

# PAC Platform Overview



This project shows how to build a raised platform for your Portable Air Conditioner (PAC).

The PAC Platform provides anti-vibration pads to reduce PAC noise and a compartment below for collecting water generated from condensation during the air conditioning process. The PAC Platform can be built as a DIY project and used with your existing or new PAC unit. The cost of parts is estimated at \$230-\$240 (shipping and sales tax is not included in this estimate).

The PAC Platform consists of 3 key components; Bottom Plate, Top Plate and Center Section. The Top and Bottom Plates are placed inside the Center Section to produce the completed platform

The PAC Platform can be built out of many types of high quality wood and dimensions can be adjusted to accommodate your PAC unit size. The PAC Platform used for our prototype was built with White Ash wood and used with the Sharp CVPD13PX Portable Air Conditioner. Some pertinent specs related to the Sharp CVPD13PX and this application are shown below for your quick reference:

### Sharp CVPD13PX Specs

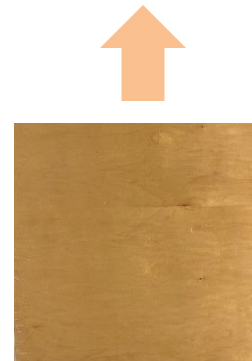
- Dimensions: (H.L.W) 33" x 19" x 19"
- Weight: 100 lbs
- Cooling Power: 13000 BTUs
- Noise level: 43 dBa (min)
- Room size: 475 sq ft (max)
- Power: 115 vac 15 Amps

The next 11 slides provide a step-by-step procedure for building your own PAC Platform.

Center Section



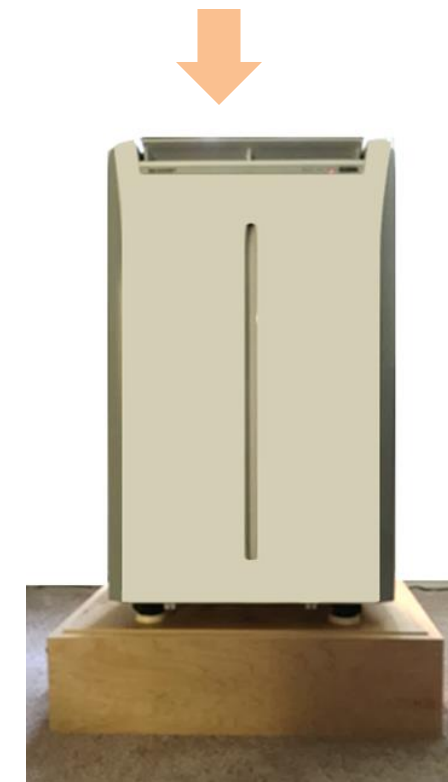
Completed Platform  
(Back View)



