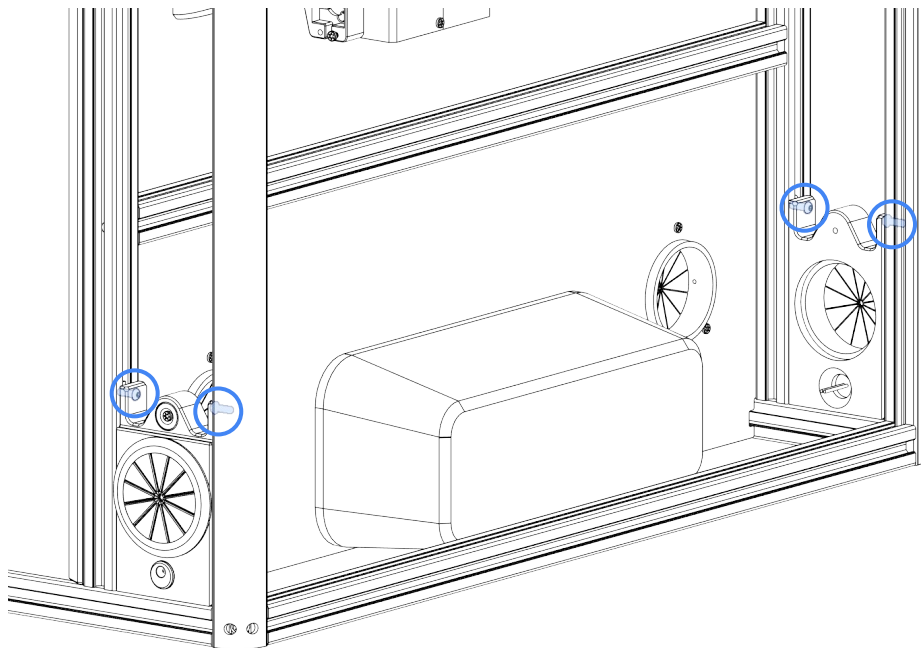
Now that everything for the side panels is assembled, try to push the back assembly (highlighted extrusions) towards the front of the enclosure to make the panels have a tighter fit (if by accident you had torqued down the 4 screws holding them down loosen them first). After having pushed 1 side at a time, tighten them completely.



Indicates position of
4 screws



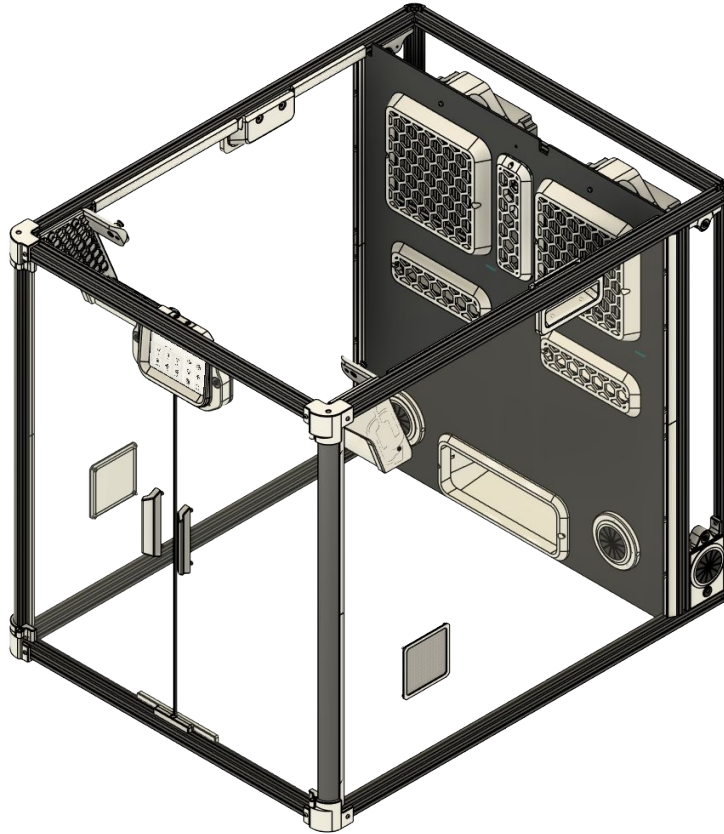
SIDE PANELS



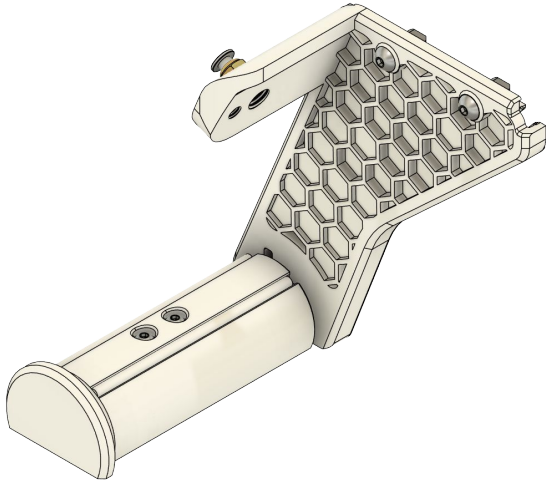
Now also tighten fully these 4 screws.

FRONT PANELS

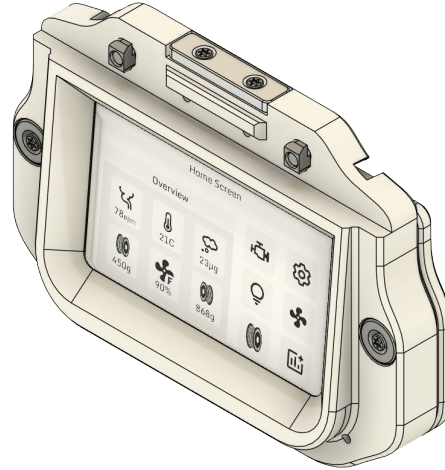
This step is where you assemble the front screen, spool holders and front panels.



COMPONENTS to be prepared



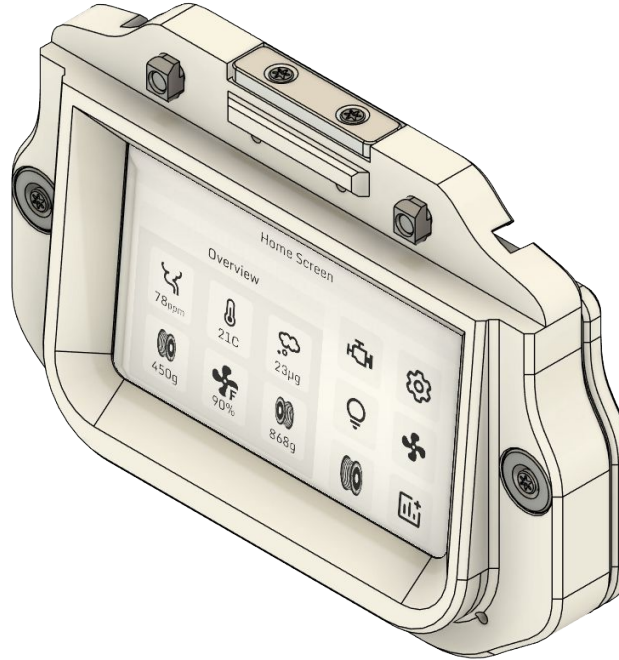
2 - Weight Measuring Spool holders



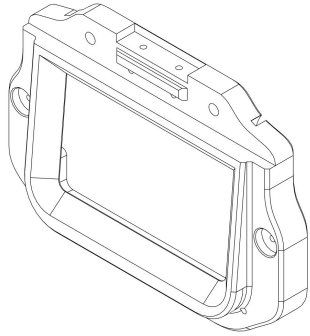
1 - Screen assembly

SCREEN ASSEMBLY

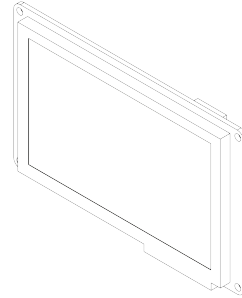
This step is where you assemble the front screen



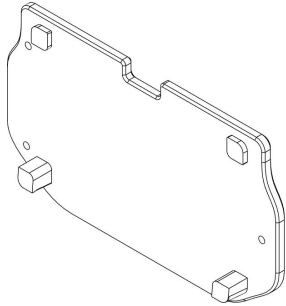
COMPONENTS SCREEN



1 - Screen Housing



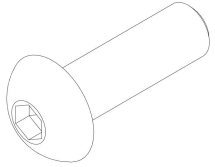
1 - TJC 4.8 inch screen



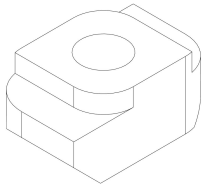
1 - Screen back plate



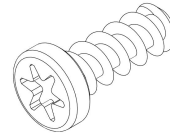
COMPONENTS SCREEN



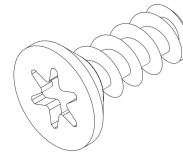
2 - M5x16 BHCS



2 - M5 T-Nuts

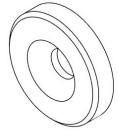


5 - M3x8 ST BHCS

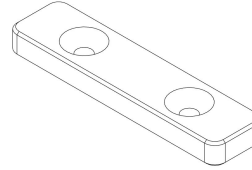


4 - M3 ST FHCS

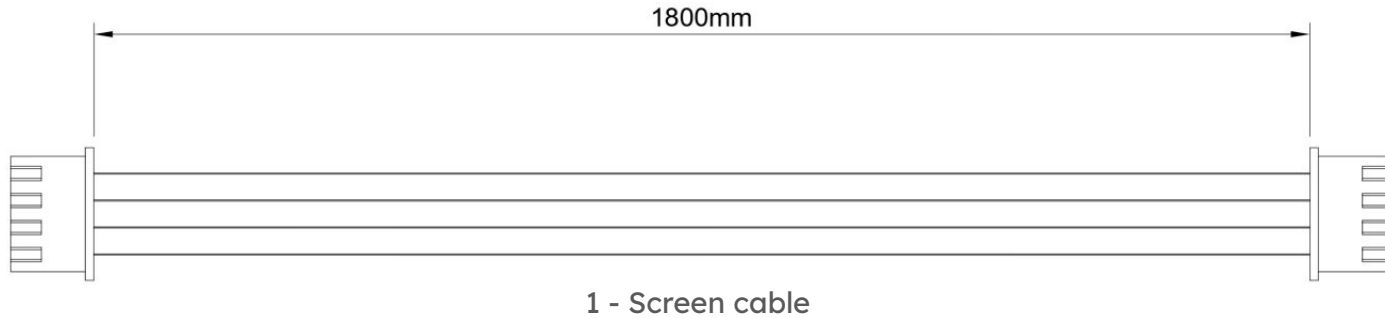
COMPONENTS SCREEN



2 - 15mm Circular magnets

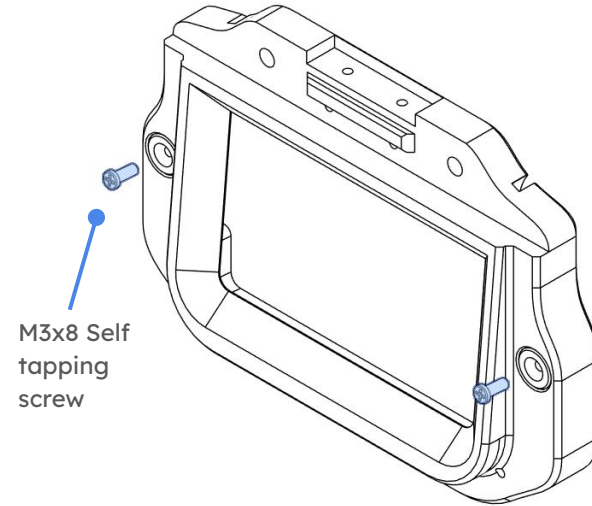
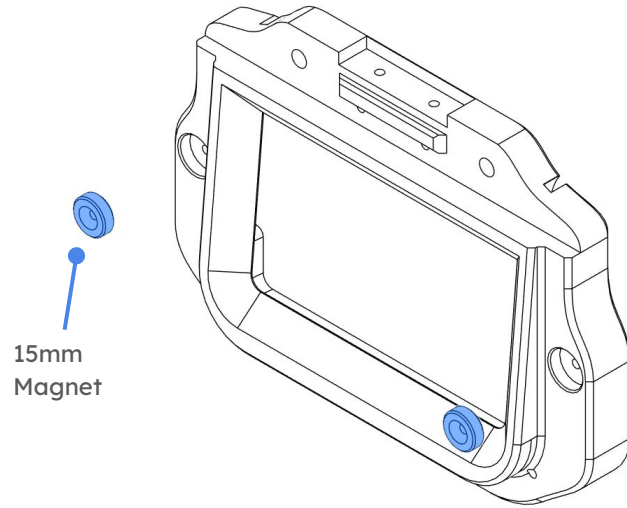


1 - 10x40mm Magnet



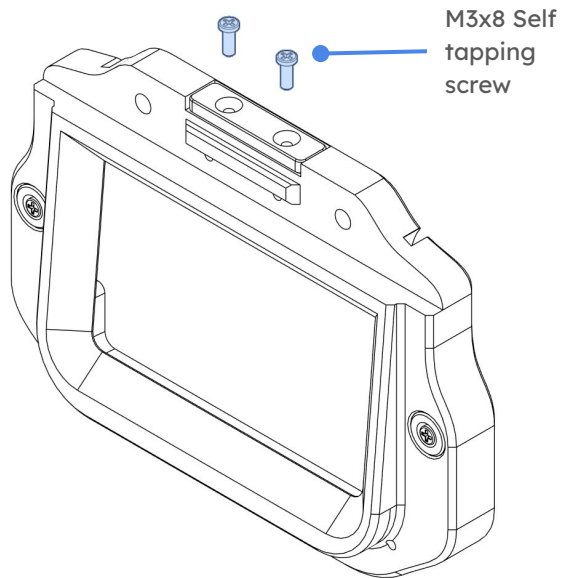
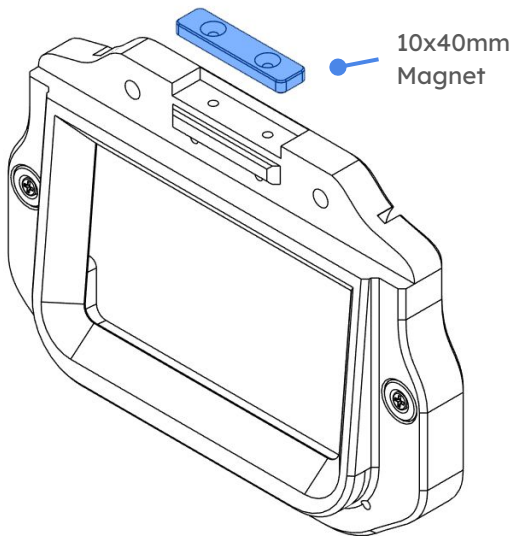
SCREEN ASSEMBLY

Let's start by assembling the screen. Get the the main housing and attach to it the two circular 15mm magnets using M3x8 self tapping screws.

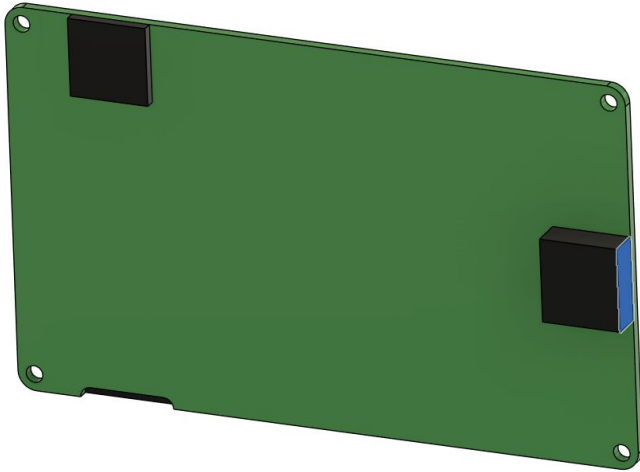


SCREEN ASSEMBLY

Get the main housing and attach to it the two the 10x40mm magnet using M3x8 self tapping screws.



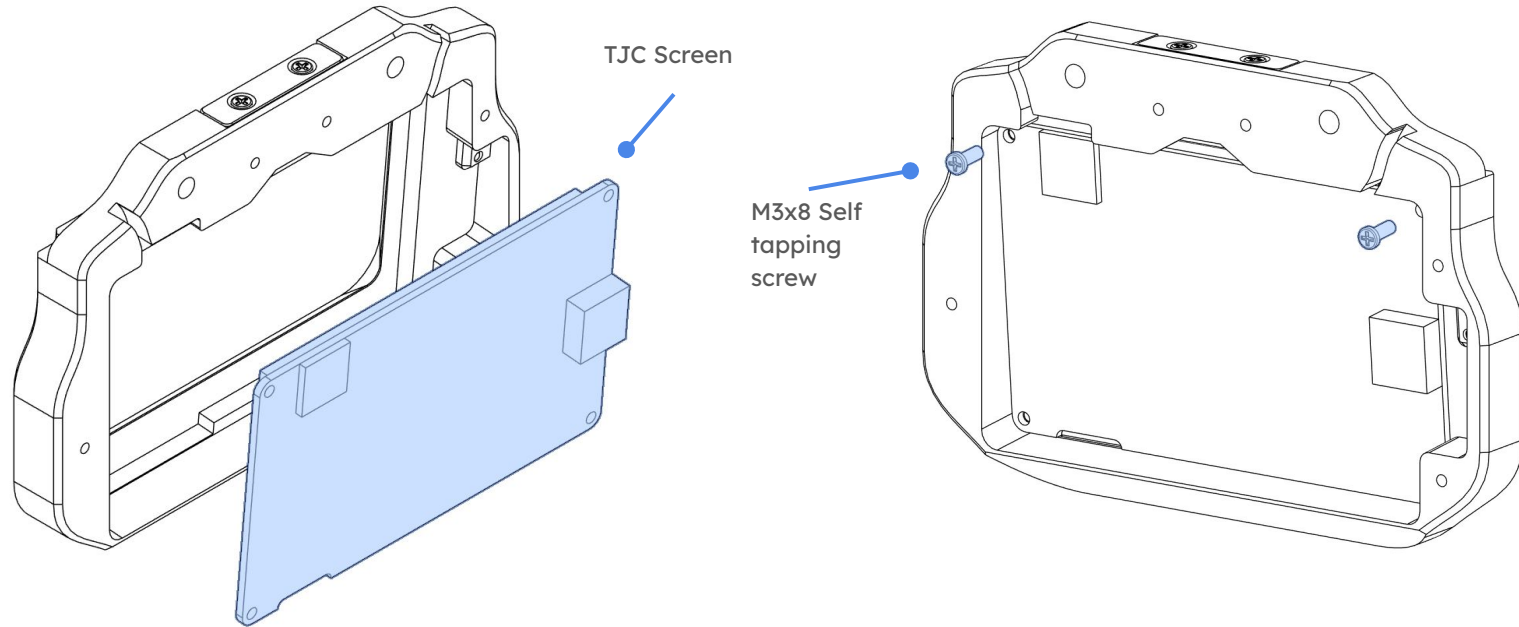
SCREEN ASSEMBLY



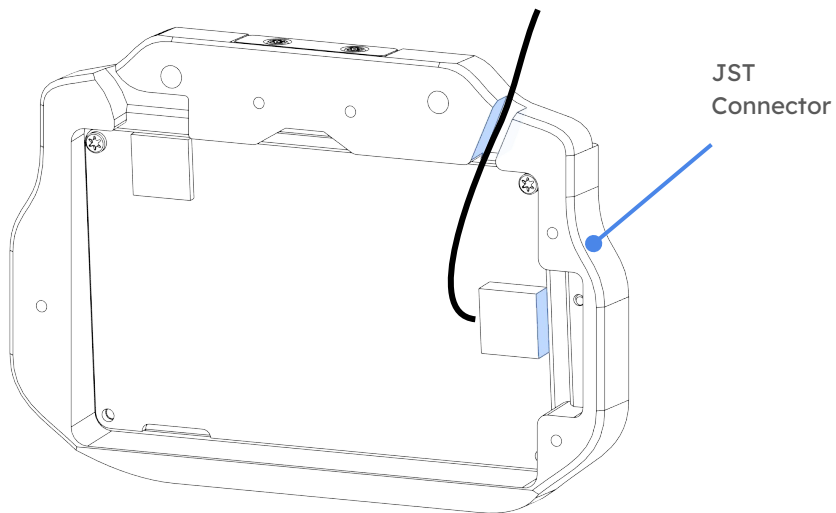
Insert the 4 pin JST cable into the screen.
The cable should be 1.5 meter long.

SCREEN ASSEMBLY

Get the TJC screen and insert it into it's housing. Tighten the two top M3x8 ST BHCS screws.



SCREEN ASSEMBLY

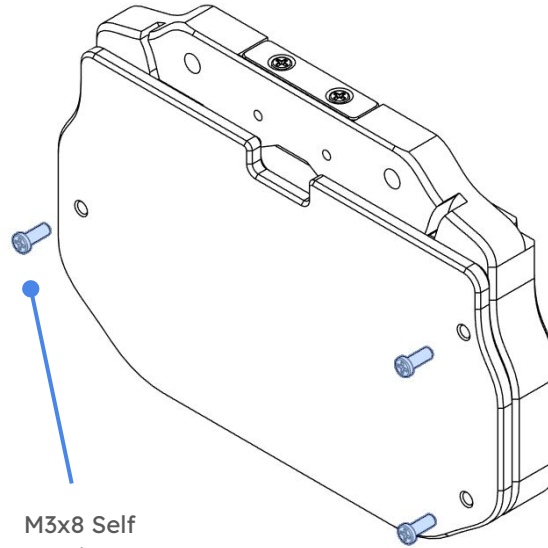
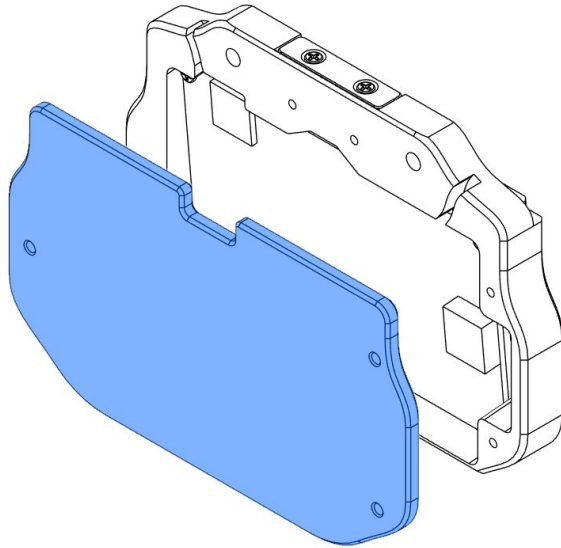


Take a moment to make sure that the cable is inserted, and curve it so that it fits through the highlighted blue channel.

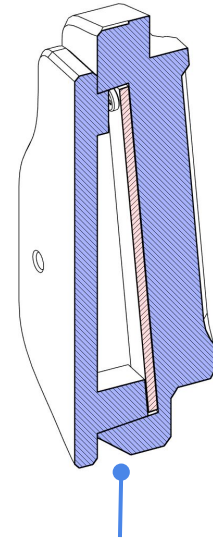
The cable should be flush with the housing of the screen in order for the back plate to fit.

SCREEN ASSEMBLY

Get thr screen backplate and insert it into the main housing. Use M3x8 ST BHCS screws to secure it in place.



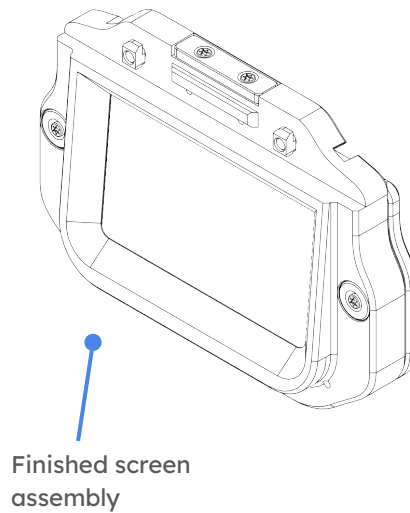
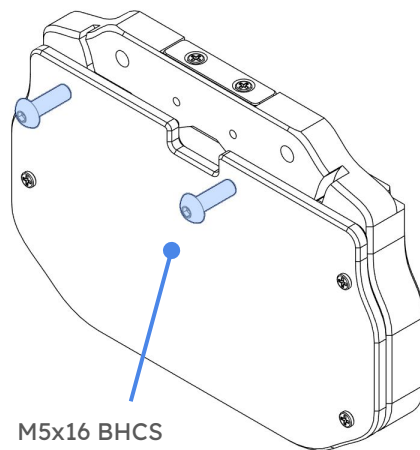
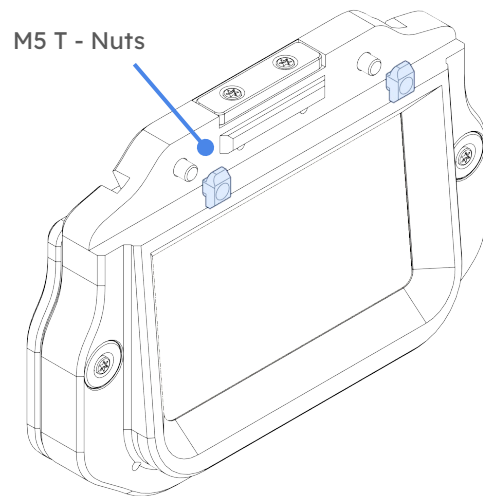
M3x8 Self
tapping screw



This is to give you an
idea of how the
backplate should fit

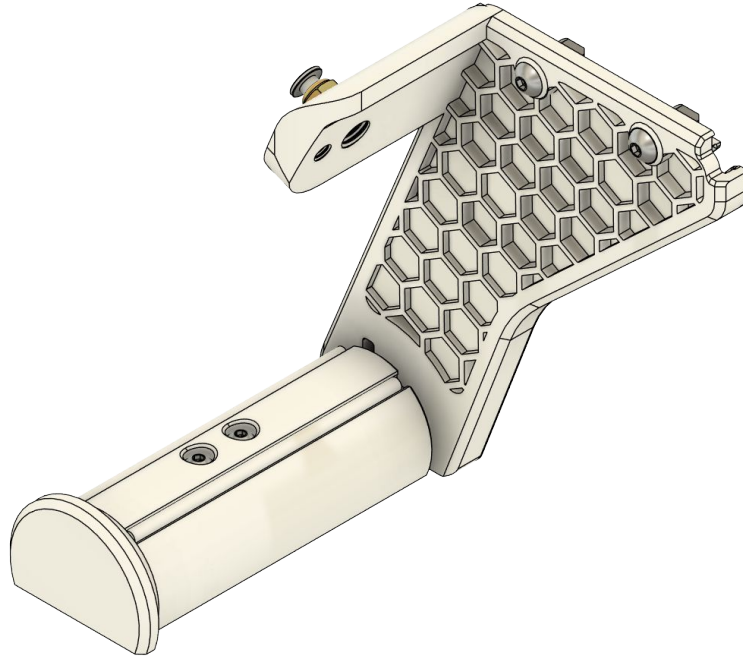
SCREEN ASSEMBLY

Insert the M5x16 BHCS screws in the assembly, and the T-nuts. Then the screen assembly should be finished. Check with the rightmost picture that it matches.

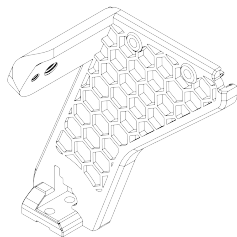


WEIGHT MEASURING SPOOL HOLDERS

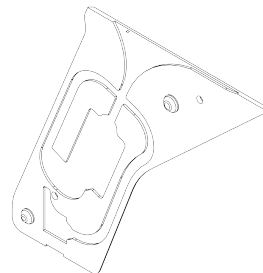
This step is where you assemble the weight measuring spool holders. They use load cells combined with an HX711 amplifier to accurately measure the weight of the filament.



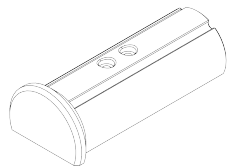
COMPONENTS



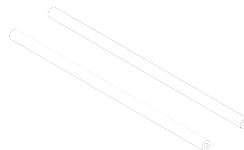
1 - Spool holder upper L



1 - Spool holders back plate L



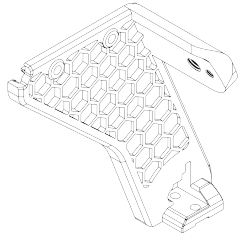
1 - Spool holder lower L



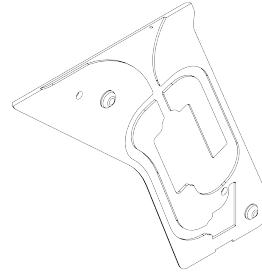
2 pairs - PTFE Tubes 95mm



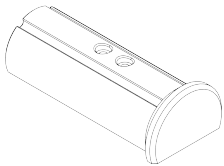
COMPONENTS



1 - Spool holder upper R



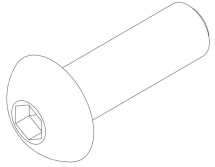
1 - Spool holders back plate R



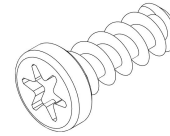
1 - Spool holder lower R



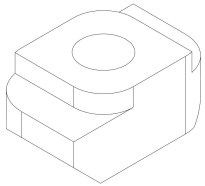
COMPONENTS



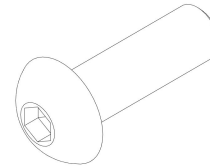
8 - M5x16 BHCS



6 - M3x8 ST BHCS

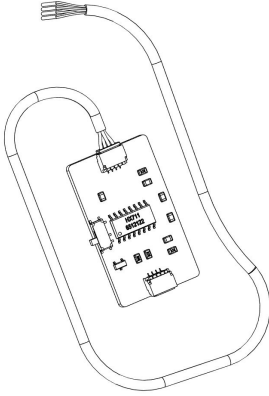


4 - M5 T-Nuts

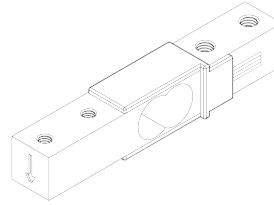


4 - M4x20 BHCS

COMPONENTS



2 - HX711 Module

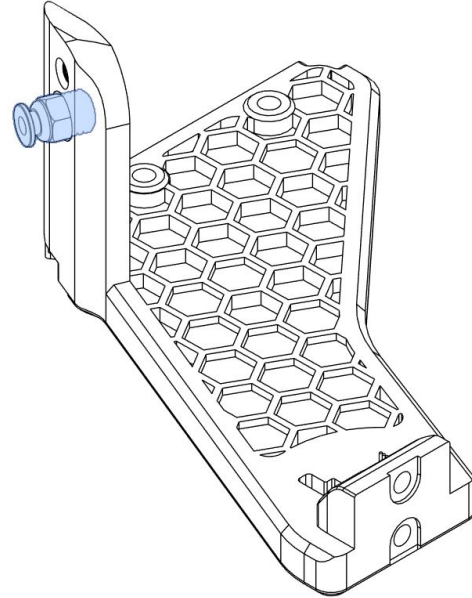
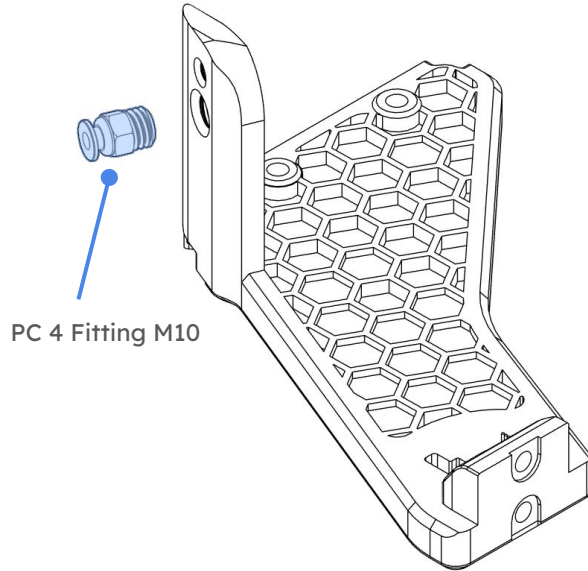


2 - Load cells



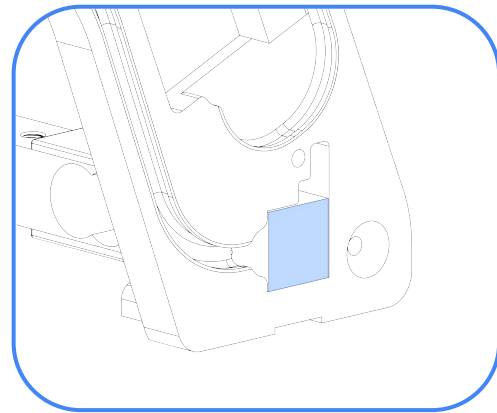
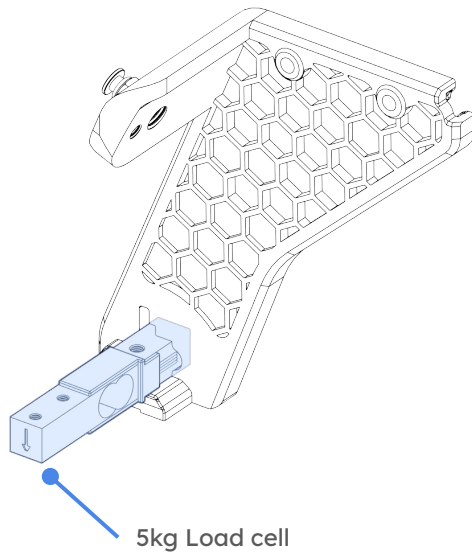
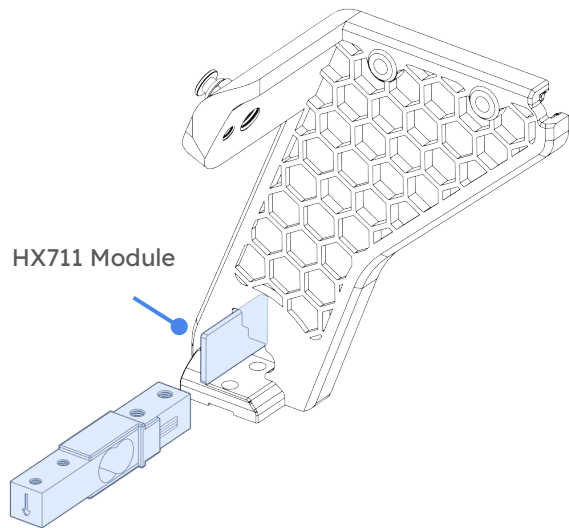
SPOOL HOLDERS

Insert the PC4 fitting in the spool holder



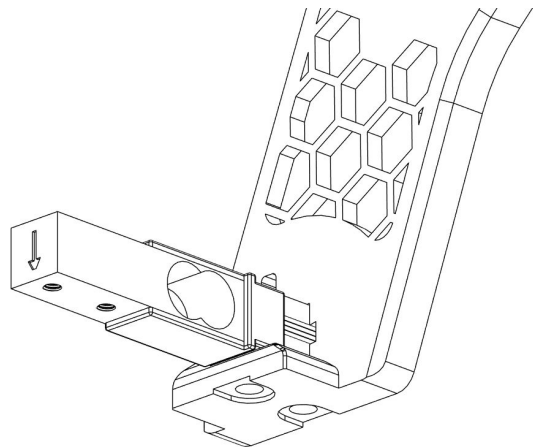
SPOOL HOLDERS

Insert the HX711 into the slot cut into the spool holder. Then press the load cell into its designated hole. Make sure that the load cell seats flush with the back of the spool.

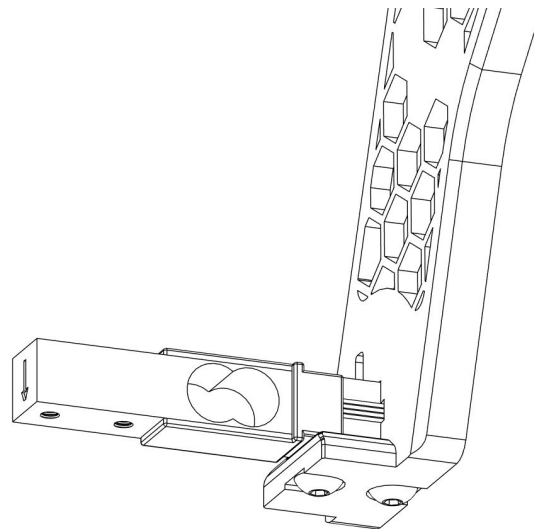
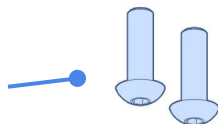


SPOOL HOLDERS

Insert the M5x16 BHCS screws into the load cell.

