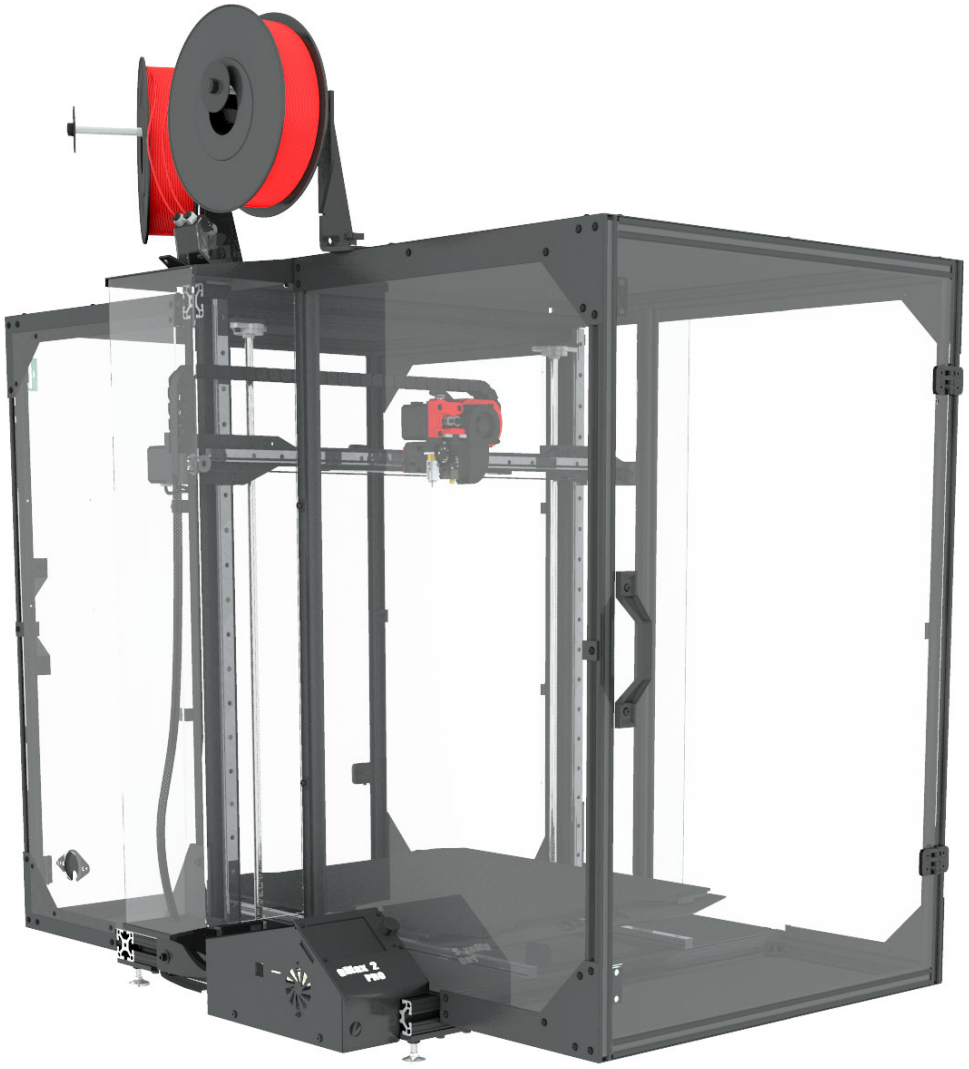
gMax Enclosure Build Guide

v220623

For gMax 2 and gMax 2 PRO



Make sure to inspect the contents of the package through the unboxing process for damage. Retain the original packaging for future use.

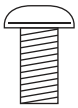
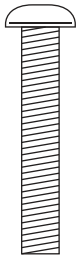
Part Breakdown

Below is a breakdown of all the parts in the enclosure kit.

Bag #1

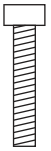
M5 T-Nut (Slide-in 4040)	M5 T-Nut (Drop-in 4040)	M5 T-Nut (Slide-in 2020)	M5 T-Nut (Drop-in 2020)	M3 T-Nut (Slide-in 2020)
				
15x	7x	70x	26x	4x

Bag #2

M5x6mm Button Head	M5x8mm Button Head	M5x10mm Button Head	M5x10mm Flat Head	M5x30mm Button Head
				
52x	27x	19x	16x	2x

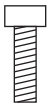
Bag #3

M3x16mm Socket Head



5x

M3x10mm Socket Head

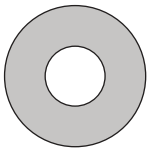


4x

Hex Keys

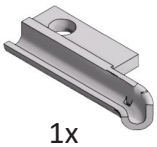
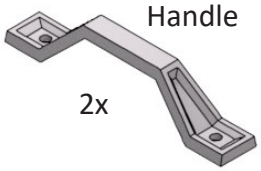
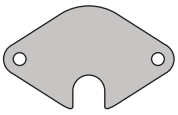
(1x) 2.5mm
(1x) 3.0mm

1/4” Washer



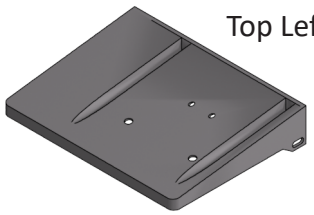
7x

Bag #4

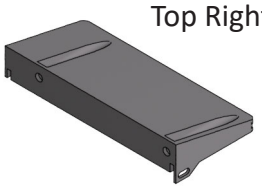
Door Magnets	Heated Bed Wire Guide	Door Handle	Wire Cover	Door Hinge	Side Acrylic Bracket	Rear Acrylic Bracket
						