Top  
Plate



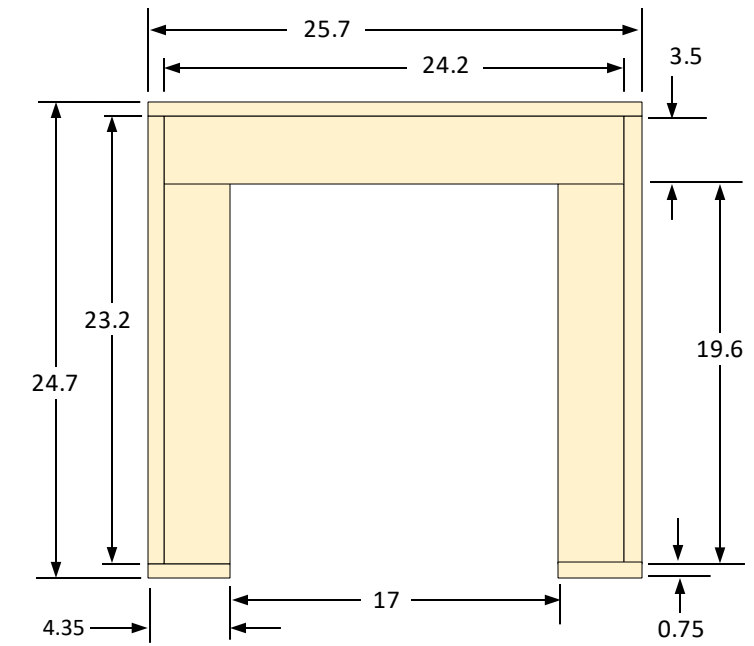
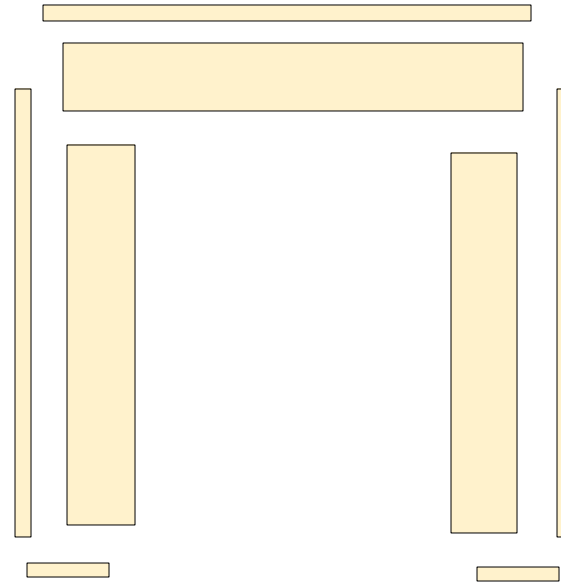
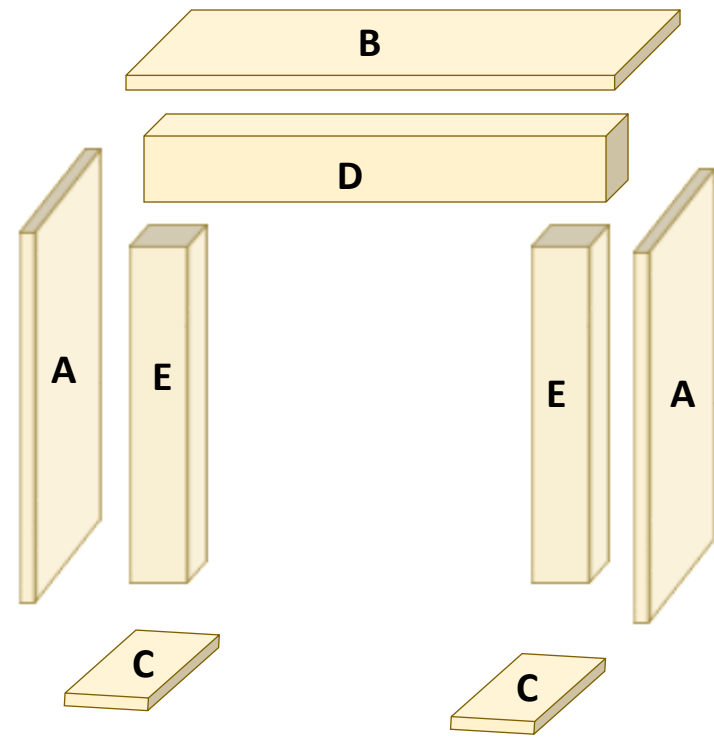
Bottom  
Plate



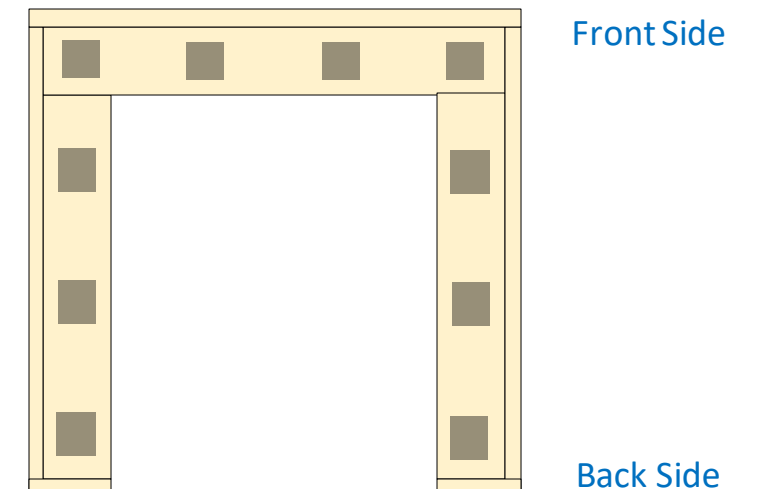
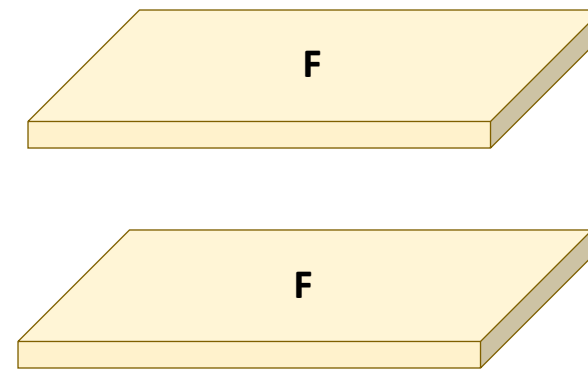
PAC on Completed Platform