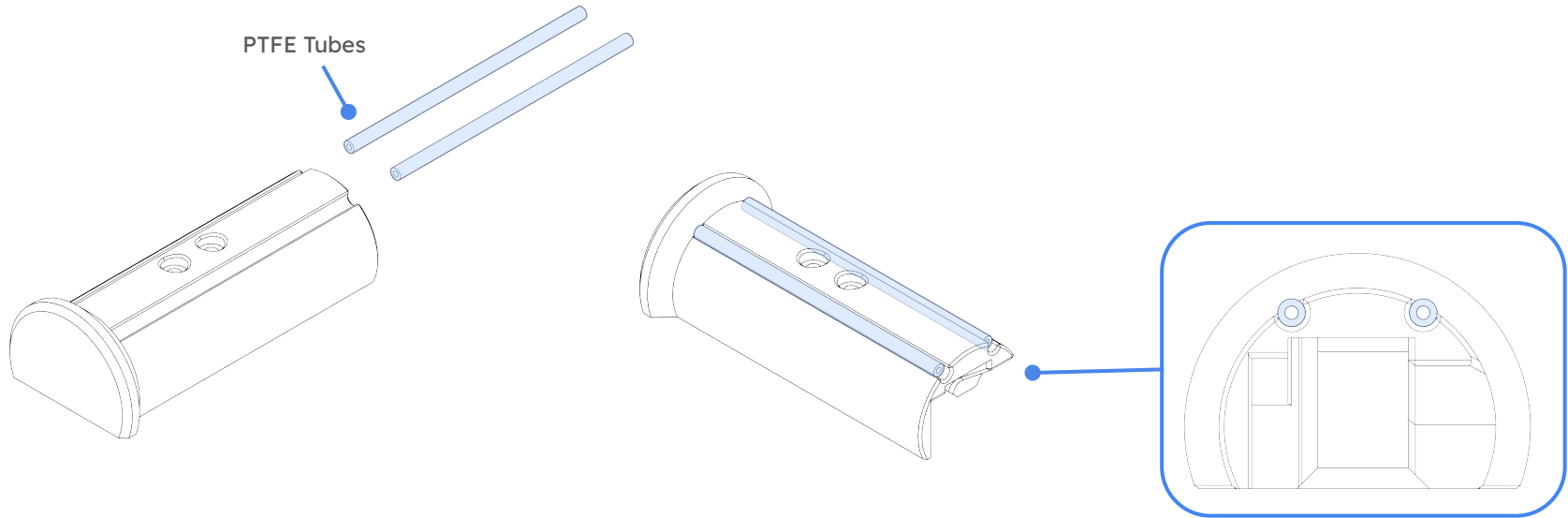


M5x16 BHCS



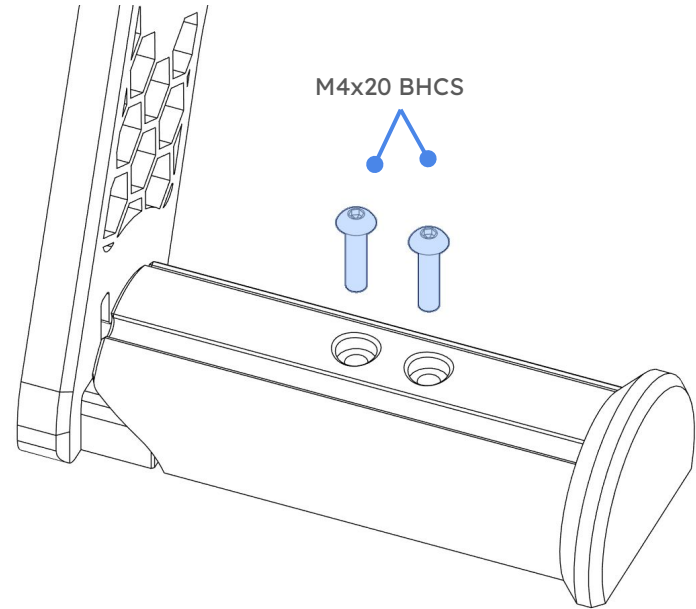
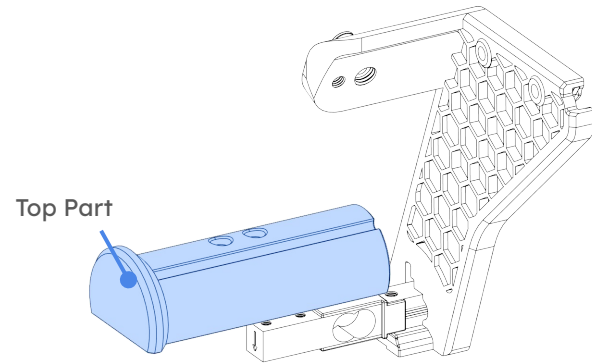
SPOOL HOLDERS

Insert the PTFE tubes in both the left and right
spool holder bottom section



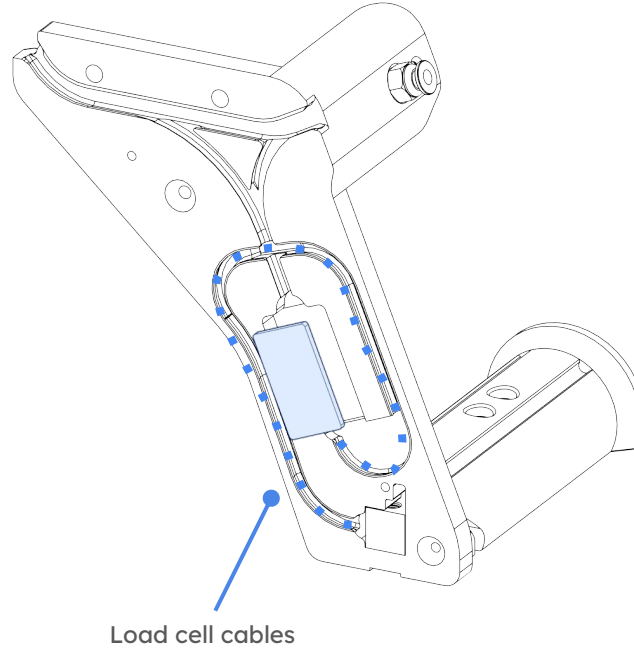
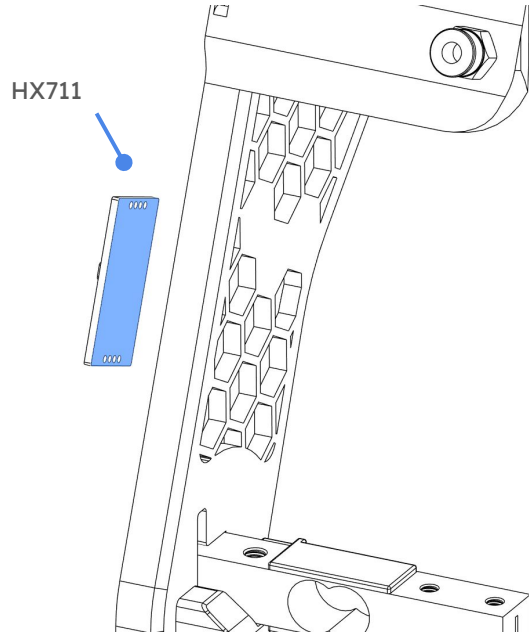
SPOOL HOLDERS

Insert the top of the spool holder, then screw it in with M4x20 BHCS.



SPOOL HOLDERS

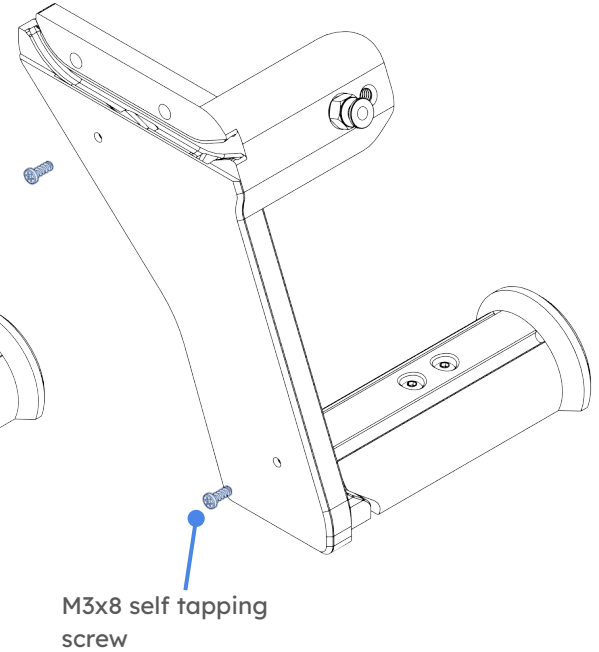
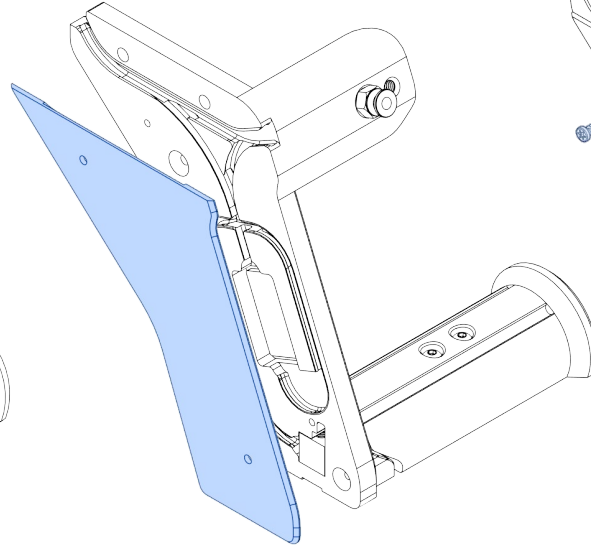
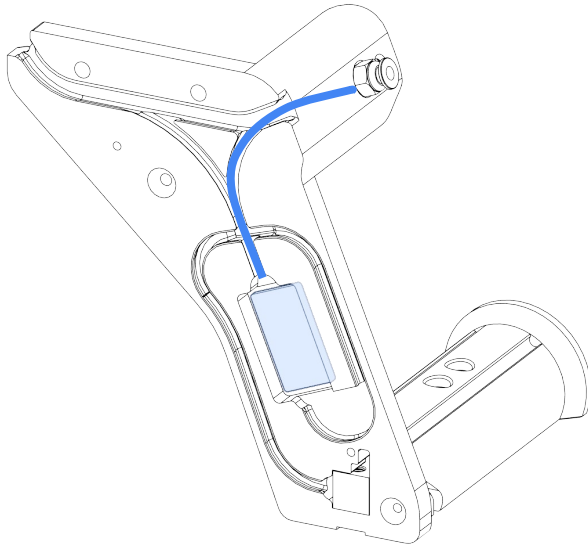
Place the HX711 module inside the cavity of the spool holder. Remember to place some double sided tape on it's back in order to attach it to the plastic. Then make sure that the load cell cables are tucked inside their channel.



SPOOL HOLDERS

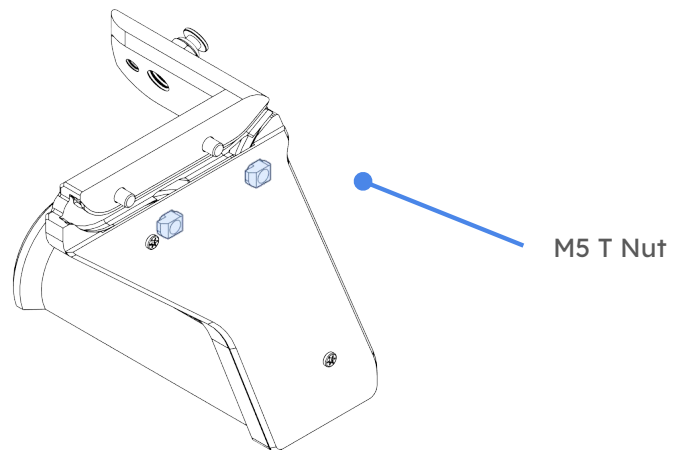
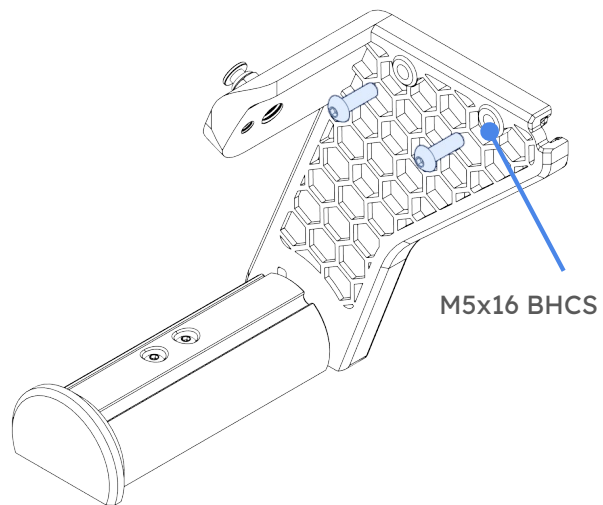
Pass the cable coming out of the HX711 in the highlighted channel. Then seal the back of the spool holder with the back plate and two M3x8 self tapping screws.

JST 4 Pin cable



SPOOL HOLDERS

Insert the two M5x16 BHCS screws and then tighten two M5 T nuts on the back



SPOOL HOLDERS

Repeat the same steps for the spool holder of the opposite side

Slides (144-151)

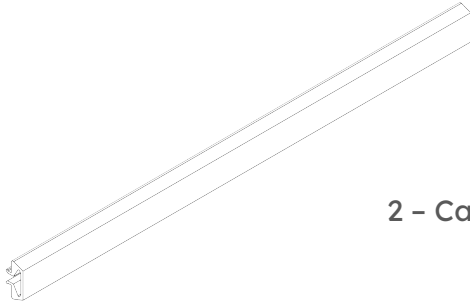


SIDE PANELS

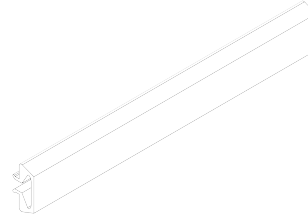
Now let's install what you prepared



ADDITIONAL COMPONENTS



2 - Cable channel front



2 - Cable channel back

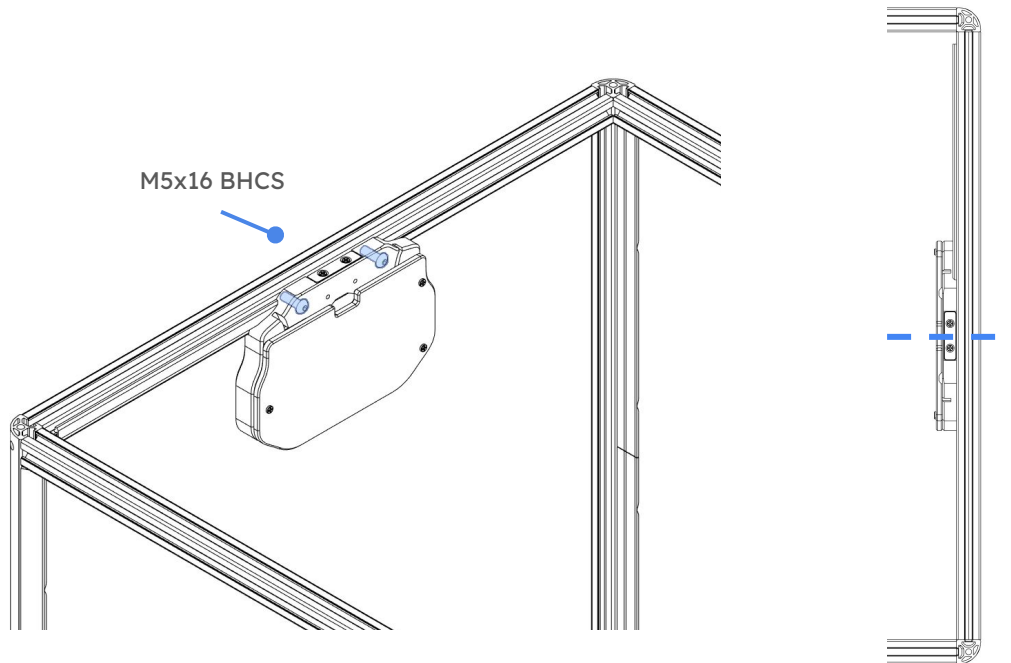
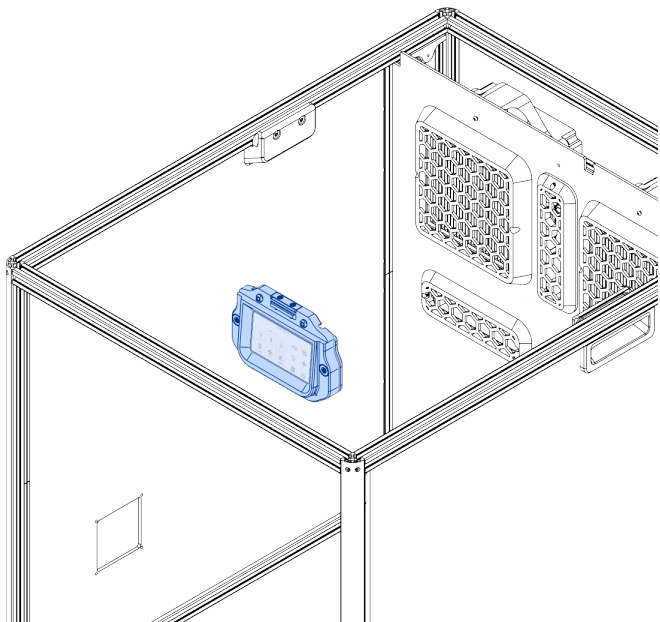


1 - Cable channel screen



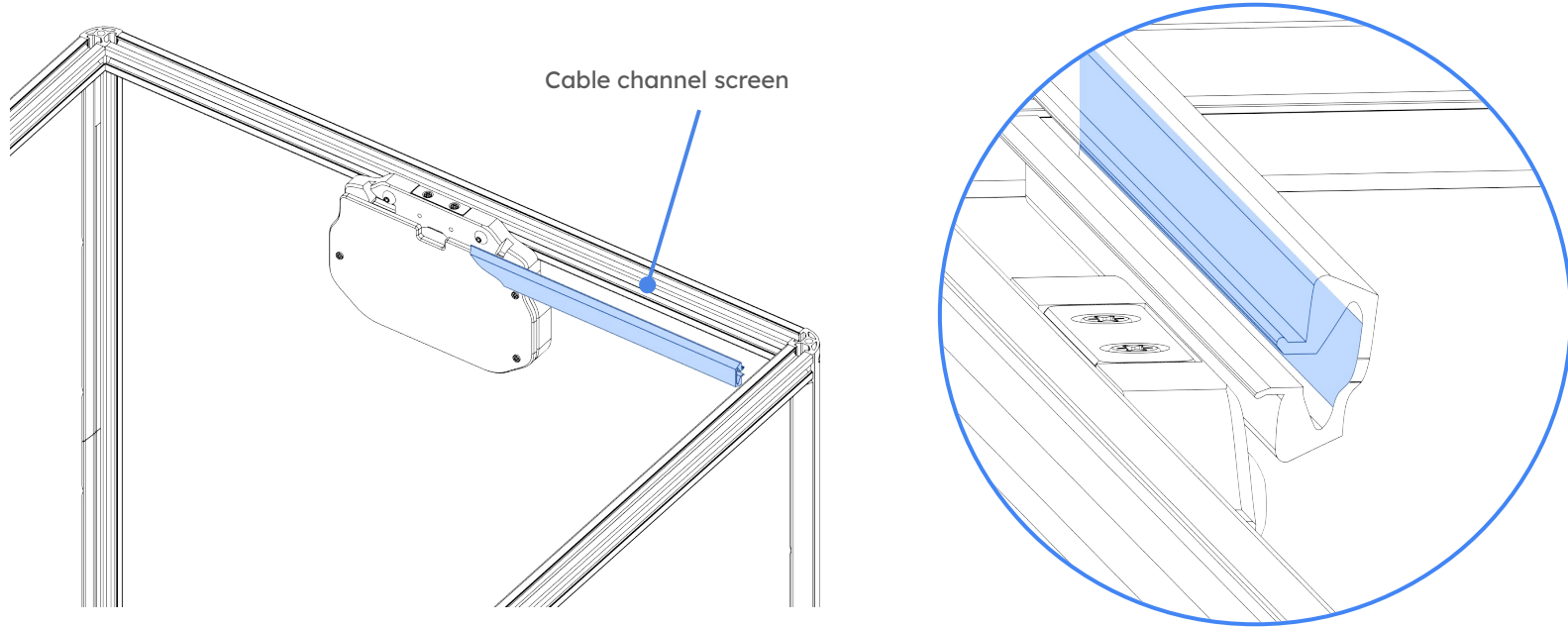
SIDE PANELS

Place the screen on the top extrusion and secure it with the M5x16 BHCS. Make sure it's approximately centered. In the next steps we will center it more carefully once the front panels are installed.

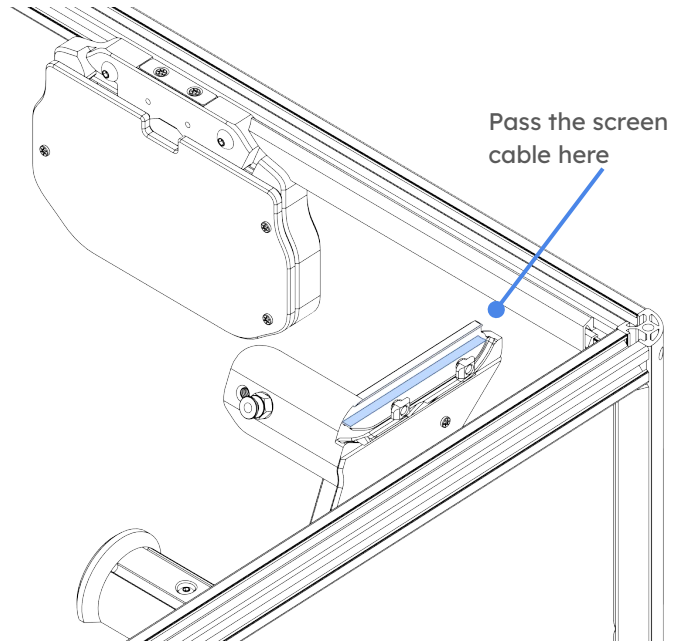


SIDE PANELS

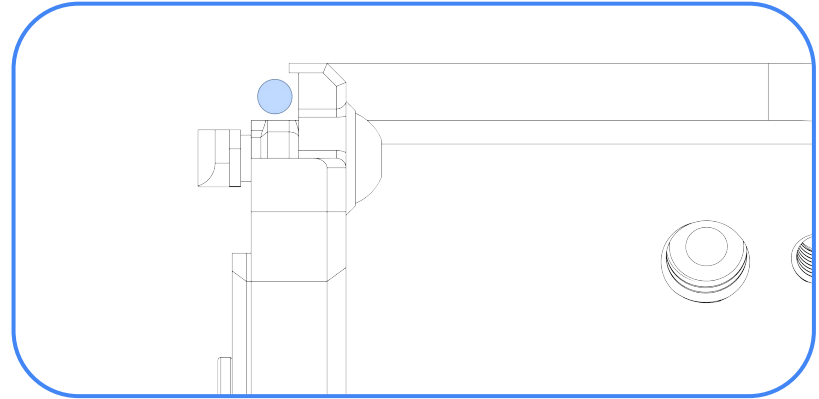
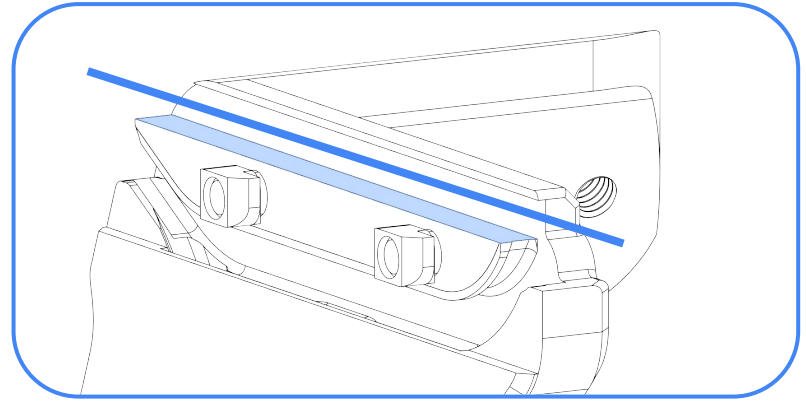
Insert the screen cable in the cable channel, and then push the channel into the extrusion, it should have a satisfying click.



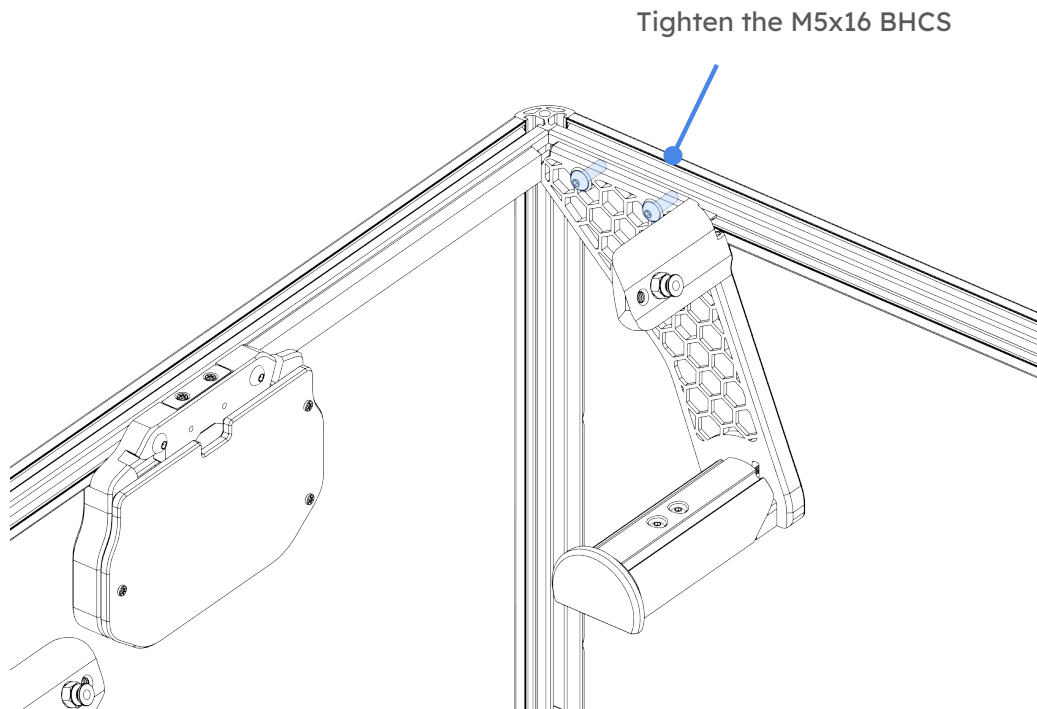
SIDE PANELS



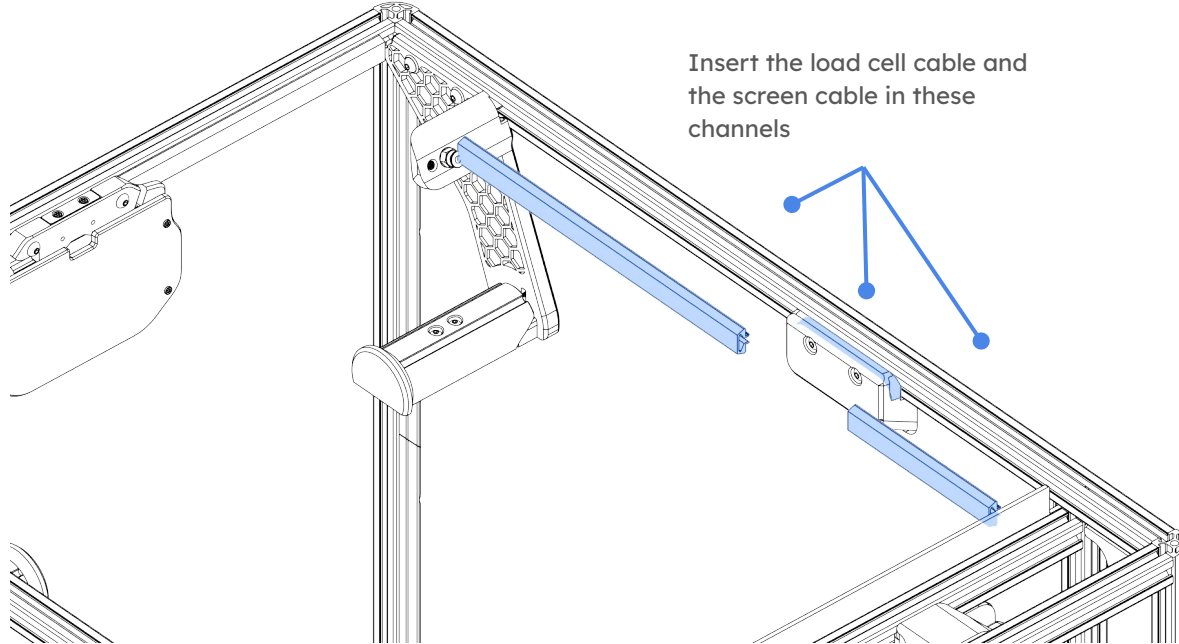
Pass the screen cable through the opening shown



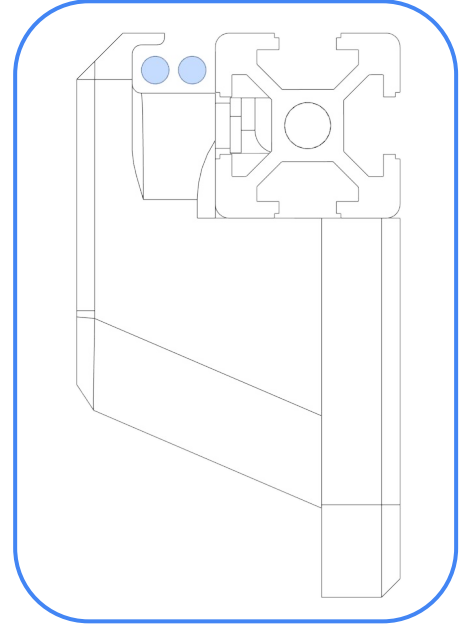
SIDE PANELS



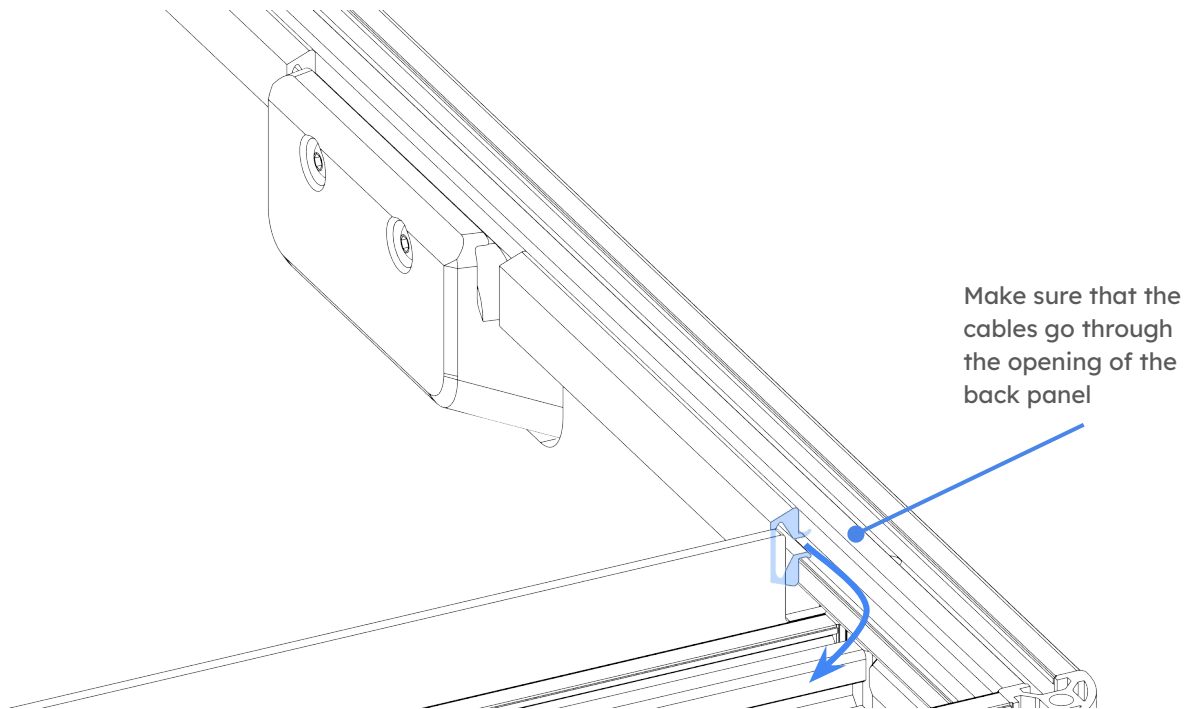
SIDE PANELS



Note how they would be positioned in the handle cutout on the right

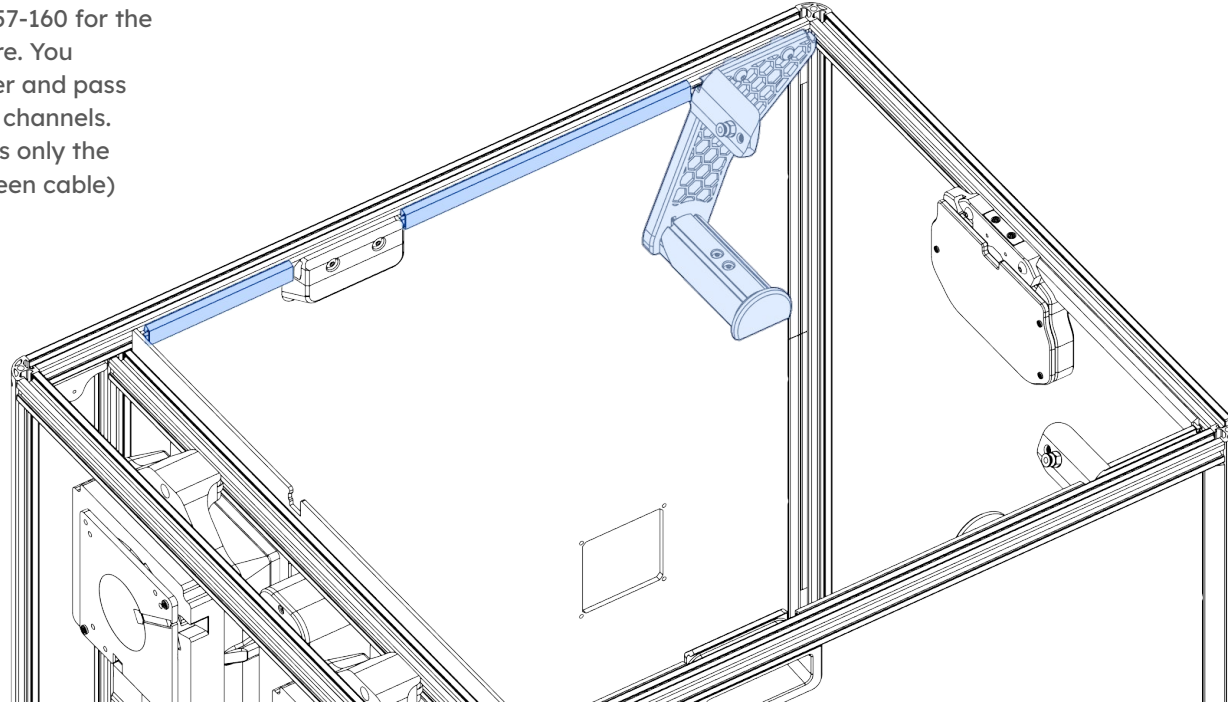


SIDE PANELS

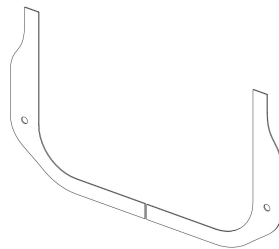
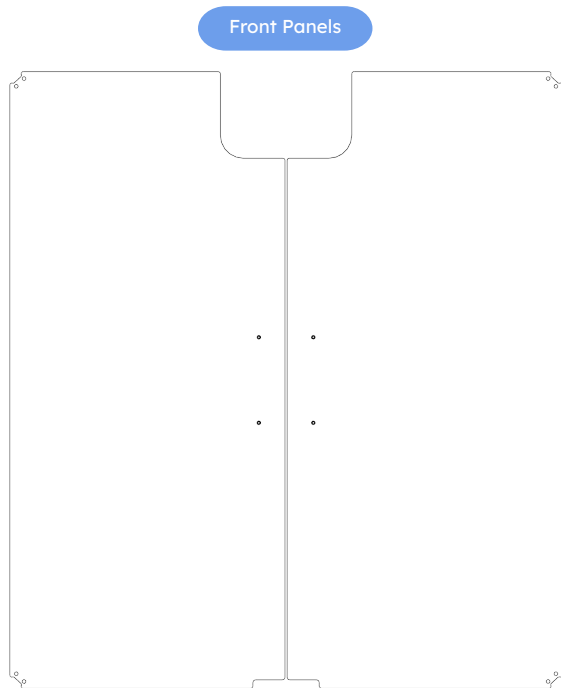


SIDE PANELS

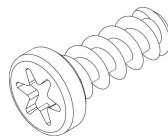
Repeat the steps on slides 157-160 for the opposite side of the enclosure. You should install the spool holder and pass it's cables through the cable channels. Note that in this case there is only the spool cable (not also the screen cable)



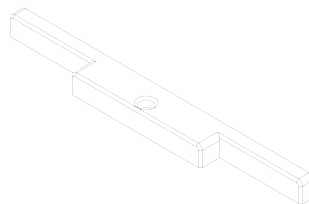
COMPONENTS FRONT PANEL



1 - Set of front panel iron plates

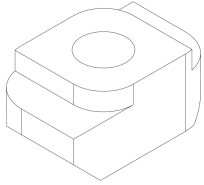


12 - M3x8 ST BHCS

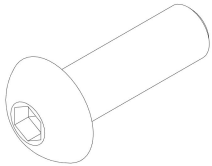


1 - Front stopper

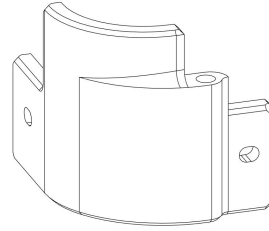
COMPONENTS



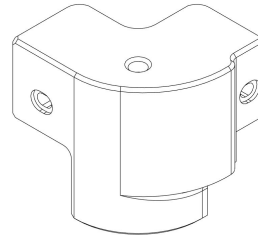
8 - M3 T-nuts



8 - M3x10 BHCS

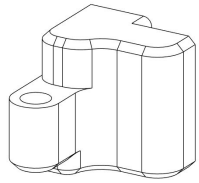


2 - Joints part A

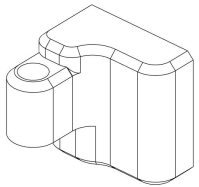


2 - Joints part B

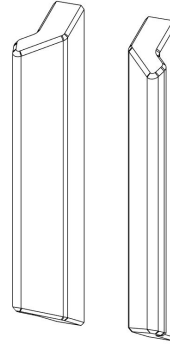
COMPONENTS



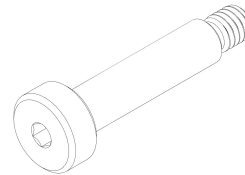
2 - Hinge part A



2 - Hinge part B



2 - Handles

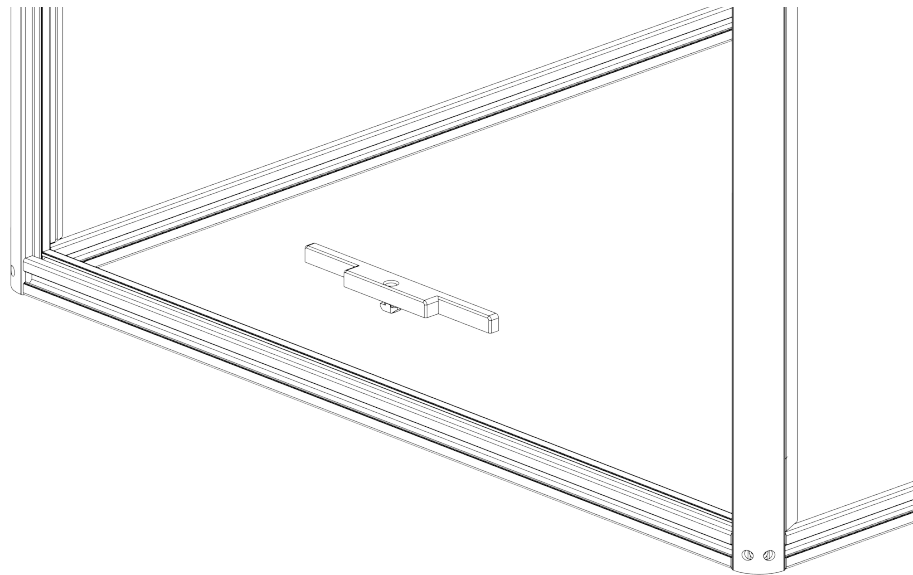
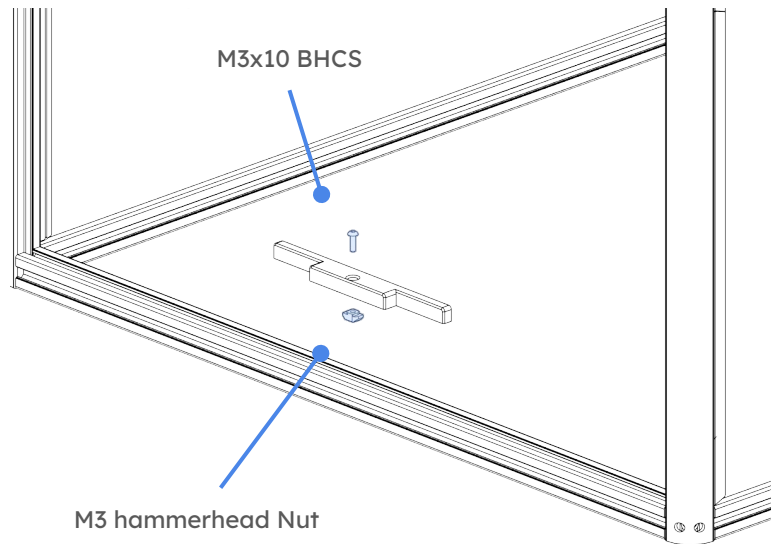


4 - M3x20 SHCS



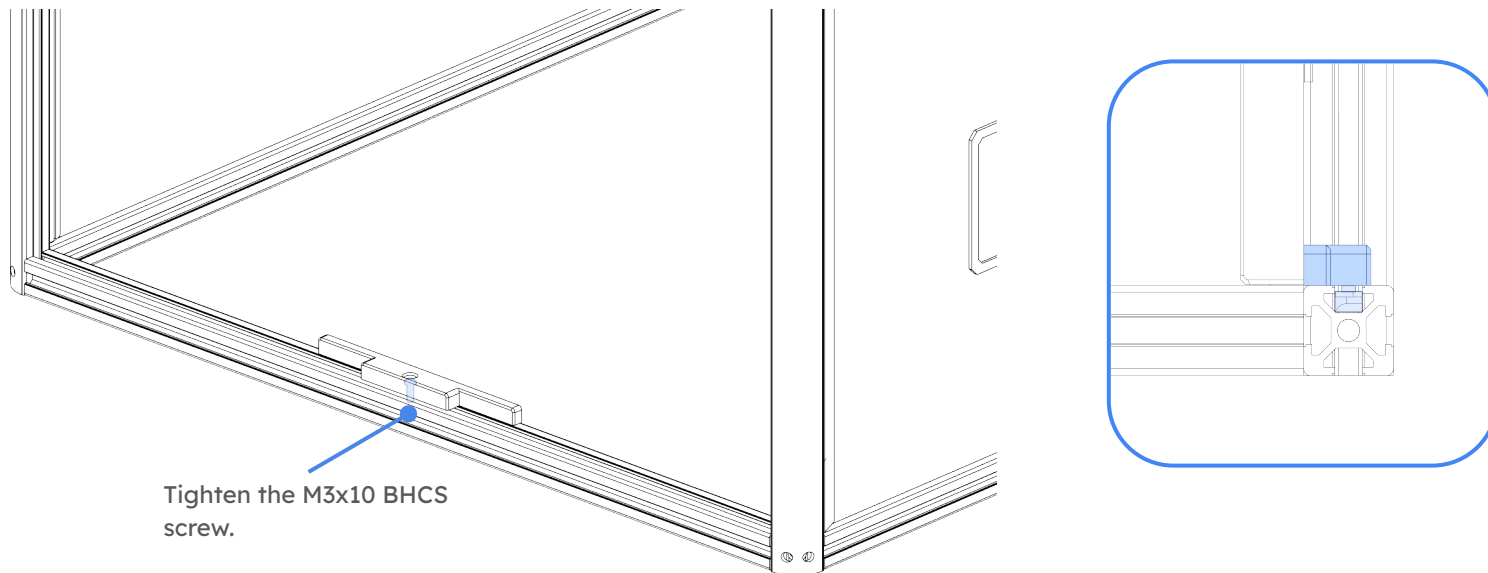
FRONT PANELS

Insert an M3x10 BHCS screw in the front stopper and secure it with an hammerhead nut on the other side. This will be used in the next step to fix the stopper to the bottom extrusion.