4x	1x	2x	1x	4x	8x	4x

3D Printed Parts

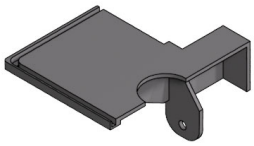
Top Left



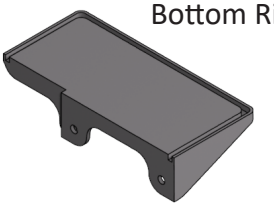
Top Right



Bottom Left



Bottom Right



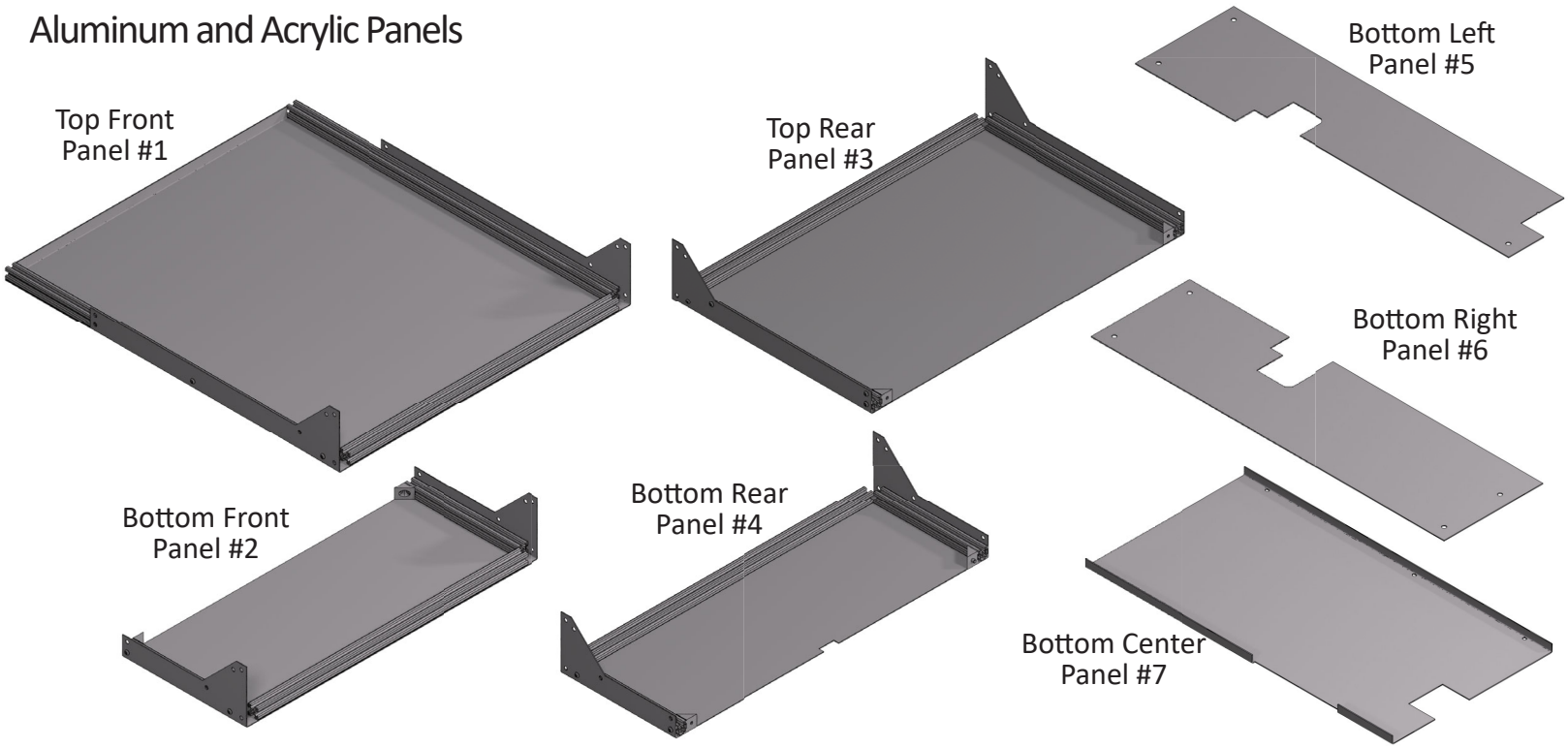
2020 Black Aluminum Rails

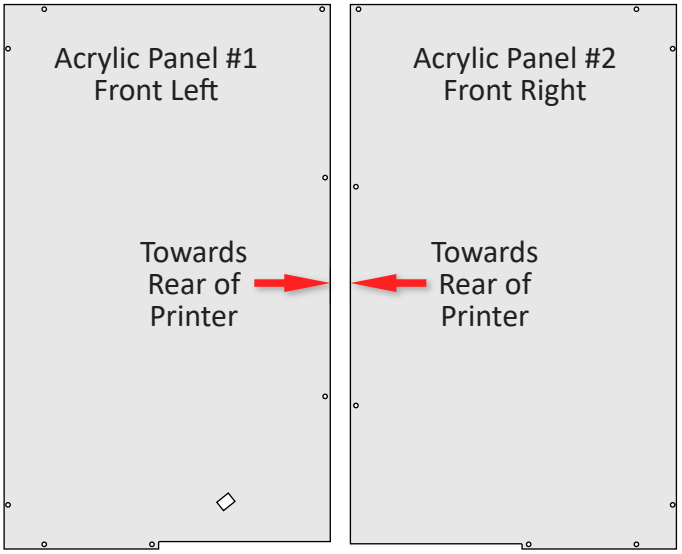
2x Front Rails
Length = 2’-8.434”

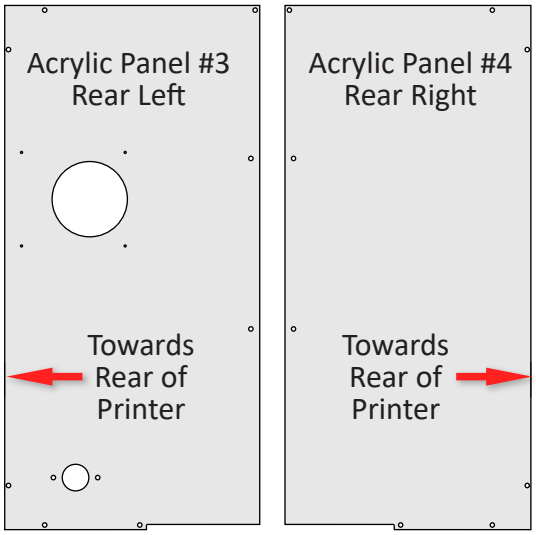
2x Center Rails
Length = 2’-7.29”

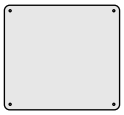
2x Rear Rails
Length = 2’-6.452

Aluminum and Acrylic Panels

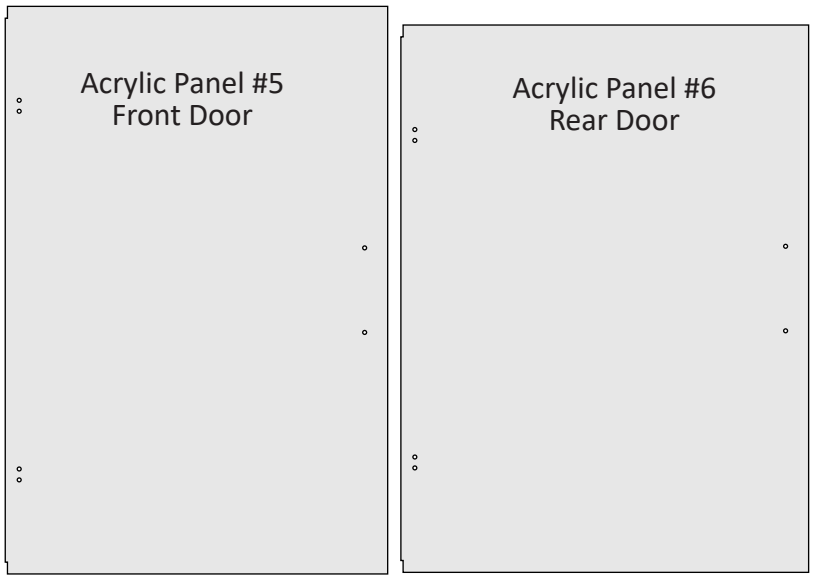


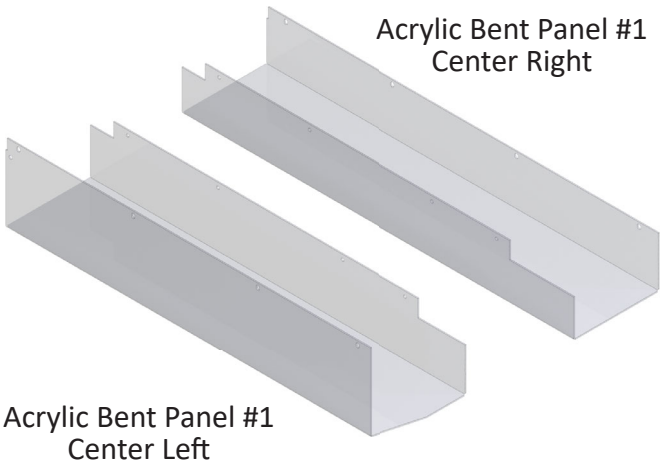






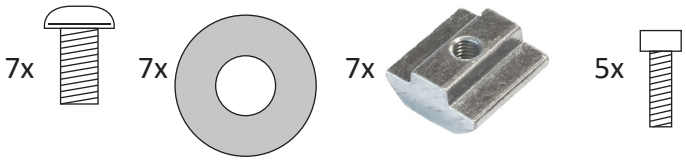
HEPA Filter
Hole Cover





Step 1

M5x10mm Button Head	1/4" Washer	M5 T-Nut (Slide-in 4040)	M3x16mm Socket Head
7x	7x	7x	5x



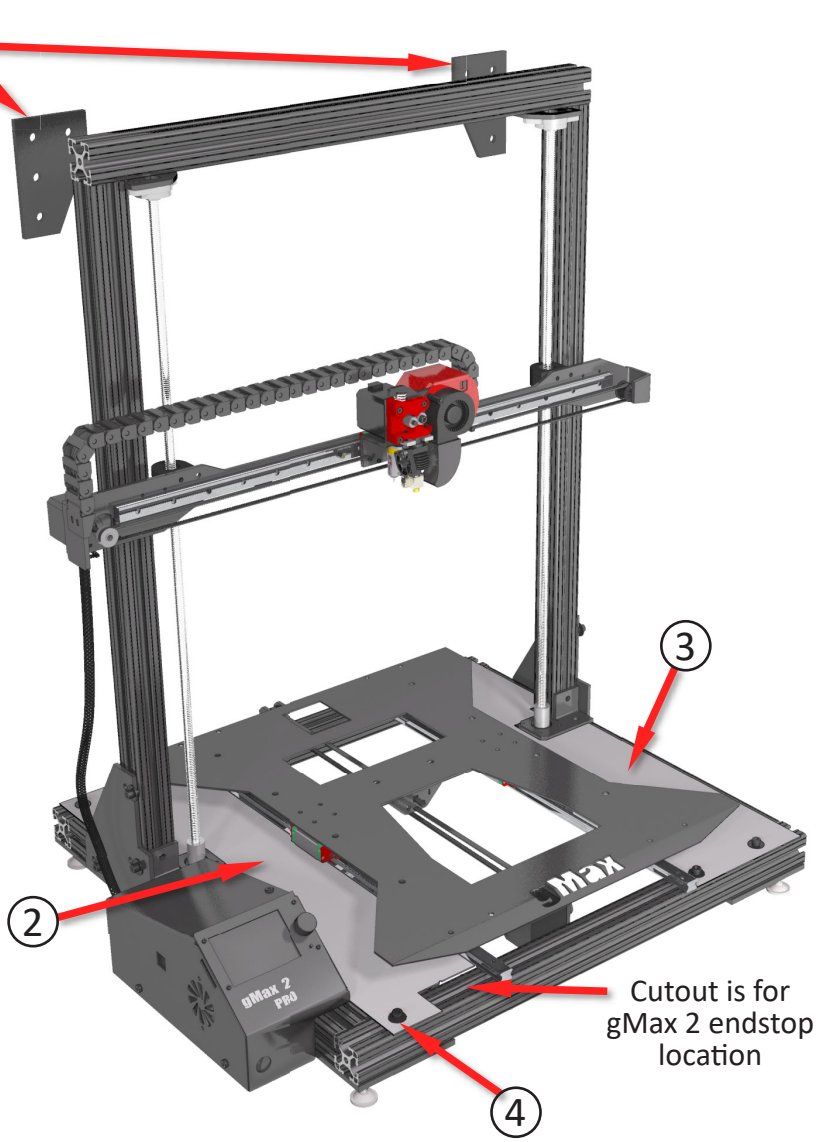
1. Remove rear brackets from back of printer

2. Install bottom left (Panel #5) aluminum panels below the bed carriage. Slide in from rear with bed pushed all the way back.