# PAC Platform

## Step 1 - Review The Design



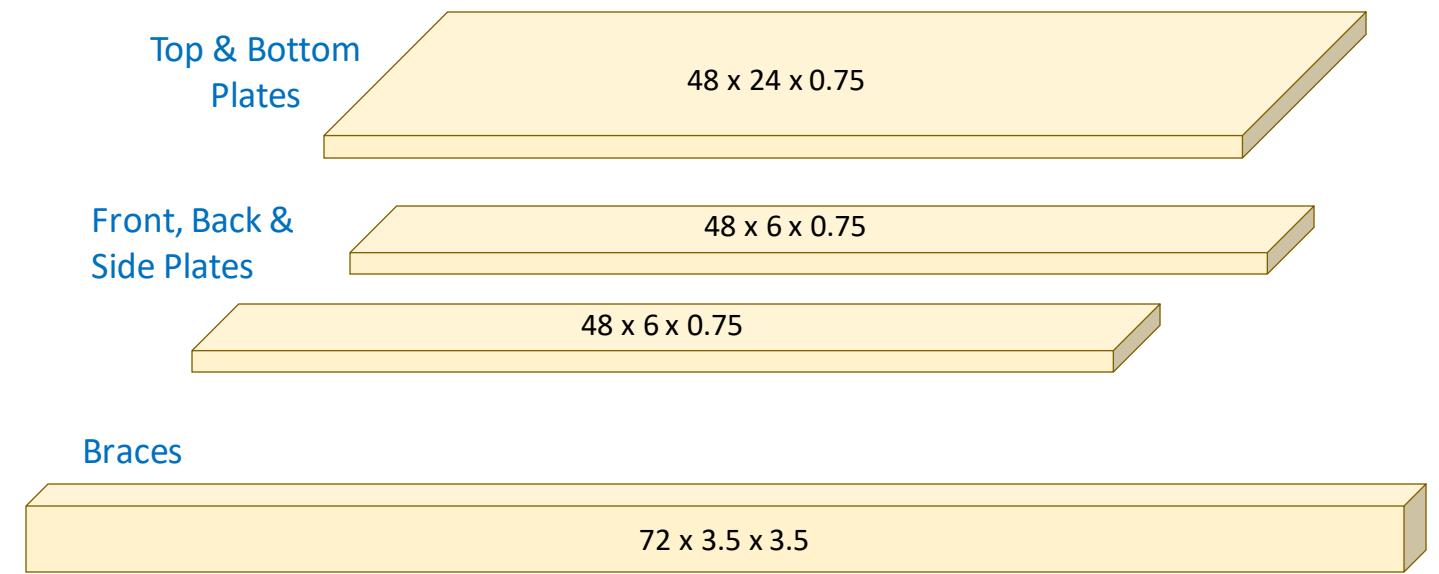
Item	Name	QTY	Dimensions (in)
A	Side Plates	2	23.2 x 6 x 0.75
B	Front Plate	1	25.7 x 6 x 0.75
C	Back Plates	2	4.35 x 6 x 0.75
D	Front Brace	1	24.2 x 3.5 x 3.5
E	Side Braces	2	19.6 x 3.5 x 3.5
F	Top & Bottom Plates	2	24 x 23 x 0.75



# PAC Platform

## Step 2- Buy The Parts

PAC Platform Parts List				
Item	Part Name	Description	Buy QTY	Suggested Supplier Links
1	Top & Bottom Plates	1 sheet of White Oak	1	<a href="#">TB Plates</a>
2	Front/Back/Side Plates	2 planks of White Oak	1	<a href="#">S Plates</a>
3	Braces	1 plank of Hem-Fir	1	<a href="#">Braces</a>
4	Anti Vibe Pads	4 pads, 3" x 3" x 0.88"	5	<a href="#">Pads</a>
5	Nails	1 box with 50 nails, L=1.5"	1	<a href="#">Nails</a>
6	Screws	1 box with 100 screws	1	<a href="#">Screws</a>
7	Wood Filler Kit	1 box with 12 small tubes	1	<a href="#">Filler</a>
8	Caster Cups	1 box, 2 casters, dia. = 3"	2	<a href="#">Cups</a>
9	Drain Hose *	1 hose, 10' long, ID=3/8"	1	<a href="#">Hose</a>
10	Water Tank	1 plastic bin, holds 2 gallons	1	<a href="#">Tank</a>