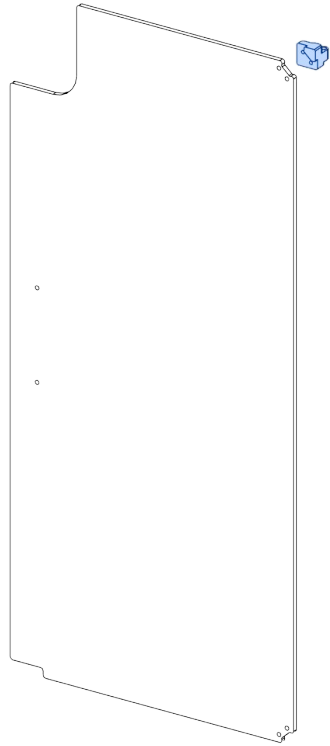


FRONT PANELS

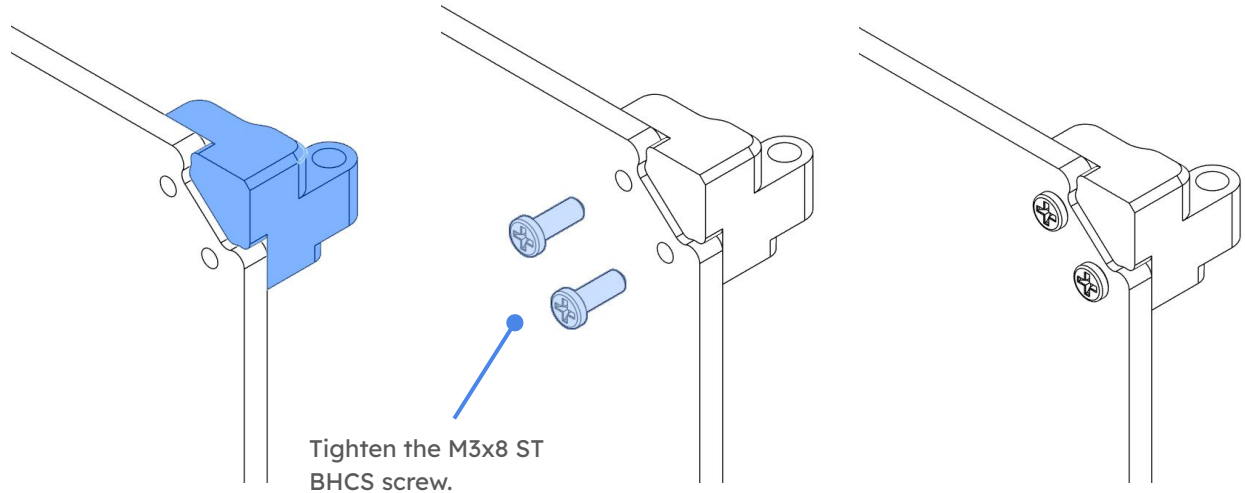
Now tighten the screw of the front stopper in order to secure it in place. Try to place it approximately halfway on the extrusion. Later on we will align it more carefully once the panels are installed.



FRONT PANELS

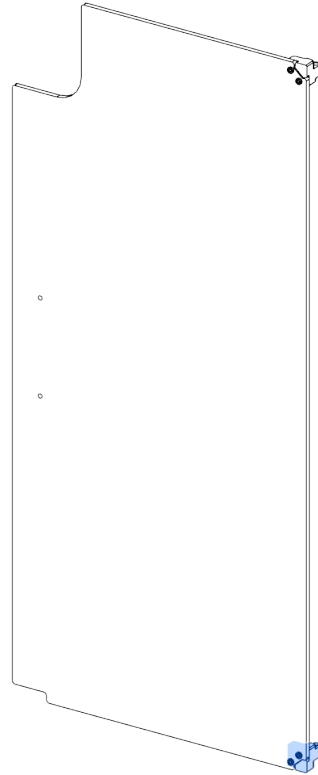


Place the Hinge part A on one of the two front panels as shown. -Please pay attention to it's direction.

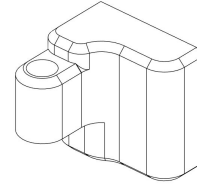


Tighten the M3x8 ST
BHCS screw.

FRONT PANELS

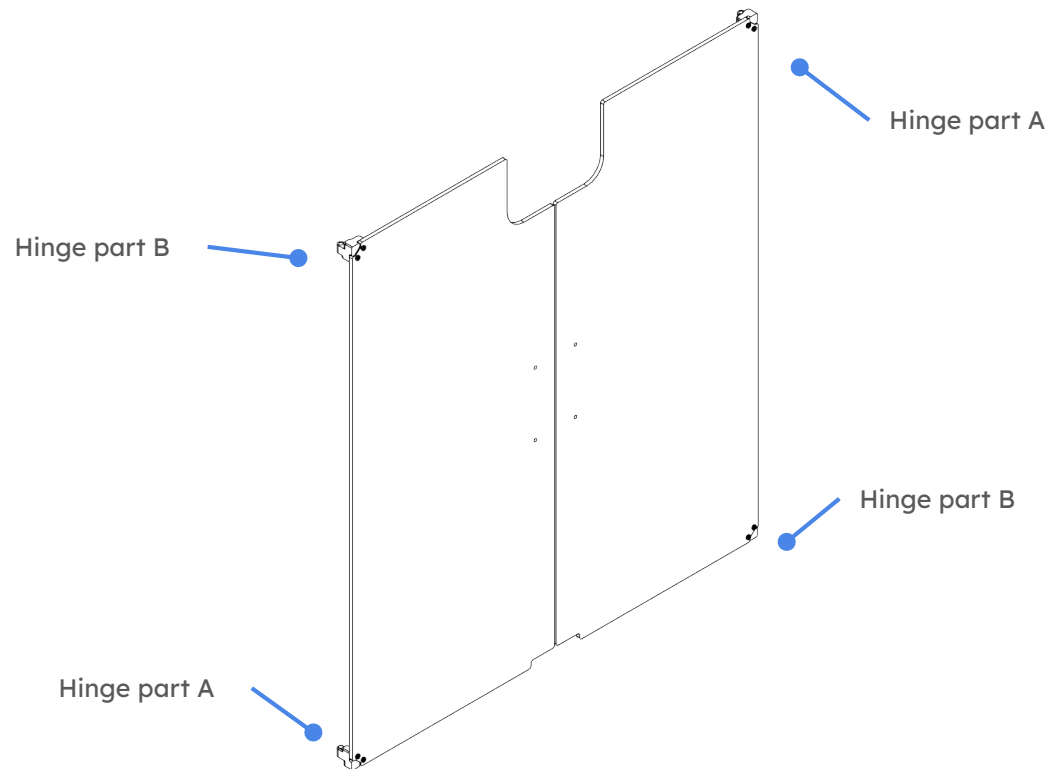


Repeat the step from the previous slide for the hinge part B.



Hinge part B

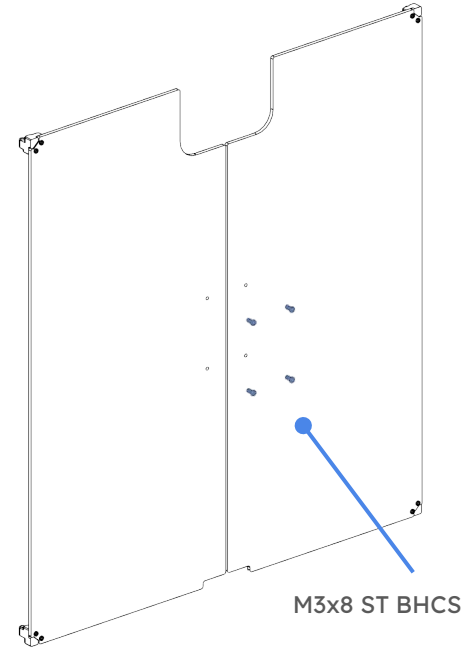
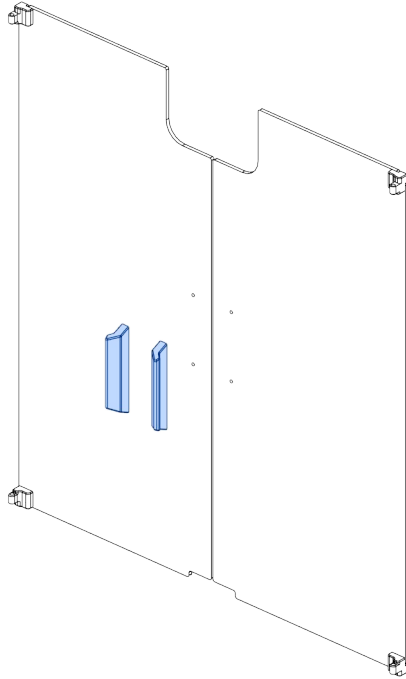
FRONT PANELS



Repeat the step from the previous slides on the remaining panel. So install hinge part A and hinge part B on the panel in the right.

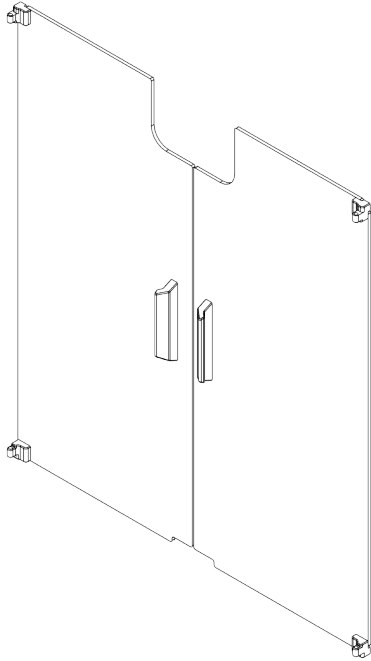
FRONT PANELS

Place the two front panel handles as shown and tighten them using four M3x8 ST BHCS



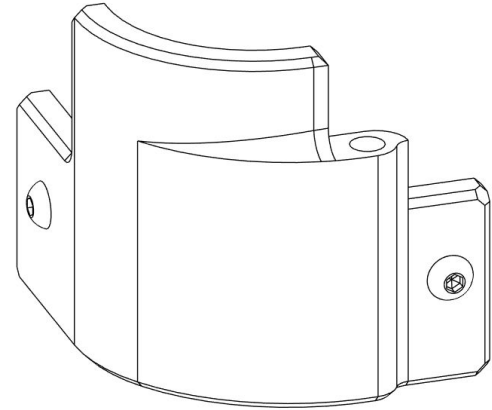
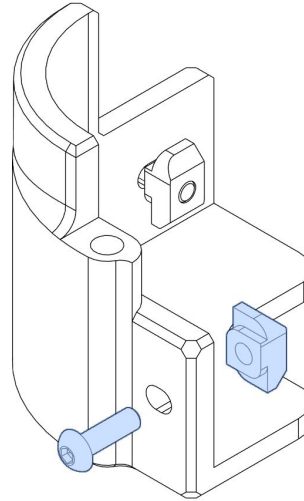
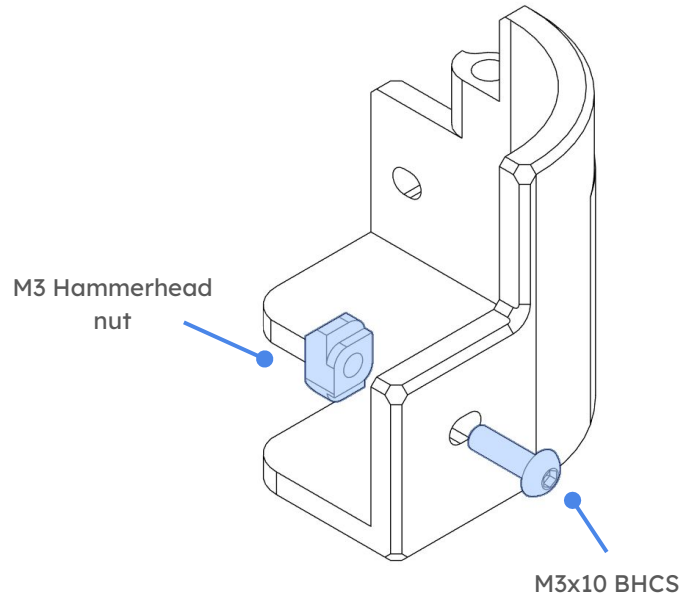
FRONT PANELS

Now we have to install the metal plates



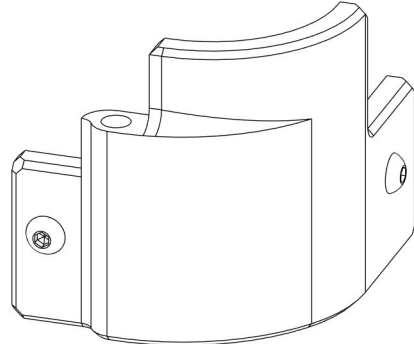
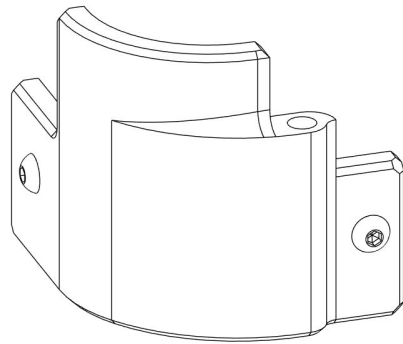
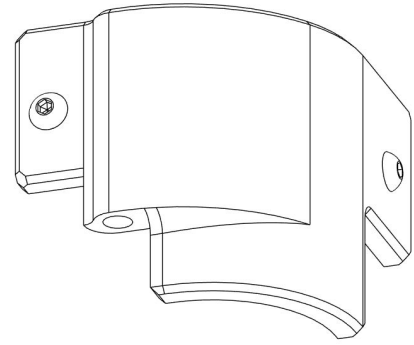
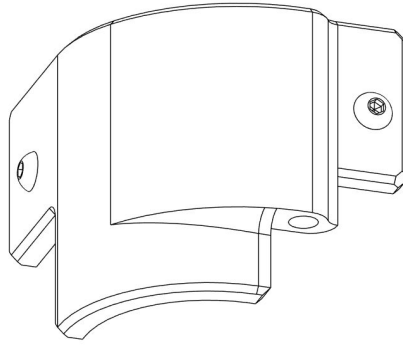
FRONT PANELS

Find the plastic piece shown (marked with A) and pre install M3x10 BHCS and M3 hammerhead nuts in the two holes as shown.

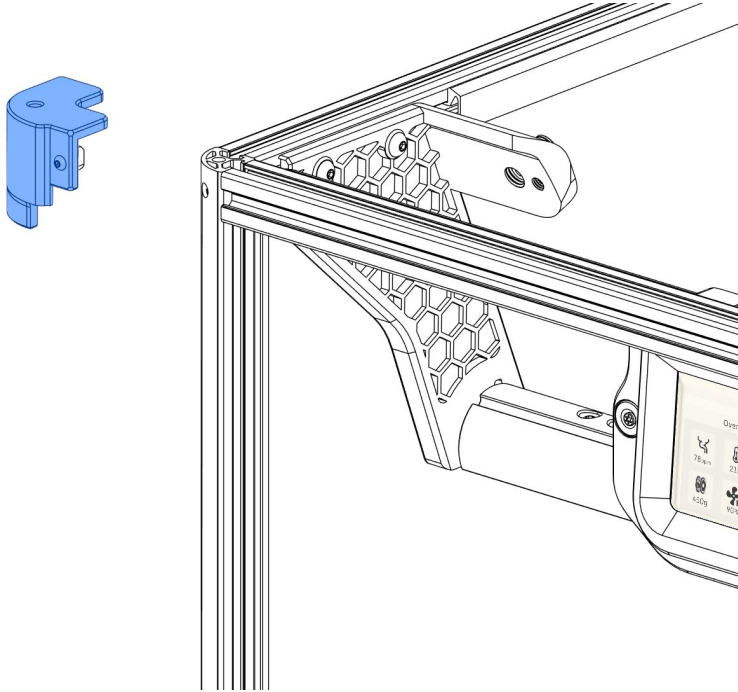


FRONT PANELS

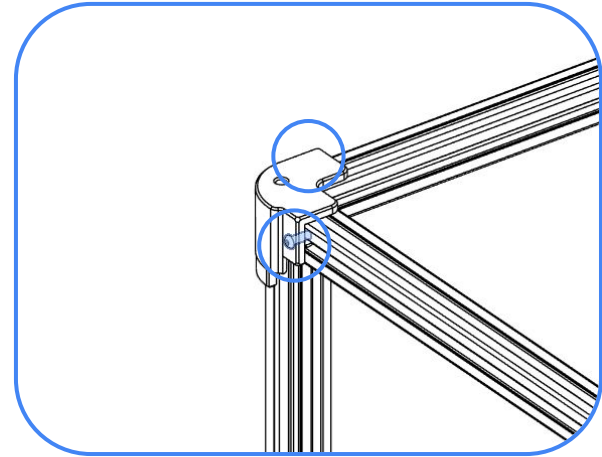
Now repeat the previous step for all of the remaining front panel holder printed parts, labeled A and B.



FRONT PANELS

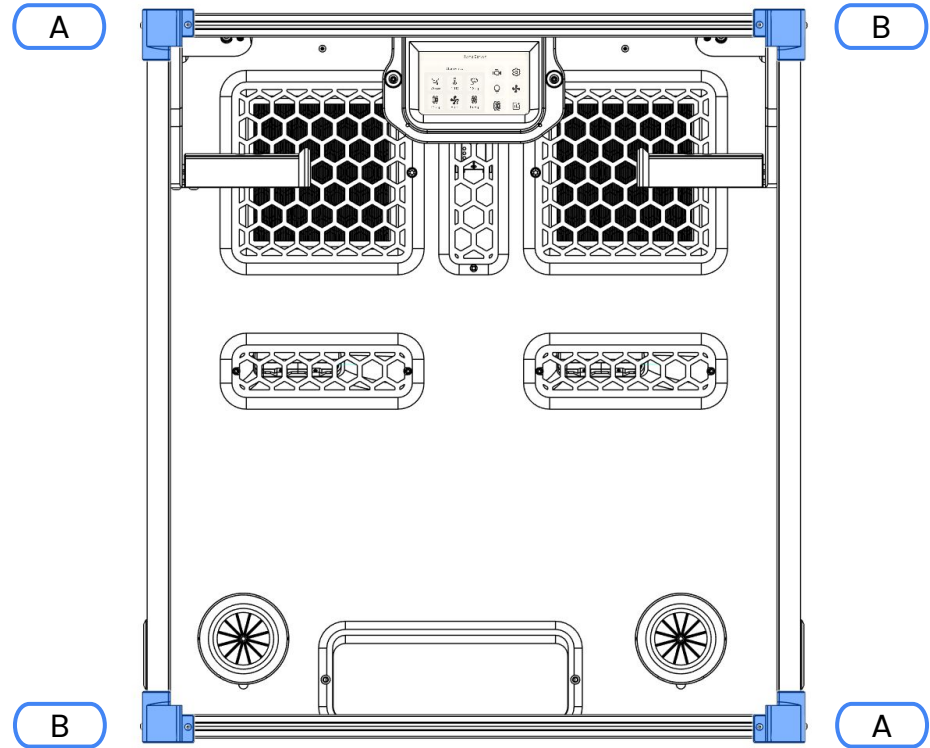


Tighten both M3x10 BHCS screws as shown.

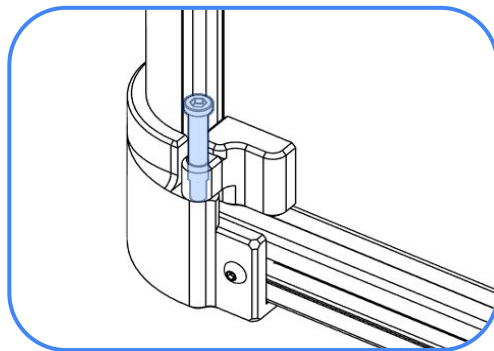
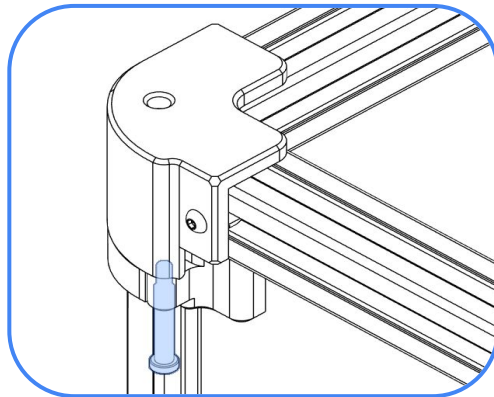
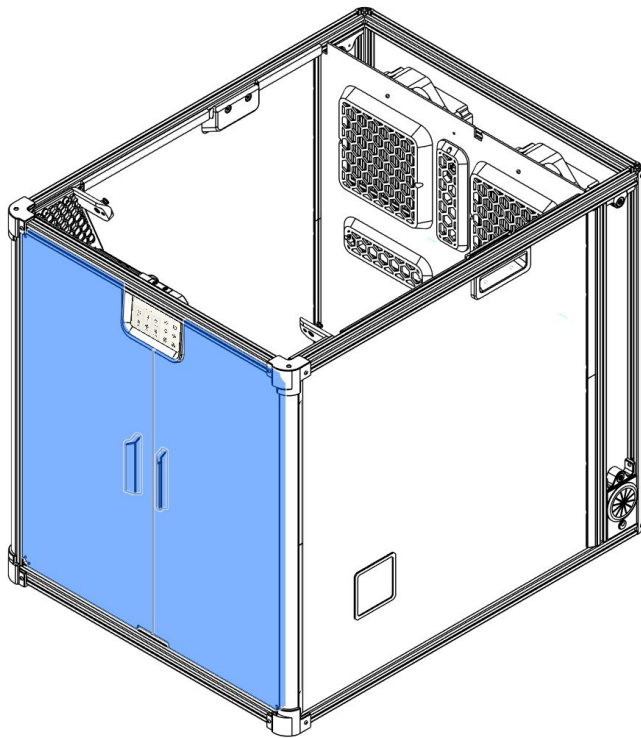


FRONT PANELS

Repeat the previous step for the remaining 3 front panel holders.



FRONT PANELS



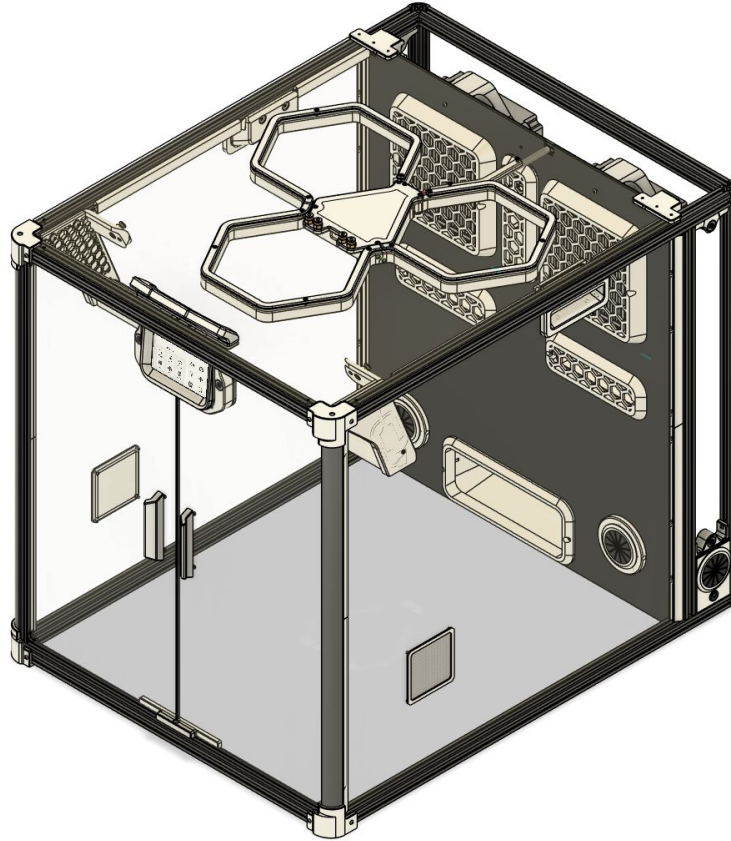
Now place one front panel at a time in its place as shown. Once it's in position, use the M3x20 SHSS screws to secure it in place. First push the bottom one into the holes on the hinge, then push the top one, and finally tighten both.

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Divider between sections



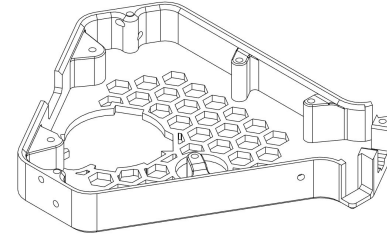
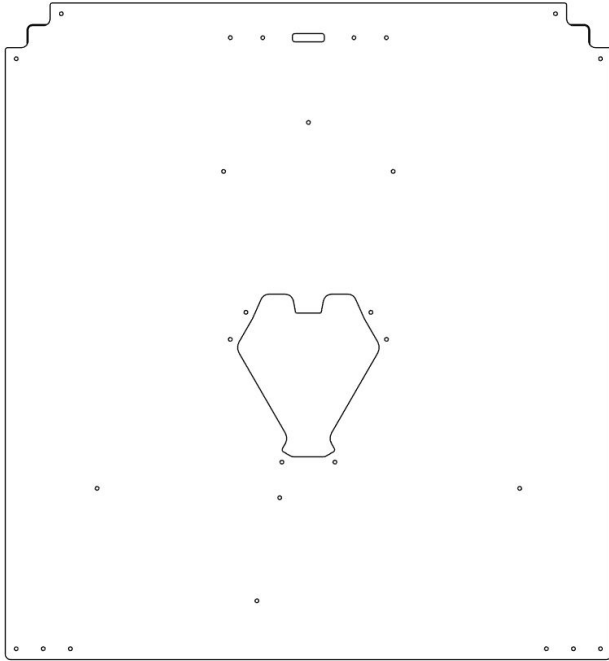
TOP PANEL

This step is for the top panel. Note that if you intend to mount the AMS on top of the enclosure you will not be able to open the top panel as the AMS mount prevents it from opening more than 20 degrees.

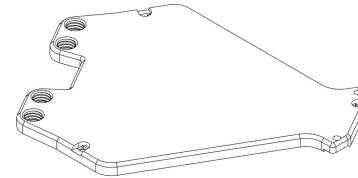


COMPONENTS

Top Panel

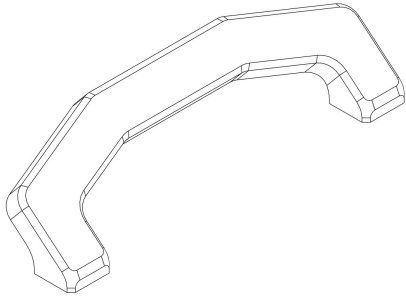


1 - Lighting Body

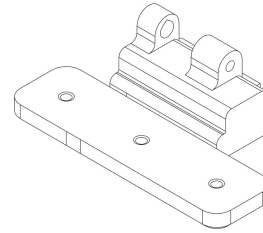


1 - Lighting Cover

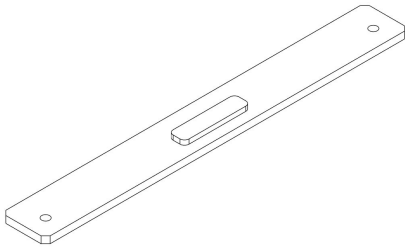
COMPONENTS



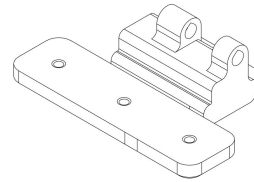
1 - Handle



1 - Top Joint A



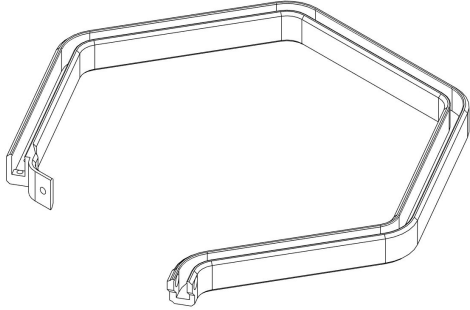
1 - Handle plate



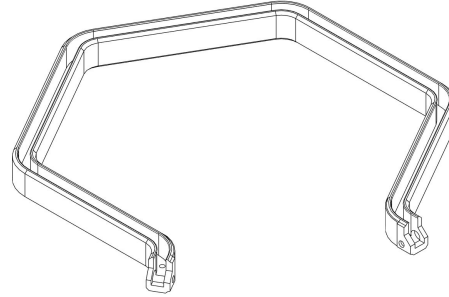
1 - Top Joint B



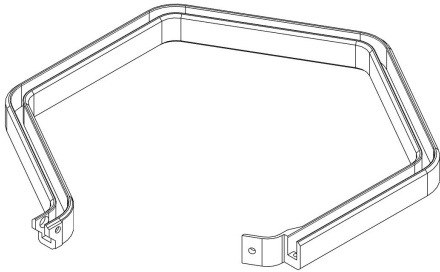
COMPONENTS



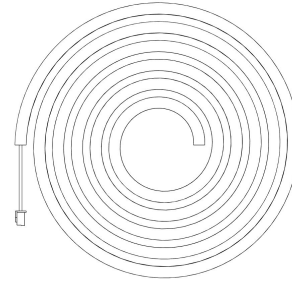
1 - Light L



1 - Light F



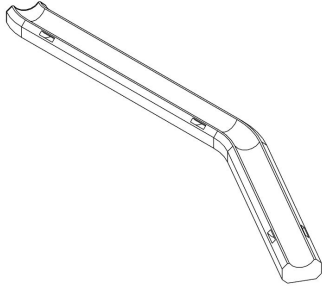
1 - Light R



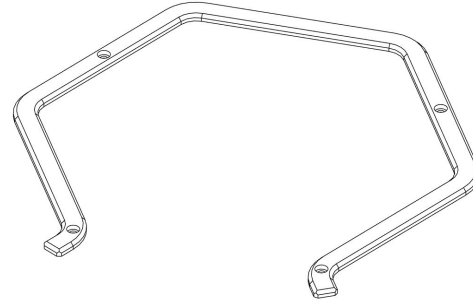
1 - RGB LED strip.



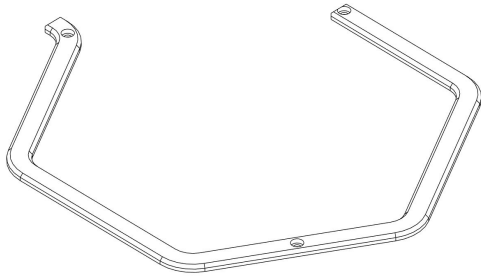
COMPONENTS



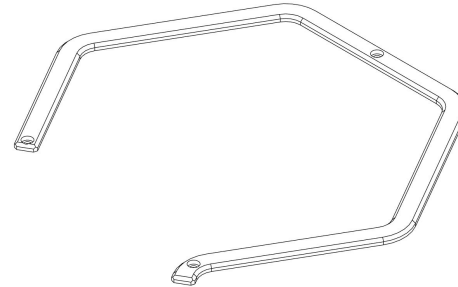
1 - Cable Fixture



1 - Light F Top

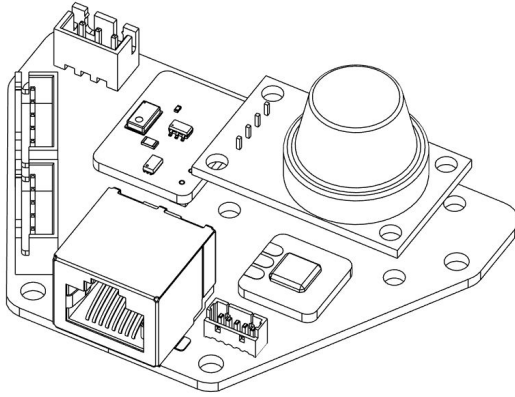


1 - Light R Top

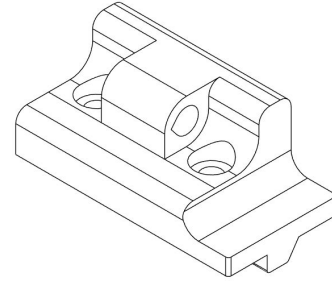


1- Light L Top

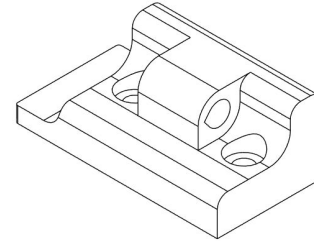
COMPONENTS



1 - SensorBoard

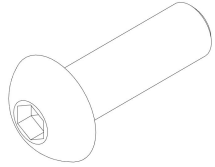


1 - Bottom Joint A

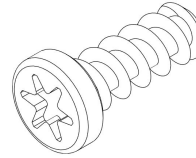


1 - Bottom Joint B

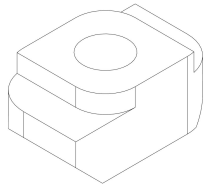
COMPONENTS



4 - M3x10 BHCS



35 - M3x8 ST BHCS

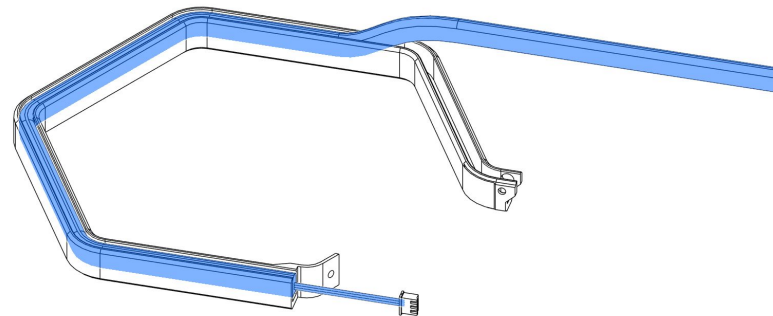
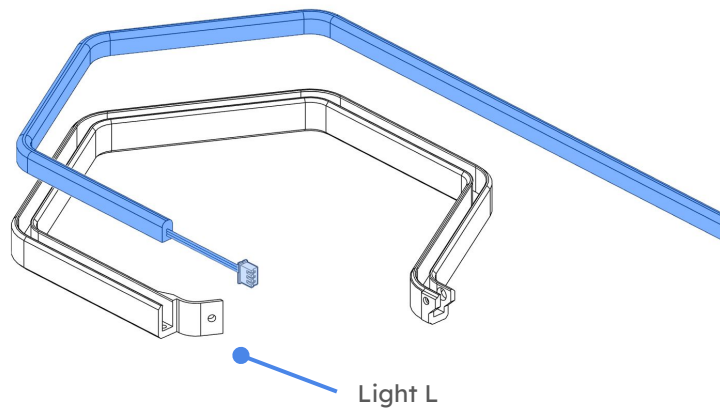


4 - M3 Hex Head
Nuts

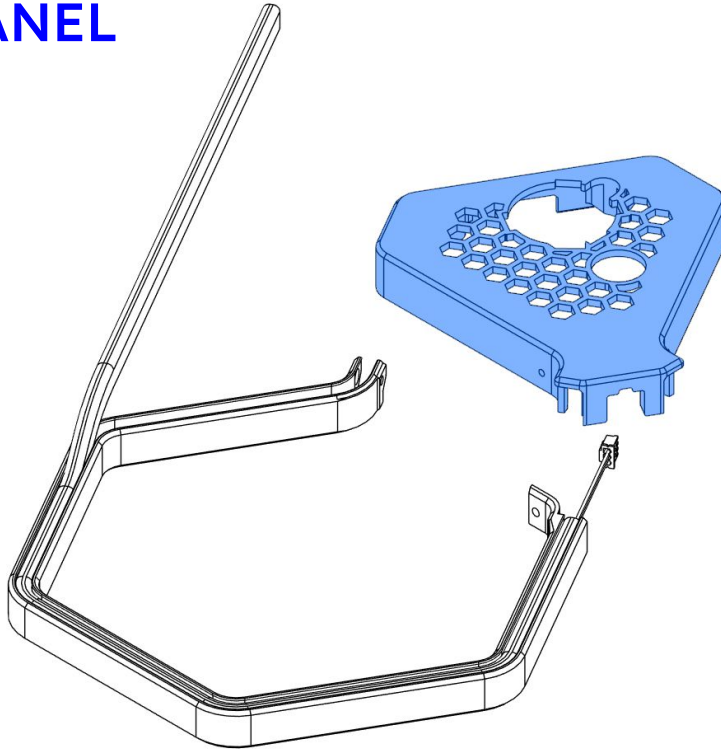


TOP PANEL

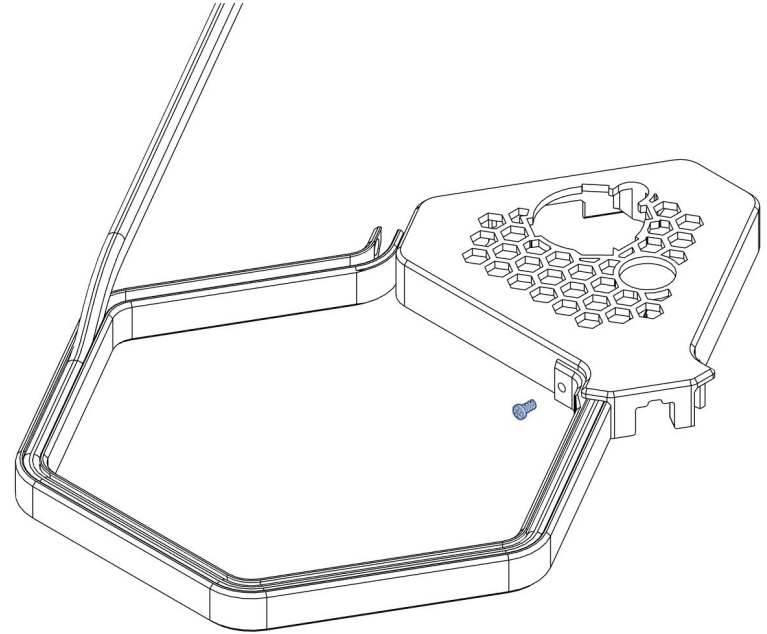
Insert the Led strip as shown, note that the flat part of the strip should be facing down. Don't insert it fully yet, stop where shown.