3. Install bottom right (Panel #6) aluminum panel below the bed carriage.

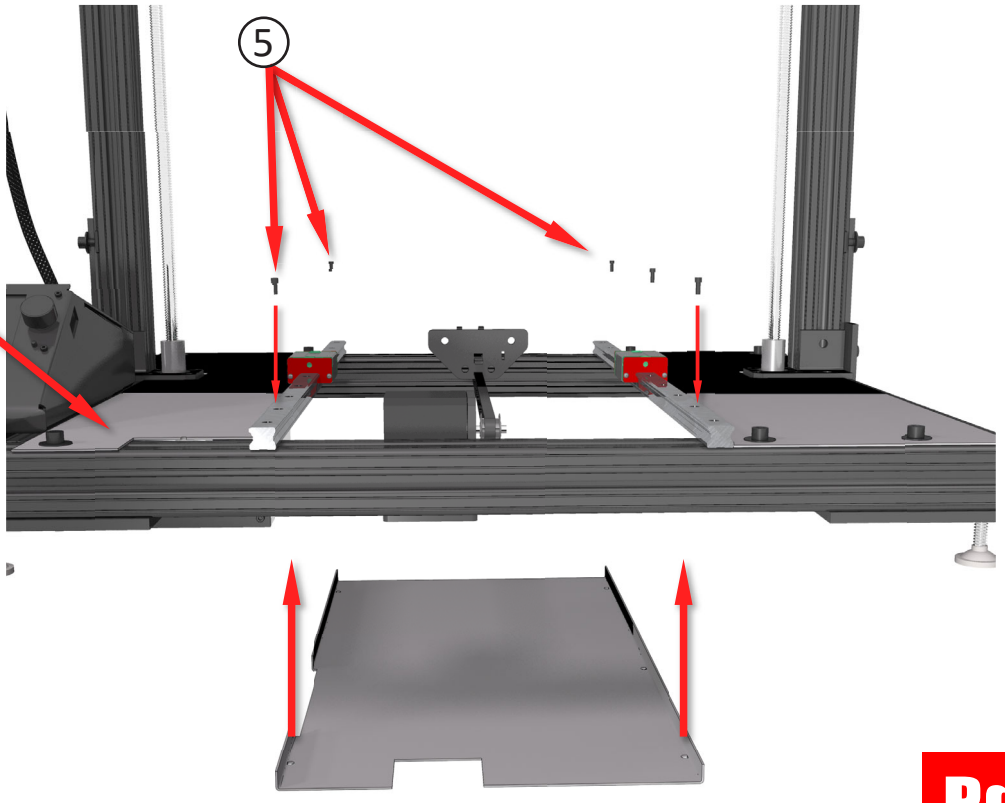
4. Use **M5x15mm** button head bolt, **1/4" washer** and **M5 4040 slide-in t-nuts** to secure panels to frame rails.

5. Use **M3 x 16mm** bolts to secure bottom center panel (Panel #7) to under side of linear guide rails.



Note

You may have to loosen power supply and adjust its position when installing the bottom center panel.



Step 2 - Front Build

M5x6mm Button Head	M5 T-Nut (Slide-in 2020)	M5 T-Nut (Drop-in 2020)	Side Acrylic Bracket
28x 	20x 	4x 	4x 

1. Locate top front (Panel #1), bottom front (Panel #2) and two of the longest 2020 rails (2'-8.434" in length).

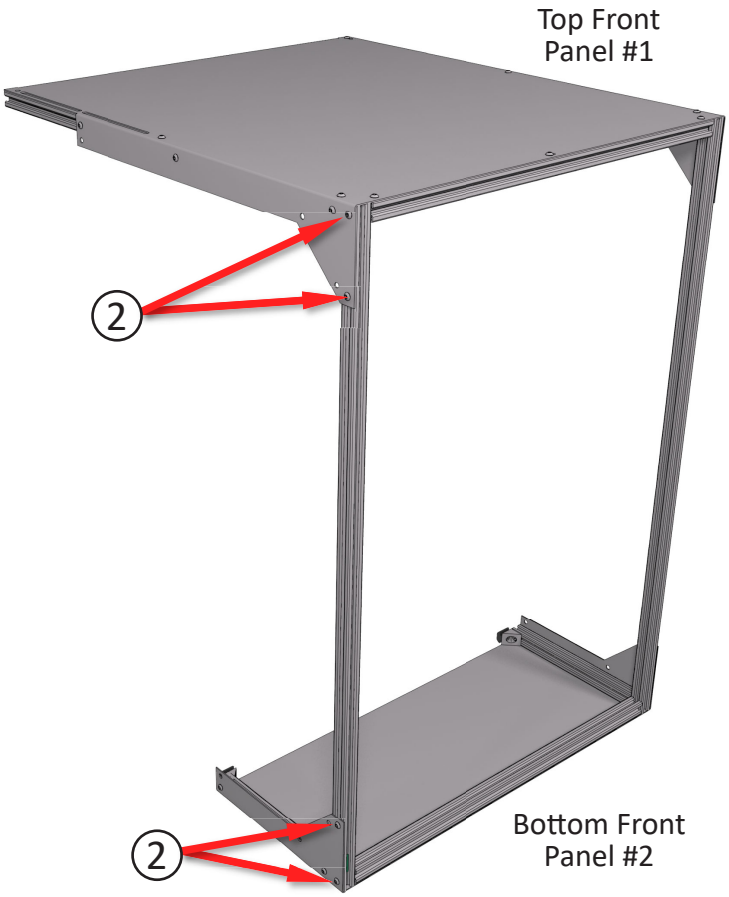
2. *Use **M5x6mm** button head bolts and **M5 2020 slide-in t-nuts** to connect both aluminum panels together.

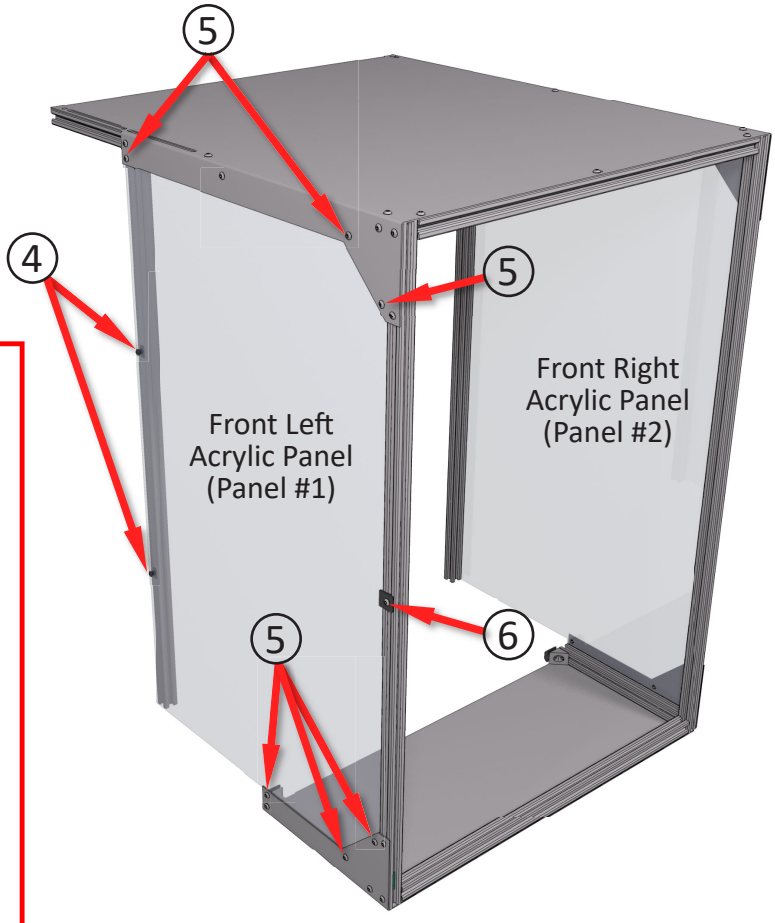
3. Locate the shortest 2020 rail (2'-6.452"), the front left acrylic panel (Panel #1) and the front right acrylic panel (Panel #2).

4. *Attach the 2020 rail to the inside rear of each panel using **M5x6mm** button head bolts and **M5 2020 slide-in t-nuts**.

5. *Attach left and right acrylic side panels to top and bottom aluminum panels using **M5x6mm** button head bolts and **M5 2020 slide-in t-nuts**.