Anti Vibe Pads (20)



Nails (40)  
L=1.5"



Screws (28)  
# 6, L=2"



Wood Filler Kit (pick color to match wood)



Caster Cups (4)



\* Many PACs have a 3/8" diameter drain nozzle which matches with the recommended Drain Hose. However, your PAC may be different. Be sure to check the nozzle size on your PAC before ordering the Drain Hose. The supplier for our recommended hose offers several sizes to choose from.

Drain Hose



Water Tank External Dimensions = 18" x 12" x 3.5"

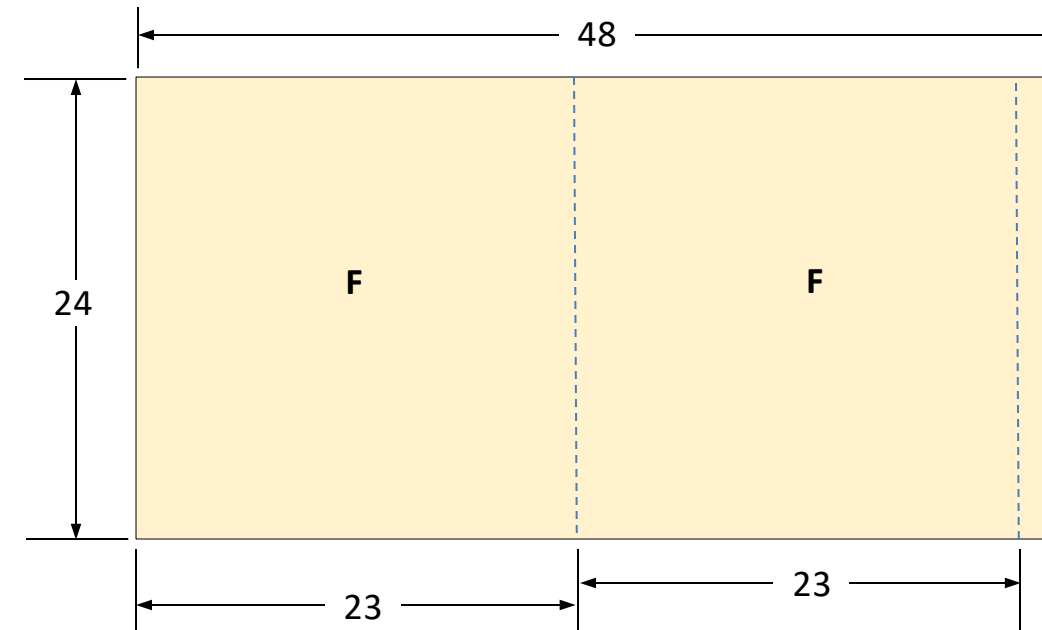


# PAC Platform

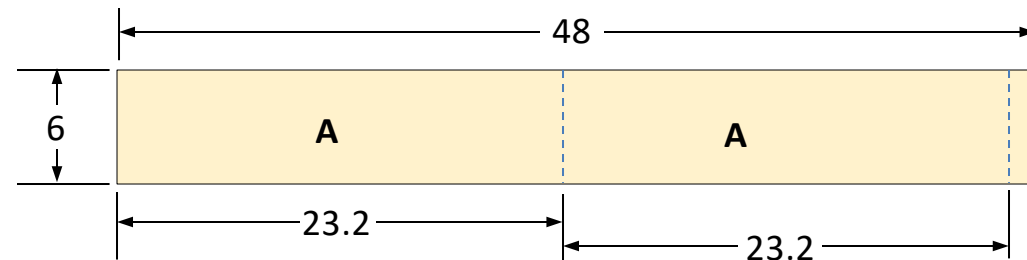
## Step 3 - Cut The Wood

Item	QTY	Part Name	Dimensions (inches)
A	2	Side Plates	23.2 x 6 x 0.75
B	1	Front Plate	25.7 x 6 x 0.75
C	2	Back Plates	4.35 x 6 x 0.75
D	1	Front Brace	24.2 x 3.6 x 3.6
E	2	Side Braces	19.6 x 3.6 x 3.6
F	2	Top & Bottom Plates	24 x 23 x 0.75