TOP PANEL

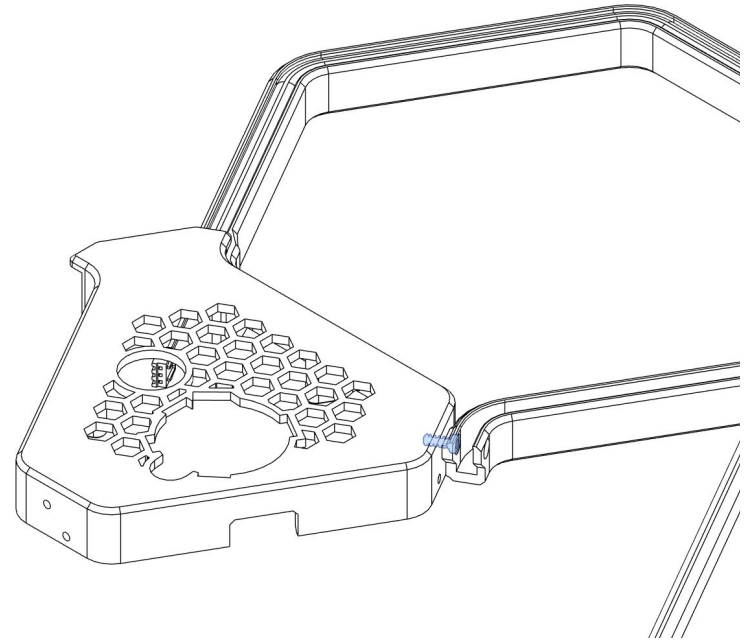
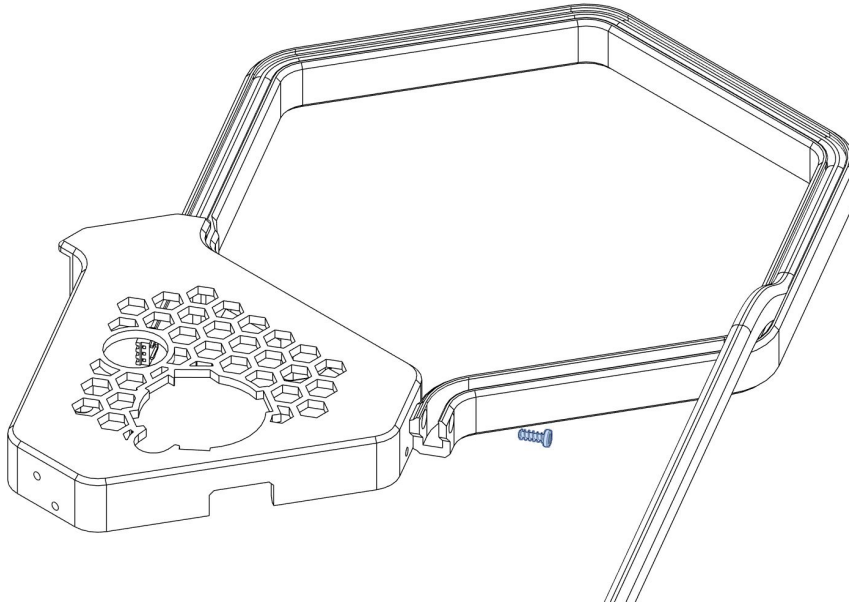


Insert the M3x8 ST BHCS screw as shown to secure the lighting body.



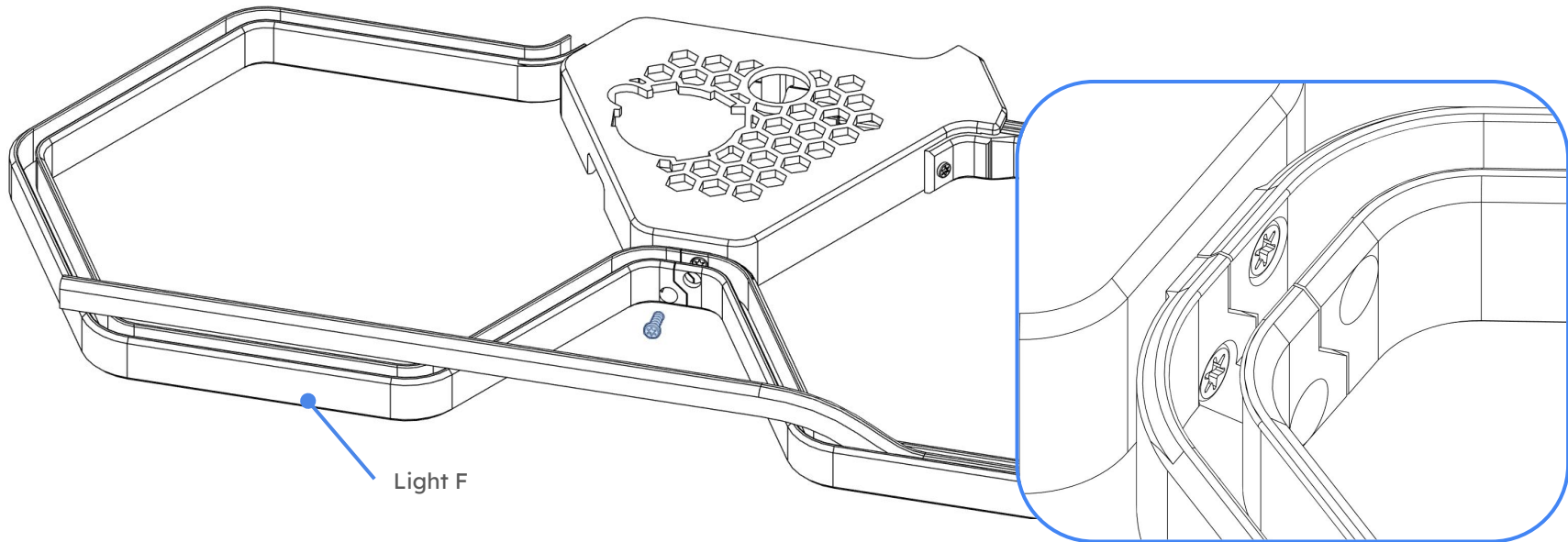
TOP PANEL

Insert the M3x8 ST BHCS screw as shown to secure the lighting body.



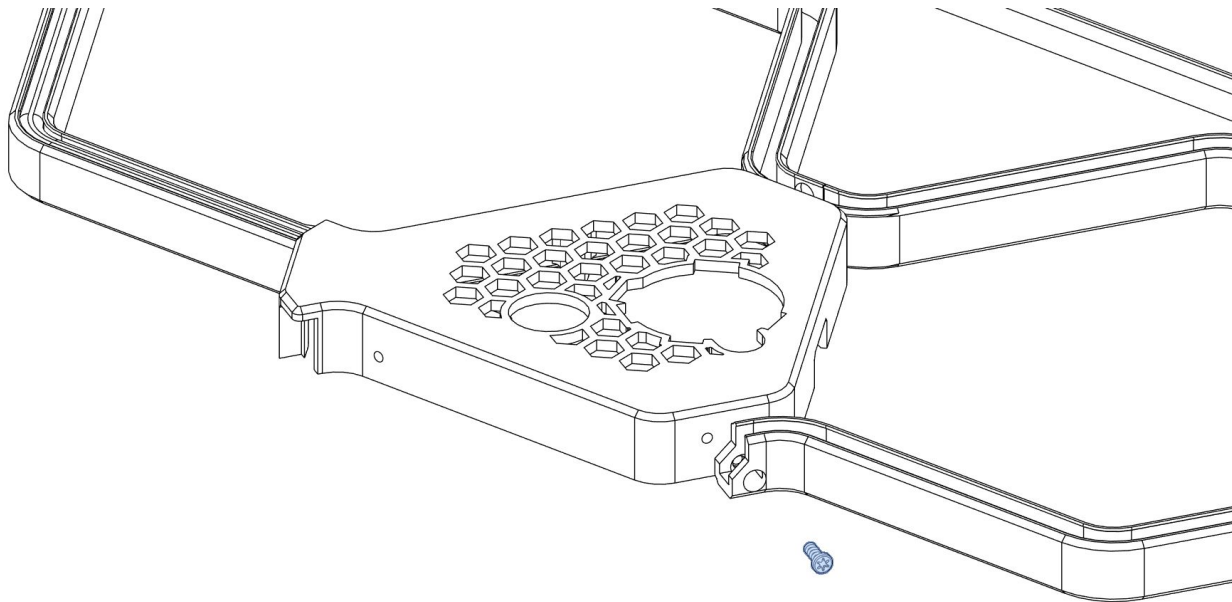
TOP PANEL

Place the light F piece as shown and then insert the M3x8 ST BHCS to secure the lighting body.



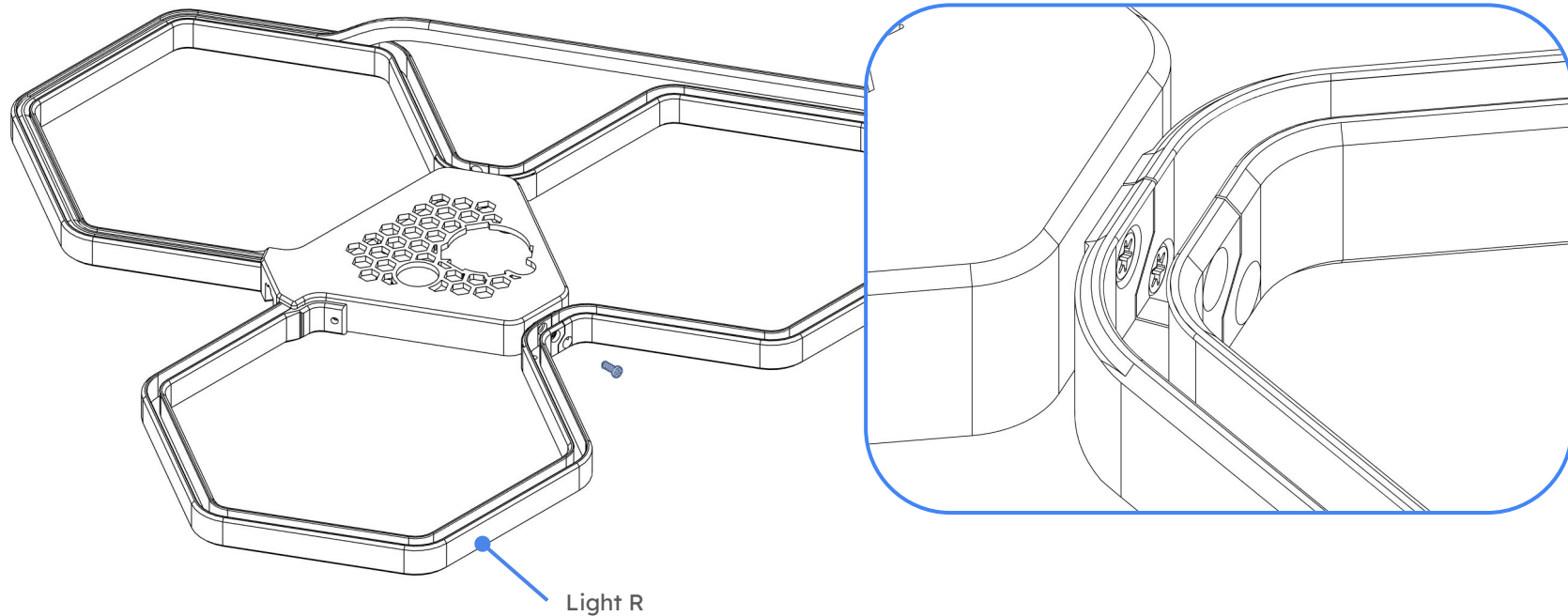
TOP PANEL

Insert the M3x8 ST BHCS screw as shown to secure the lighting body.



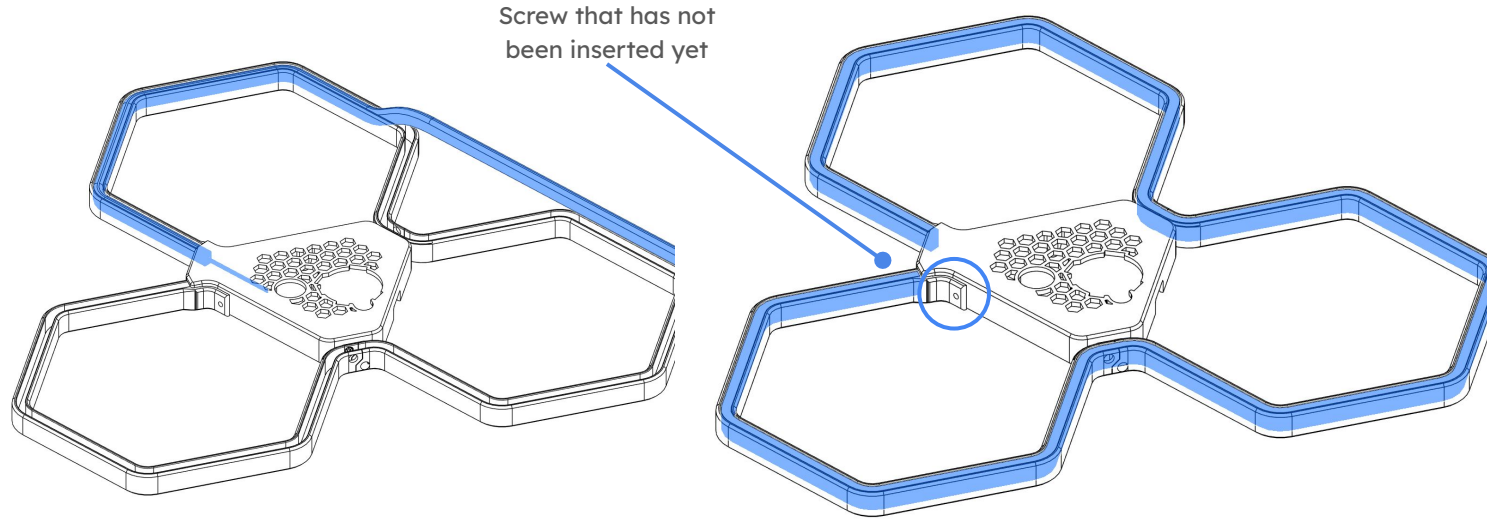
TOP PANEL

Now insert the light R body as shown and tighten it with one M3x8 ST BHCS screw.



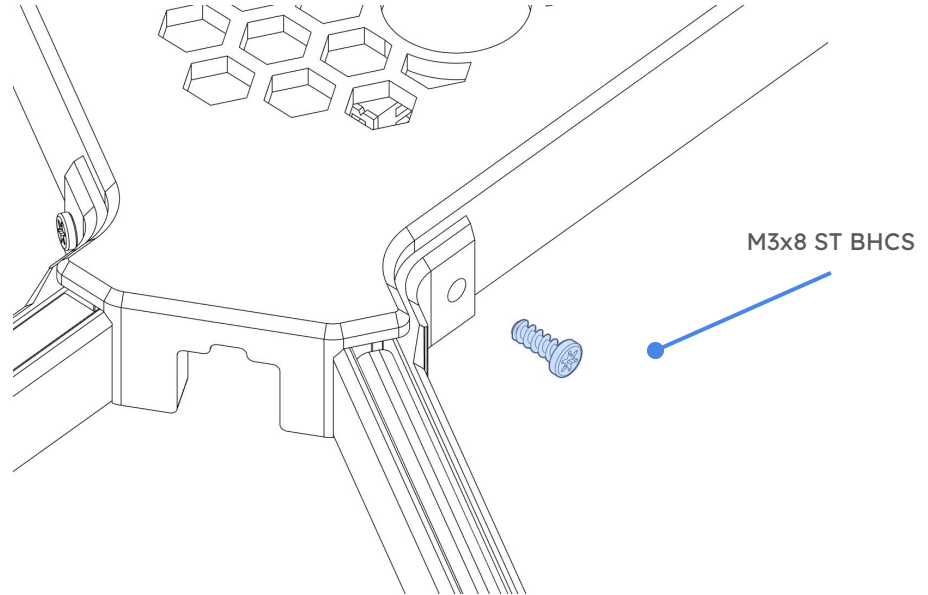
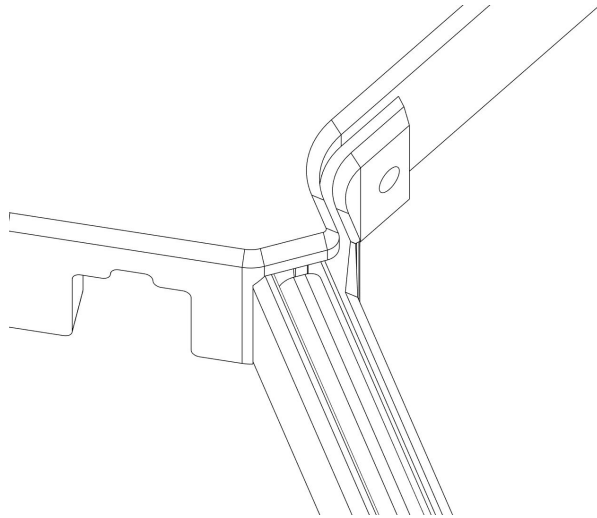
TOP PANEL

Now that we have secured almost all of the plastic pieces just insert the led in it's channel. Note that we have not secured the last hexagon so that you can more easily insert the led into the final channel in the case that the length is slightly too long.



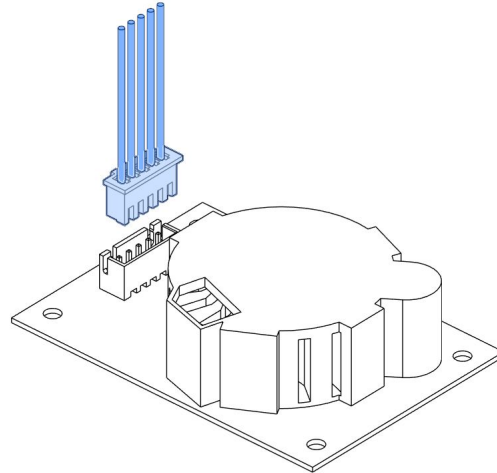
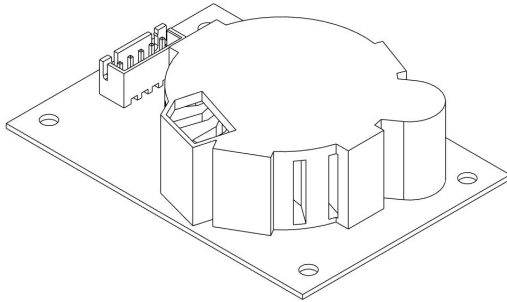
TOP PANEL

Now that the led is inserted, get the last M3x8 ST BHCS screw in tighten it as shown.



ELECTRONICS PREP

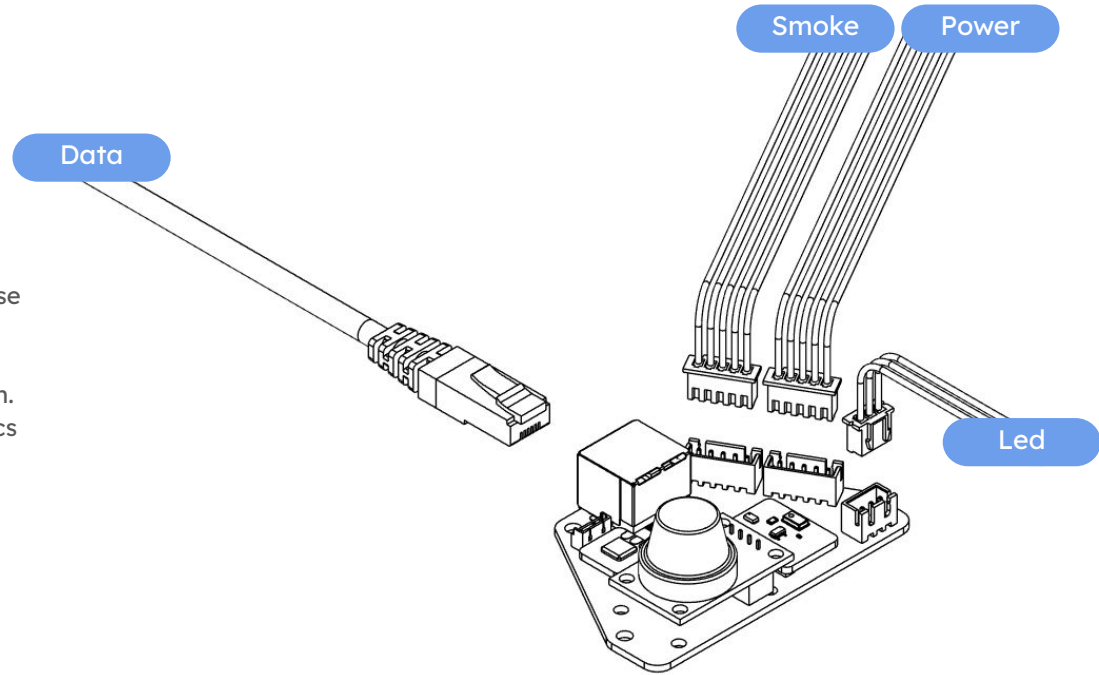
Insert the 5 pin cable for the smoke sensor in it's connector as shown.



TOP PANEL

Get the sensorboard pcb, bring it close to the plastic part we just assembled and connect the led, smoke sensor, power cable and data cable as shown.

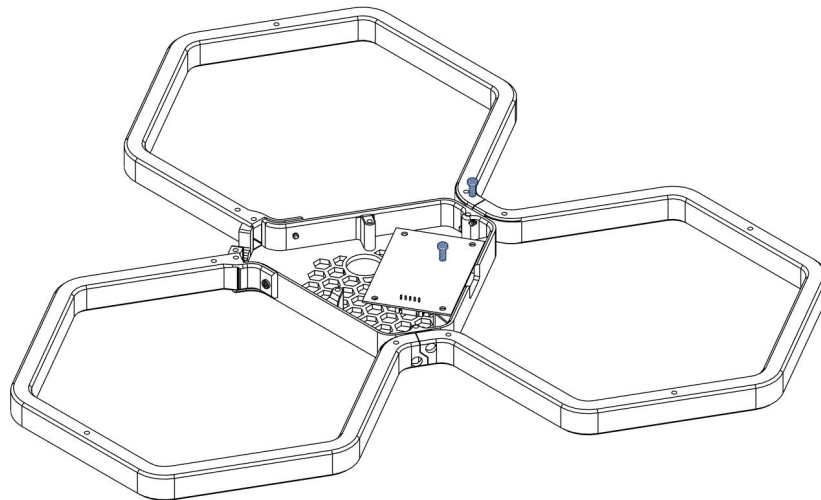
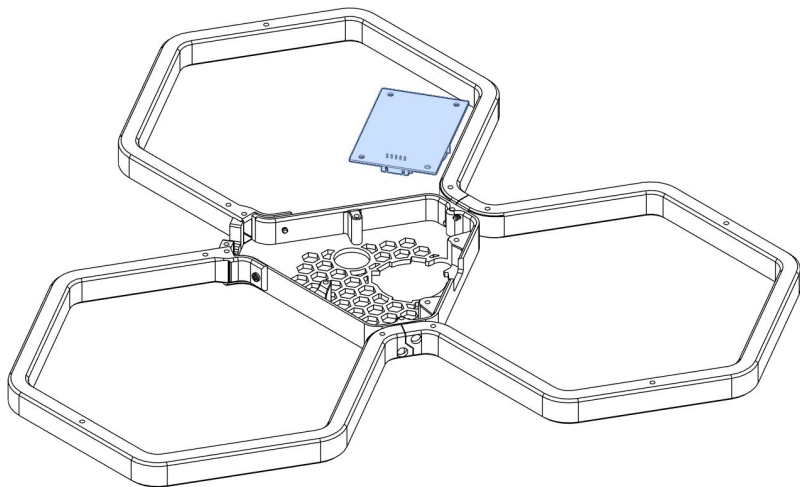
NOTE: the power cable characteristics are shown below:



TOP PANEL

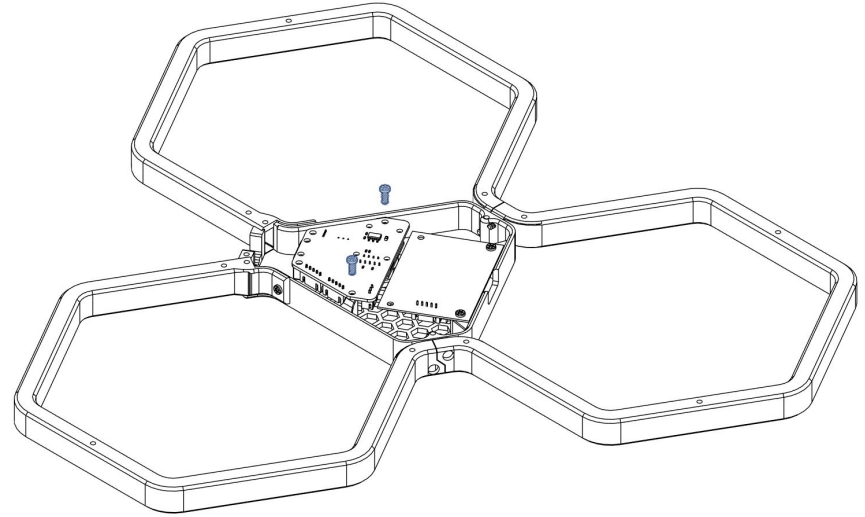
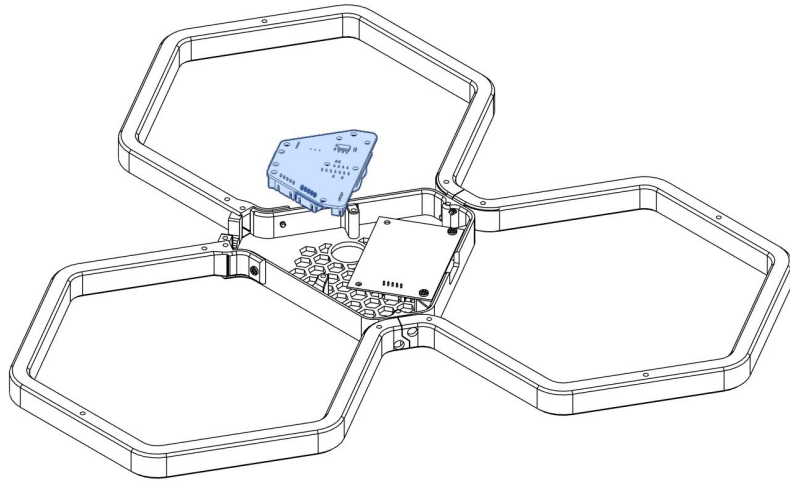
Insert the smoke sensor as shown and screw it in with two M3x8 ST BHCS.

NOTE: in this pictures the sensorboard is not shown but the smoke sensor is still attached to it.



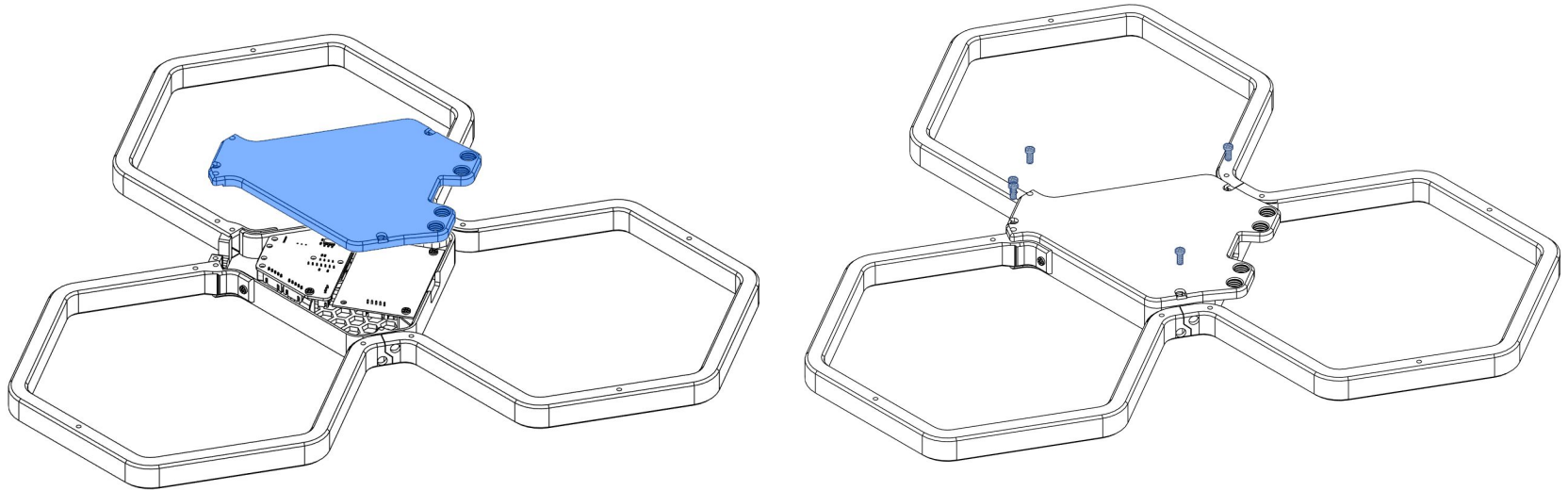
TOP PANEL

Now also fix the sensoboard in place by tightening in the two M3x8 ST BHCS shown.

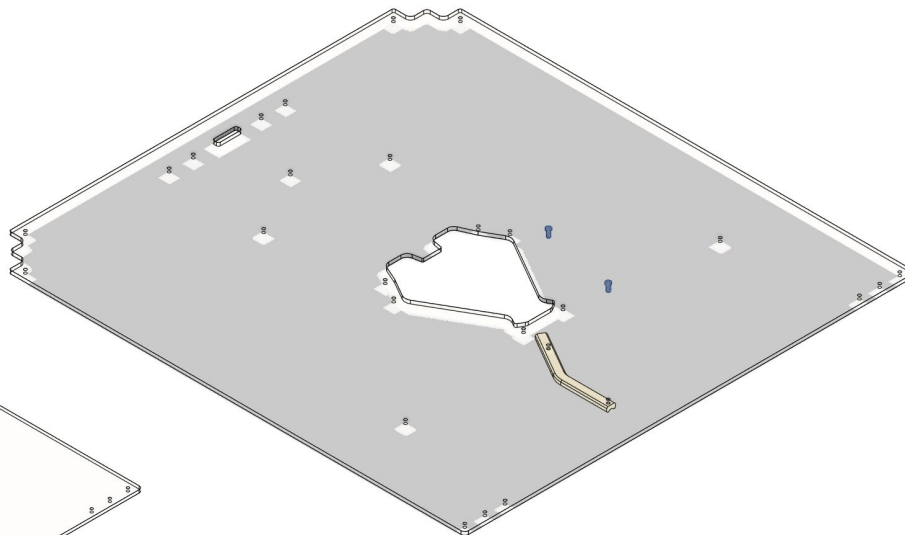
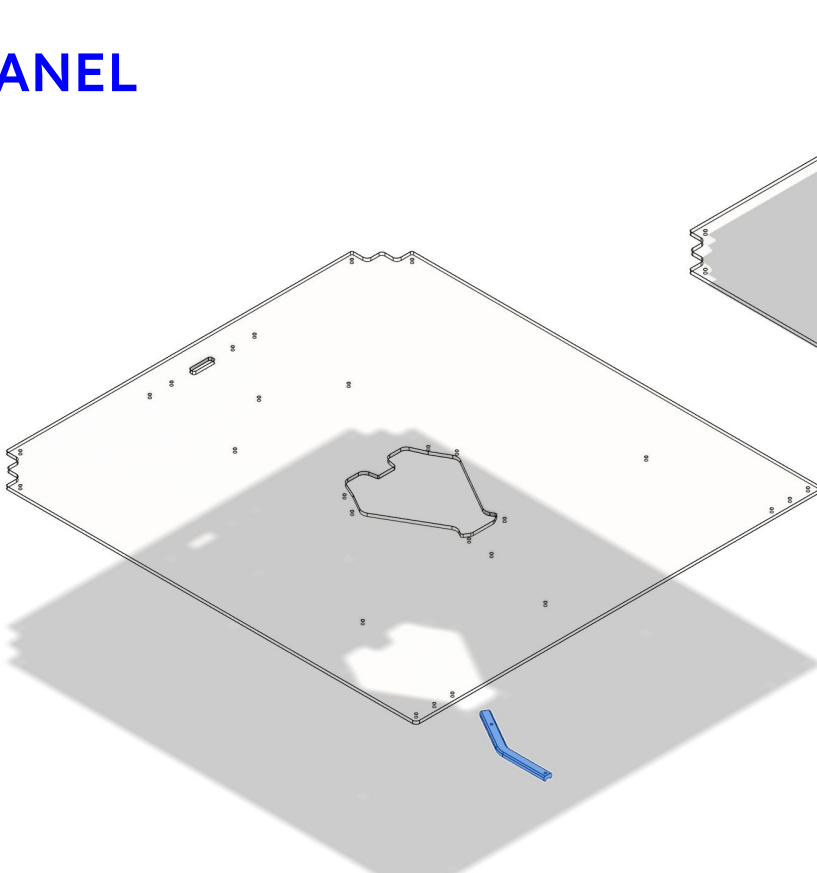


TOP PANEL

Now just close the lid using the 5 M3x8
ST BHCS screws shown.