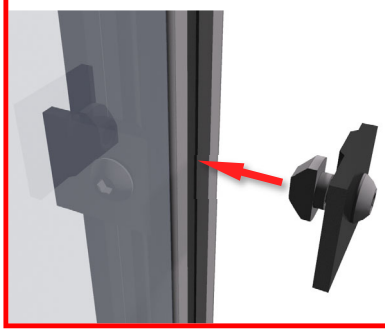
*Repeat on both sides



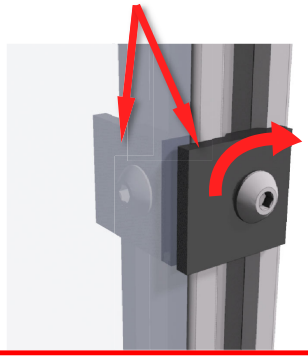


6 *Attach 3d printed acrylic clip to secure panel in place. Use **M5x8mm** button head and **M5 2020 drop-in t-nut**. See below.

Put drop-in t-nut on end of bolt, then insert in 2020 rail and turn clockwise to tighten



Install acrylic clip on outside and inside of enclosure rails.



Step 3 - Rear Build

M5x6mm Button Head	M5 T-Nut (Slide-in 2020)	M5 T-Nut (Drop-in 2020)	Side Acrylic Bracket
24x 	20x 	4x 	4x 

1. Locate top rear (Panel #3), bottom rear (Panel #4) and two of the medium length 2020 rails (2'-7.29" in length).

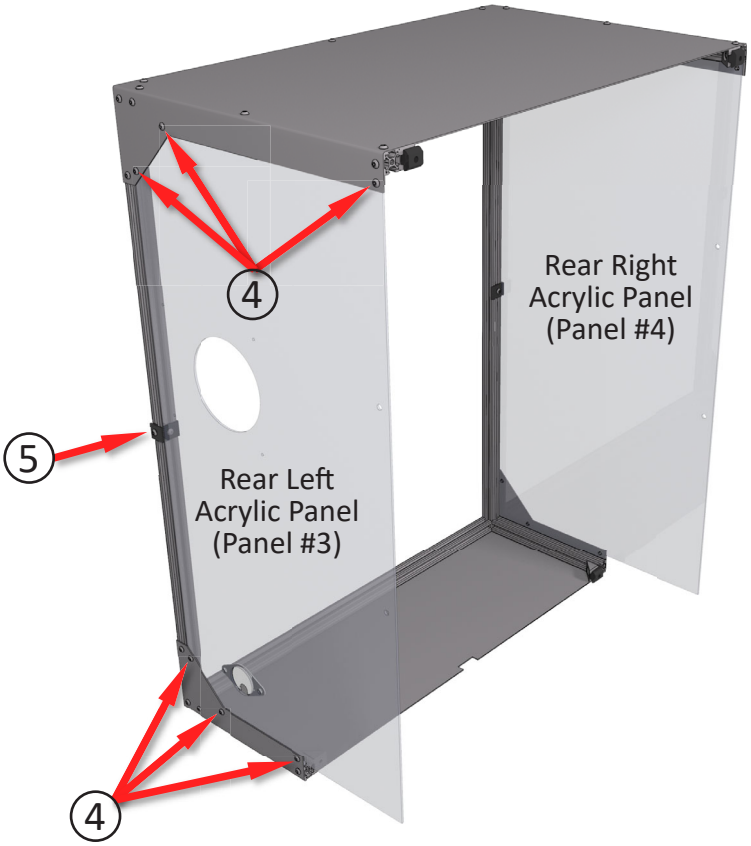
2. *Use **M5x6mm** button head bolts and **M5 2020 <u>slide-in</u> t-nuts** to connect both aluminum panels together.

3. Locate the rear left acrylic panel (Panel #3) and the rear right acrylic panel (Panel #4).

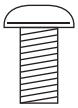
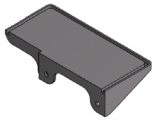
4. *Attach left and right acrylic side panels to top and bottom aluminum panels using **M5x6mm** button head bolts and **M5 2020 <u>slide-in</u> t-nuts**.

5. *Attach 3d printed acrylic clip to secture panel in place. Use **M5x6mm** button head and **M5 2020 <u>drop-in</u> t-nut**.

*Repeat on both sides



Step 4 - Center Brackets

M5 T-Nut (Drop-in 4040)	M5x10mm Button Head	Bottom Left	Bottom Right
3x 	3x 		

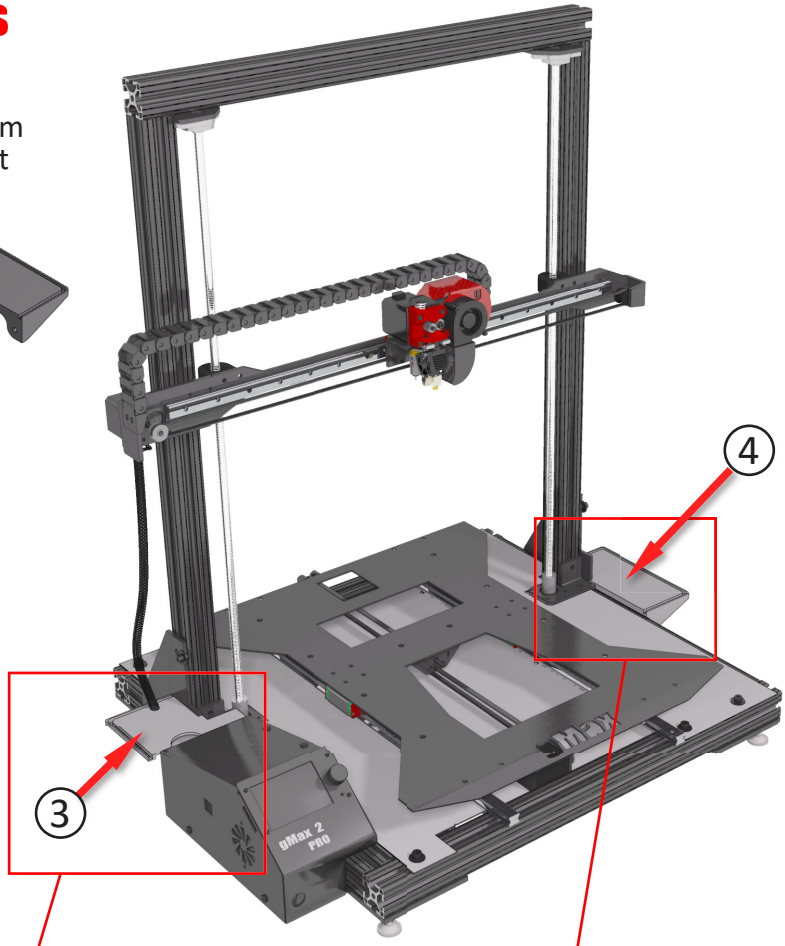
1. Locate and install left and right lower 3d printed brackets on side rails. (See below)

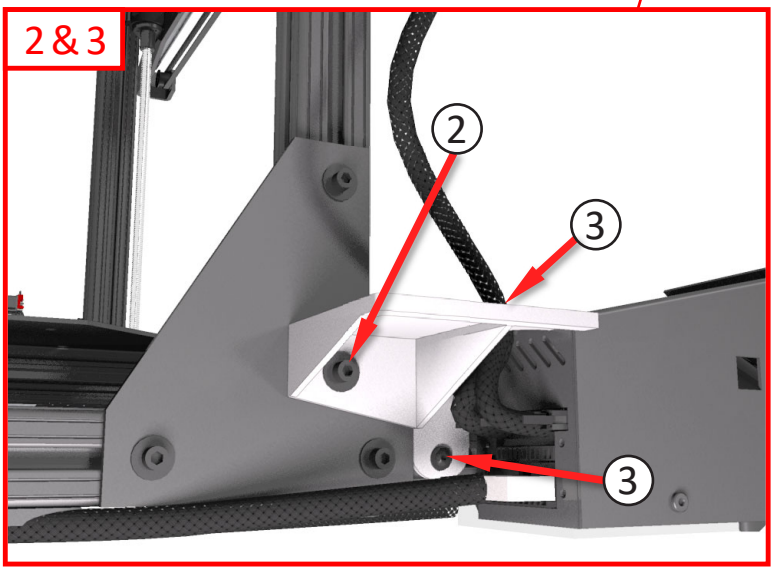
2. On left side, remove the M6 bolt already installed on side plate and reinstall over new 3d printed bracket (in next step).