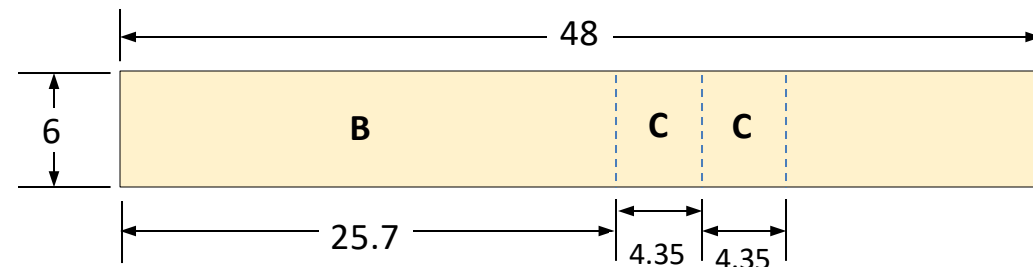
Top & Bottom Plates



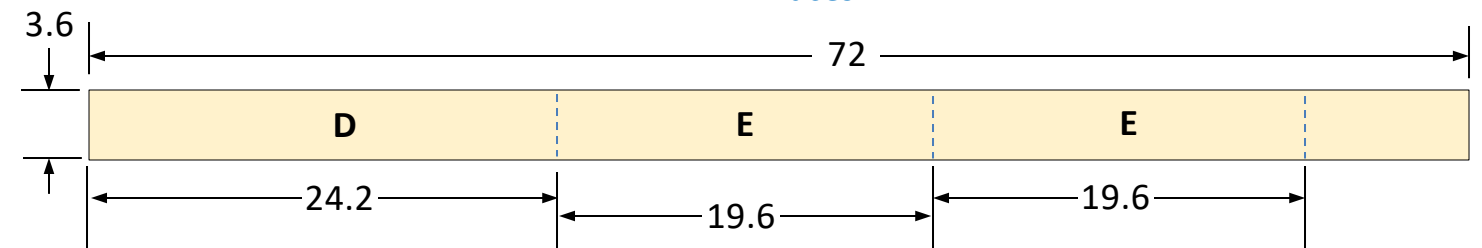
Side Plates



Front & Back Plates



Braces

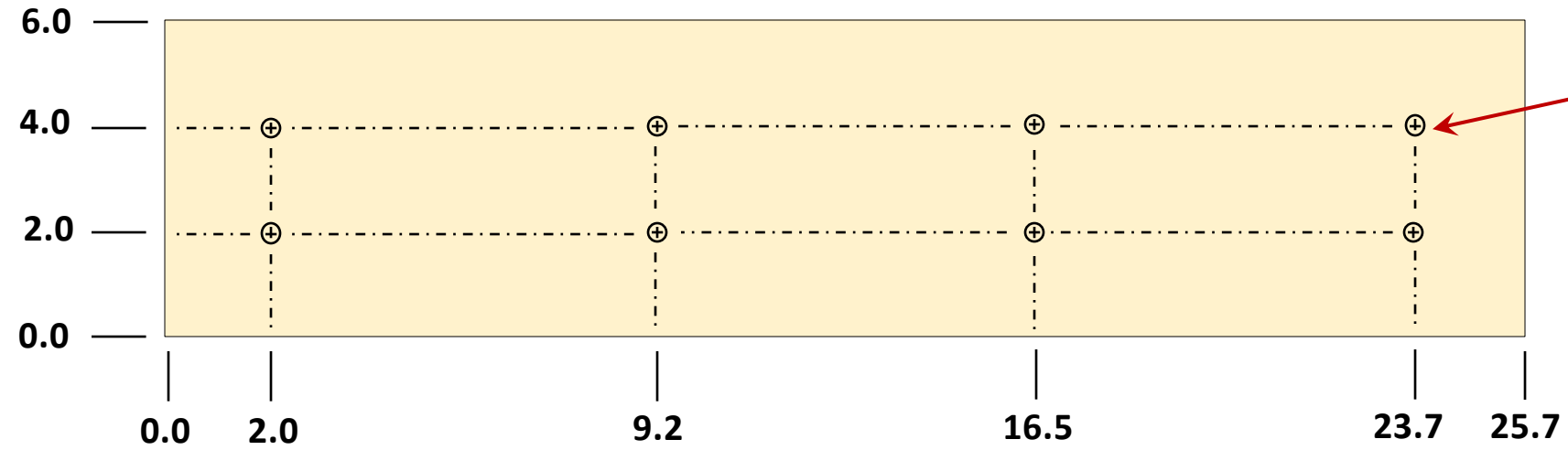


# PAC Platform

## Step 4 - Drill Plate Holes