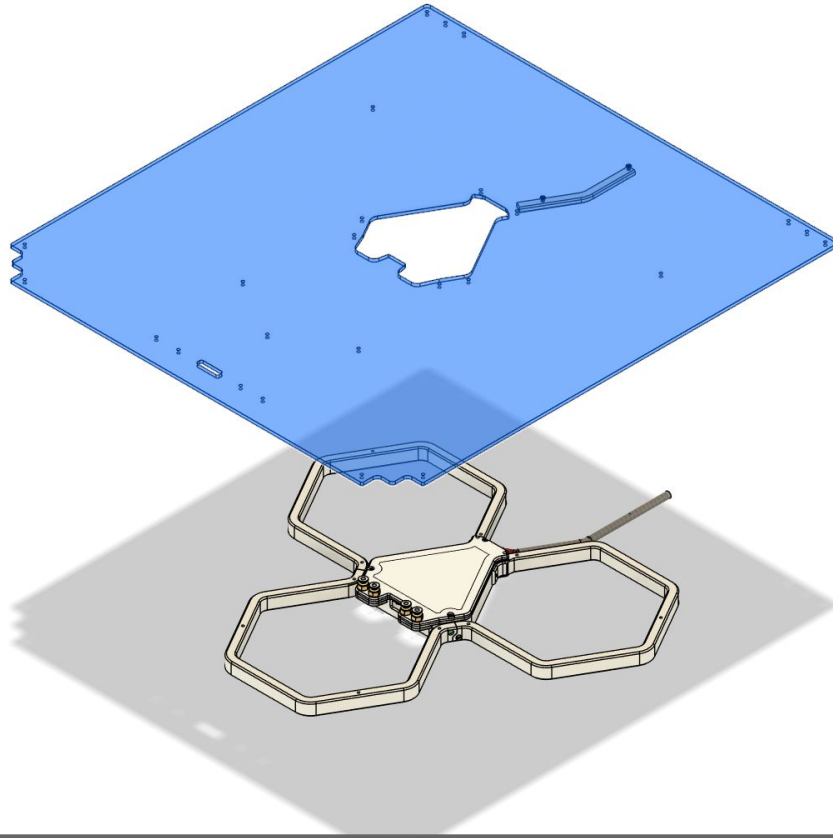
TOP PANEL



Insert the two M3x8 ST BHCS screws as shown and use them to tighten the cable guide. **NOTE:** pay close attention to the direction of the panel, the cable guide should be offset to the left as shown in this view from the centerline of the panel

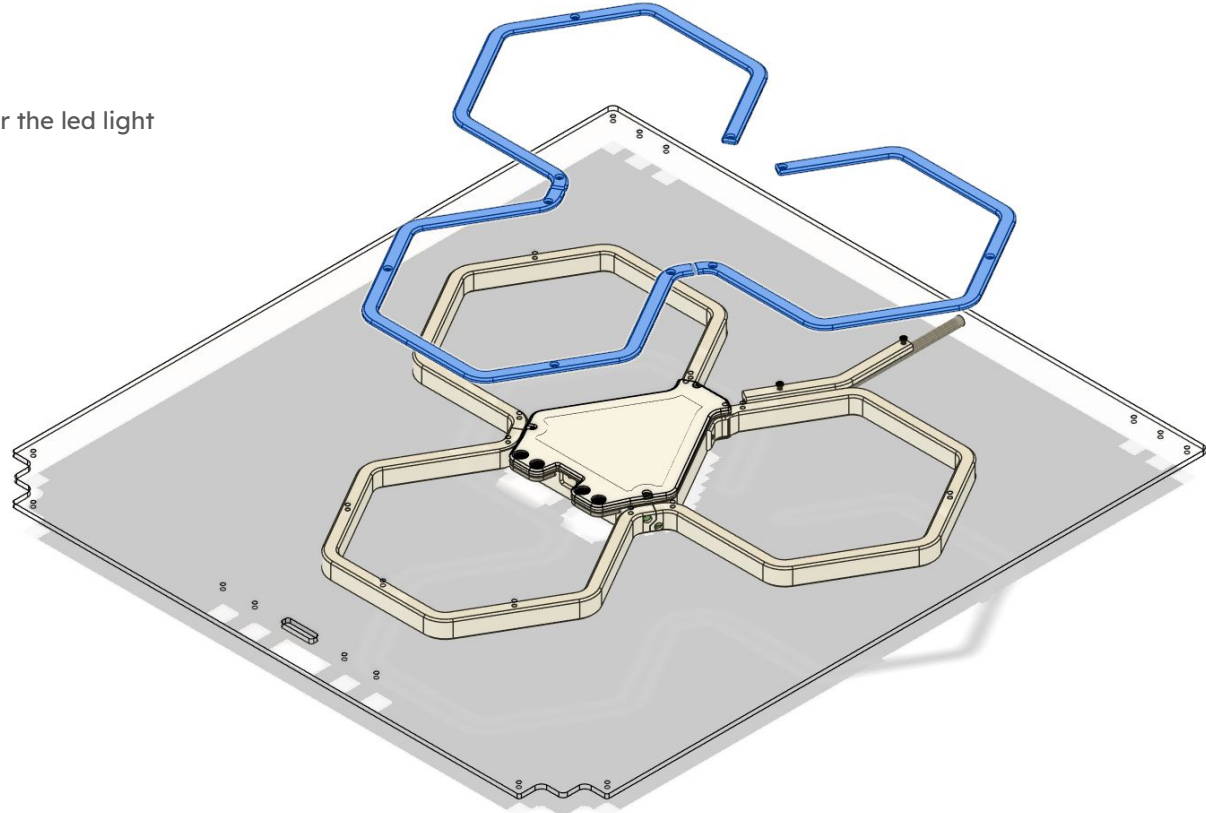
TOP PANEL

Now get the led assembly and place the top panel on top it.



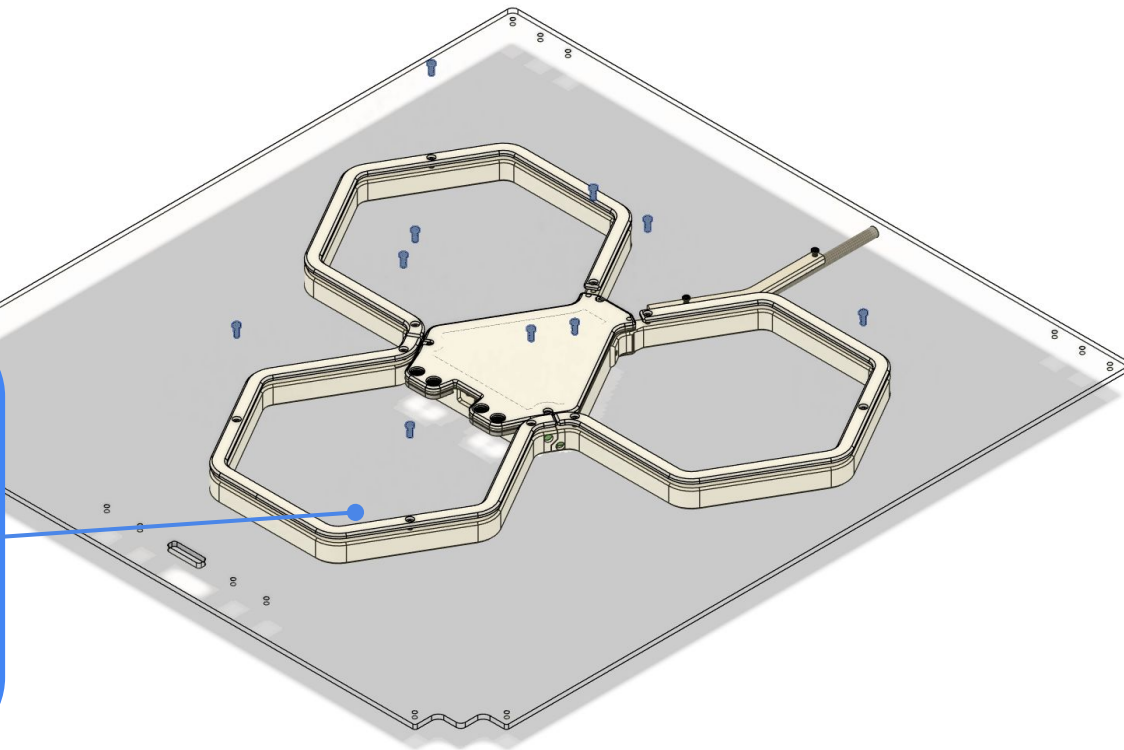
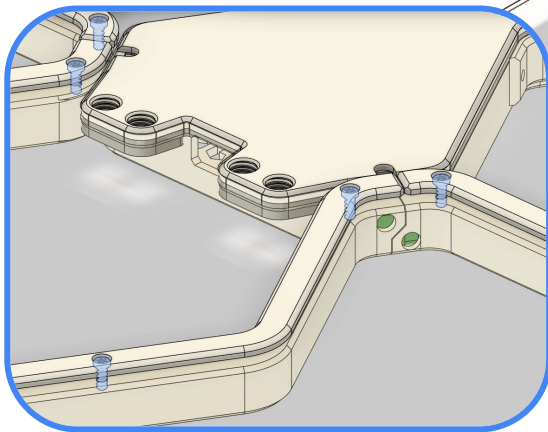
TOP PANEL

Now insert the top parts for the led light assembly as shown.



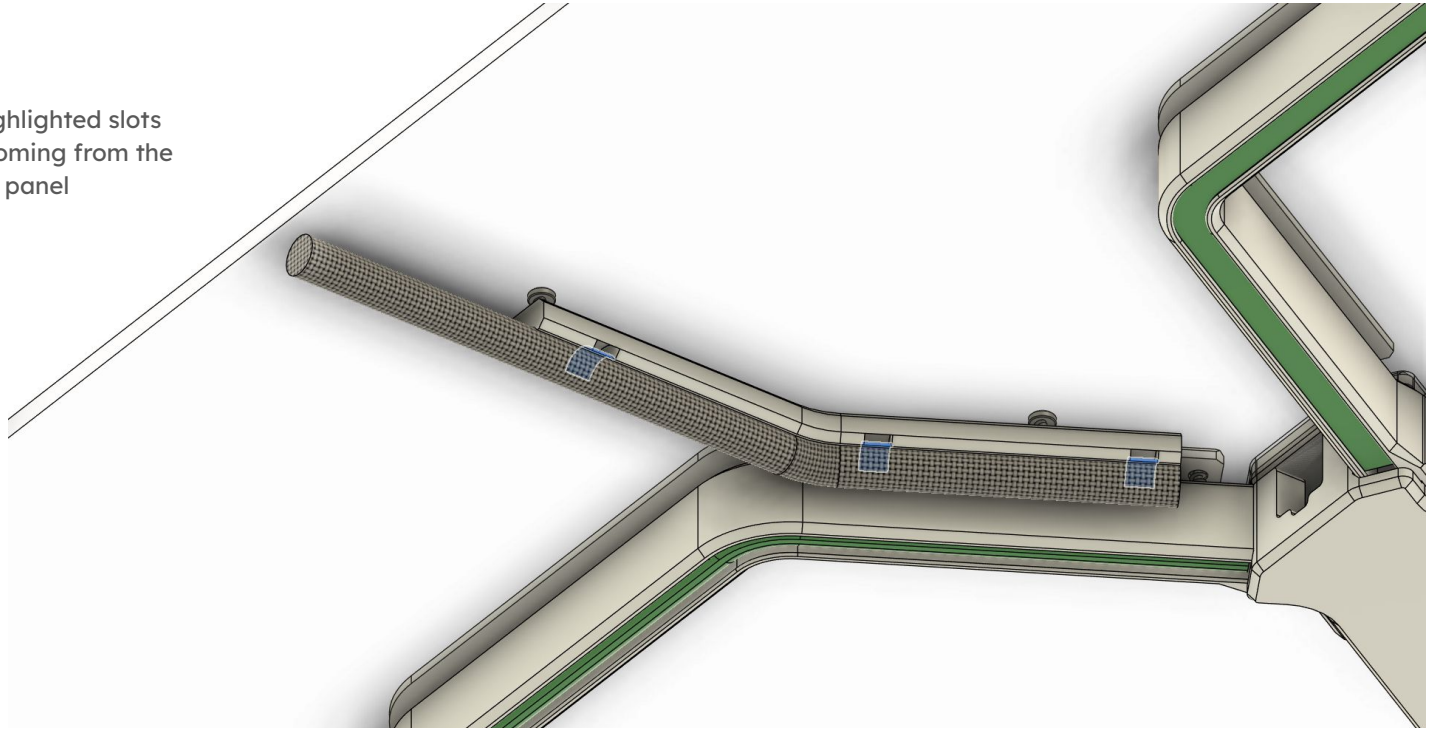
TOP PANEL

Now get 10 M3x8 ST BHCS screws and use them to secure the top light parts with the top panle and the bottom light assembly. The detail view below shows you how it would look like after tightening the screws.



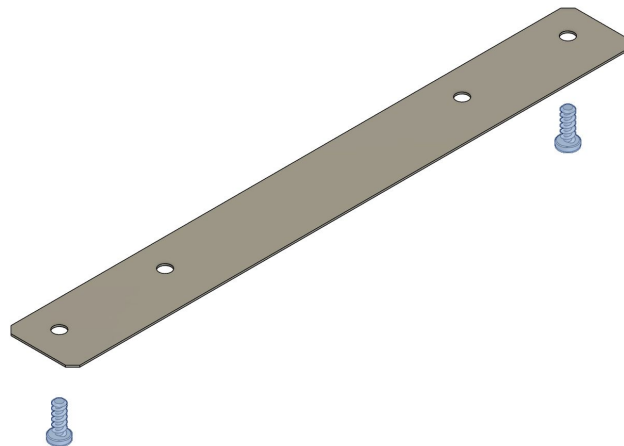
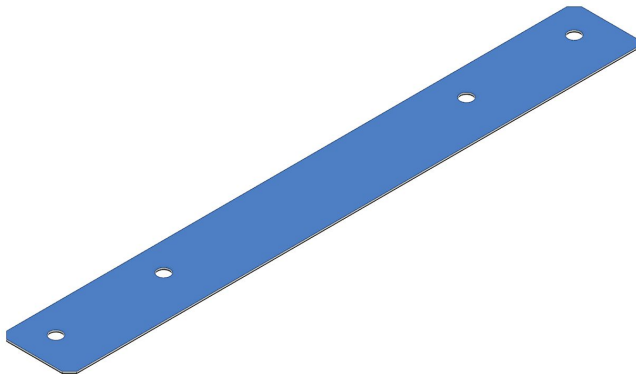
TOP PANEL

Insert zip ties in the highlighted slots
and secure the cable coming from the
sensorboard to the top panel



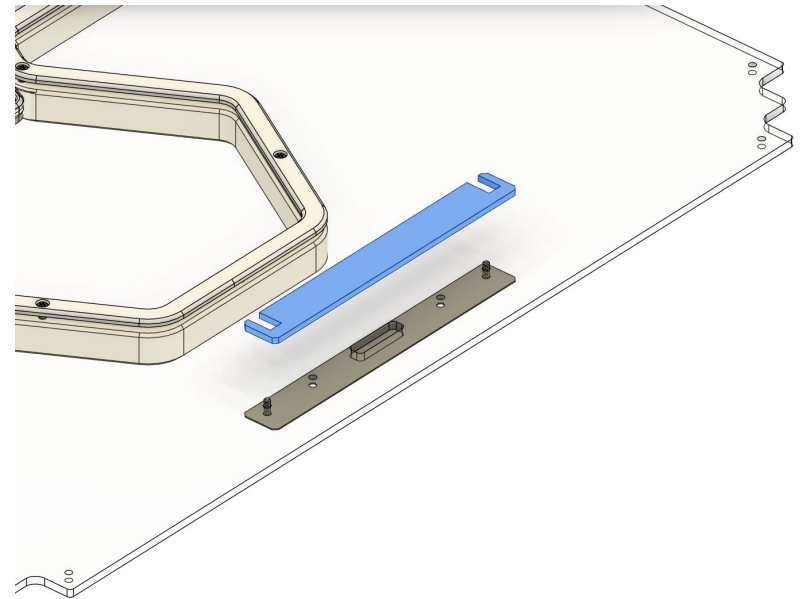
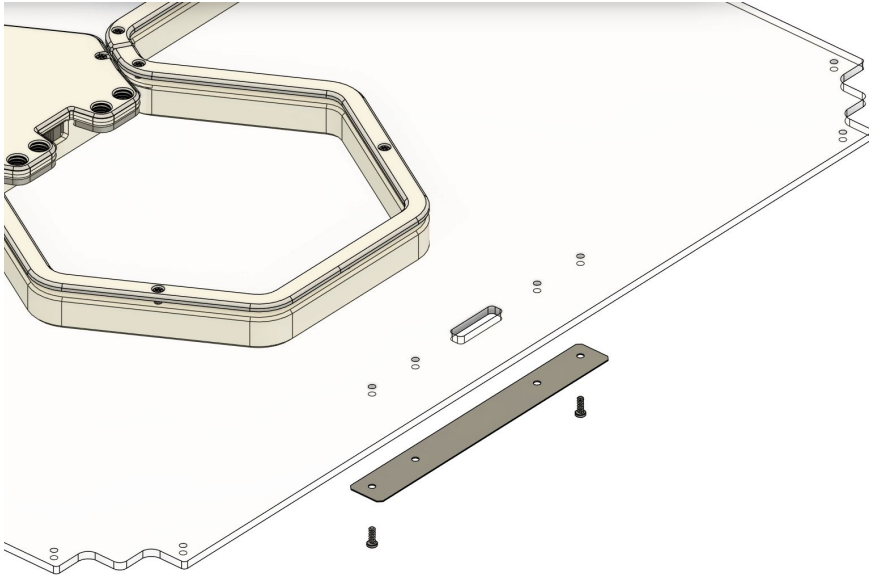
TOP PANEL

Remove the adhesive protective peel from the metal piece shown. (The peel is indicated by the blue face). Then get 2 M3x8 ST BHCS screws and place them in the outer holes. We will use them to position the metal plate in the next step



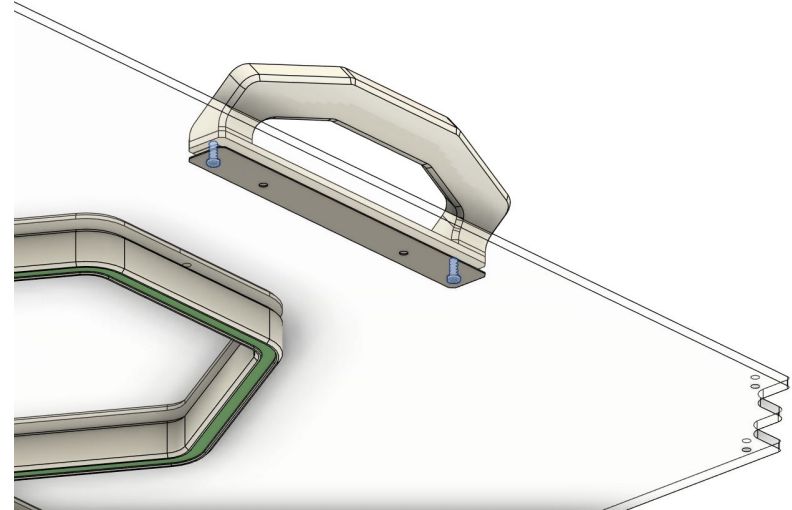
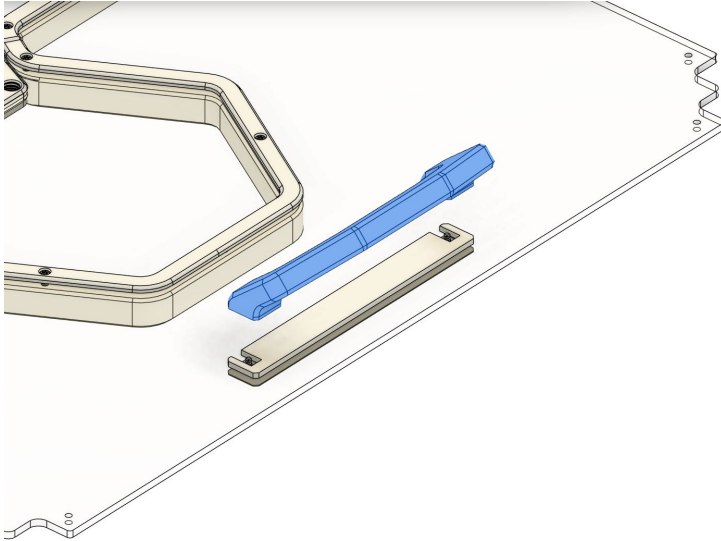
TOP PANEL

By placing the screws into the metal plate and then into the acrylic panel position the metal plate and then make sure that it's fully adhered to the acrylic. Once that is done get the plastic part shown and place it on top of the screws.



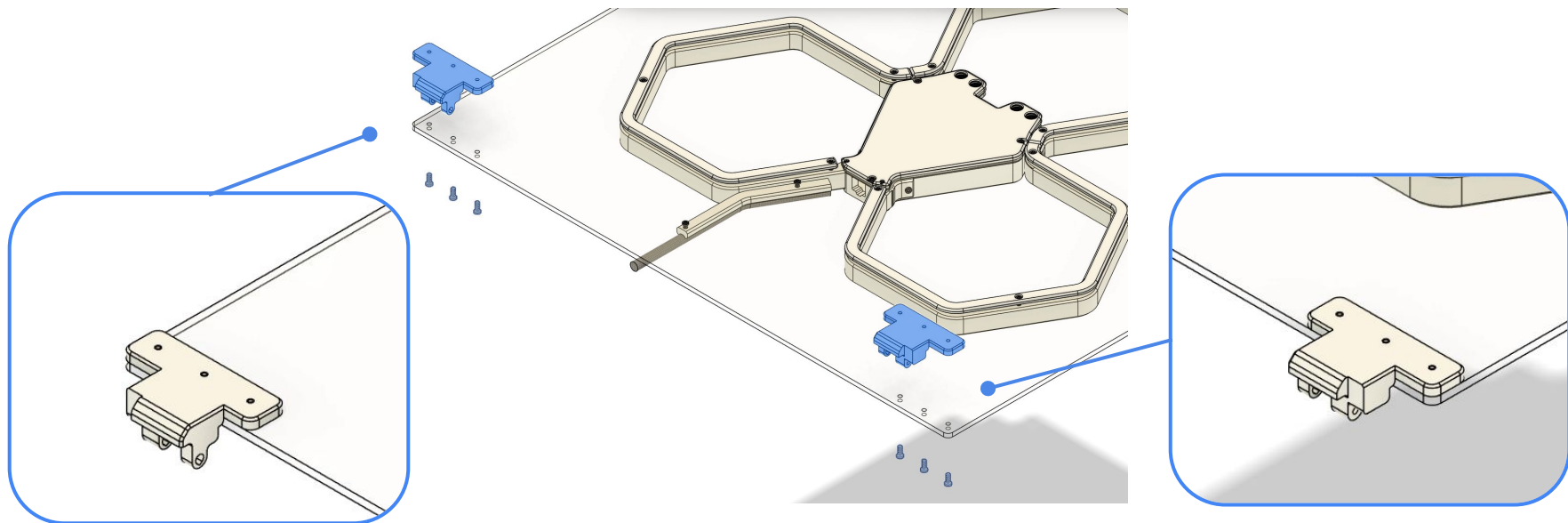
TOP PANEL

Now place the handle as shown and tighten it using the same M3x8 ST BHCS that we used to align the metal plate

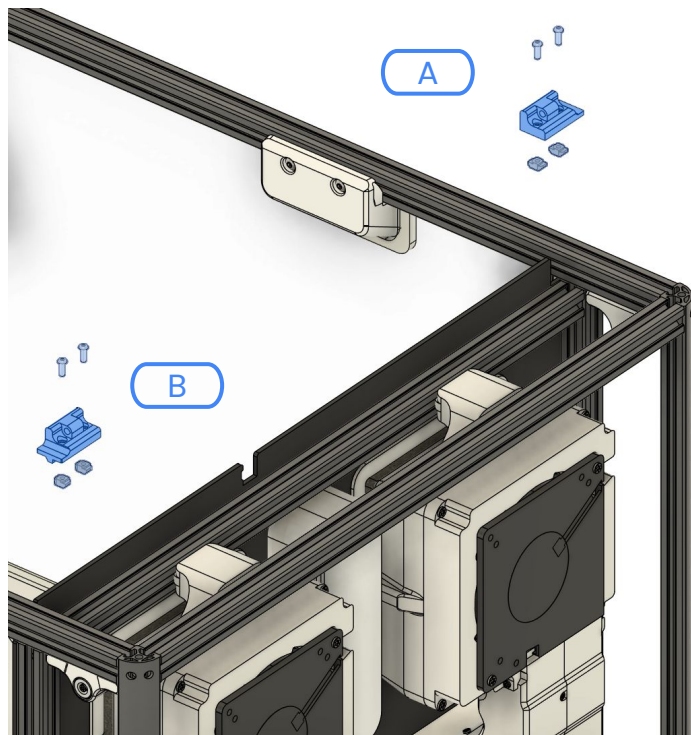


TOP PANEL

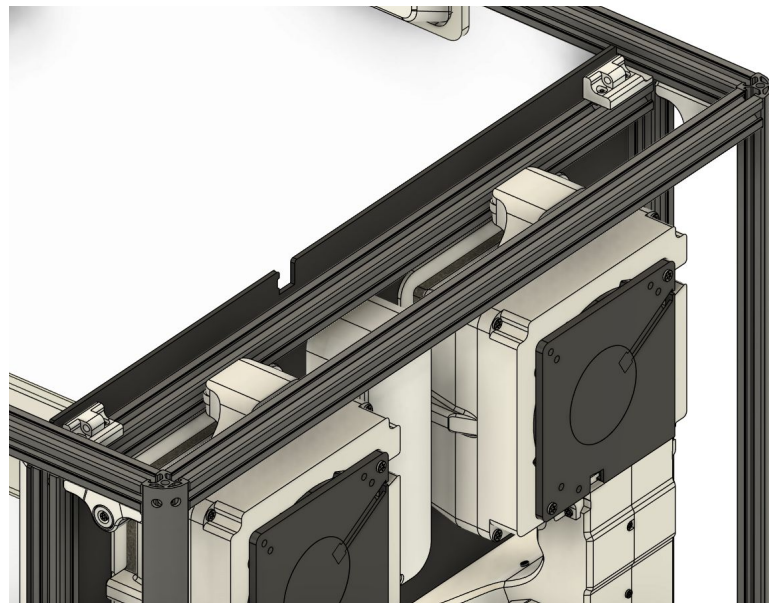
Place the two top panel hinges as shown. Then screw them in from the bottom of the acrylic panel with 3 M3x8 ST BHCS screws each. **NOTE:** the A/B markings should correspond to the pictures



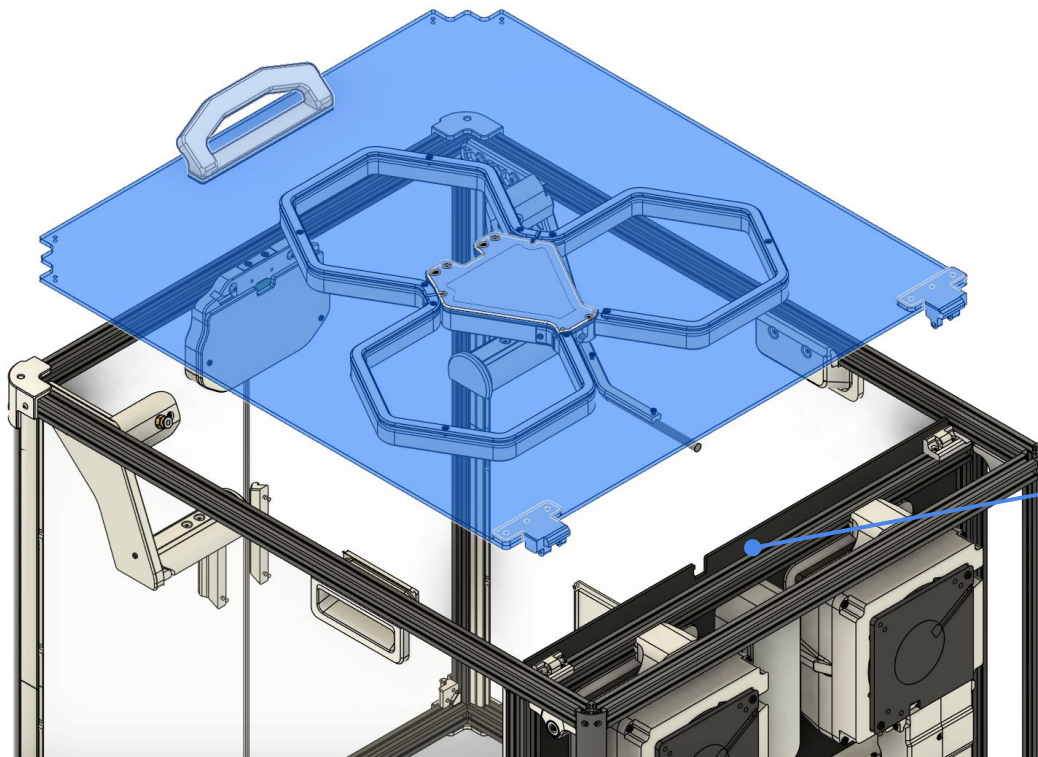
TOP PANEL



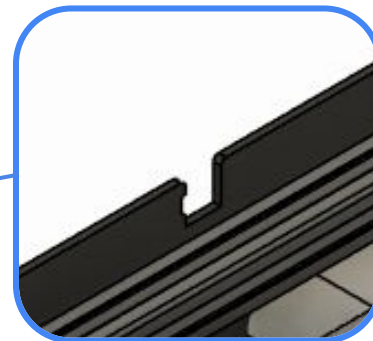
Now tighten the other part of the back panel hinges on the frame. Pay attention to place the correct version on each side. (A/B markings)



TOP PANEL

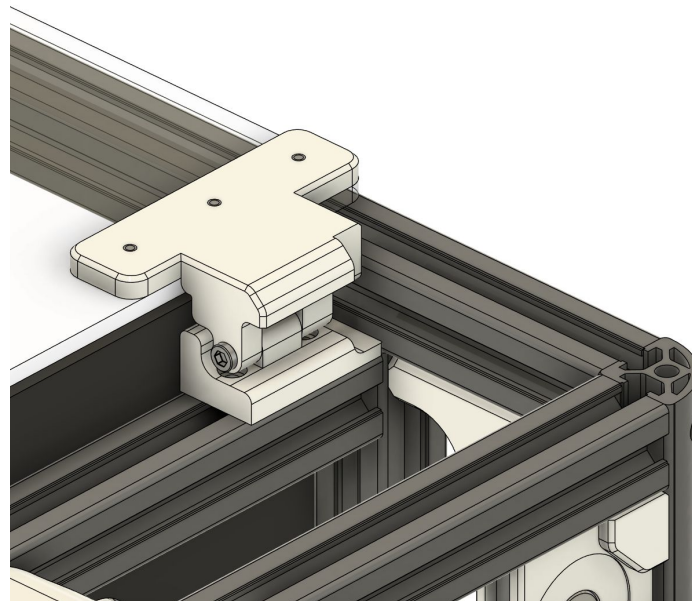
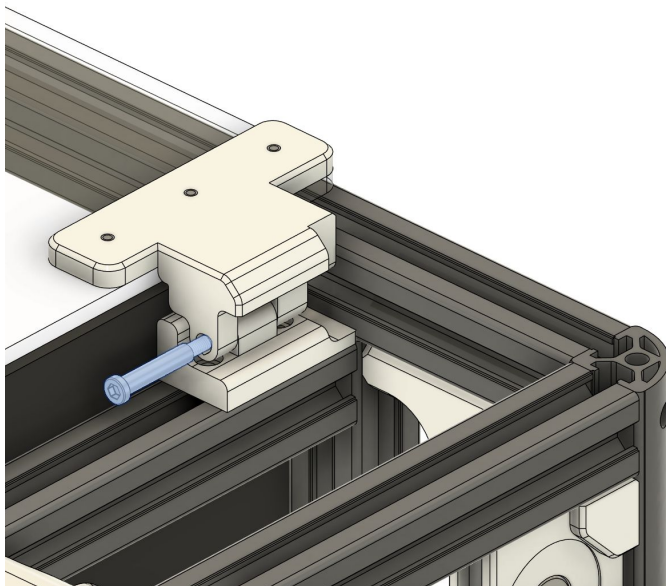


Now just place the top panel on top of the enclosure. Pay attention to the cables from the lighting assembly, make sure that they pass in the cutout in the panel and to the fact that the hinges fit inside each other.

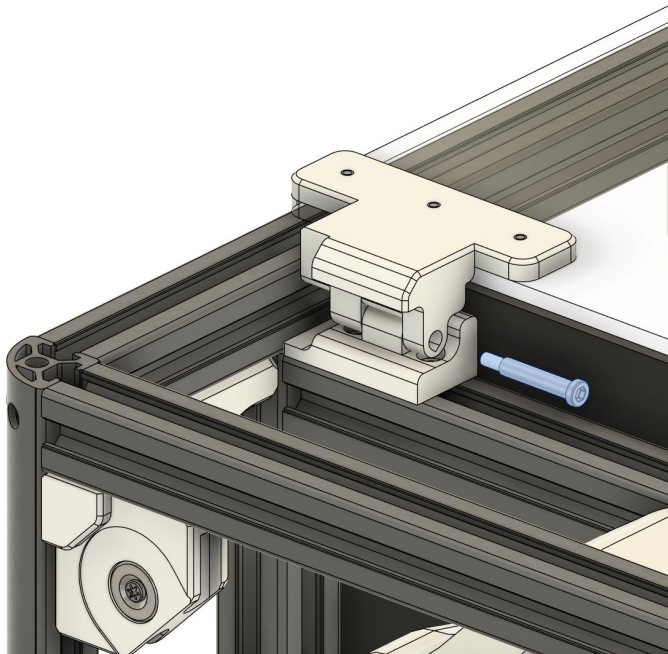


TOP PANEL

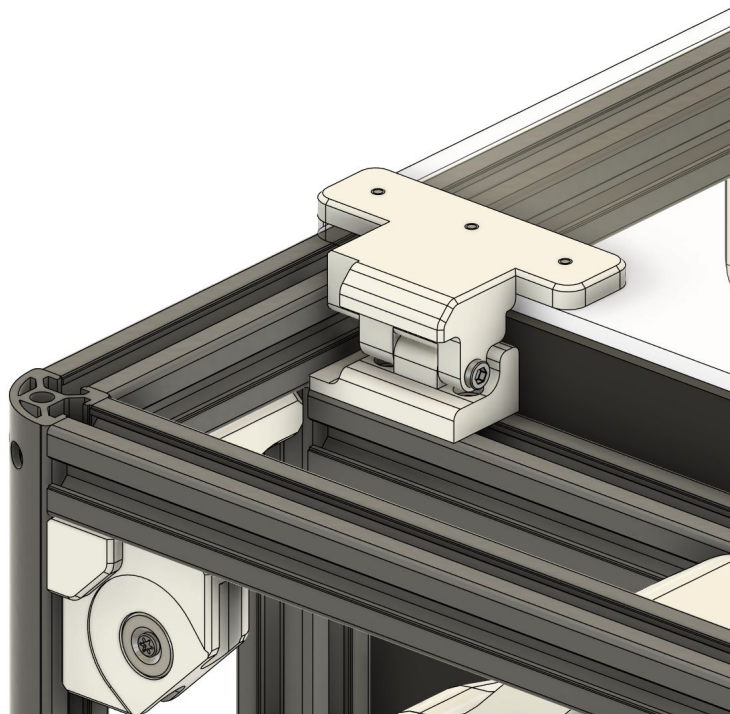
Insert the M3x20 SHSS screw into the hinge rotation axis as shown below. You will need to screw it in after that is has passed the smooth section.



TOP PANEL



Repeat the same step as before, but now for this side.

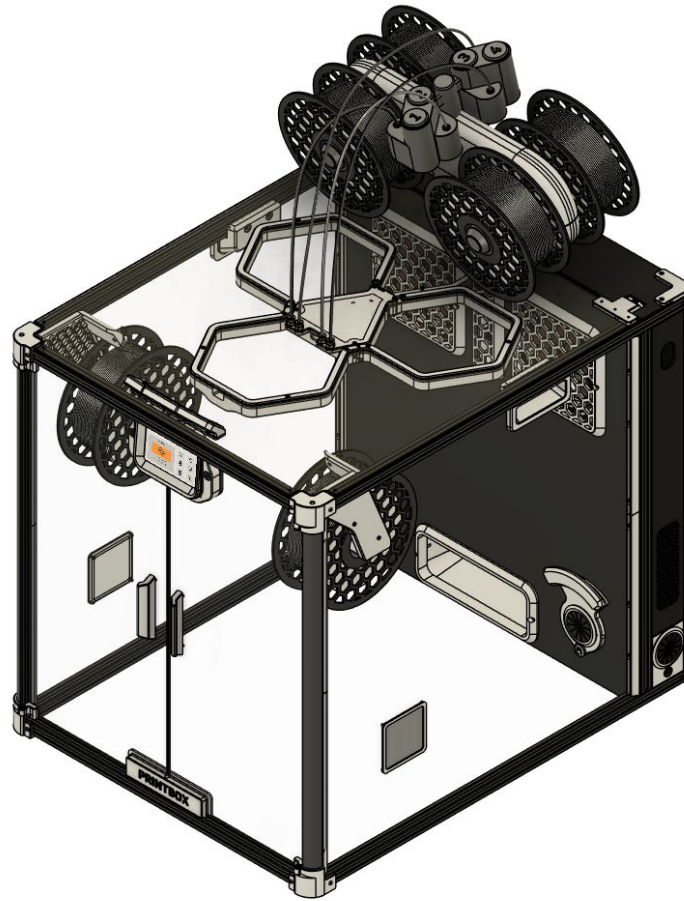


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Divider between sections

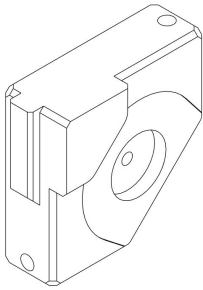


ELECTRONICS

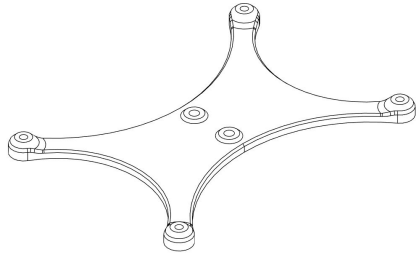
This is the last step of the assembly process! So let's get some electrons flowing



COMPONENTS

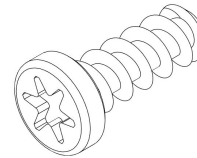


4 - Back panel
magnet holders



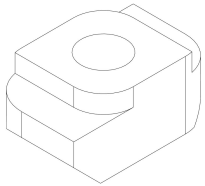
1 - Mainboard
mount

1 - 6025 fan
mount



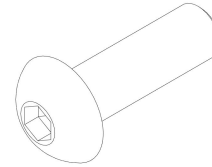
4 - M3x8 ST BHCS
screws

COMPONENTS



4 - 14mm
magnets

11 - M3
Hammerhead nut

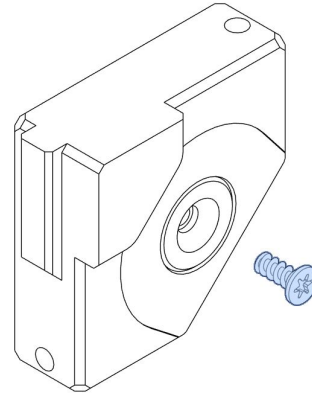
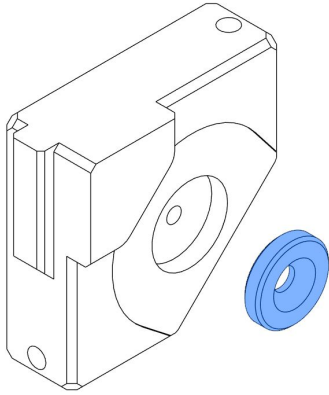


11 - M3x10 BHCS

1 - 6025 Fan

ELECTRONICS

Insert the 14mm circular magnet in the plastic part shown. Then fix it in place with an M3x8 ST FHCS. Repeat it another 3 times to get 4 electronics panel magnet holders in total.