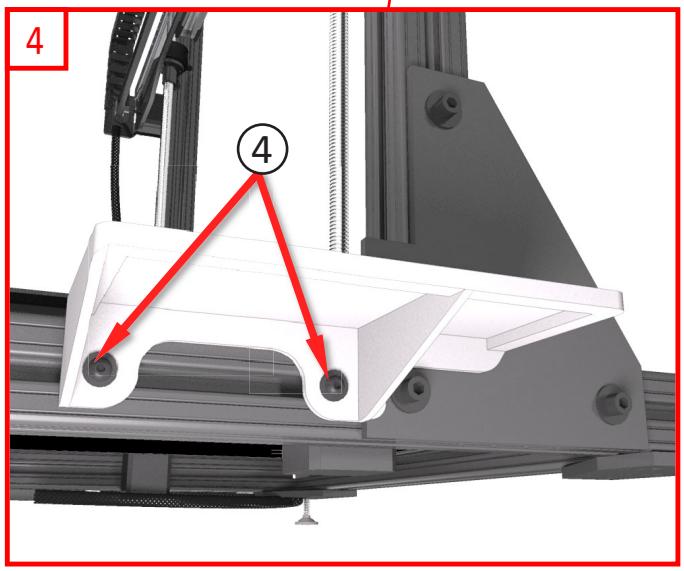
3. Use **M5 4040 drop-in t-nut** on side rail behind the electronics box. Make sure wire bundle is routed through semicircle in 3d printed bracket.

Note: you may have to loosen the electronics case when installing the bracket.

4. On right side, use **M5 4040 drop-in t-nuts** and **M5x10mm** button head bolts to attach bracket to side rail.

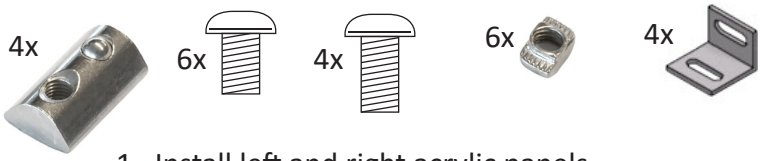






Step 5 - Center Acrylic

M5 T-Nut (Drop-in 4040)	M5x8mm Button Head	M5x10mm Button Head	M5 T-Nut (Drop-in 2020)	Rear Acrylic Bracket
4x	6x	4x	6x	4x



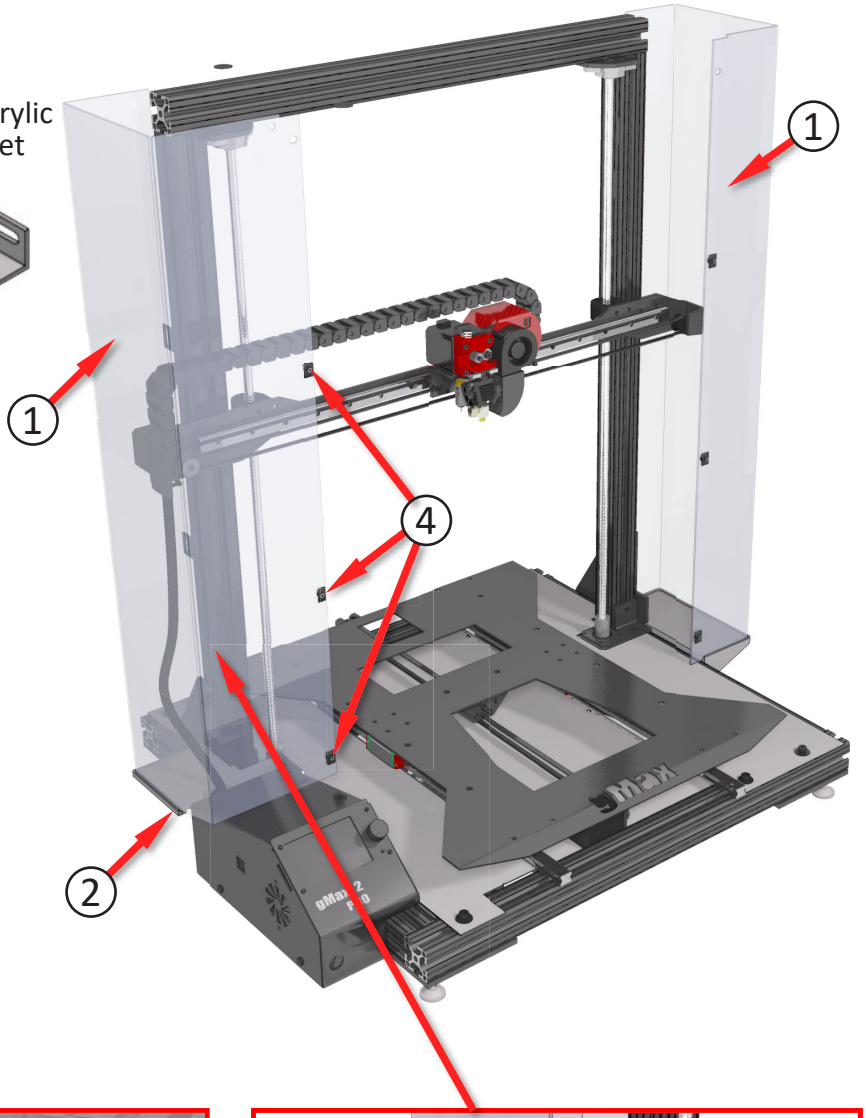
1. Install left and right acrylic panels.

2. Panels will slide into grooves on 3d printed brackets. See below on how to route extruder wire and zip tie to acrylic.

3. *Use **3d printed rear brackets** and attach panels to rear of aluminum rails using **M5x10mm** button head bolts and **M5 4040 drop-in t-nuts**.

4. Loosely install **M5x8mm** button head bolts and **M5 2020 drop-in t-nuts** on front of both acrylic panels. T-nuts should be on the front and bolts on the back.

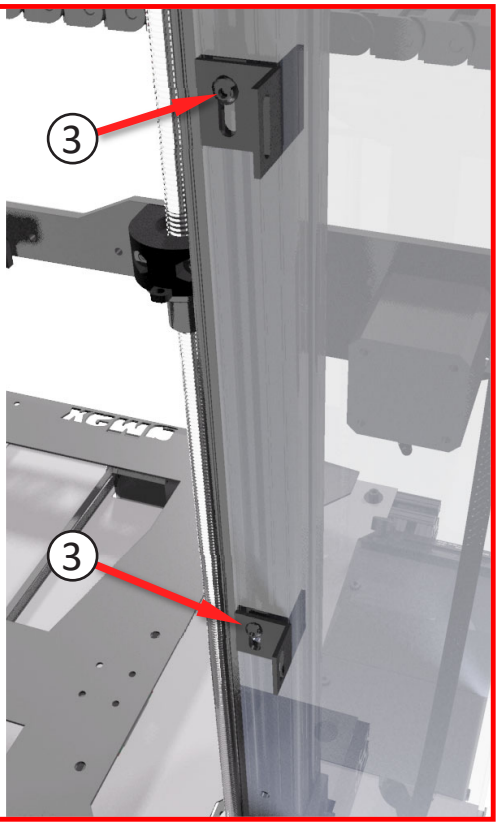
*Repeat on both sides

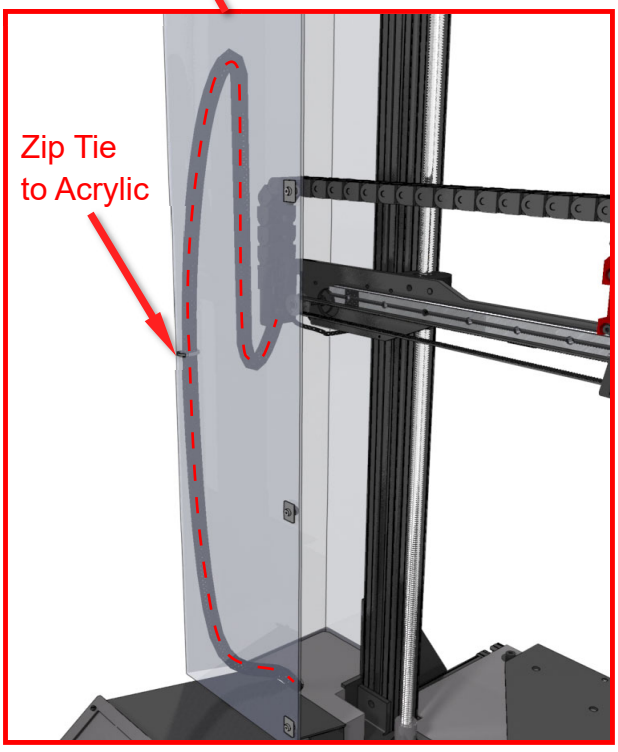


3 View from Rear

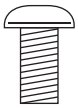
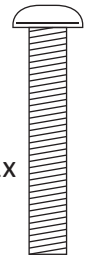
Note

