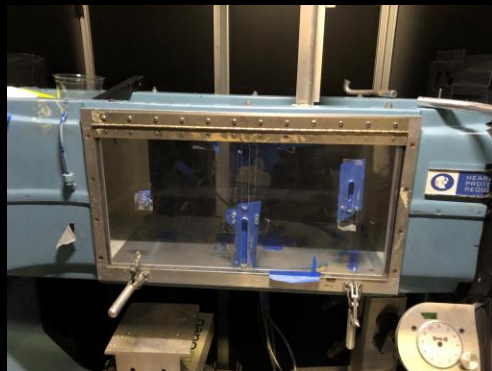
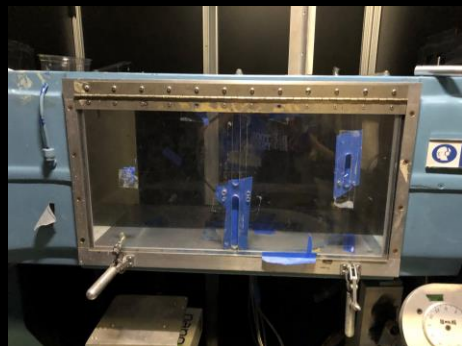
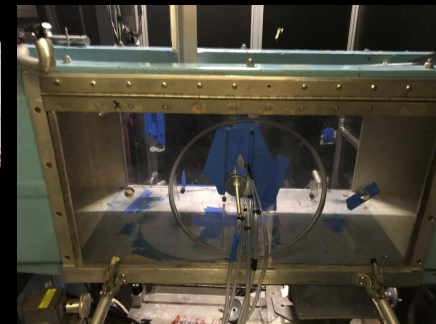
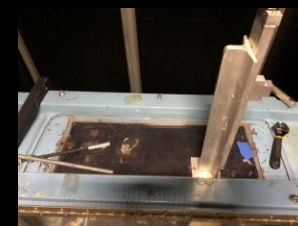
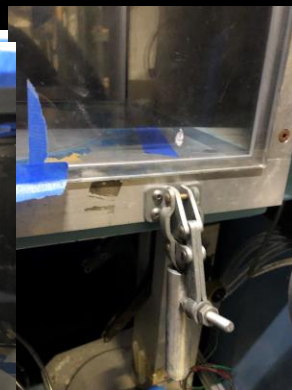
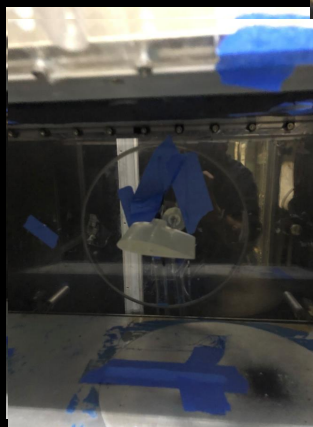
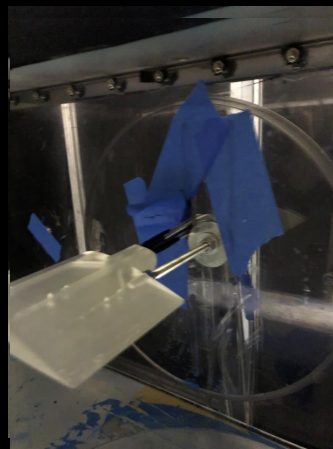
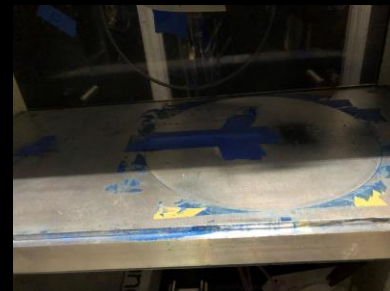
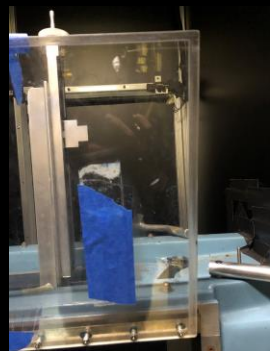