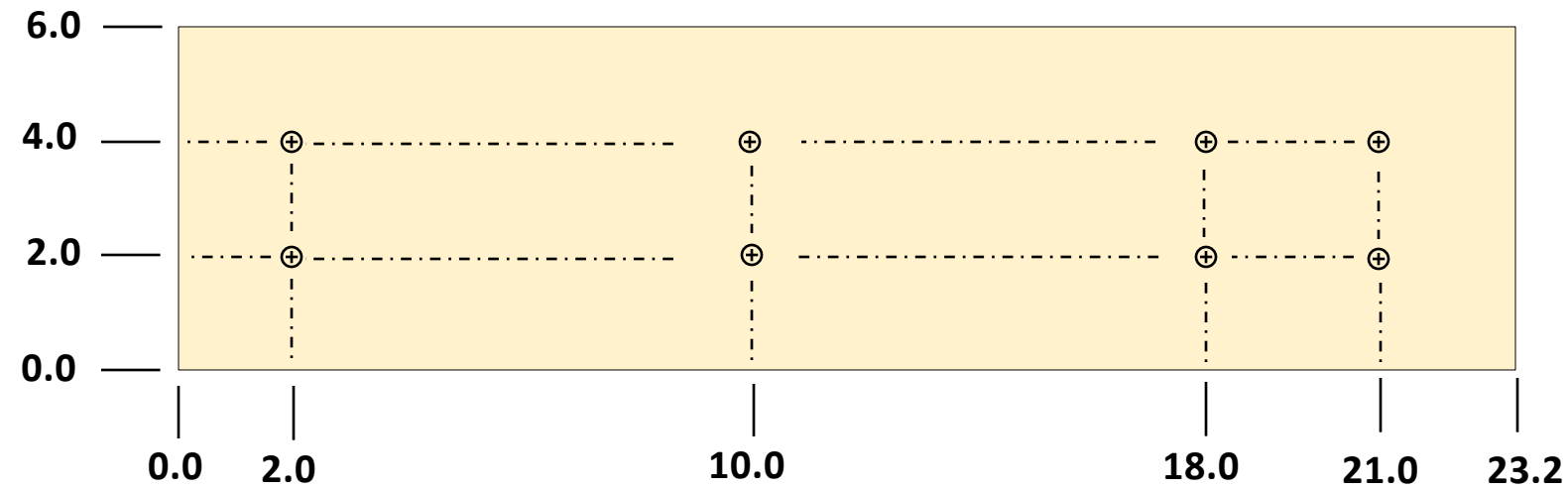
Drill holes into the Front, Back and Side Plates as shown below.

Front Plate

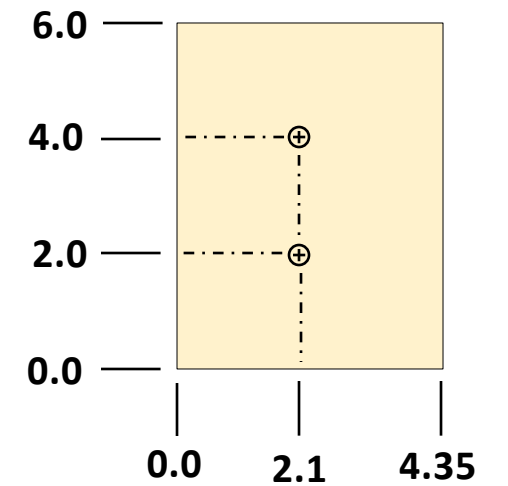


28 thru holes, dia=0.125"

Side Plates  
(QTY=2)



Back Plates  
(QTY=2)