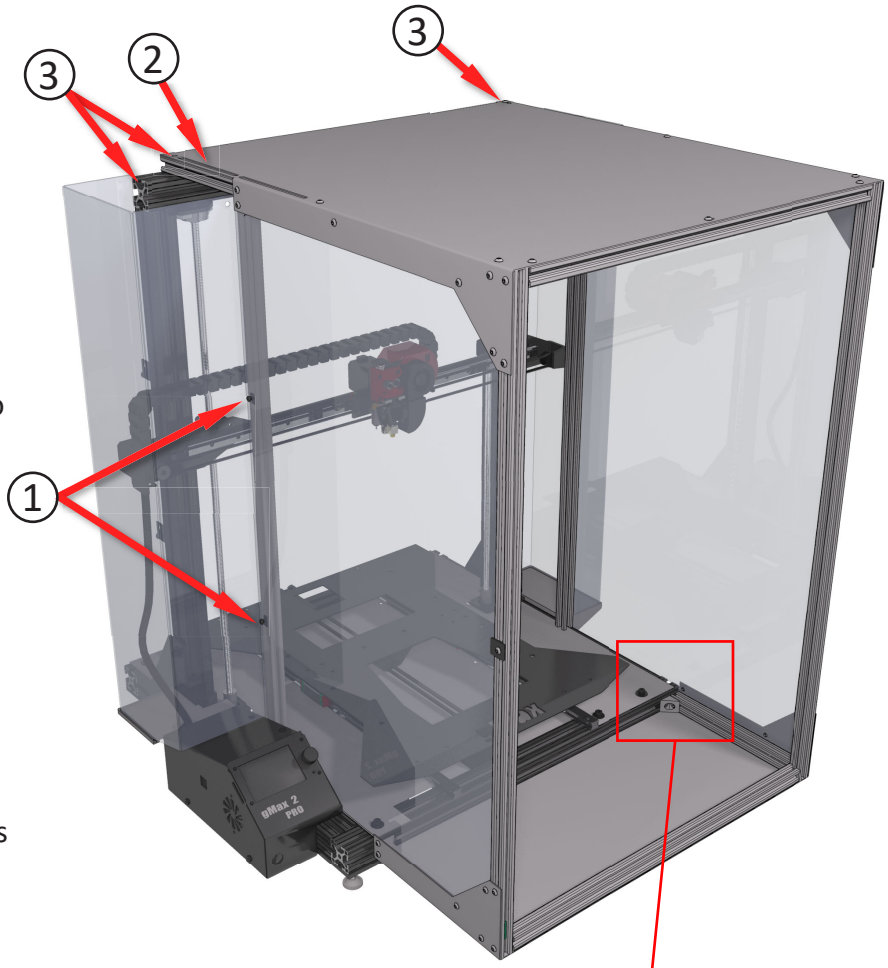
Long side of 3d printed bracket attaches to back of rear rail and short side attaches to future acrylic side panels.





Step 6a - Install Front

M5 T-Nut (Slide-in 4040)	M5 T-Nut (Slide-in 2020)	M5x10mm Button Head	M5x30mm ButtonHead
4x 	2x 	2x 	2x 



1. *Install the front enclosure assembly from **page #4** on the printer. The **M5 2020 drop-in t-nuts** installed on the acrylic side panels also from **page #4** should bolt to the rear of the vertical 2020 rails.

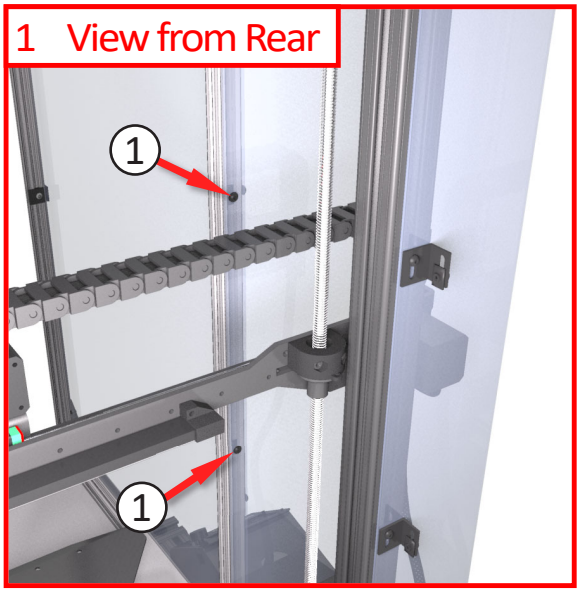
2. *Slide in (2) **M5 2020 slide-in t-nuts** on the top rail to hold the future filament spool brackets.

3. *Slide in (2) **M5 4040 slide-in t-nuts** to left and right of top rail. Secure the top of the enclosure using **M5x30mm** button head bolts through the hole in the top enclosure panel into the **M5 4040 t-nut**.

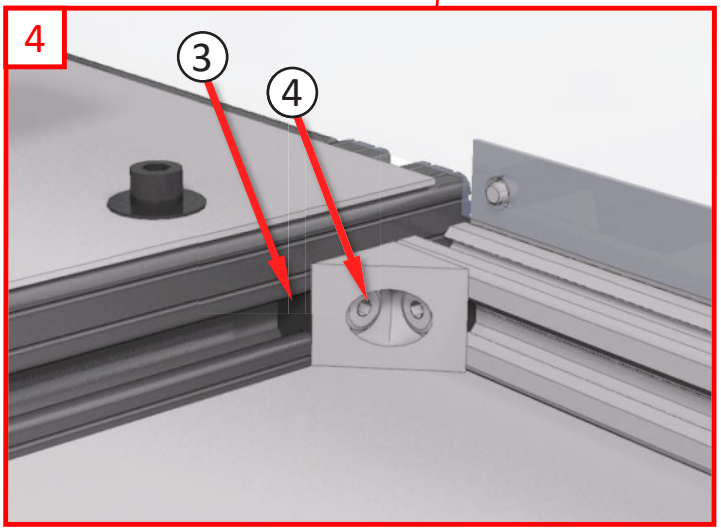
4. *Secure the bottom of the enclosure to the front rail using **M5x10mm** button head bolts and **M5 4040 slide-in t-nuts**.

*Repeat on both sides

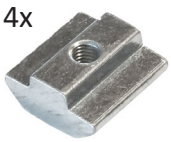
1 View from Rear



4



Step 6b - Install Rear

M5 T-Nut (Slide-in 4040)	M5 T-Nut (Slide-in 2020)	M5x8mm Button Head	M5x10mm Button Head
4x 	4x 	4x 	4x 

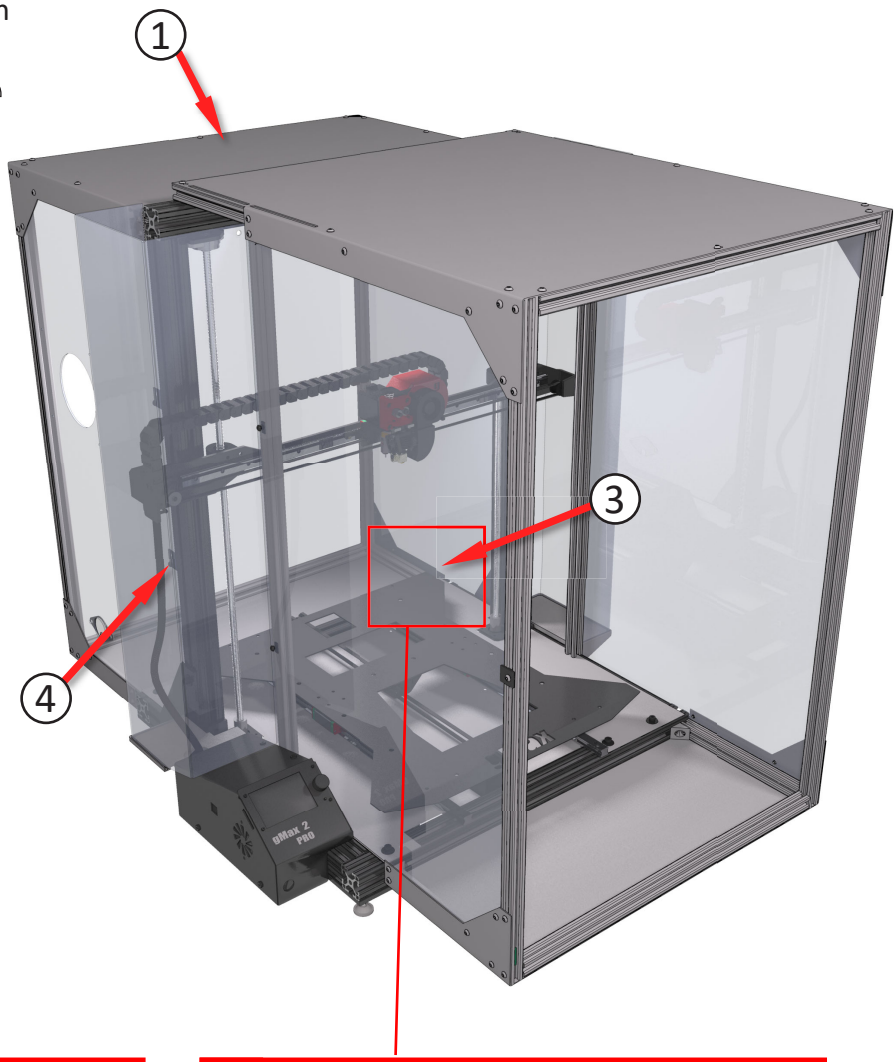
1. Install the rear enclosure assembly from **page #5** on the printer. Make sure side acrylic panels are on outside of 3d printed brackets from **page #7**.