# Wind Tunnel Testing Chamber Design

Petros Sklavounos

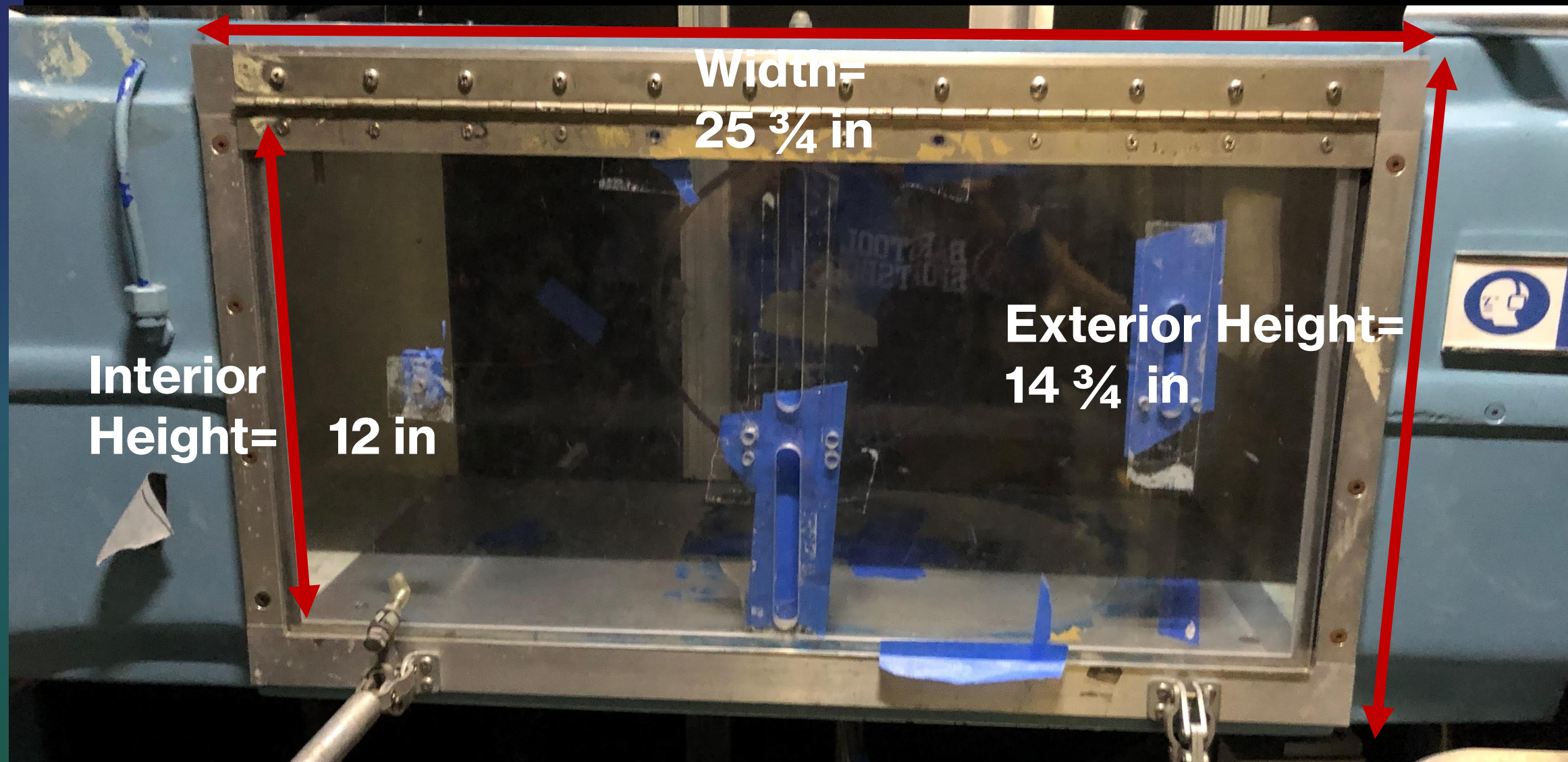






# 1. Current Dimensions





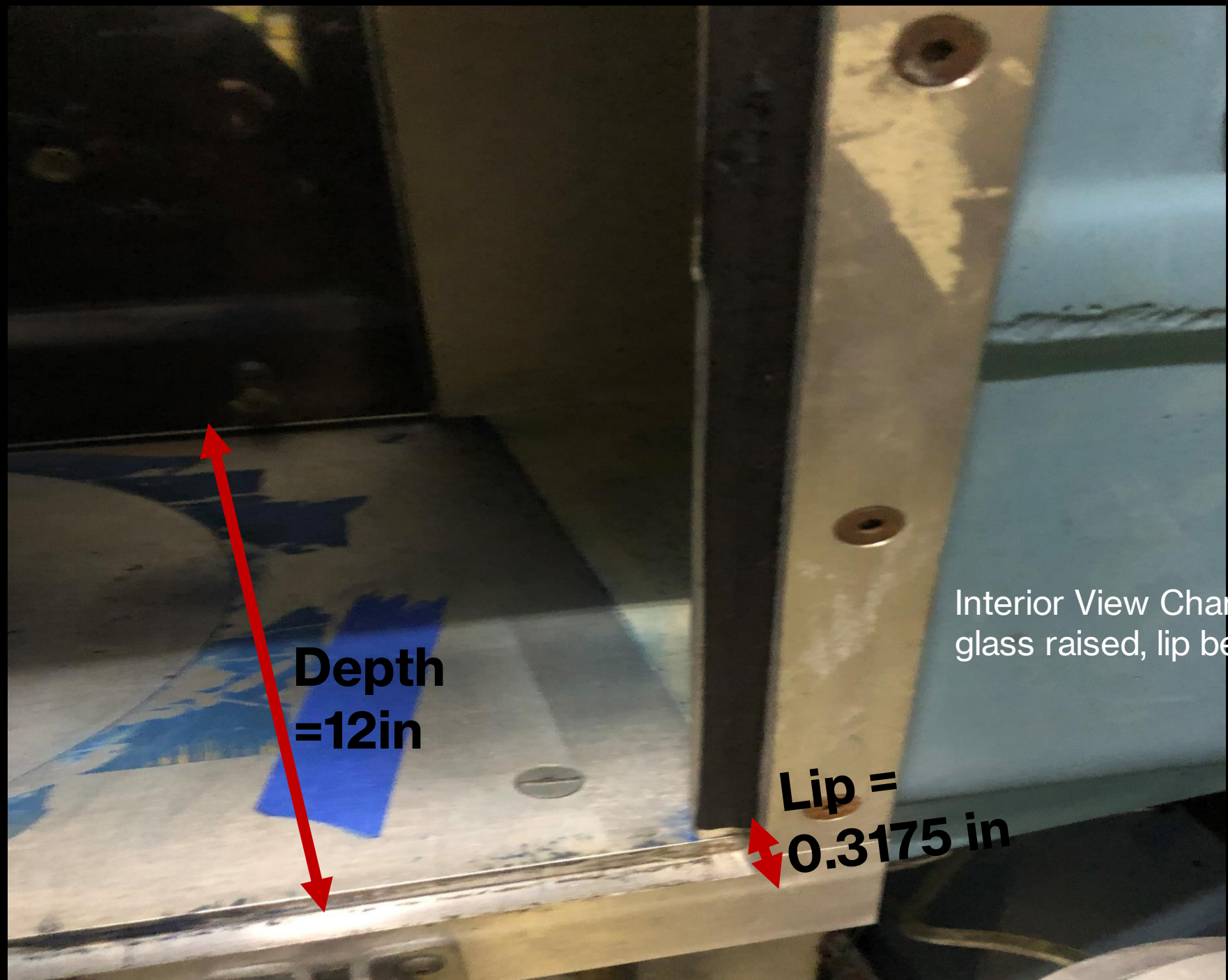
Width=  
 $25 \frac{3}{4}$  in