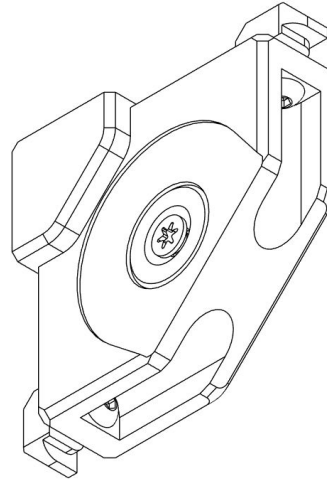
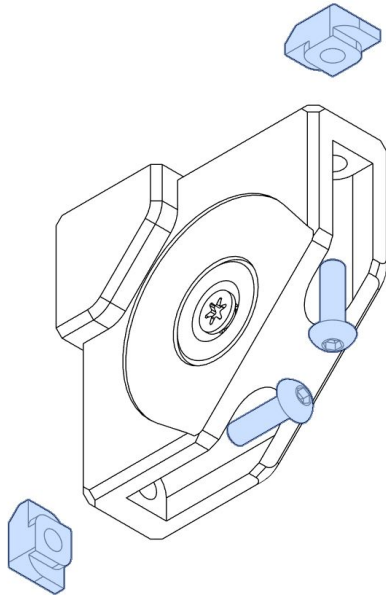


x4



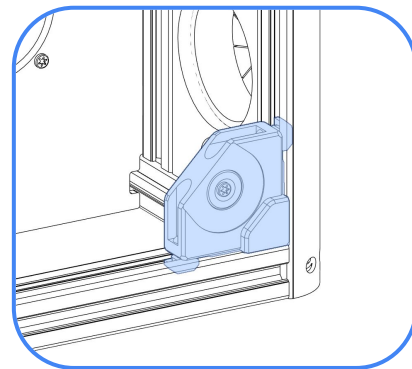
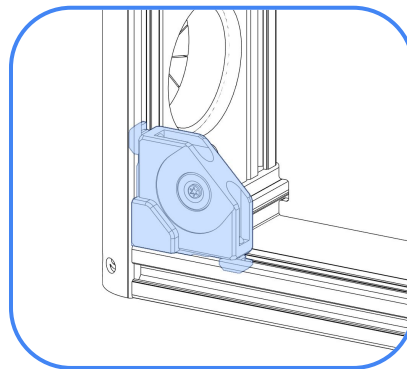
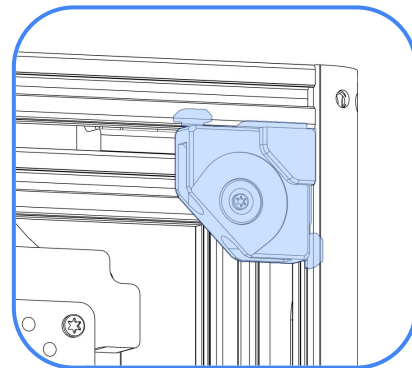
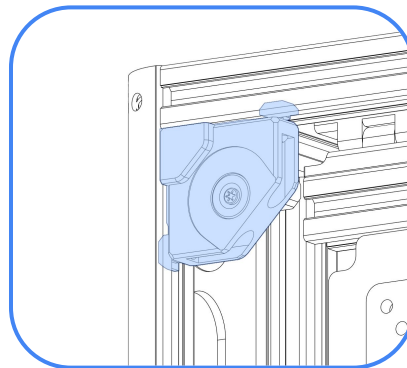
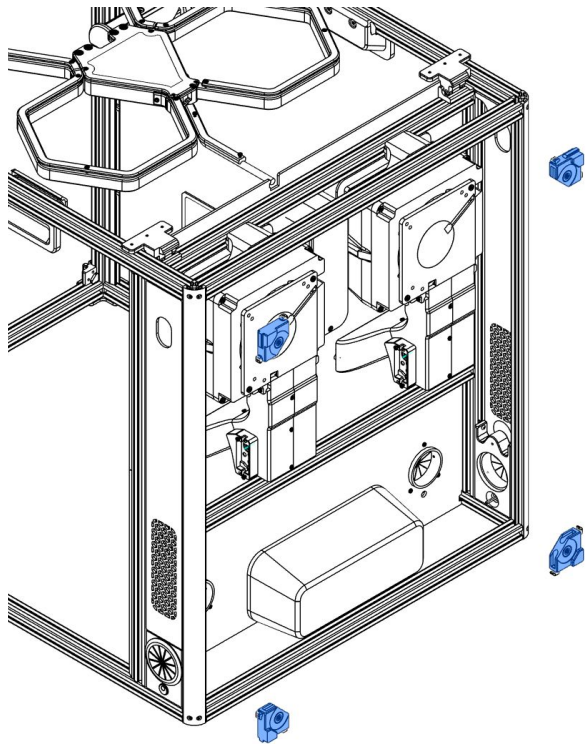
ELECTRONICS

Assemble as shown the M3x10 BHCS screws and M3 hammerhead nuts. Repeat it another 3 times to get 4 electronics panel magnet holders in total.



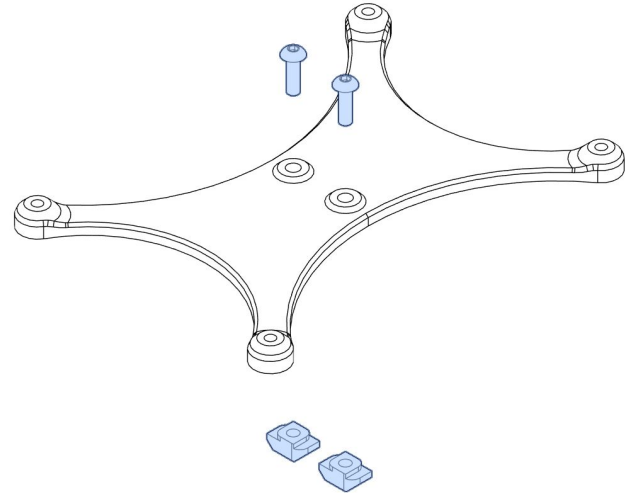
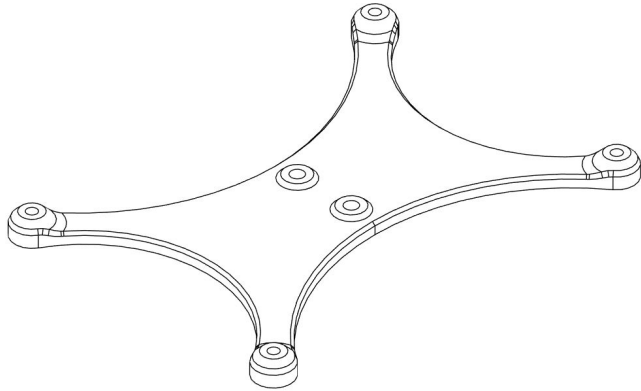
ELECTRONICS

Install the electronics back panel magnet holders as shown. Tighten the M3x10 BHCS screws.



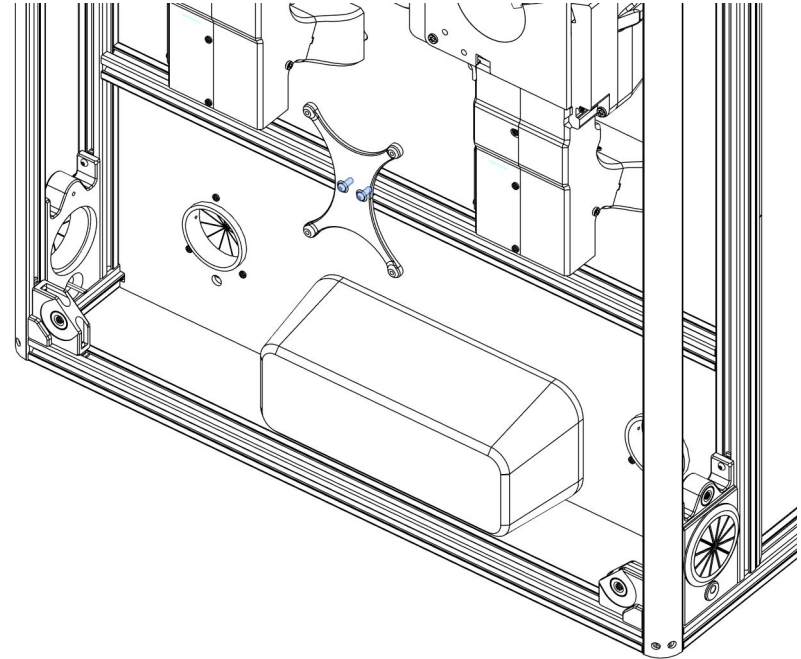
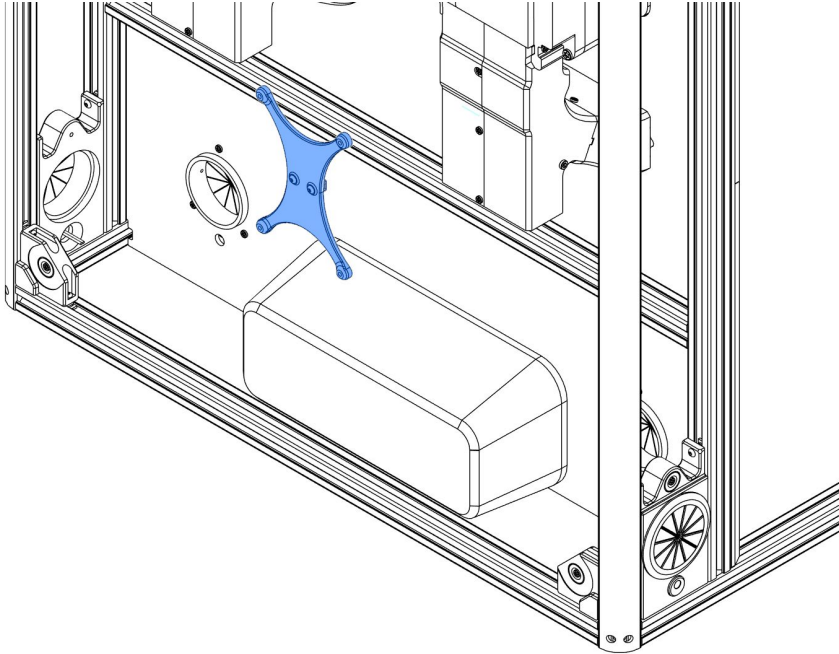
ELECTRONICS

Install the 2 M3x10 BHCS screws and
hammerhead nuts as shown on the
mainboard mount



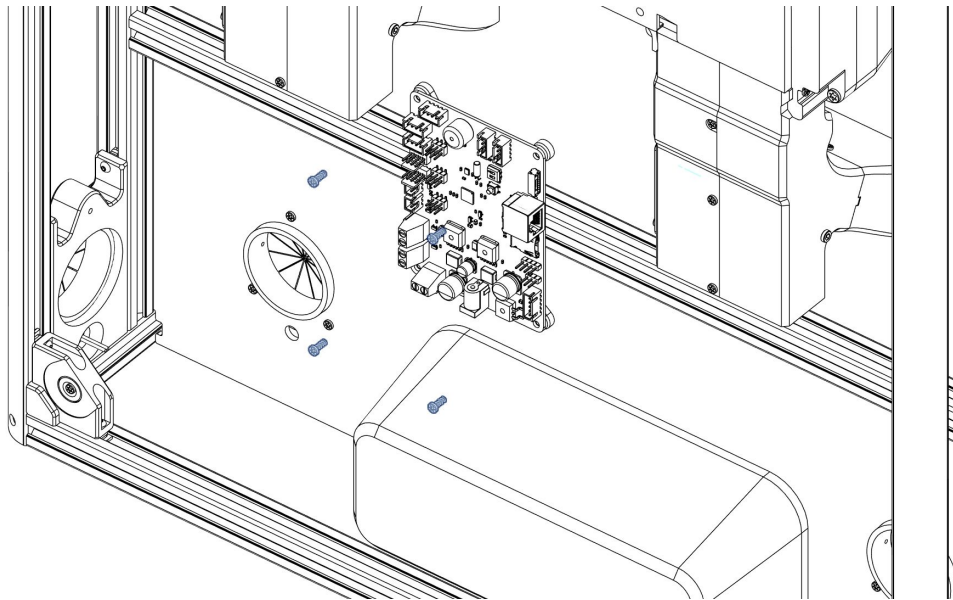
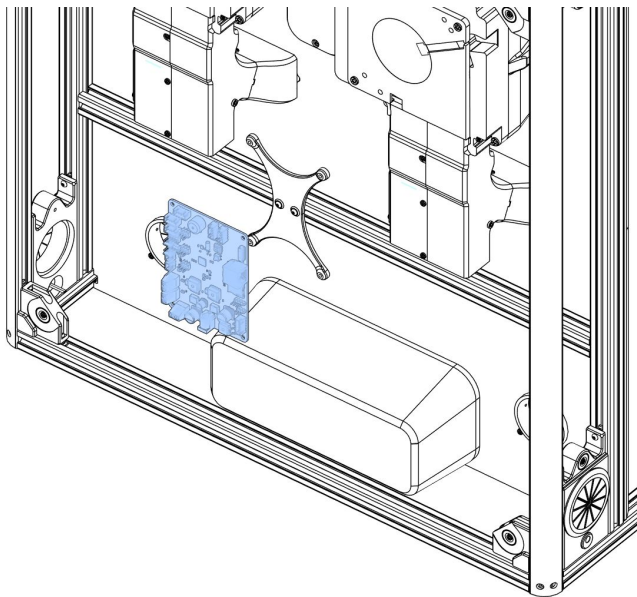
ELECTRONICS

Place the mainboard mount approximately in the middle of the extrusion shown. Then tighten the M3x10 BHCS screws

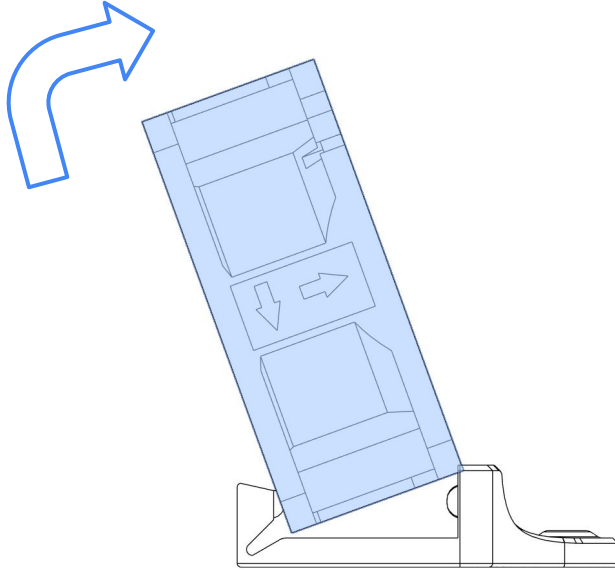


ELECTRONICS

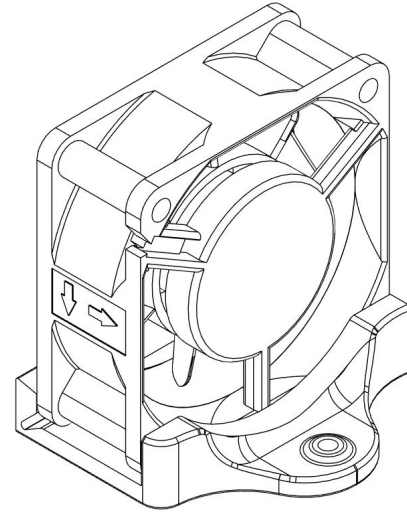
Place very carefully the motherboard as shown and secure it in place with M3x8 ST BHCS screws. **NOTE:** don't do this step if you are on a carpet or wearing something that might be statically charged as it might damage the motherboard.



ELECTRONICS

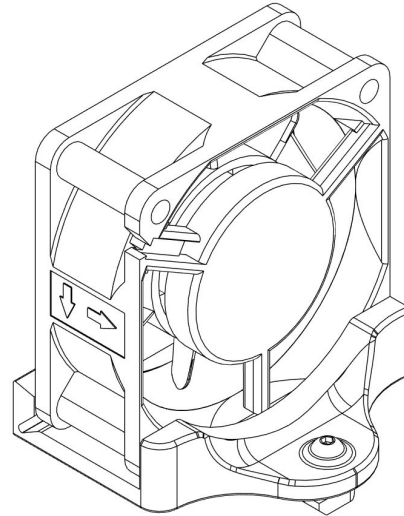
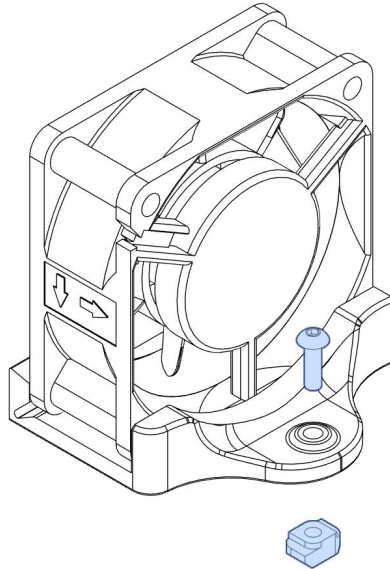


Press the fan into place by positioning it as shown and applying a force in the clockwise direction. It might take a bit of force depending on the material you use to print the part

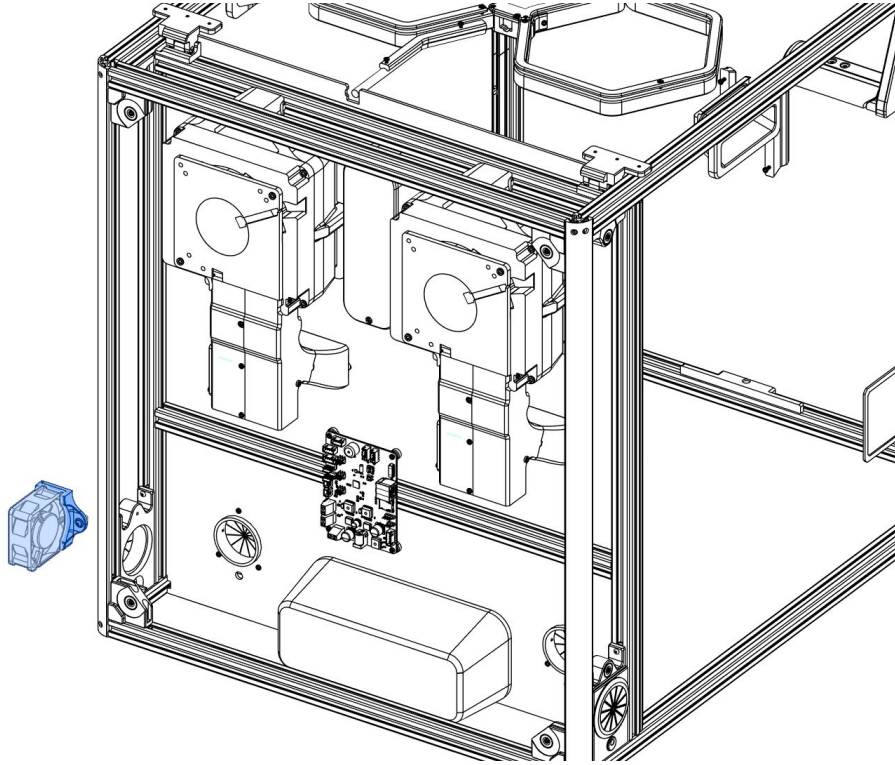


ELECTRONICS

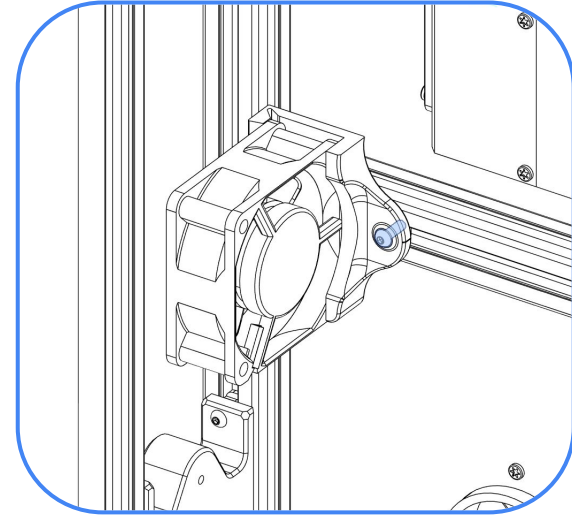
Insert the M3x10 BHCS screw and use the M3 hammerhead nut to secure it in place.



ELECTRONICS



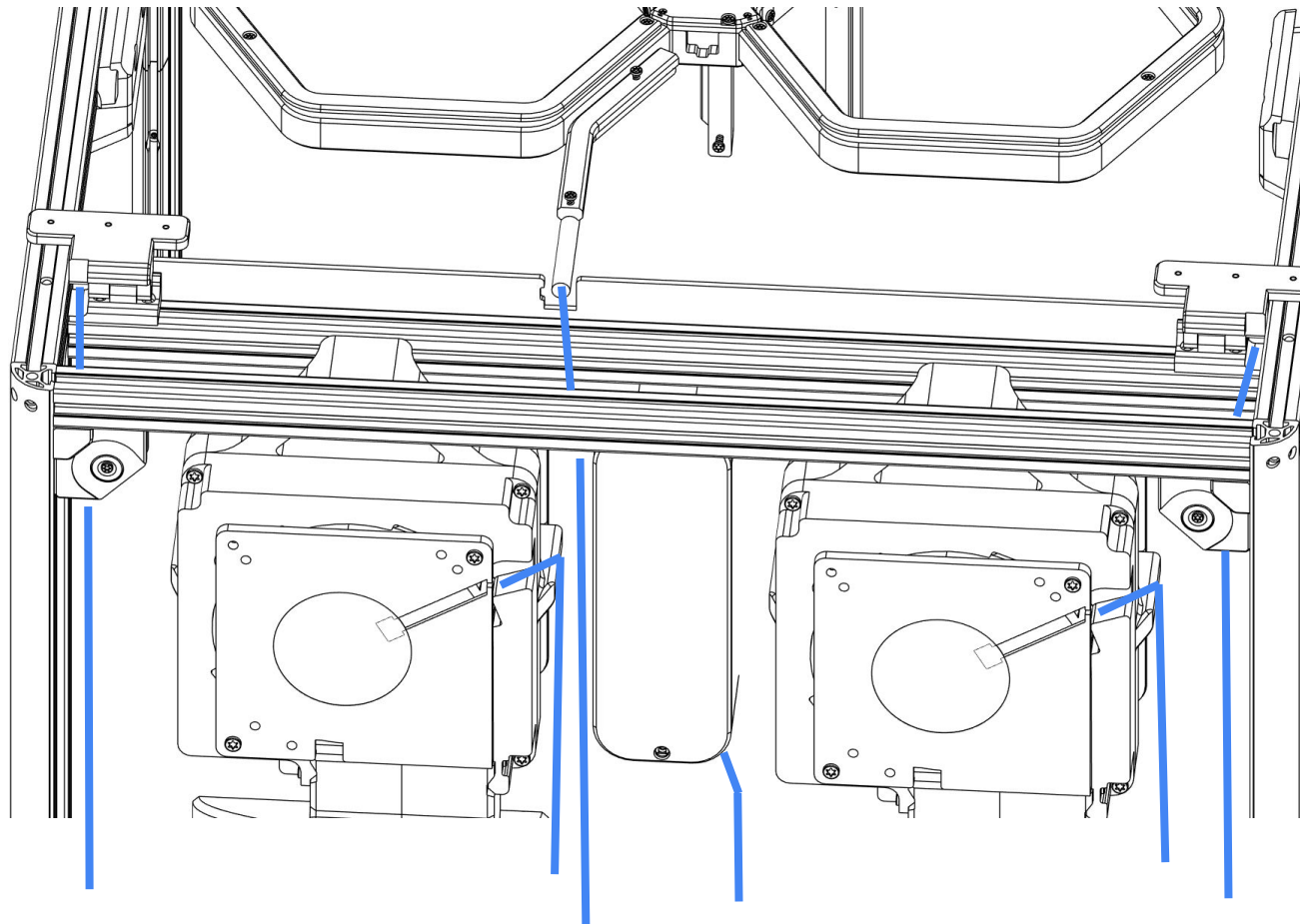
Place the fan assembly as shown and tighten the M3 screw.



Now we're going to pass the cables in the back panel of the enclosure and then connect them to the motherboard. For this section it's recommended to make sure that you are not statically charged.

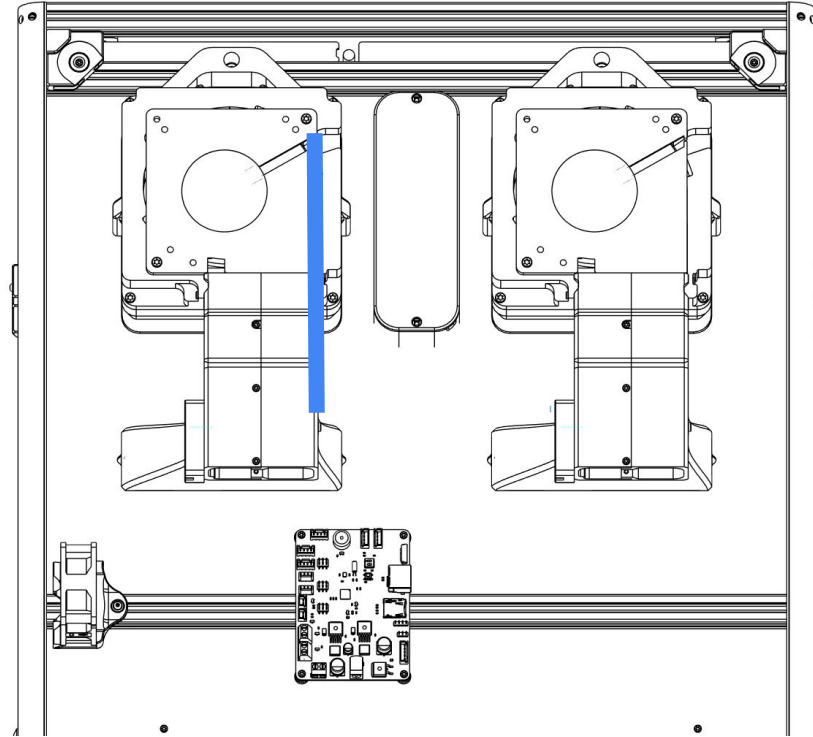
ELECTRONICS

Bring the following cables toward the pcb. You can fix them to the enclosure with zip ties using the 3d printed parts shown below if you want your back panel to look perfectly organized. If not we will just tie all of the excess cables together with two zip ties after.



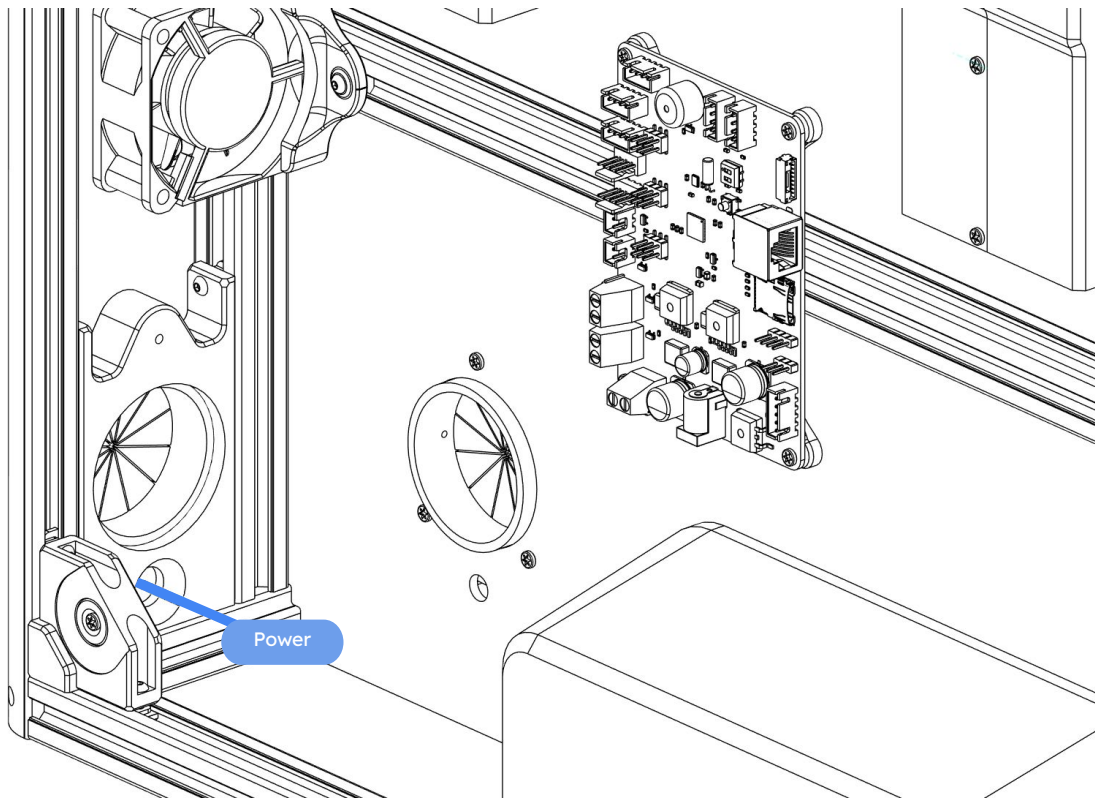
ELECTRONICS

Insert the two M5x16 BHCS screws and
then tighten two M5 T nuts on the back

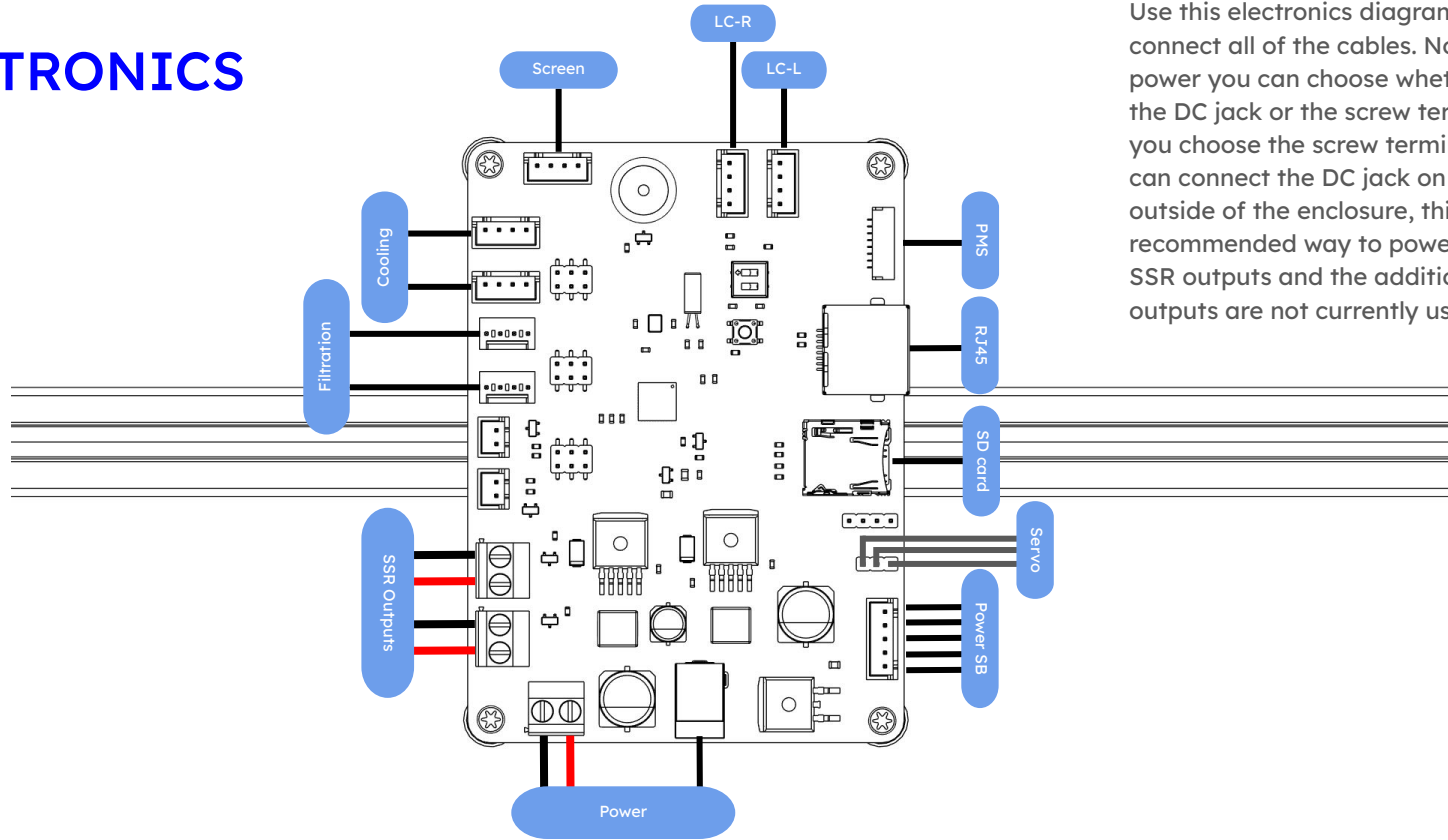


ELECTRONICS

You can choose whether to plug in the left, right, or both DC jacks. If you plug both please solder the cables or crimp them together. I would recommend to just choose one side from where you want to power your enclosure from.



ELECTRONICS



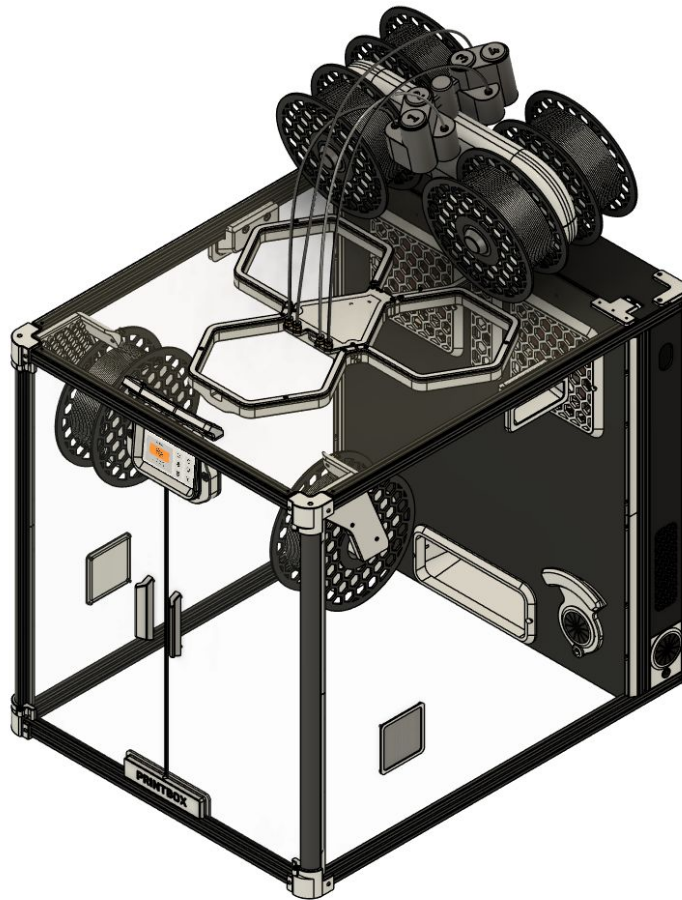
Use this electronics diagram to connect all of the cables. Note that for power you can choose whether to use the DC jack or the screw terminal. (If you choose the screw terminal you can connect the DC jack on the outside of the enclosure, this is the recommended way to power it). The SSR outputs and the additional fan outputs are not currently used)

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Divider between sections



AMS TOP MOUNT

In this step we will assemble the AMS top mount. If you don't own an AMS lite or don't want to use it with your enclosure just skip this section and go straight to the commissioning checks.



COMPONENTS

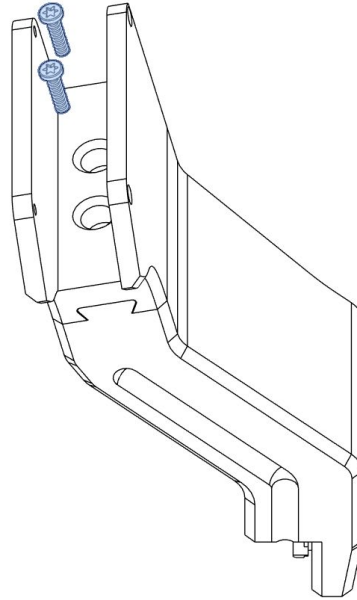
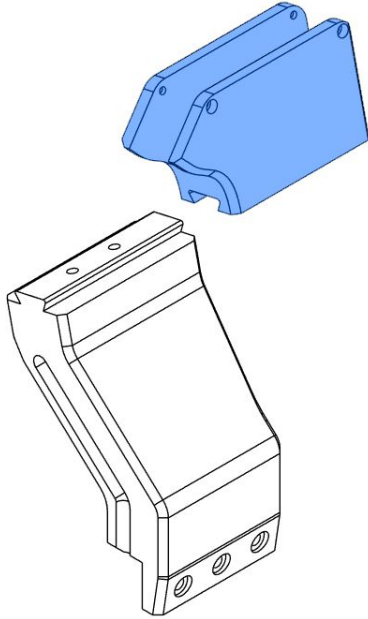
4 - Back panel
magnet holders

1 - 6025 fan
mount

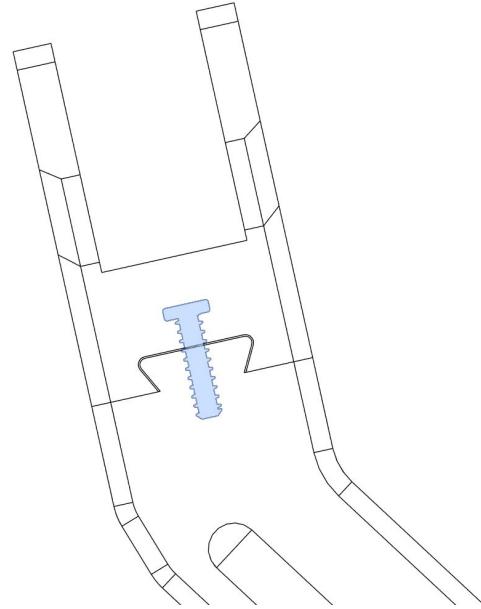
1 - Mainboard
mount

4 - M3x8 ST BHCS
screws

AMS TOP MOUNT

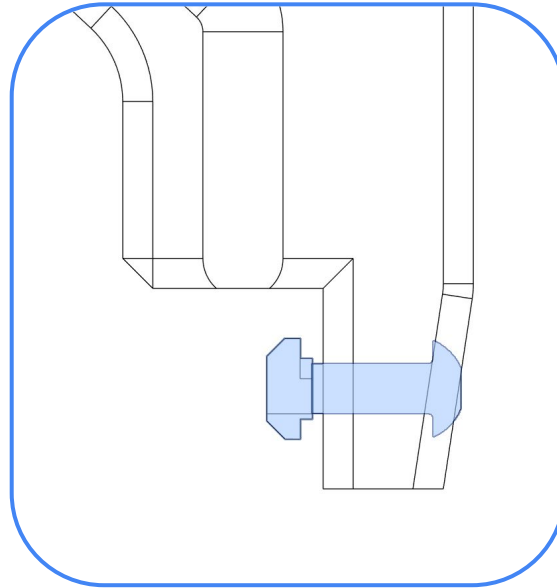
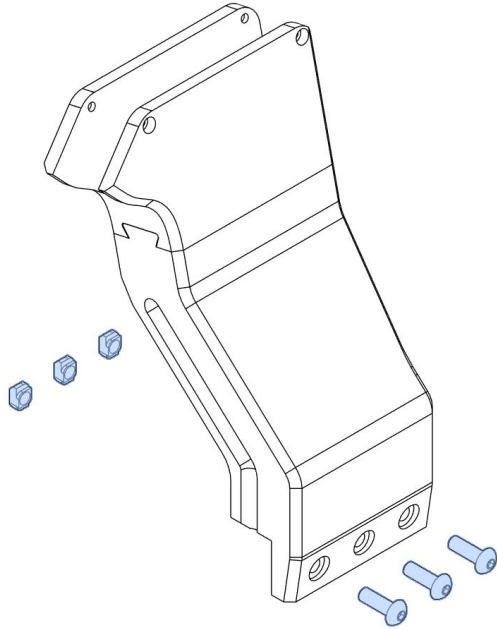


Slide the top part of the ams mount on the bottom part. Then get two M4x16 ST BHCS and use them to tighten the parts together.