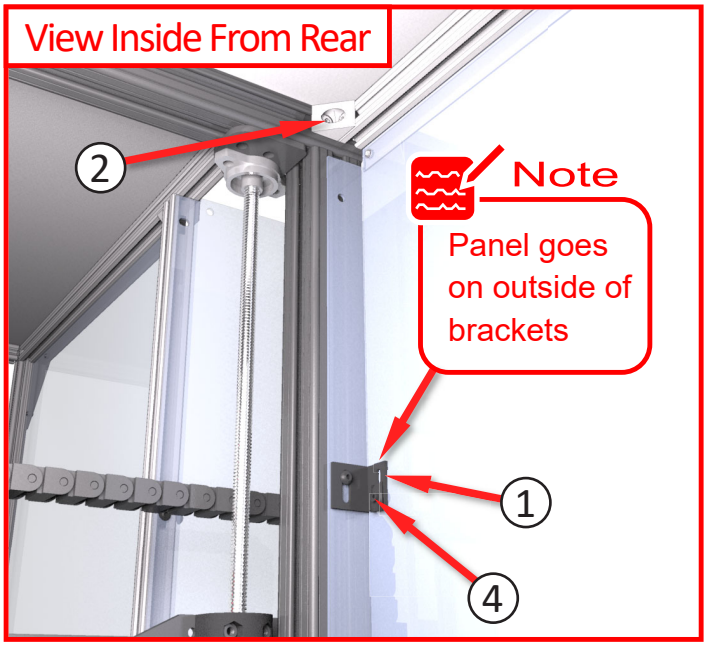
2. *Secure the top of the enclosure using **M5x10mm** button head bolts and **M5 4040 slide-in t-nuts**.

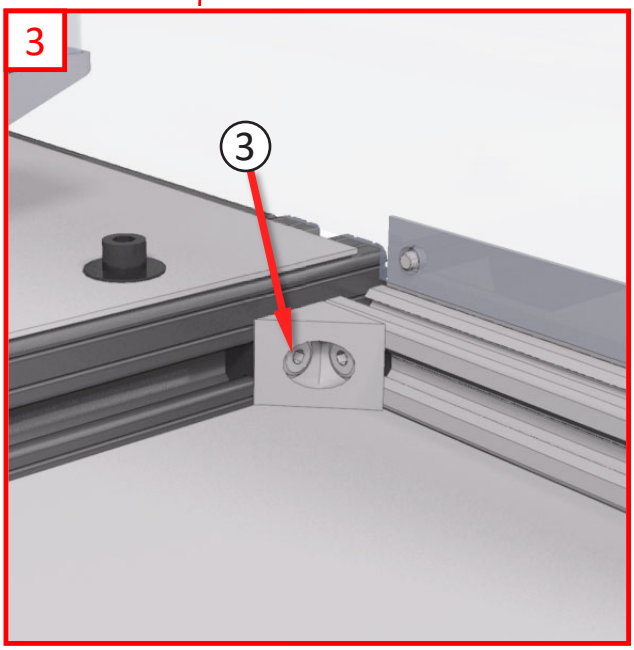
3. *Secure the bottom of the enclosure to the rear rail using **M5x10mm** button head bolts and **M5 4040 slide-in t-nuts**.

4. *Secure sides of rear assembly to 3d printed brackets using **M5x8mm** button head bolts and **M5 tnuts**.

*Repeat on both sides







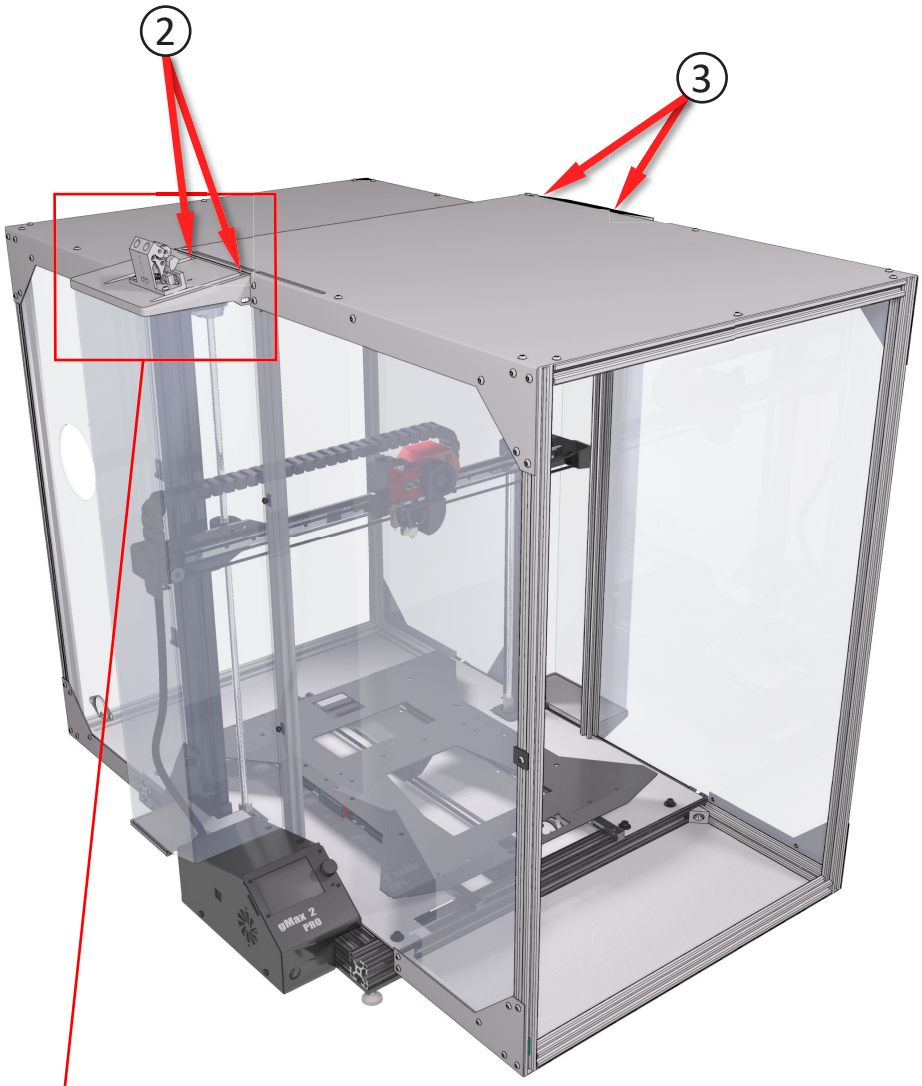
Step 7 - Top Brackets

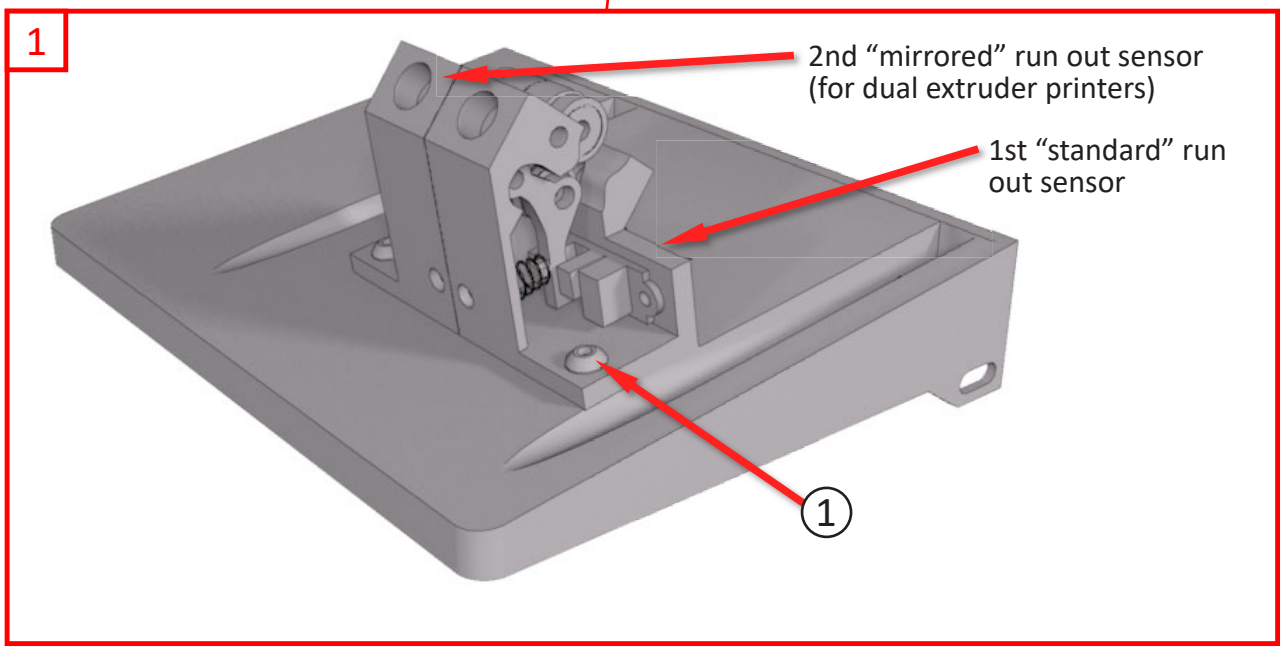
M5 T-Nut (Slide-in 2020)	M5x8mm Button Head	M5x10mm Button Head
6x 	4x 	2x 

1. Install runout sensors on top left 3d printed acrylic enclosure bracket. Use **M5x10mm** button head bolts and **M5 2020 slide-in t-nuts**.