Exterior Height=  
 $14 \frac{3}{4}$  in

Interior  
Height=  
12 in

Front View Chamber





**Depth  
=12in**

**Lip =  
0.3175 in**

Interior View Chamber, sight  
glass raised, lip being shown

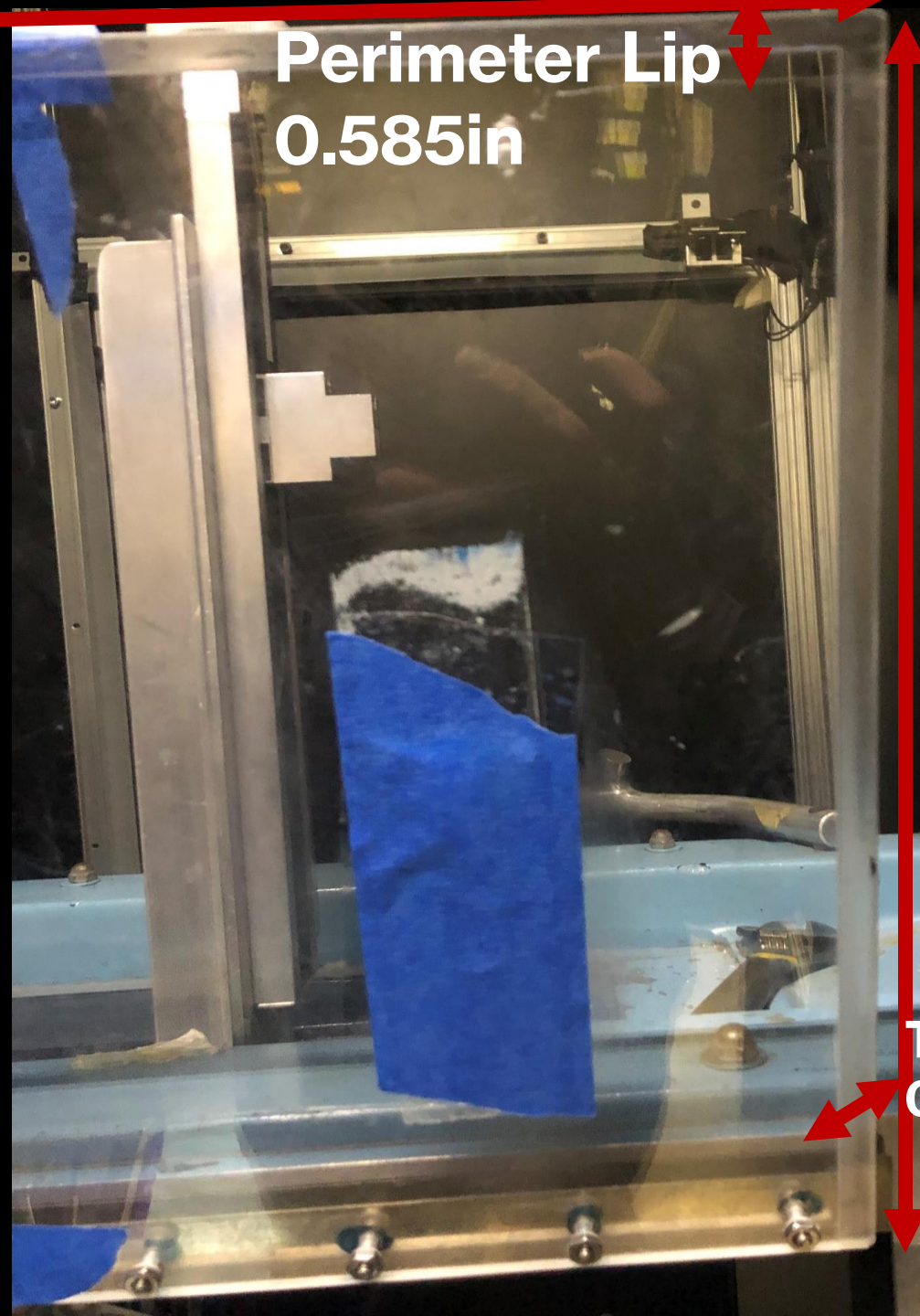
**Width= 23 7/8 in**

Plastic viewing glass

**Perimeter Lip  
0.585in**

**Length =  
12 3/8in**

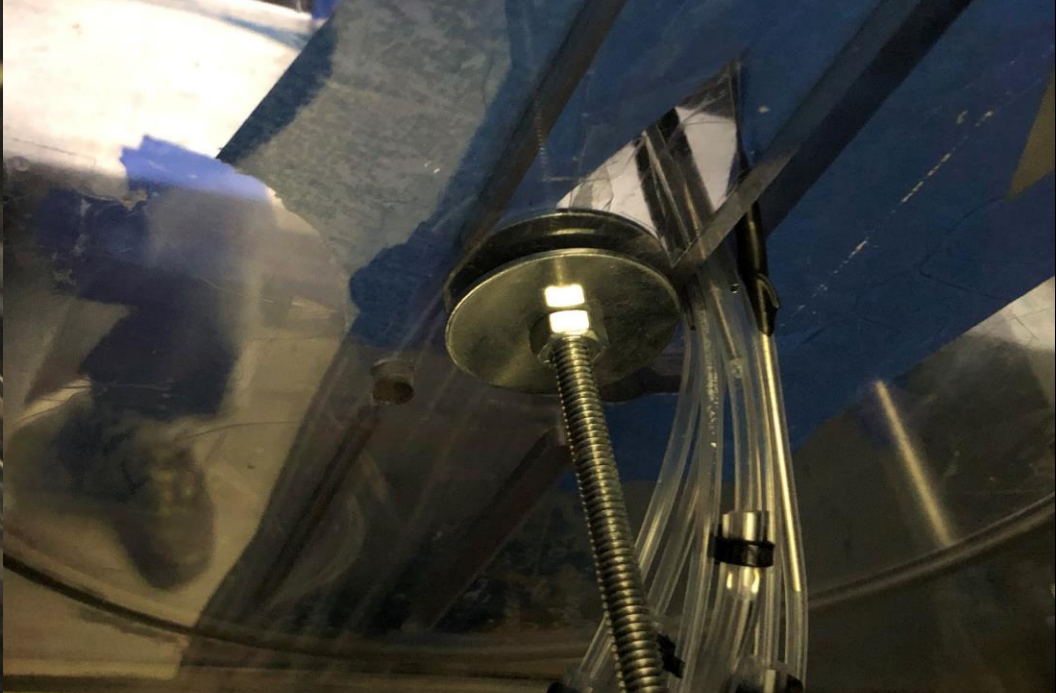
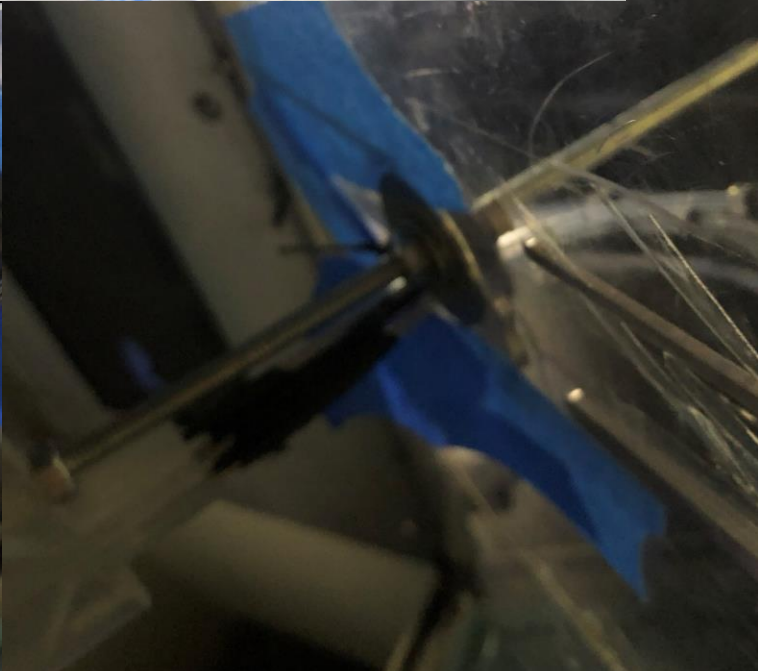