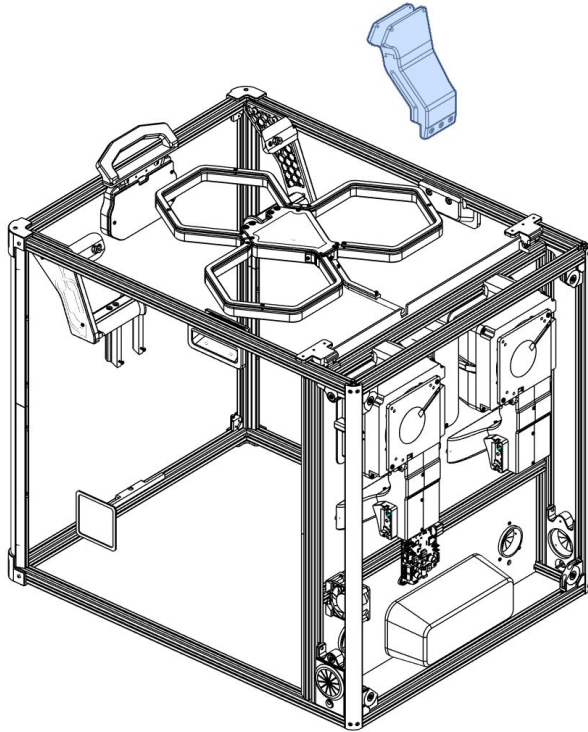
AMS TOP MOUNT

Insert the three M5x16 BHCS screws and then screw in three M5 T nuts on the back

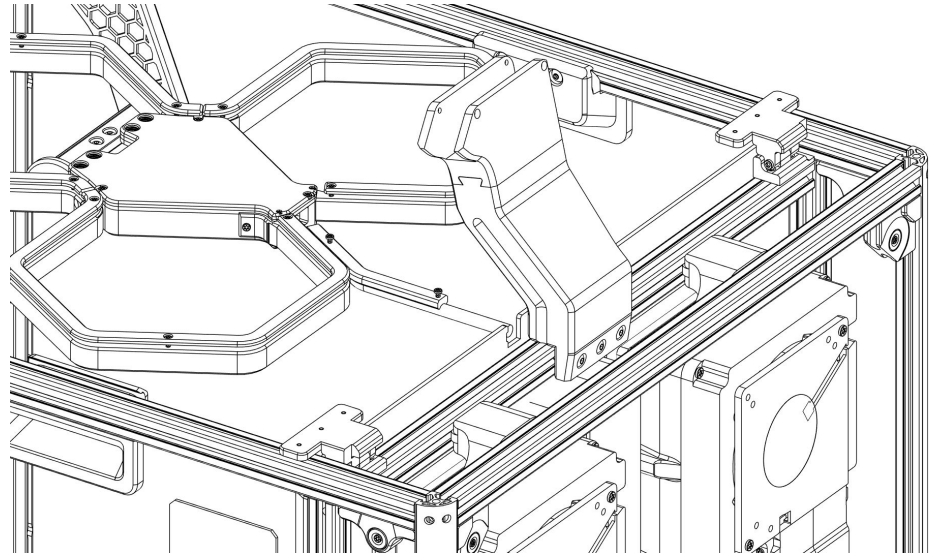


See the image on the left as reference for how the screws and nut should assembled.

AMS TOP MOUNT



Insert the ams mont on the extrusion shown in the back assembly. Then tighten partially all of the M5x16 BHCS screws.



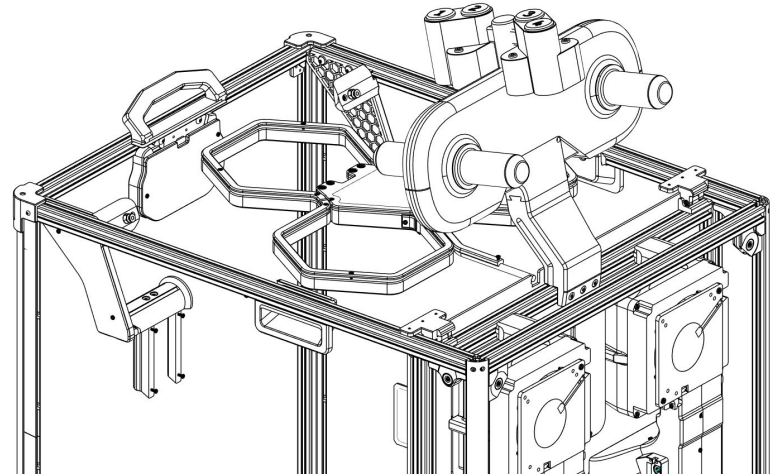
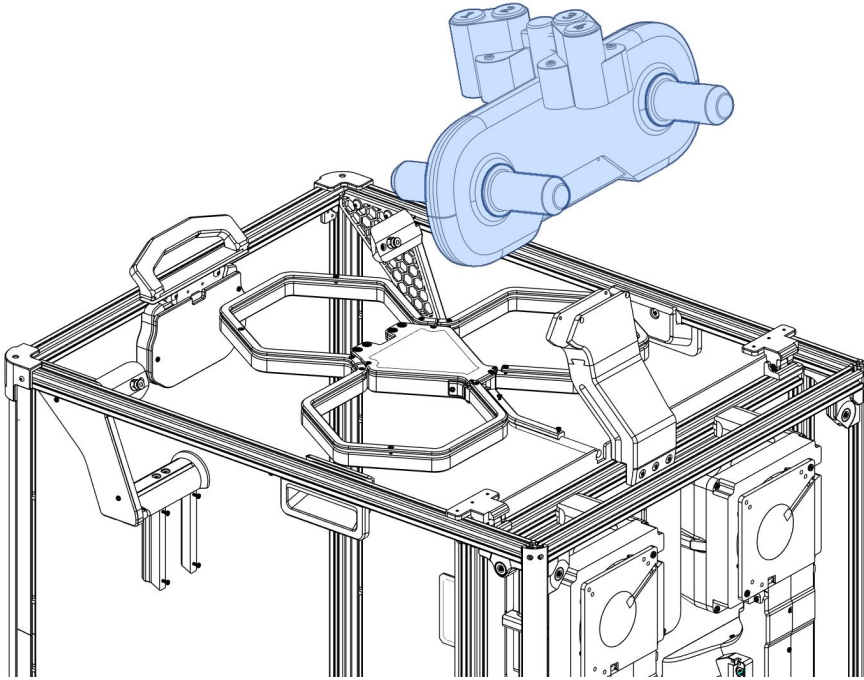
AMS TOP MOUNT

Grab the top panel as shown and use it to align the ams mount in it's slot. Then remove the top panel and tighten completely all of it's M5x16 BHCS screws.



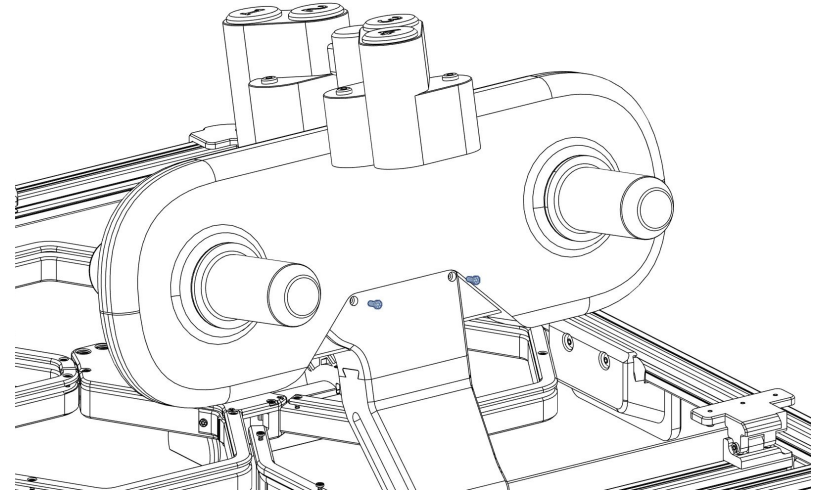
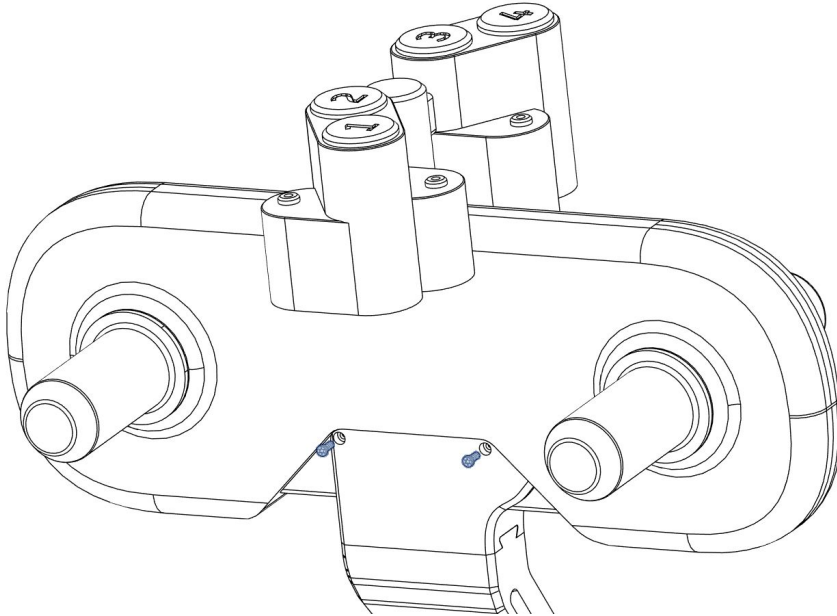
AMS TOP MOUNT

Insert the ams on the ams mount as shown.



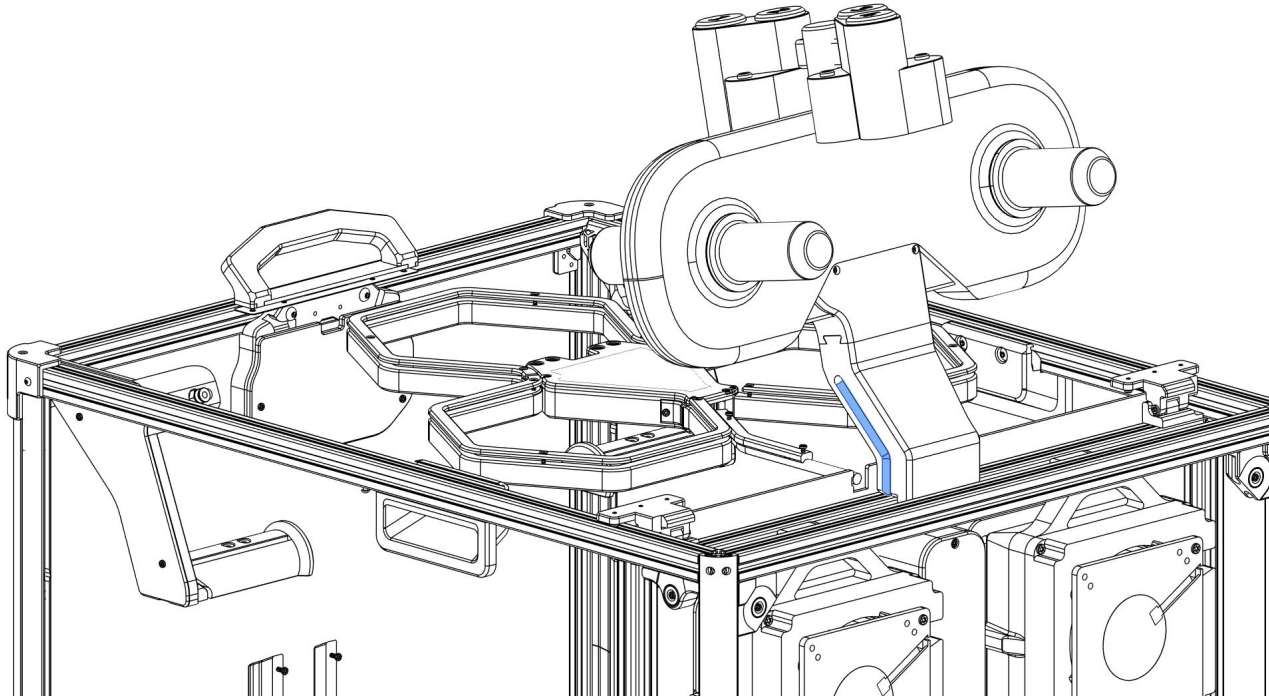
AMS TOP MOUNT

Use the screws that came with the ams to tighten it to the mount on both sides.

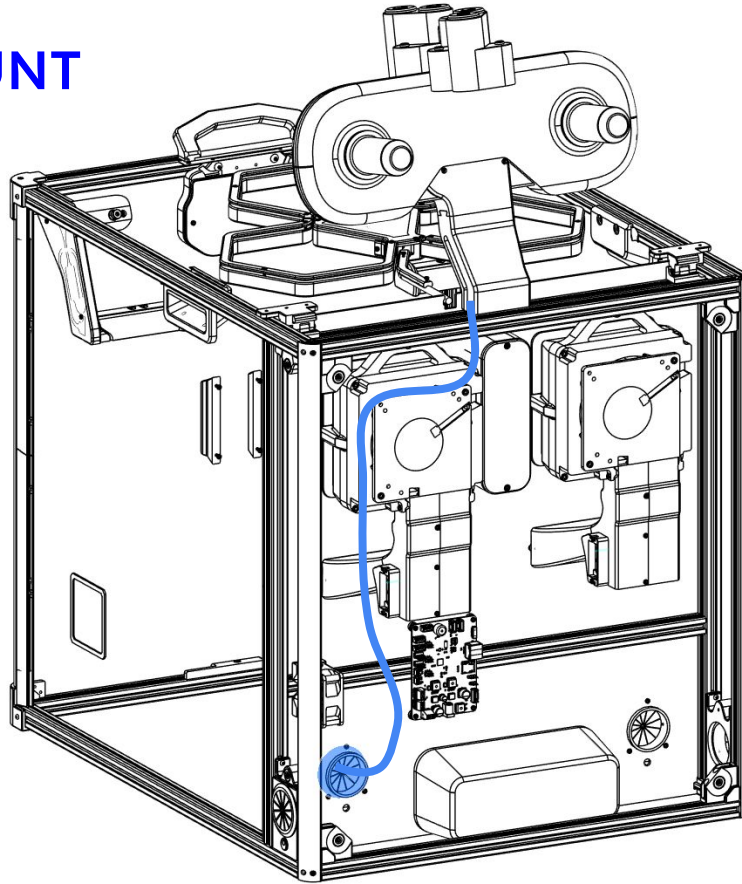


AMS TOP MOUNT

Now just make the ams cable pass toward the bottom of the enclosure following the highlighted cable channel.



AMS TOP MOUNT



Make the Ams cable follow the blue line drawn. You will need to extend it by using the provided extender.

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Divider between sections



COMMISSIONING CHECKS & servos

This step is where you assemble what you want to have on your enclosure. In the manual i will cover all of the possible accessories for now, but if there is something that you don't want to install you can just print the corresponding hole cover.

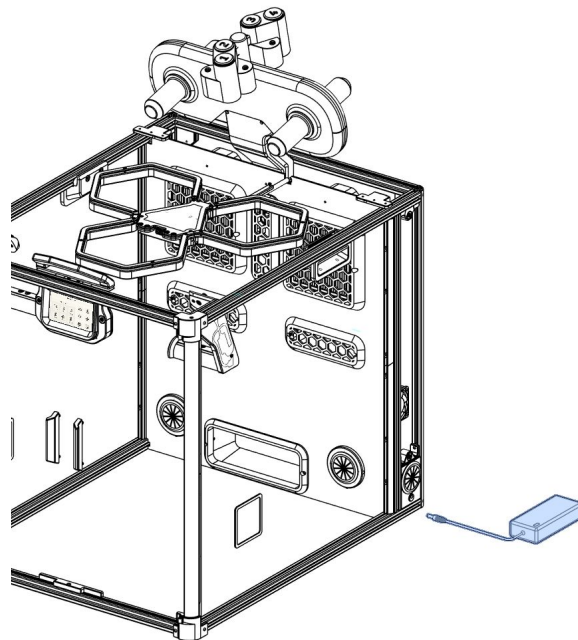
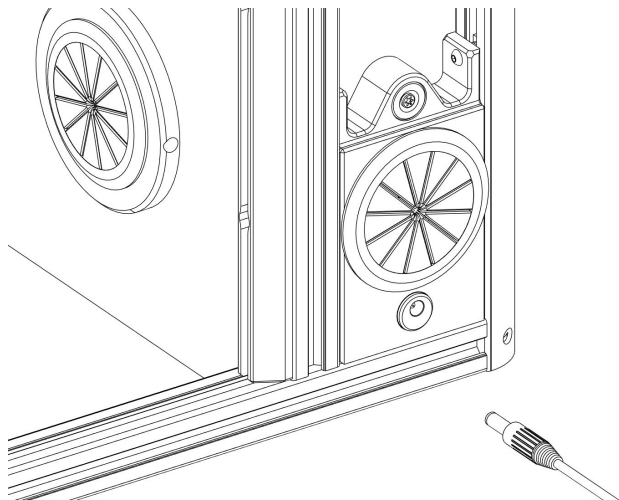
COMPONENTS

1 - Lighting Body

1 - Lighting Cover

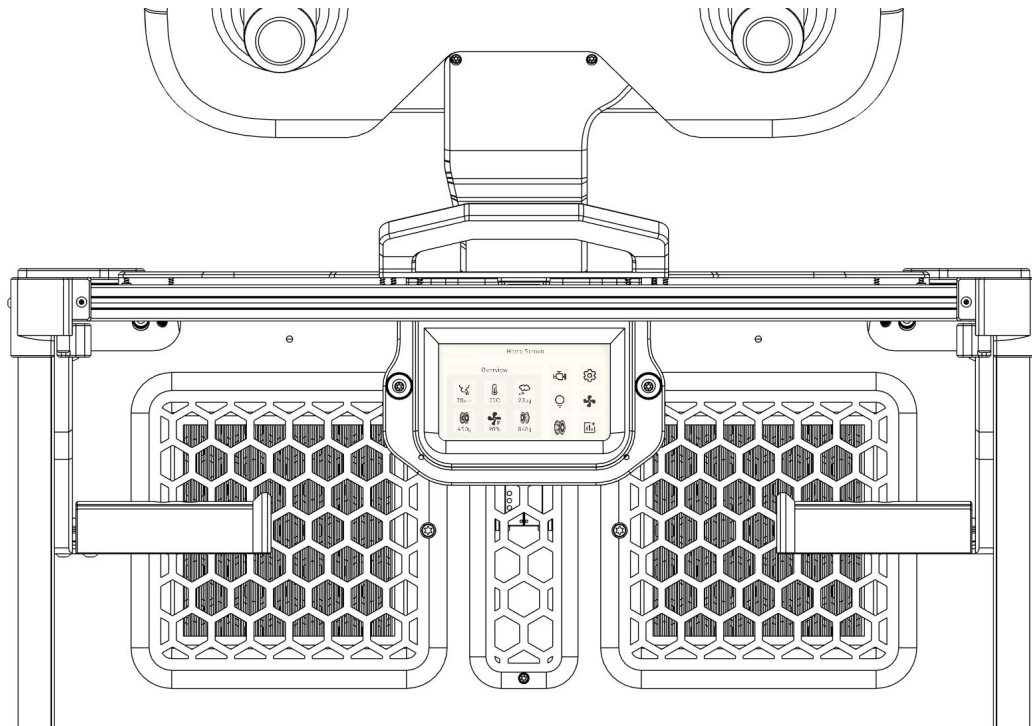
CHECKS

Insert the two M5x16 BHCS scr
then tighten two M5 T nuts on



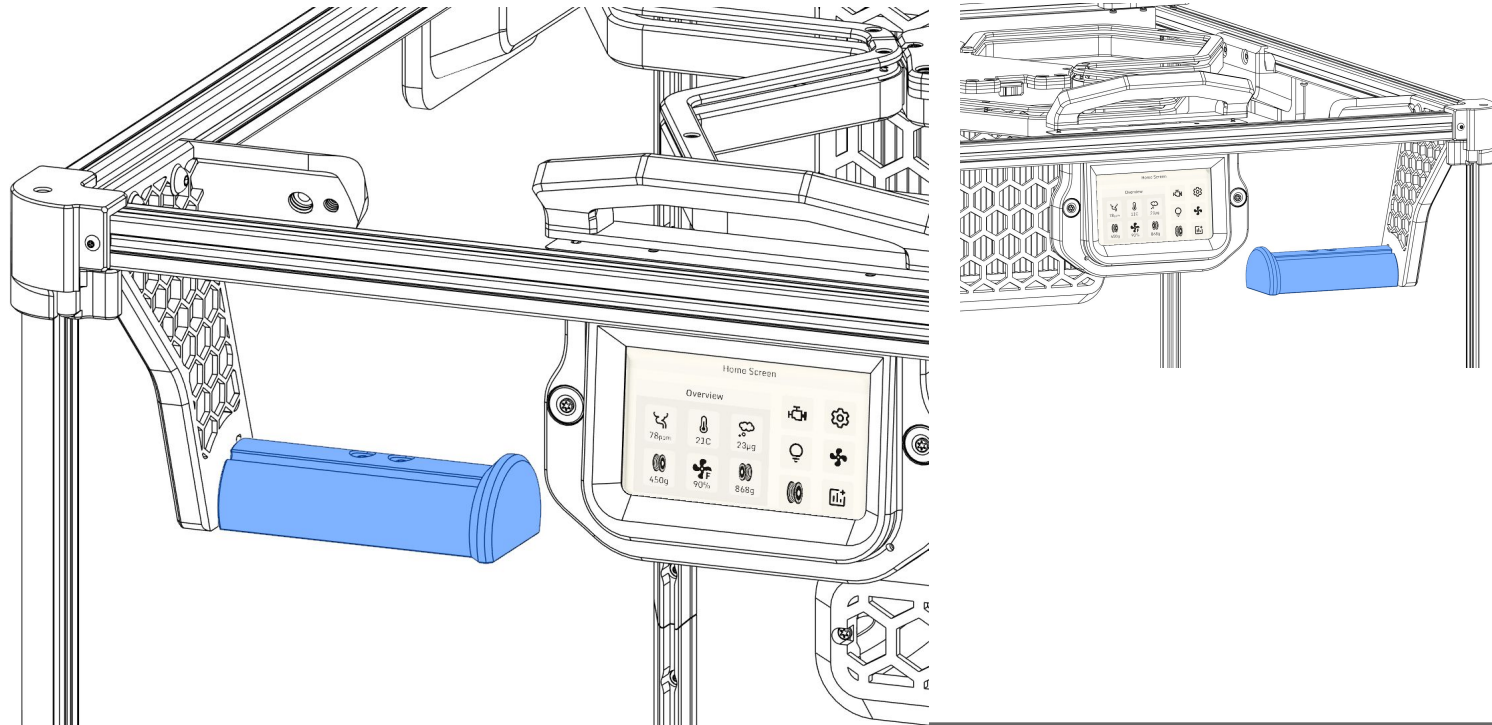
CHECKS

Insert the two M5x16 BHCS scr
then tighten two M5 T nuts on



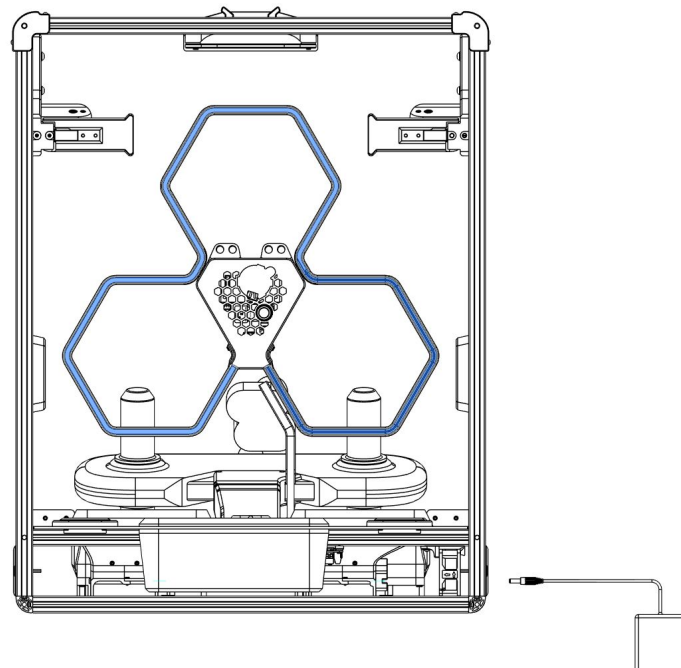
CHECKS

Insert the two M5x16 BHCS screws and



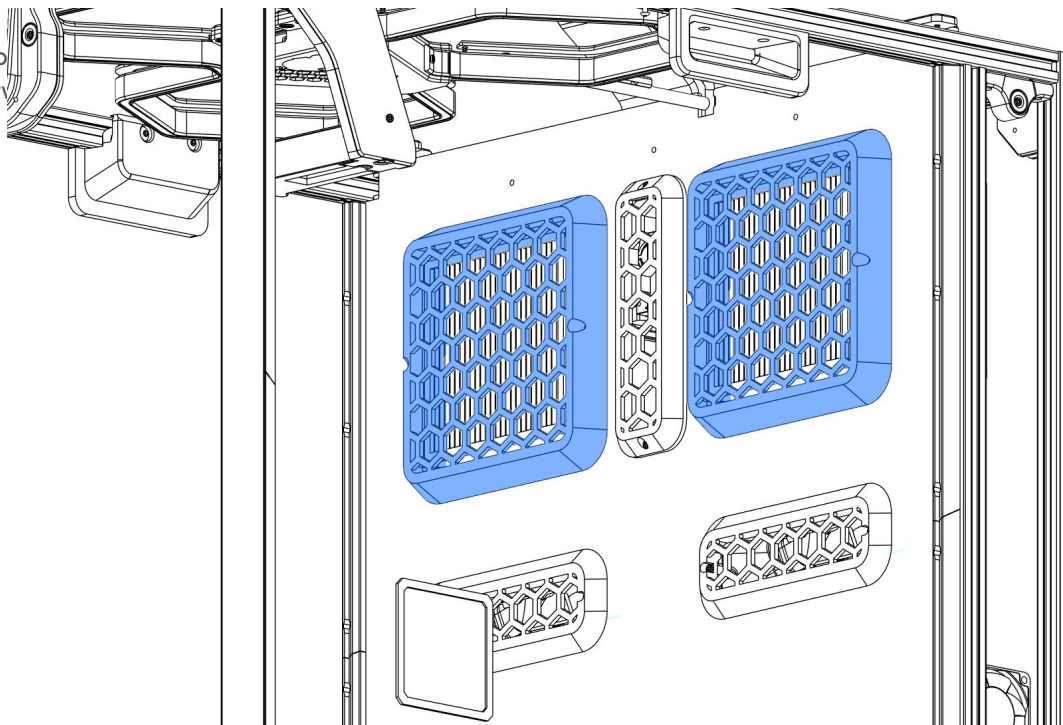
CHECKS

Insert the two M5x16 BHCS
then tighten two M5 T nuts



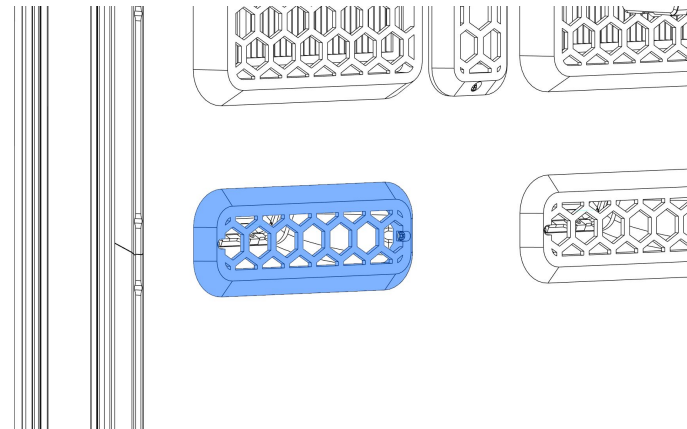
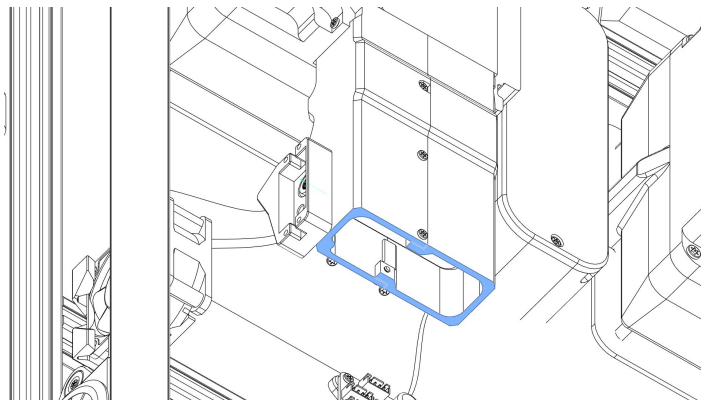
CHECKS

Insert the two
then tighten tv



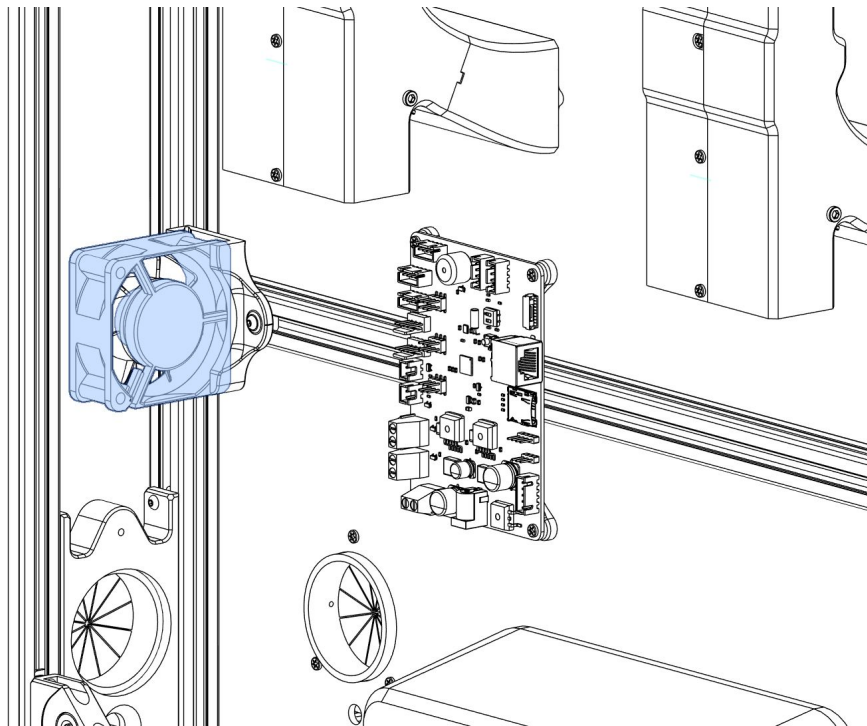
CHECKS

Insert the two M5x16 BHCS screws and
then tighten two M5 T nuts on the back



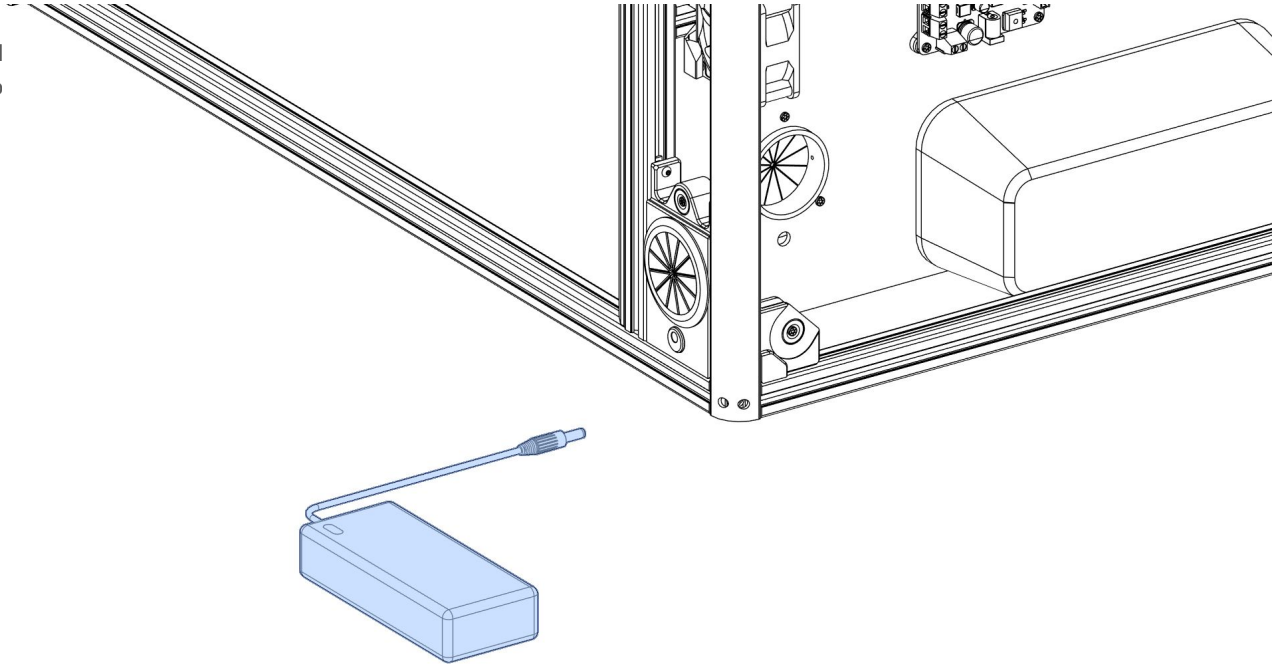
CHECKS

Insert the two M5x16 BHCS screws and
then tighten tw



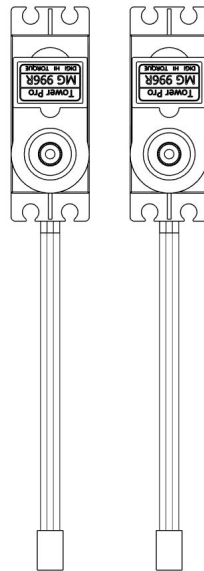
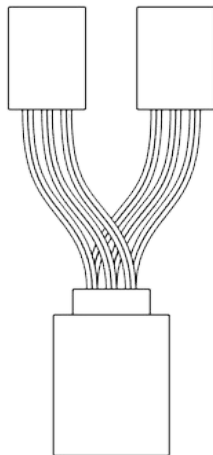
CHECKS

Insert the two M
then tighten two



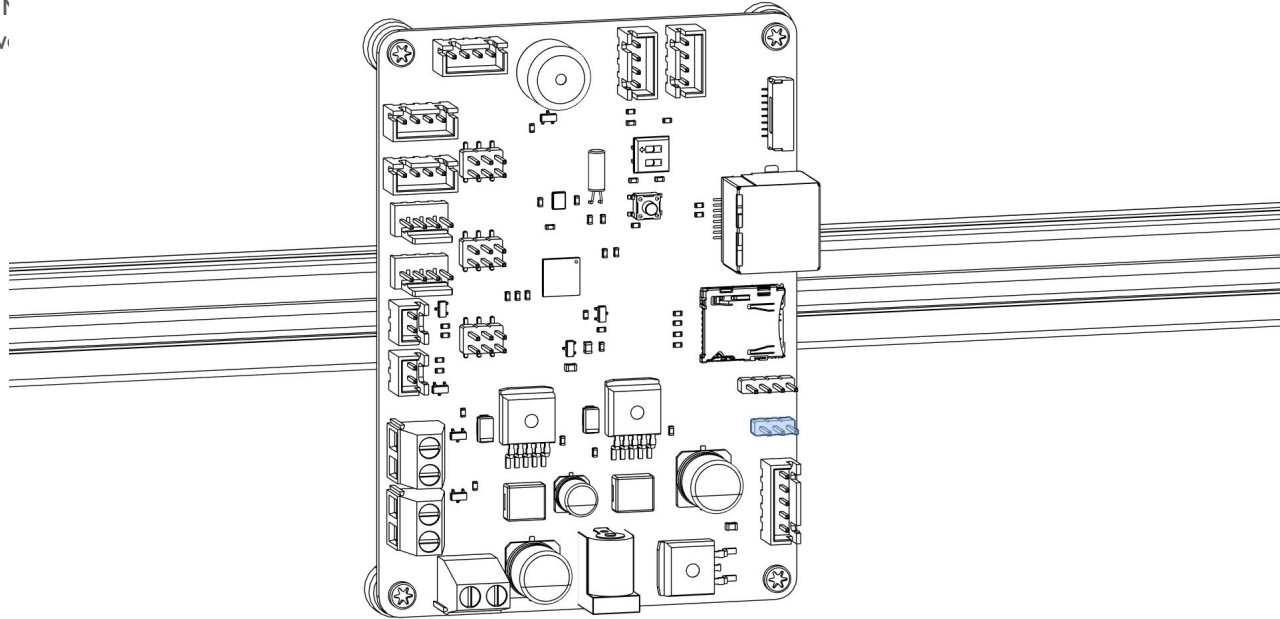
CHECKS

Insert the two M5x16 BHCS screws
then tighten two M5 T nuts on the I



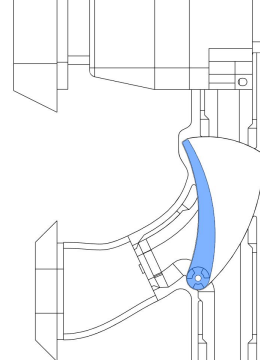
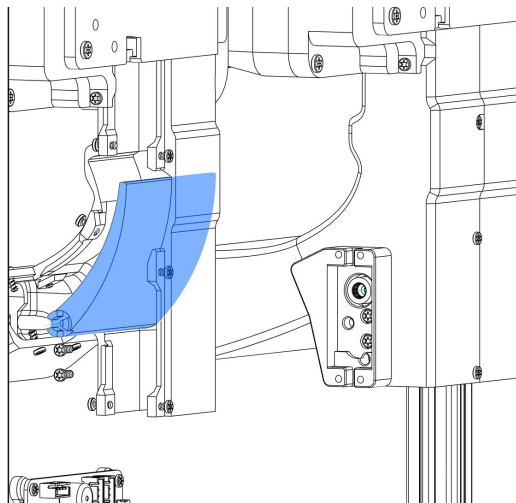
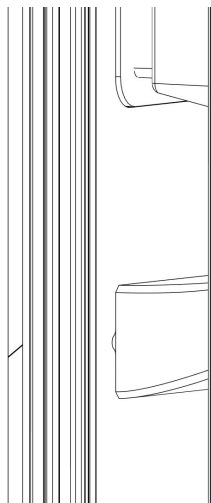
CHECKS