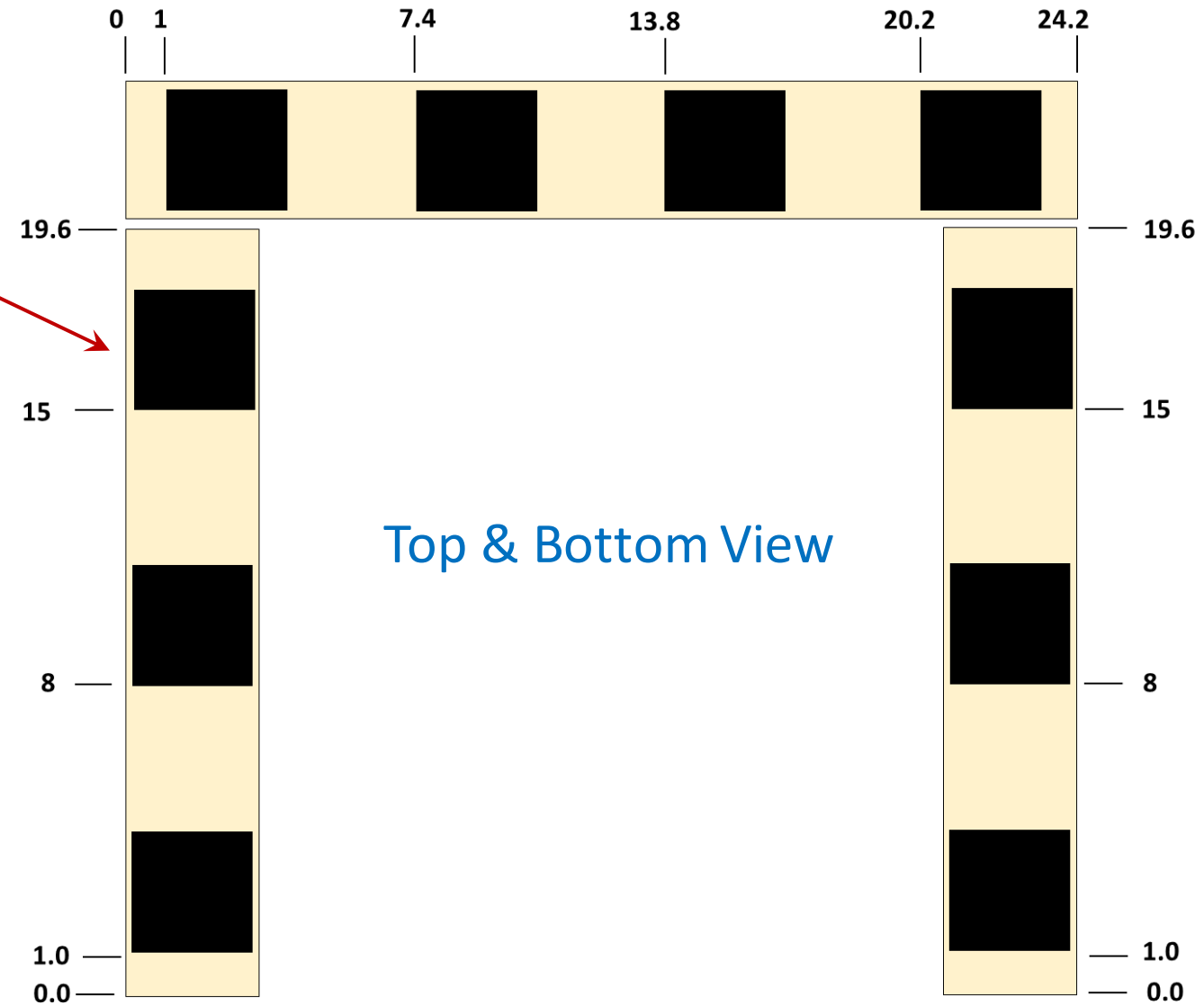


# PAC Platform

## Step 5 - Attach Anti Vibe Pads

Use the dimensions shown to attach 20 Anti Vibe Pads to the top and bottom of each Brace. The flat part of the Pad goes against the wood. All dimensions are in inches.

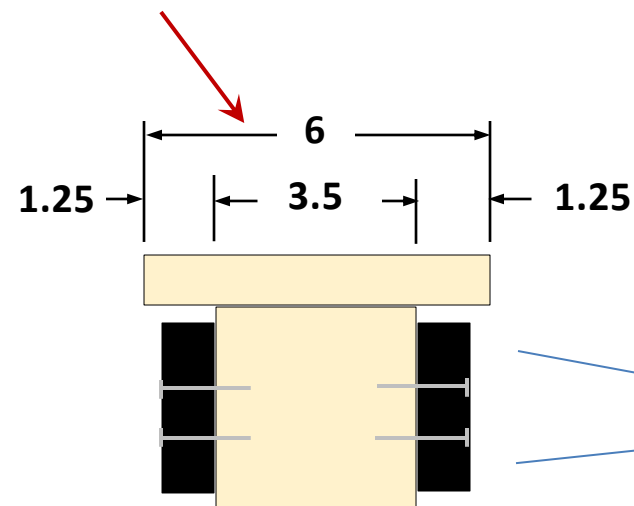
Use 2 nails for each Pad.  
Drive the nails through low spots in the Pad.