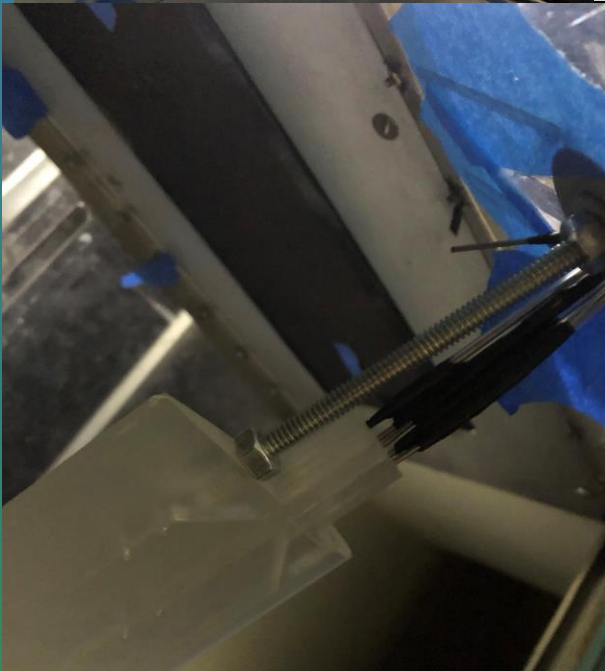
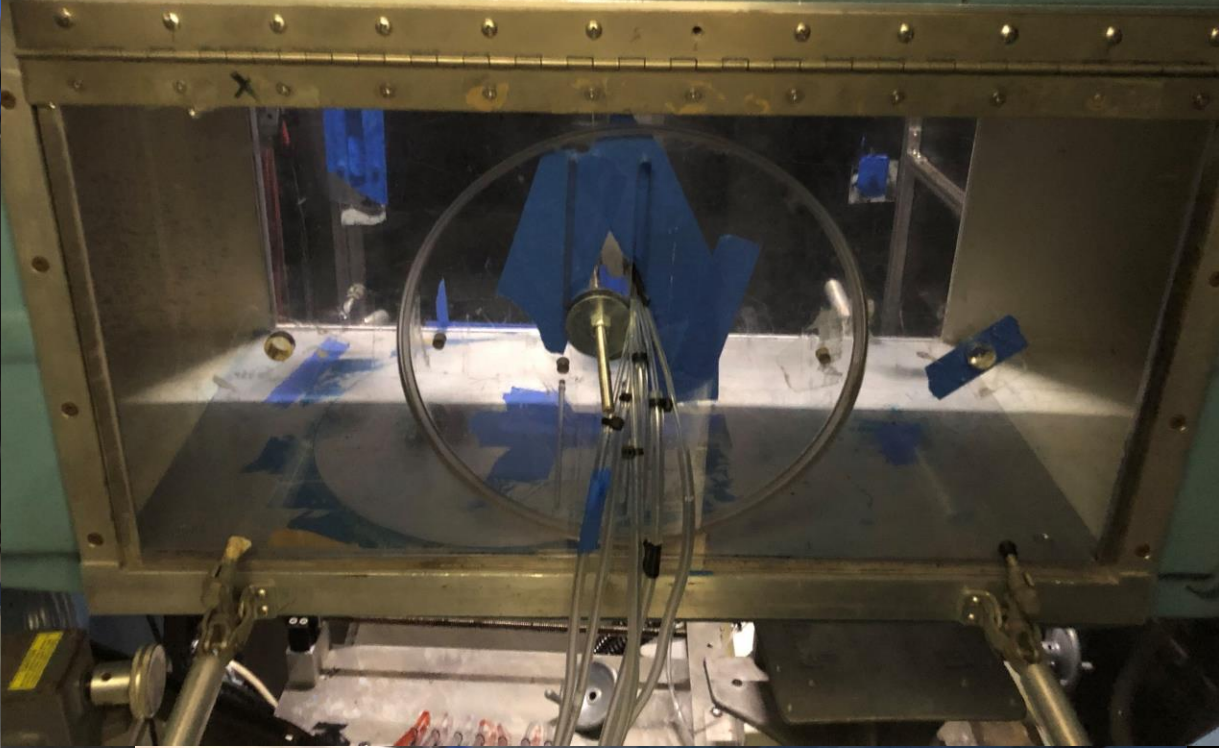
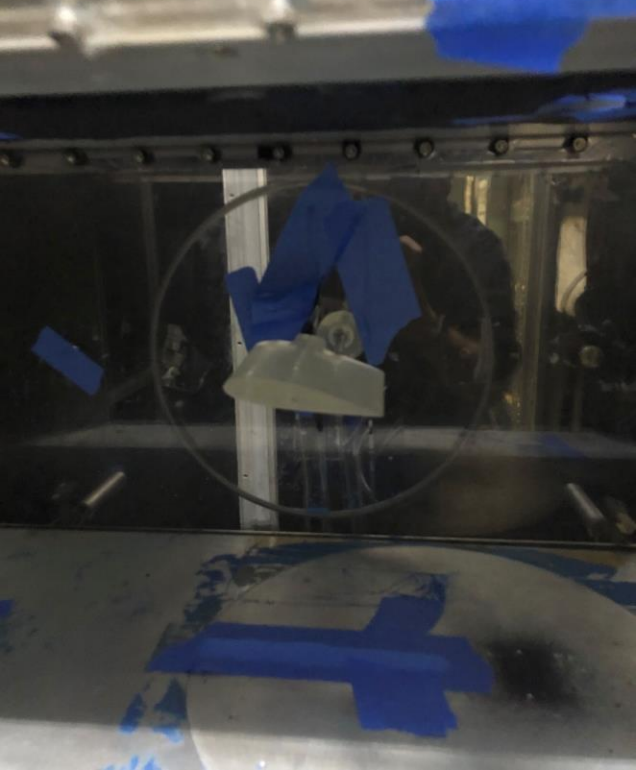
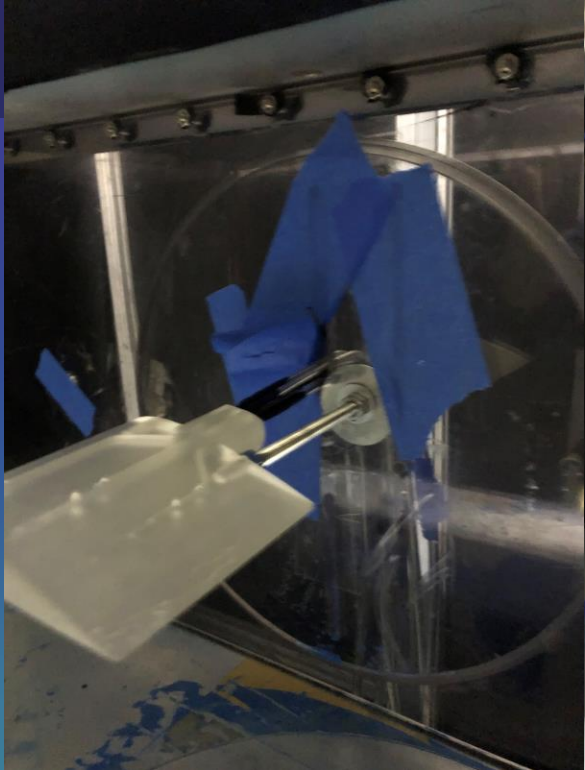
**Thickness =  
0.2548 in**