Insert the two I
then tighten tw

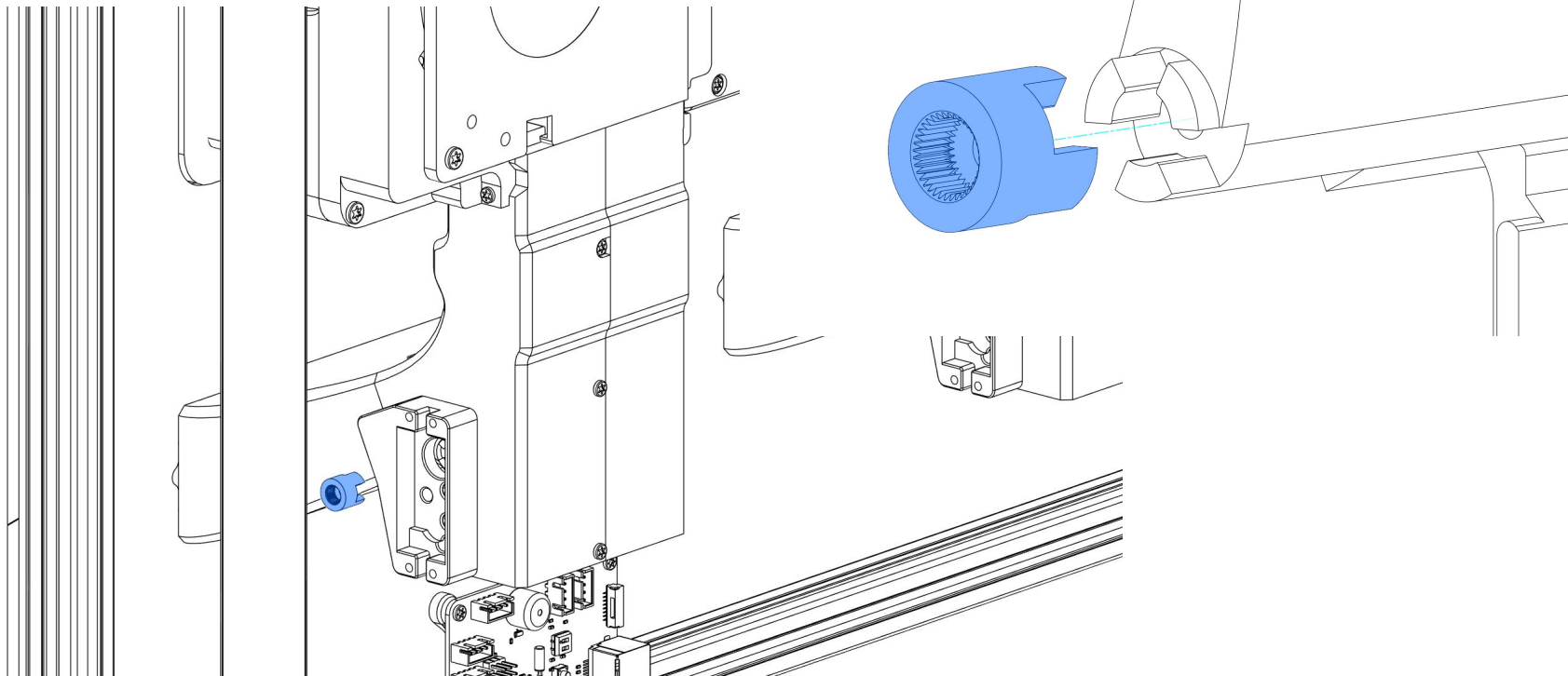


CHECKS

Insert the two M5x16 BHCS screws and
then tighten two M5 T nuts on the back

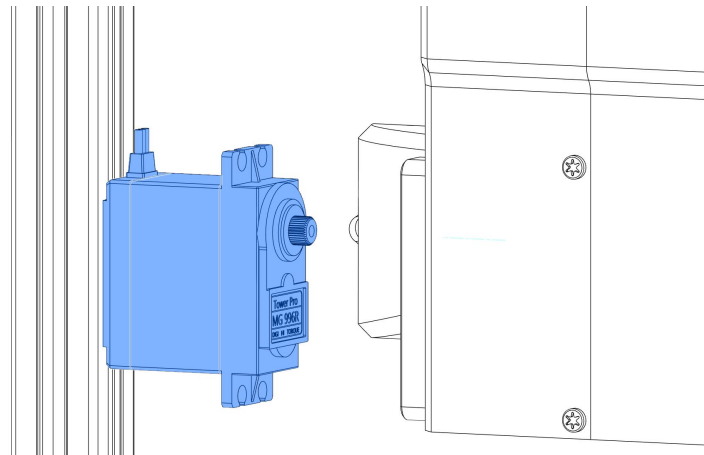
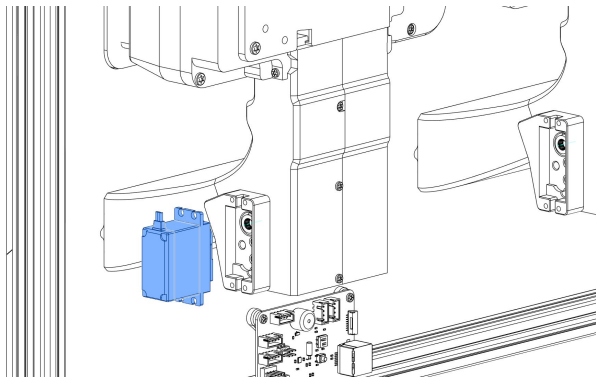


CHECKS



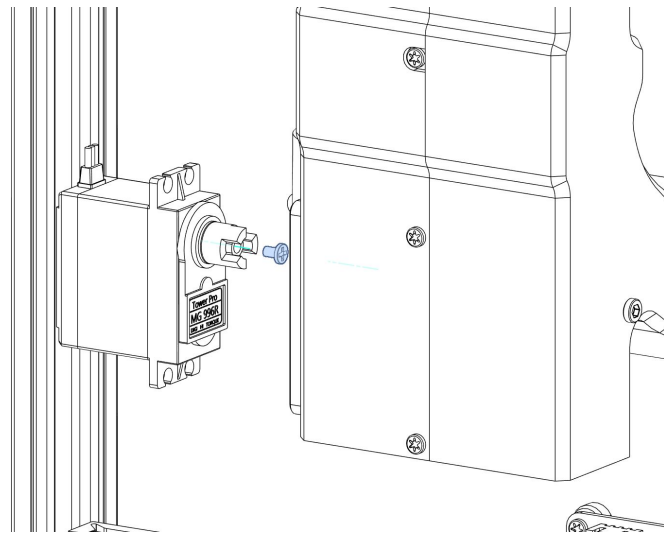
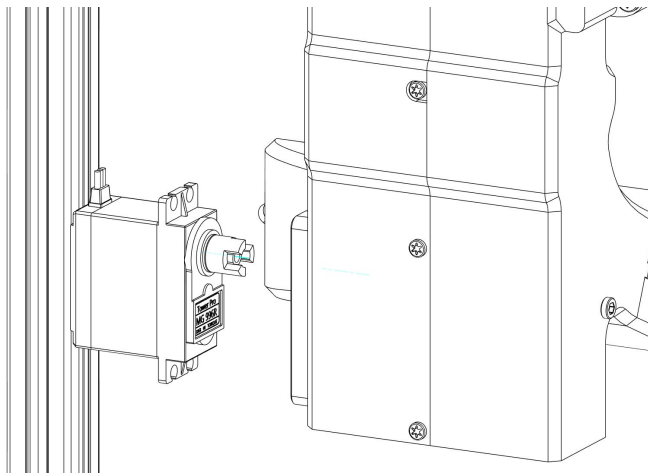
CHECKS

Insert the two M5x16 BHCS screws and
then tighten two M5 T nuts on the back



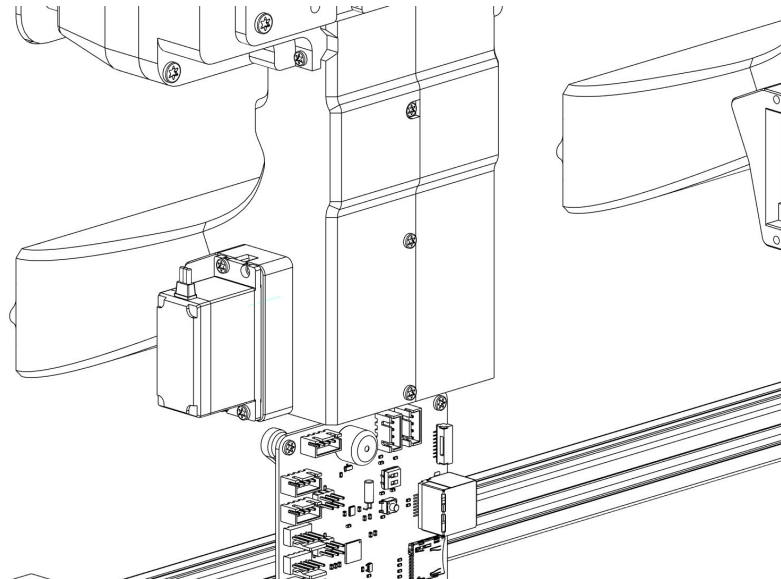
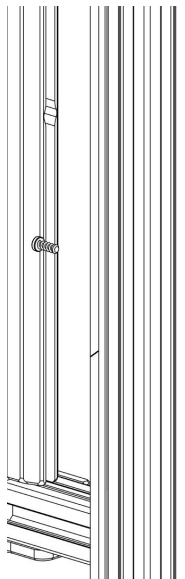
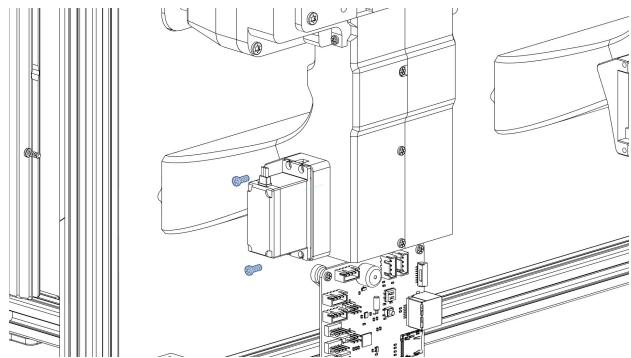
CHECKS

Insert the two M5x16 BHCS screws and
then tighten two M5 T nuts on the back



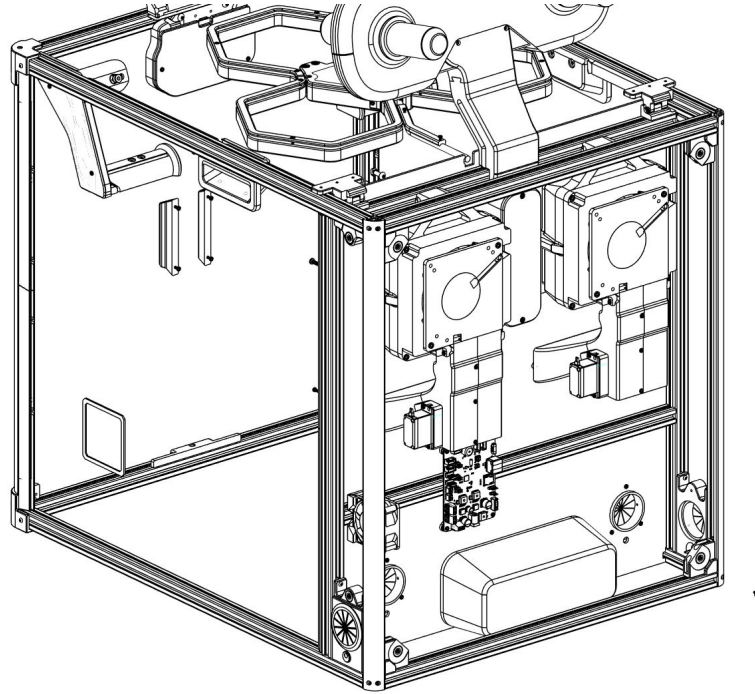
CHECKS

Insert the two M5x16 BHCS screws and
then tighten two M5 T nuts on the back



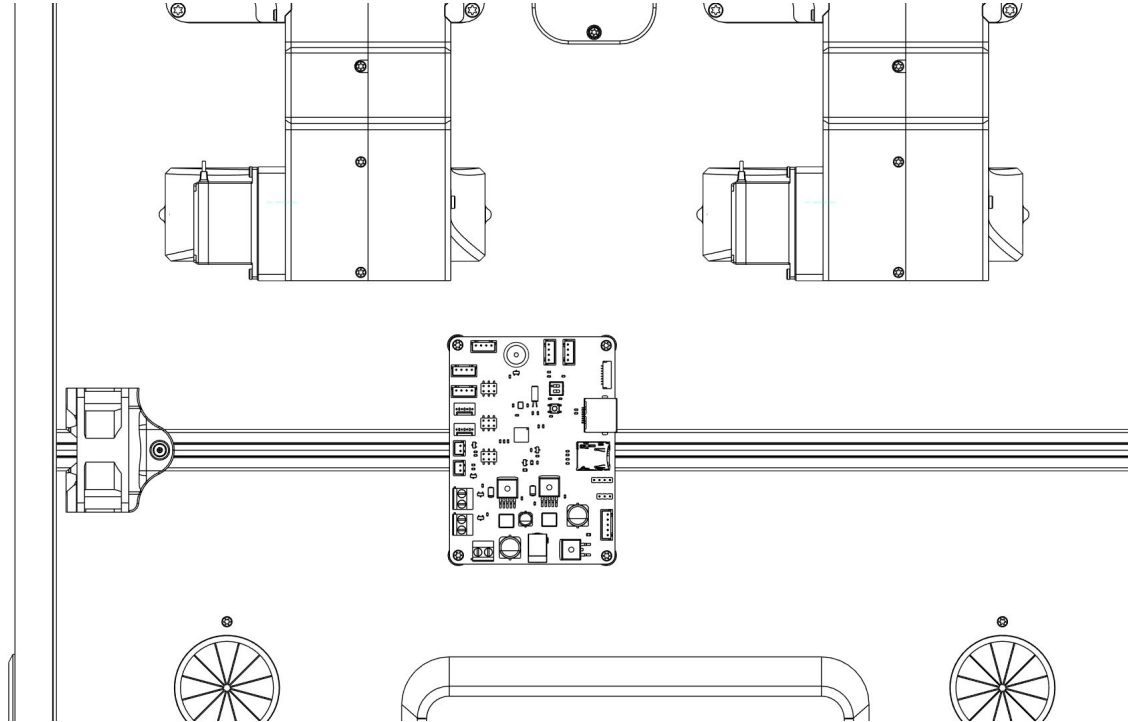
CHECKS

Insert
then t



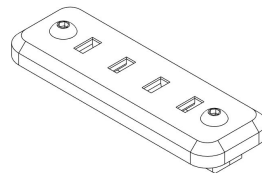
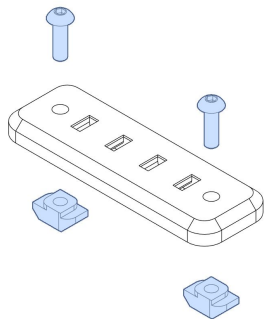
CHECKS

Insert the two M
then tighten two



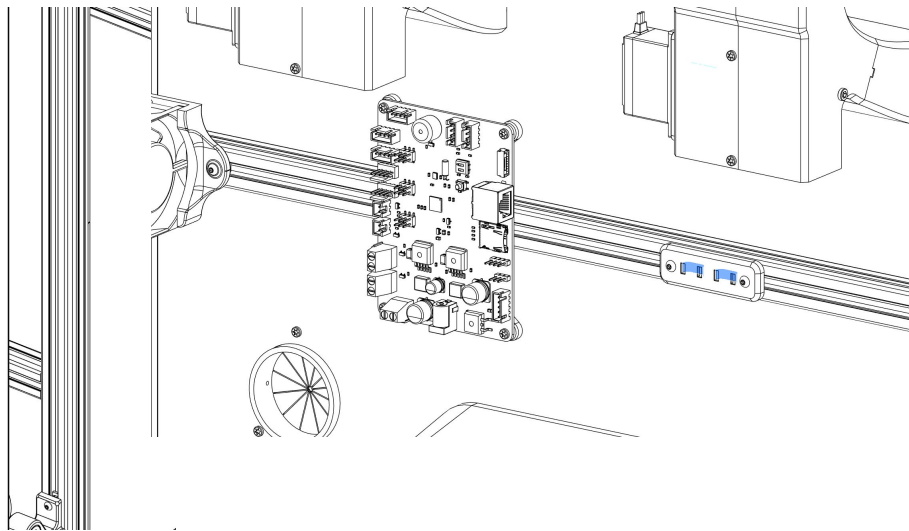
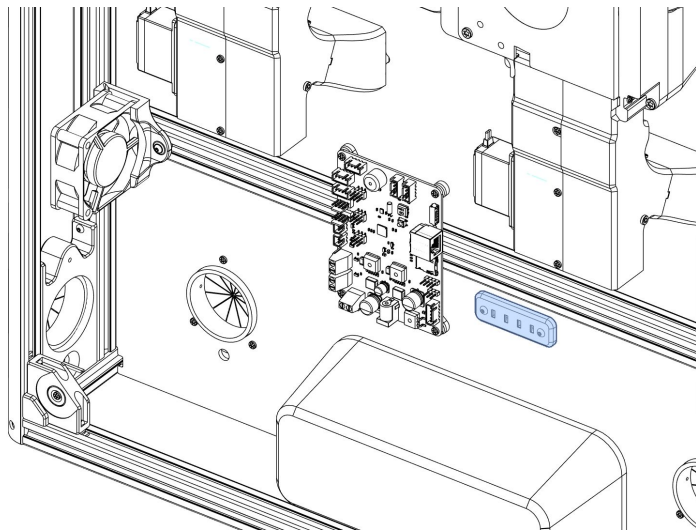
CHECKS

Insert the two M5x16 BHCS screws and
then tighten two M5 T nuts on the back



CHECKS

Insert the two M5x16 BHCS screws and
then tighten two M5 T nuts on the back

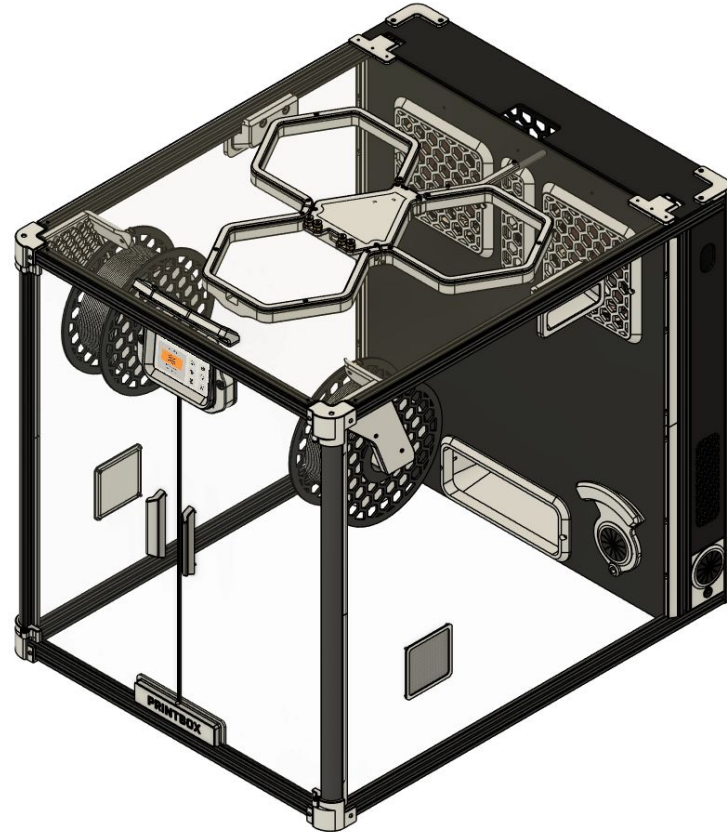


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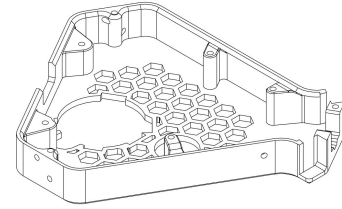
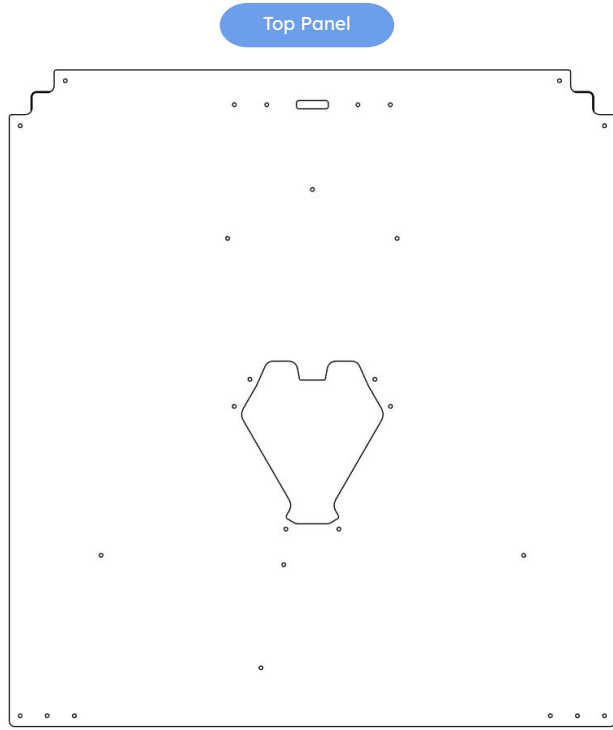


BACK PANEL

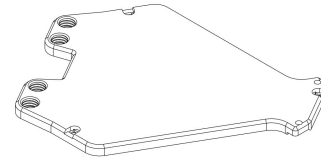
This step is where you assemble what you want to have on your enclosure. In the manual i will cover all of the possible accessories for now, but if there is something that you don't want to install you can just print the corresponding hole cover.



COMPONENTS



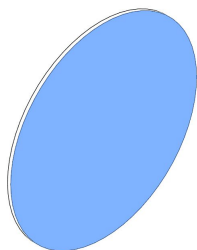
1 - Lighting Body



1 - Lighting Cover

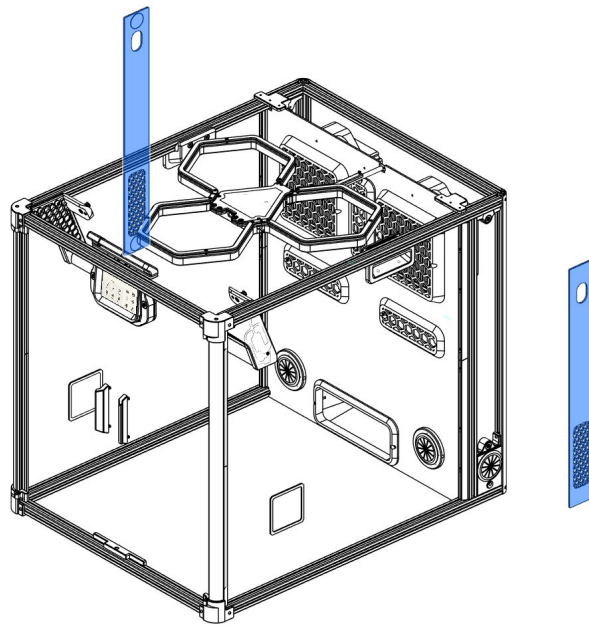
TOP PANEL

Insert the two M5x16 BHCS screw
then tighten two M5 T nuts on the



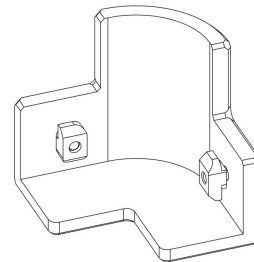
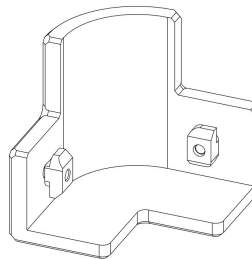
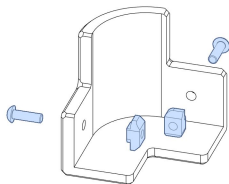
TOP PANEL

Insert the two M5x16 BHCS screw
then tighten two M5 T nuts on the



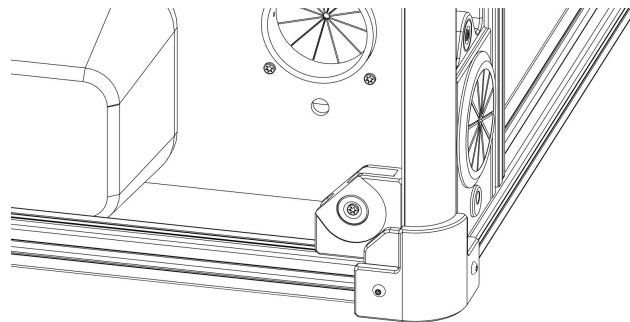
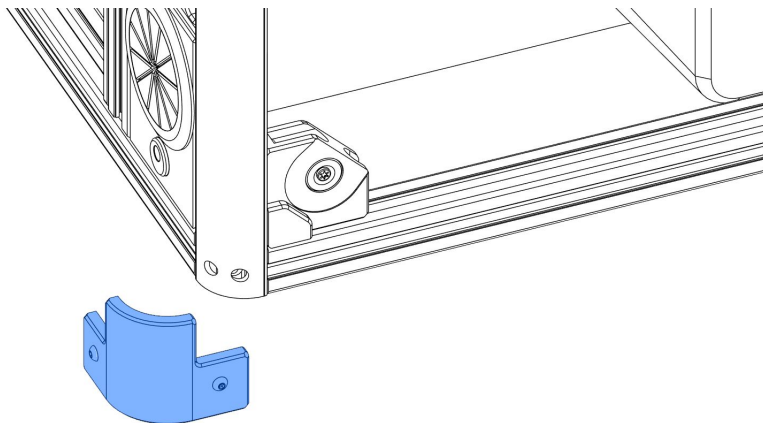
TOP PANEL

Insert the two M5x16 BHCS screws and
then tighten two M5 T nuts on the back



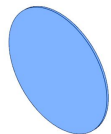
TOP PANEL

Insert the two M5x16 BHCS screws and
then tighten two M5 T nuts on the back



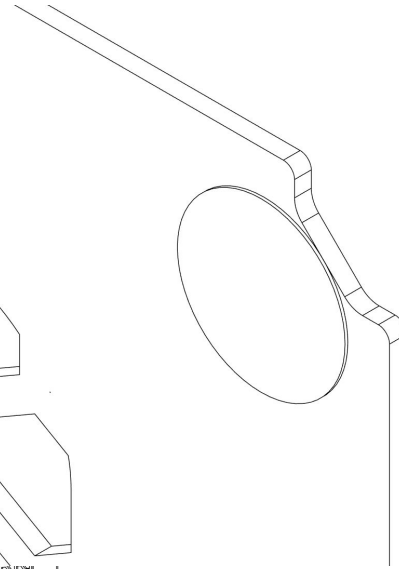
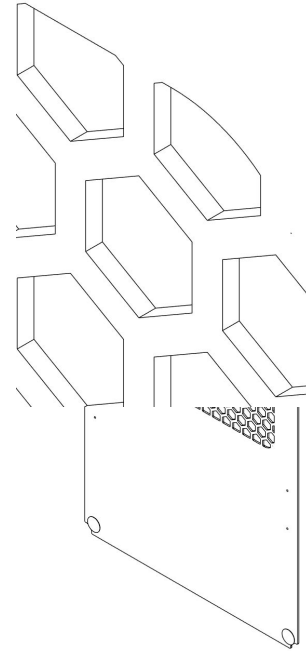
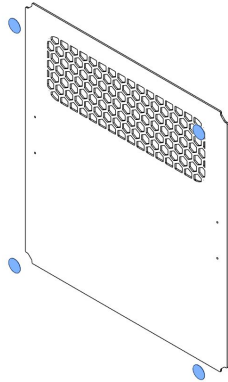
TOP PANEL

Insert the two M5x16 BHCS screws and
then tighten two M5 T nuts on the back



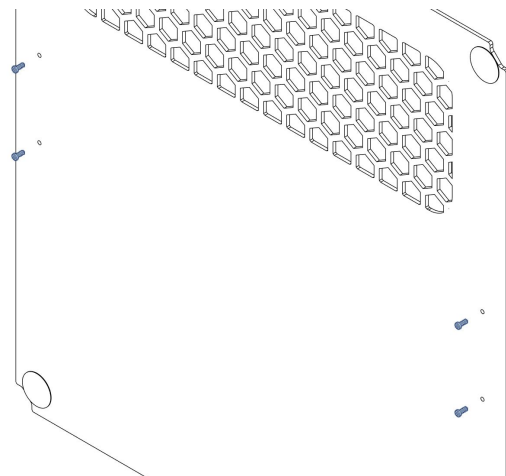
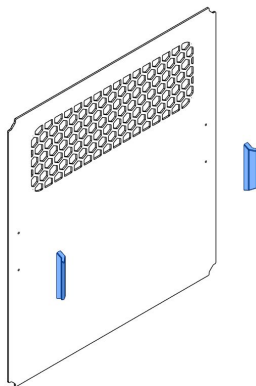
TOP PANEL

Insert the two M5x16 BHCS screws and then tighten two M5 T nuts on the back



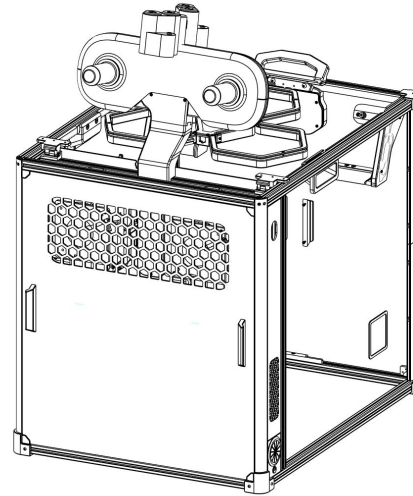
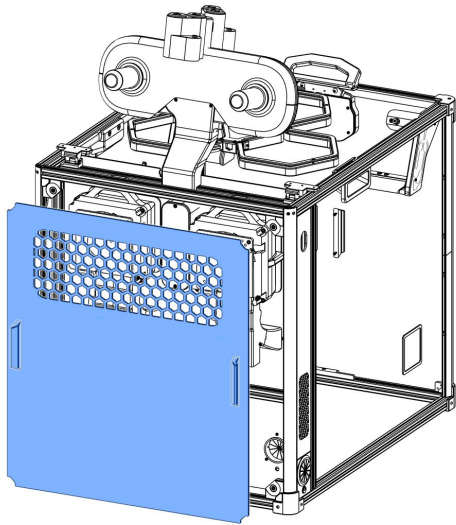
TOP PANEL

Insert the two M5x16 BHCS screws and
then tighten two M5 T nuts on the back



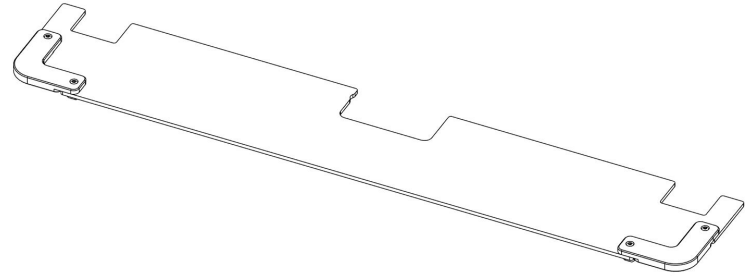
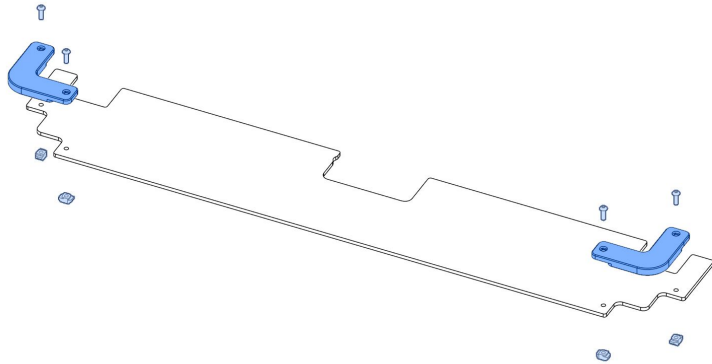
TOP PANEL

Insert the two M5x16 BHCS screws and
then tighten two M5 T nuts on the back



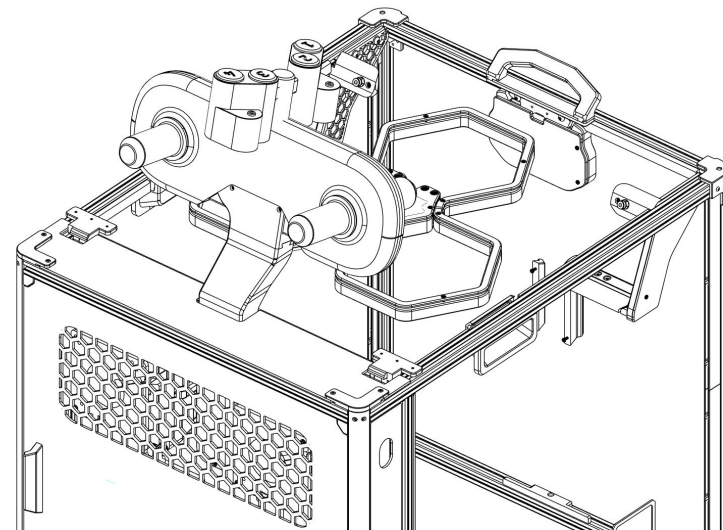
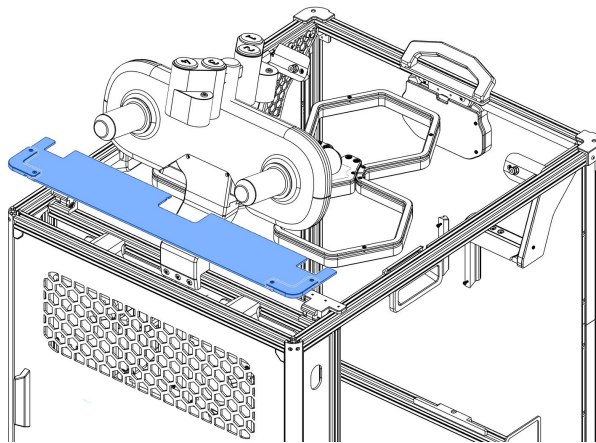
TOP PANEL

Insert the two M5x16 BHCS screws and
then tighten two M5 T nuts on the back



TOP PANEL

Insert the two M5x16 BHCS screws and
then tighten two M5 T nuts on the back



**YOU'RE
DONE**



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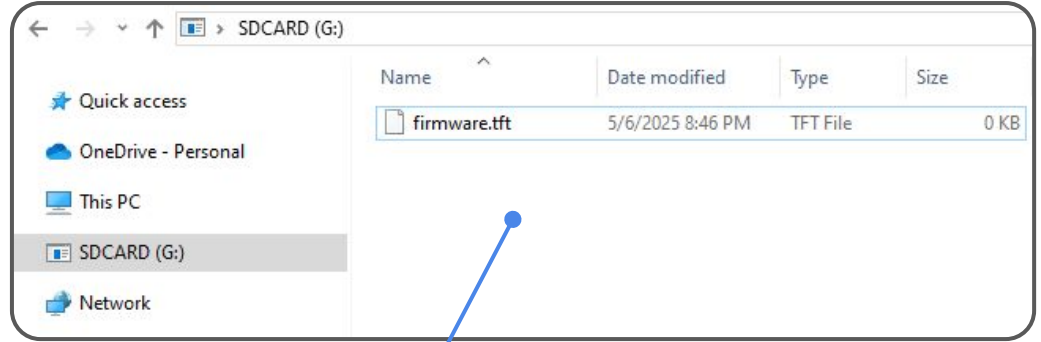
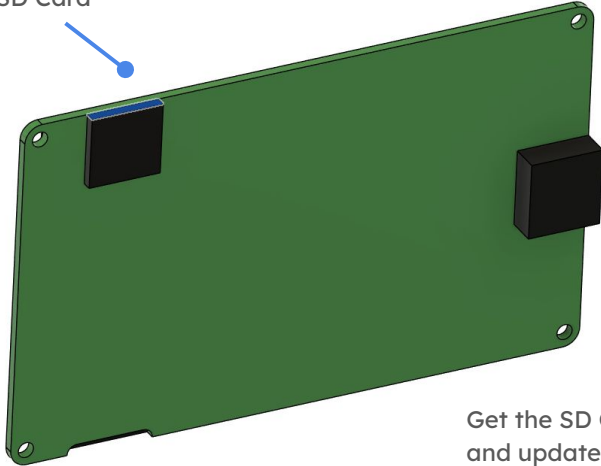


SOFTWARE UPDATES

This step is where you assemble what you want to have on your enclosure. In the manual i will cover all of the possible accessories for now, but if there is something that you don't want to install you can just print the corresponding hole cover.

UPDATING THE SCREEN

SD Card

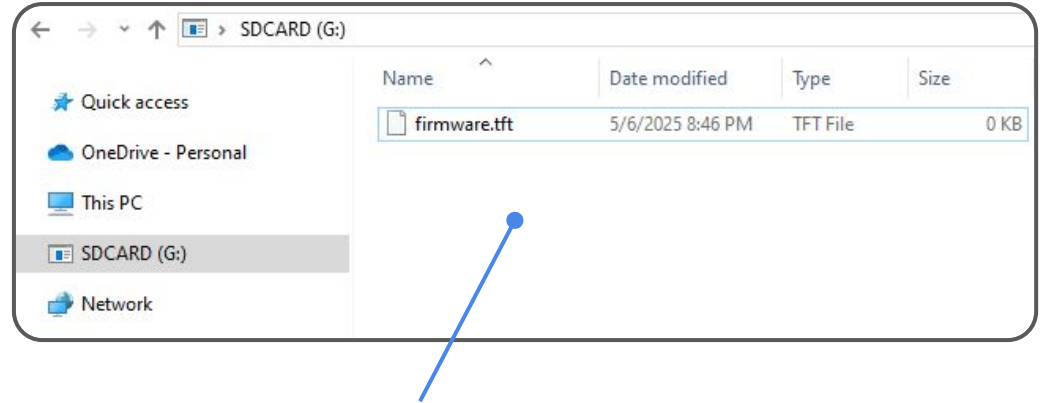


Get the SD Card from the screen, (To extract it push it in and then raise it up). Insert it in your computer and update the firmware of the screen. To do so, you must delete the current firmware file and paste the new file. Make sure the name of file is exactly as you see in the picture: **firmware.tft** .You can find this file on our website.

Then eject the SD Card and insert it back into the screen. Power it up by inserting the jst connector. Wait for the screen to say that it's updated and then power it off again and remove the sd card.

UPDATING THE PCB

SD Card



Get the SD Card from the screen, (To extract it push it in and then raise it up). Insert it in your computer and update the firmware of the screen. To do so, you must delete the current firmware file and paste the new file. Make sure the name of file is exactly as you see in the picture: **firmware.tft** .You can find this file on our website.

Then eject the SD Card and insert it back into the screen. Power it up by inserting the jst connector. Wait for the screen to say that it's updated and then power it off again and remove the sd card.