2. Install top left 3d printed bracket (with runout sensors) on bent acrylic panels. Use **M5x8mm** button head bolt and **M5 2020 slide-in t-nuts** to secure part to 2020 rail.

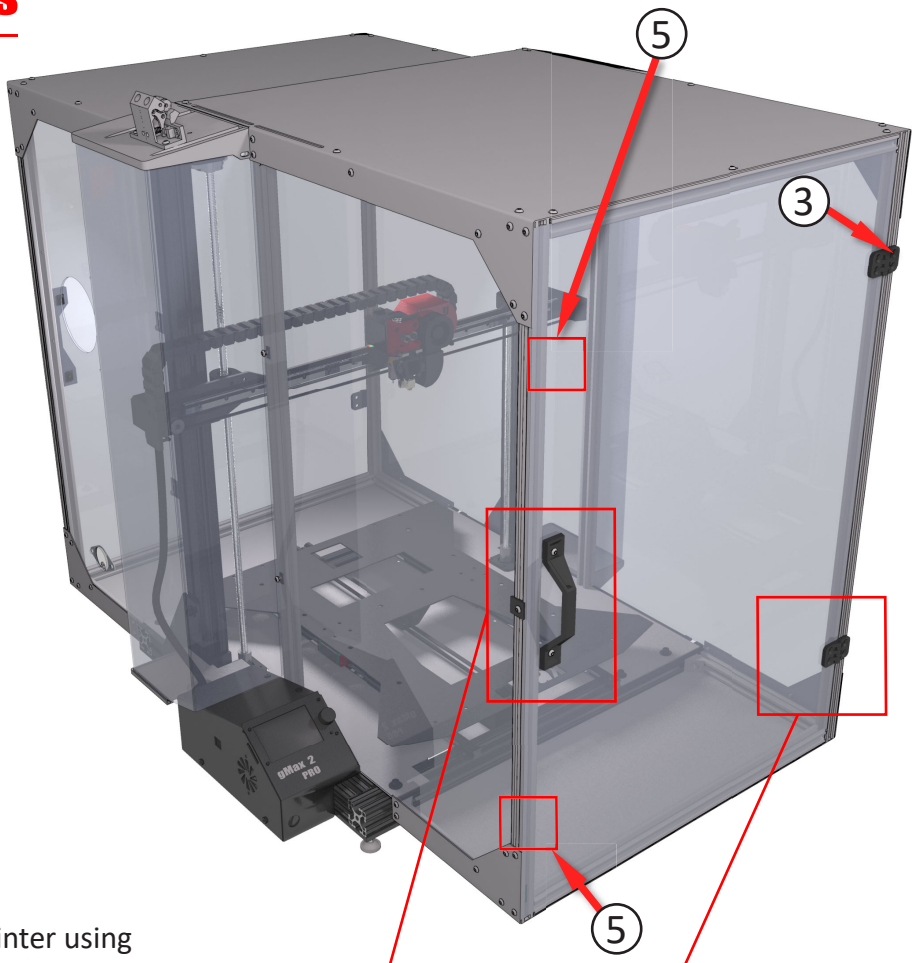
3. Install top right 3d printed bracket on bent acrylic panels. Use **M5x8mm** button head bolt and **M5 2020 slide-in t-nuts** to secure part to side of 2020 rail.





Step 8 - Acrylic Doors

M5x10mm Button Head	M5x10mm Flat Head	M5 T-Nut (Slide-in 2020)	M5 T-Nut (Drop-in 2020)
8x	16x	12x	12x



1. Install 3d printed door handle on front and rear acrylic door panels using **M5x10mm** button head bolts and **M5 2020 slide-in t-nuts**.

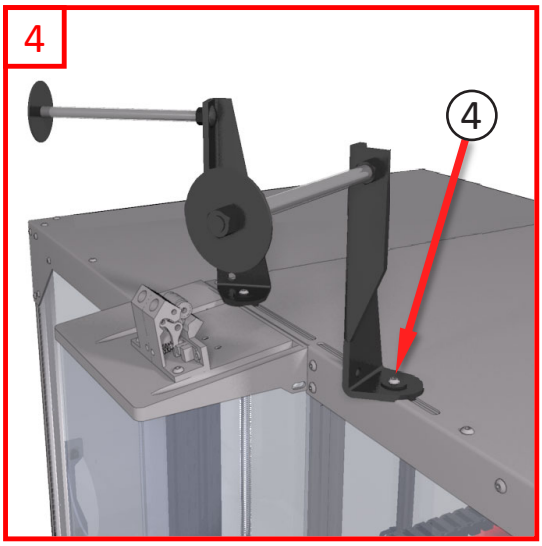
2. Install 3d printed hinges on front and rear acrylic door panels using **M5x10mm flat head bolts** and **M5 2020 slide-in t-nuts**.

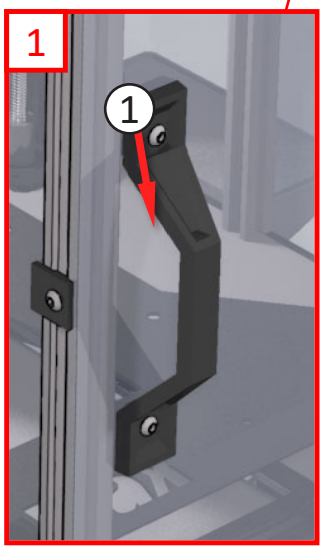
3. Install front and rear acrylic door panels on enclosure using **M5x10mm flat head bolts** and **M5 2020 drop-in t-nuts**.

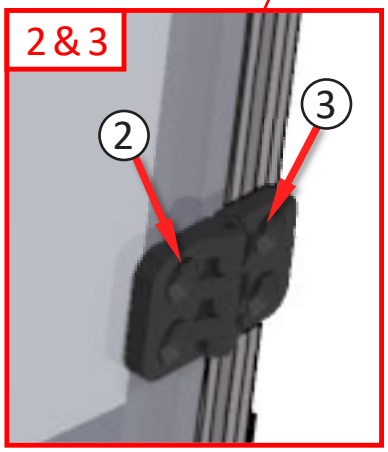
4. Install filament spool brackets on top of printer using **M5x10mm** button head bolts and existing M5 2020 t-nuts from **page #8.**

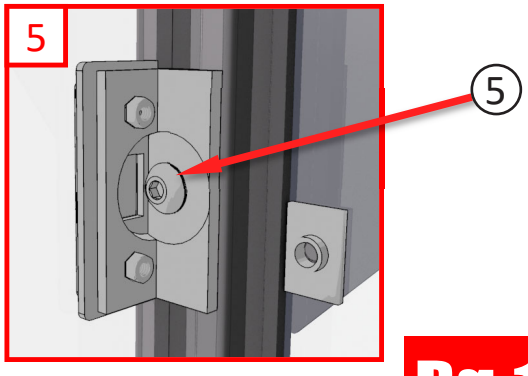
5. Install magnetic latch catch on 2020 rail with **M5x8mm button head bolts** and **M5 2020 drop-in t-nuts** on front and rear doors.

6. To install magnetic catch plate on acrylic, peel off covering on 3m double sided tape and press acrylic against catch plate.

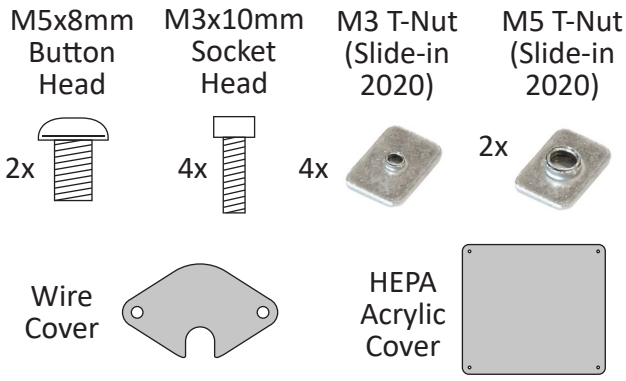








Step 9 - Final Parts



1. Install heated bed on printer and route power wire through hole in side of enclosure. Install 3d printed cover (with hole) over opening to secure wire using **M5x8mm button head bolts** and **M5 2020 slide-in t-nuts**.

2. Replace existing heated bed clip with new 3d printed bed spacer with wire quide to route heated bed wire along side of enclosure and secure with zip tie.

3. Install acrylic cover over hole using **M3x10mm socket head bolts** and **M3 2020 slide-in t-nuts** at each corner. Contact gCreate for information on future HEPA filter upgrade.