## **2. Current Mounting**





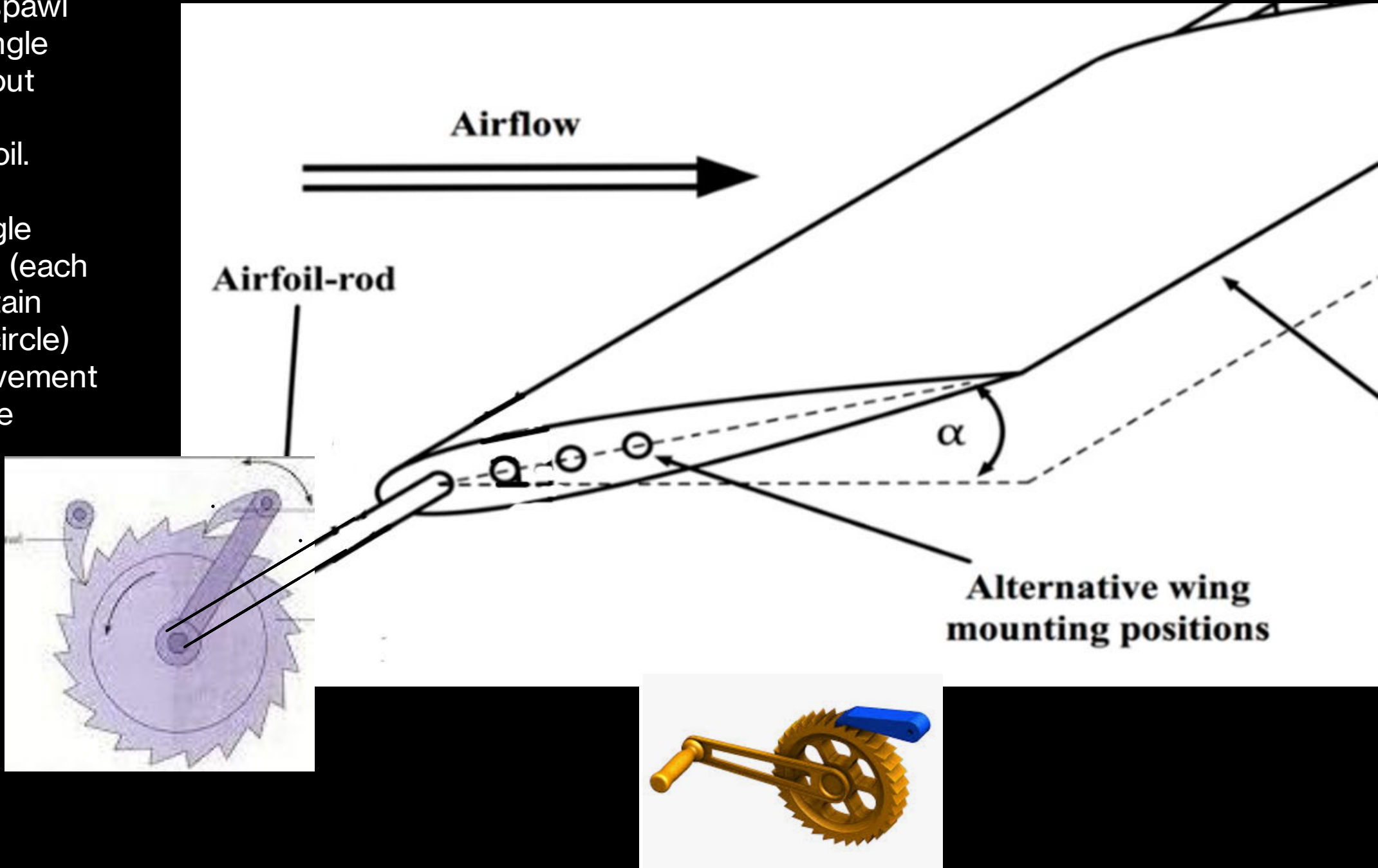




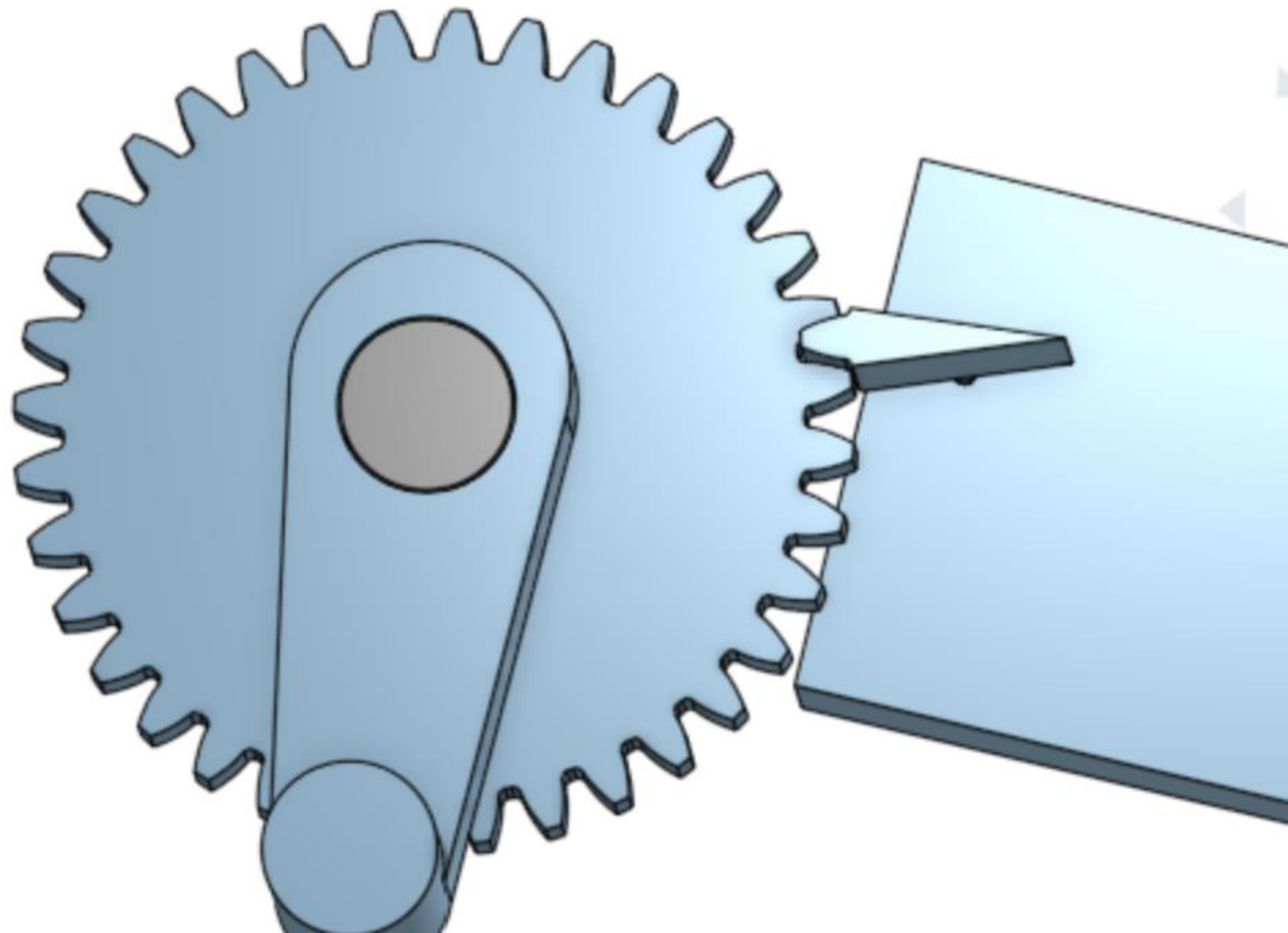
## **3. Mounting Ideas**

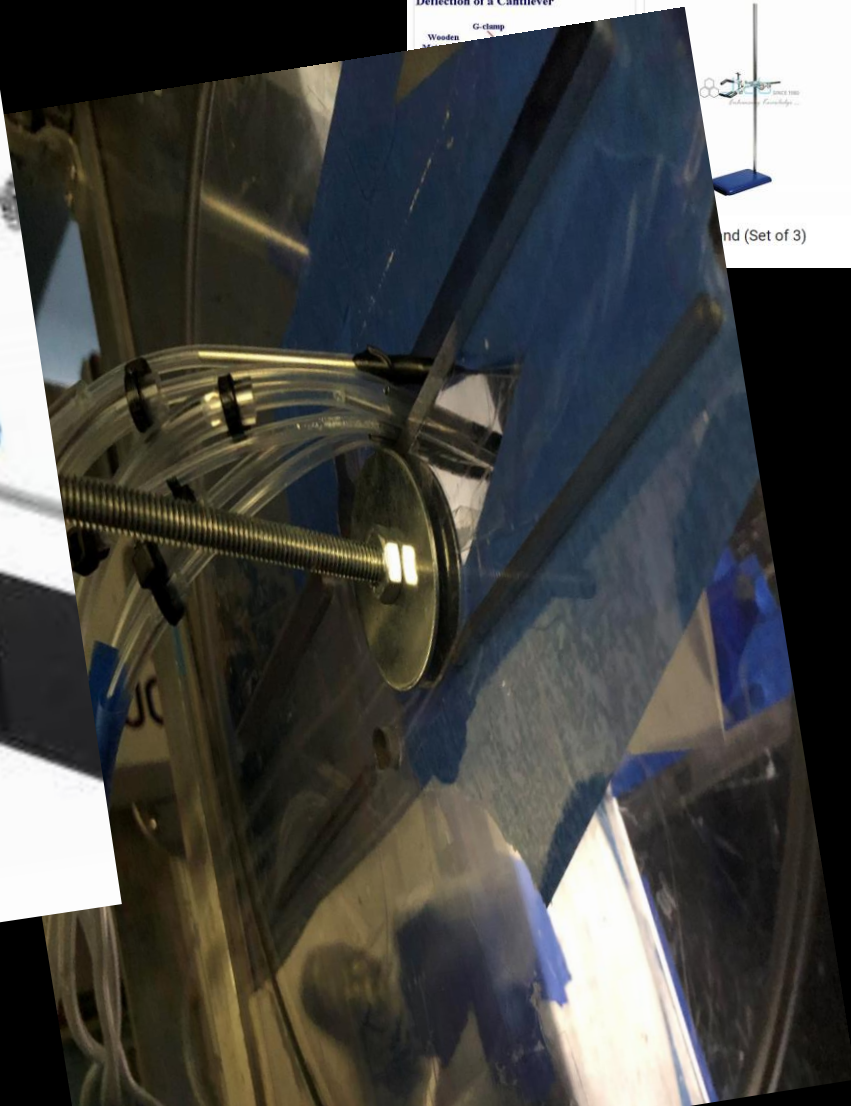
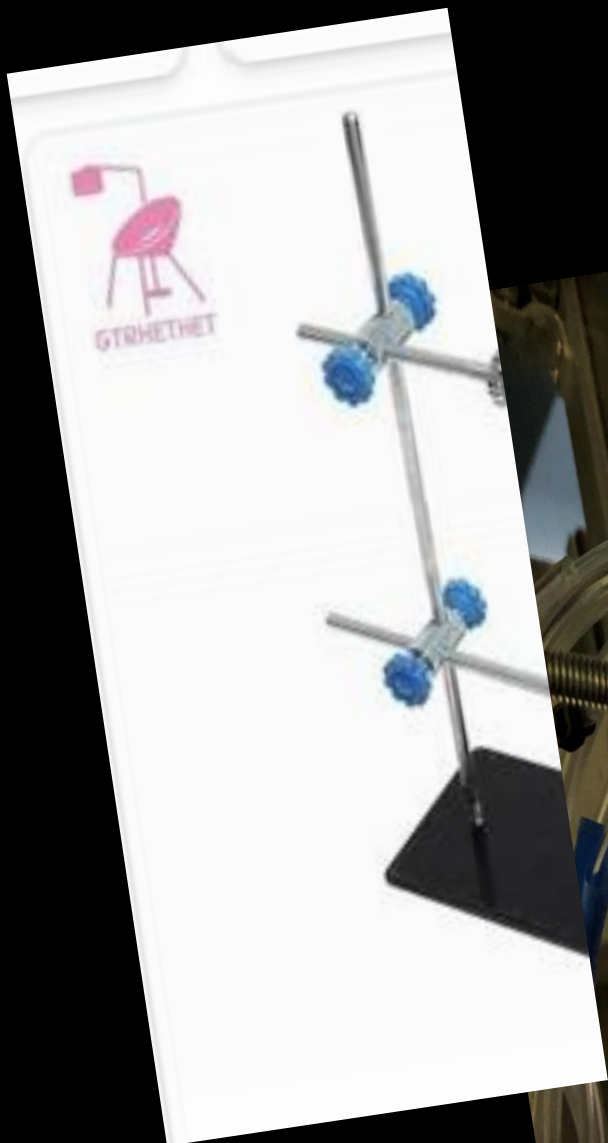
Ratchet and spawl  
to allow for angle  
iteration without  
touching the  
mounted air foil.

Allows for angle  
measurement (each  
tooth is a certain  
fraction of a circle)  
-prevents movement  
in the opposite  
direction









Complete Retort Stand - Grey/Blue | Buy online...



Complete Retort Stand - Grey/Blue | Buy online...



flamesofchemi...



Complete Retort Stand - Grey/Blue | Buy online - Futura...



Retort Stand Manufacturer, Wholesale Retor...



Retort Stand Kit - Haines Educational



Acid and Alkali Mind42

#### Deflection of a Cantilever

Wooden G-clamp



nd (Set of 3)



G-clamp

1Pcs 30Cm High Retort Stand with Clamp Clip La...

RETORT STAND Manufacturer, Supplier

p11

RETORT STAND 20 X 14 BASE 60CM ROD - ...

RETORT STAND 20 X 14 BASE 60CM ROD - ...

RETORT STAND 20 X 14 BASE 60CM ROD - ...

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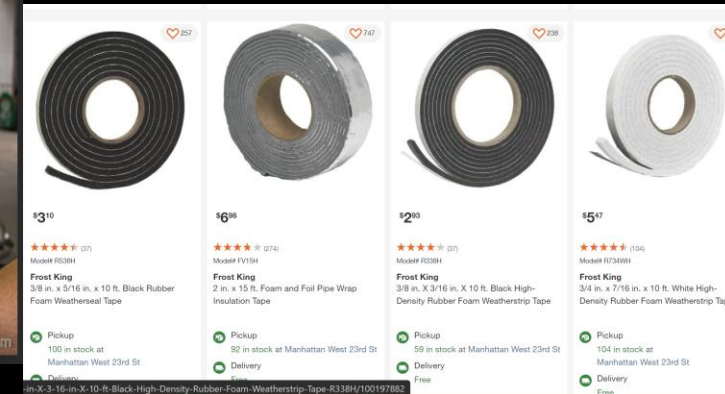
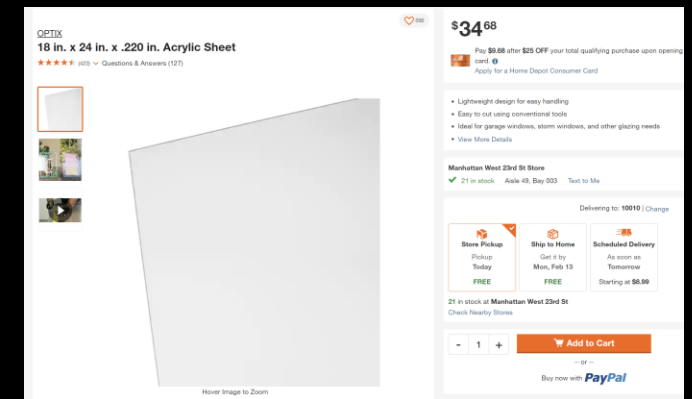


## 4. Parts List

# Brainstorm ideas session

Plexiglass (Acrylic sheet ) 18x 24x 0.220 in from home depot for example (thickness a bit bigger)

Insulation: gun or tape or rubber





# Actual List

Bill of materials

Quantity of air chambers: 1

	Date	Material	Quantity	Dimensions	Thickness	Unit Price	Total Price	Link
	4/7/2023	aluminium sheet	1	12" Wx 24" L	0.19"	\$ 85.05	\$ 85.05	<a href="https://www.mcmaster.com/catalog/89015K32">https://www.mcmaster.com/catalog/89015K32</a>
received	4/8/2023	Plexiglass	2	24" W x 12" L	15/64"	\$ 26.68	\$ 53.36	<a href="https://www.mcmaster.com/catalog/8560K222">https://www.mcmaster.com/catalog/8560K222</a>
pending order	4/9/2023	Vertical T-slots+shorter h	6	12"L x 1.0"W	1"	\$ 12.17	\$ 73.02	<a href="https://www.mcmaster.com/catalog/47065T101">https://www.mcmaster.com/catalog/47065T101</a>
	4/10/2023	LongHorizontal T-slots	4	24 "L x 1.0" W	1"	\$ 27.44	\$ 109.76	<a href="https://www.mcmaster.com/catalog/47065T347/">McMaster-Carr</a>
	4/11/2023	Hinges+mounting	4	1" high rail		\$ 19.39	\$ 77.56	<a href="https://www.mcmaster.com/catalog/6812N158">https://www.mcmaster.com/catalog/6812N158</a>
	4/12/2023	Toggle clamp with Handle	4			\$ 63.93	\$ 255.72	<a href="https://www.mcmaster.com/catalog/6544K62">https://www.mcmaster.com/catalog/6544K62</a>
	4/13/2023	Low carbon steel sheet to	1	24x24		\$ 73.72	\$ 73.72	<a href="https://www.mcmaster.com/catalog/3136N157">https://www.mcmaster.com/catalog/3136N157</a>
		T-Slotted FraminAngle						
	4/14/2023	Bracket for 1" High Rail	4	for 1"		\$ 17.05	\$ 68.20	<a href="https://www.mcmaster.com/catalog/47065T236">https://www.mcmaster.com/catalog/47065T236</a>
	4/15/2023	interior I bracket	4	for 1"		\$ 7.92	\$ 31.68	
						Total price	\$ 828.07	
						estimate with tax	\$ 901.49	
	4/13/2023	interior I bracket	4	for 1"		\$ 7.92	\$ 31.68	<a href="https://www.mcmaster.com/catalog/47065T236">https://www.mcmaster.com/catalog/47065T236</a>