# PAC Platform

## Step 6 - Attach Front Plate To Front Brace

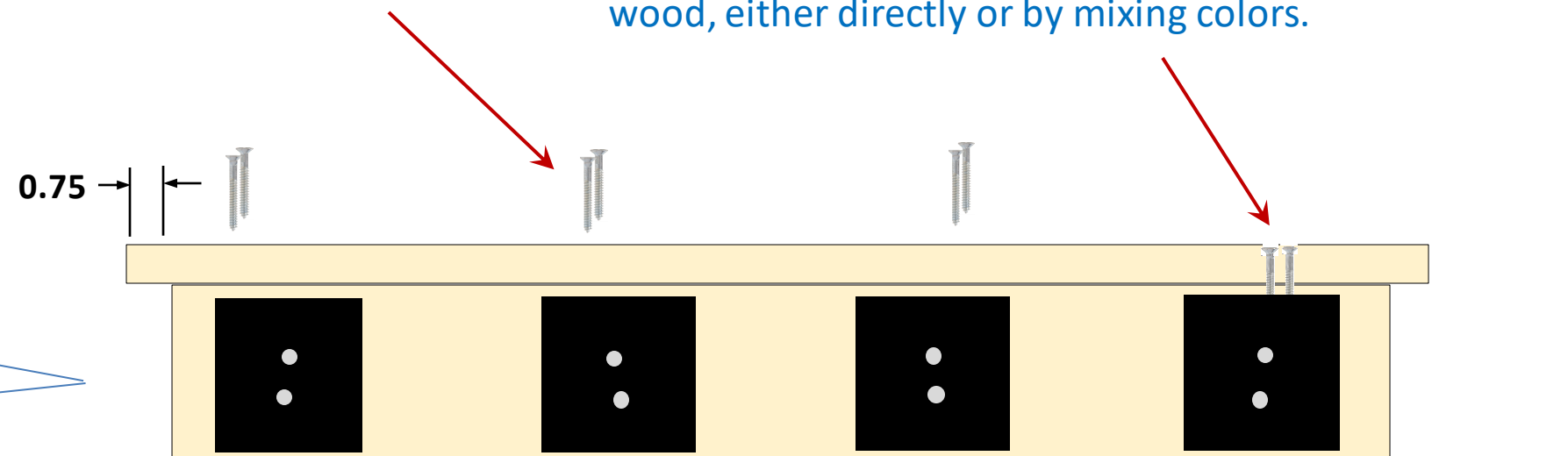
Place the Front Plate against the Front Brace. Make sure the Front Plate is centered from top to bottom and right to left.



End View

Use the Front Plate holes as a template to drill pilot holes into the Brace. Use wood screws to attach Plate to Brace.

Tighten screws enough to allow the screws to self countersink within the wood (about 1/8 inch). Fill the countersink cavity with Woodfill. The recommended Woodfill Kit provides a variety of colors that can be matched to the wood, either directly or by mixing colors.

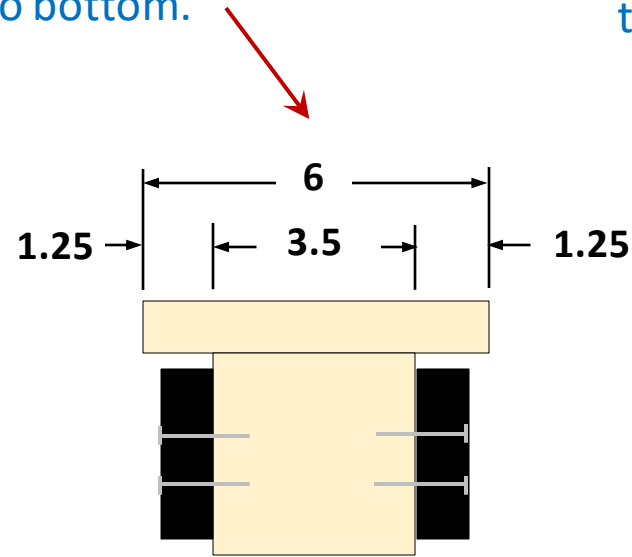


Top View

# PAC Platform

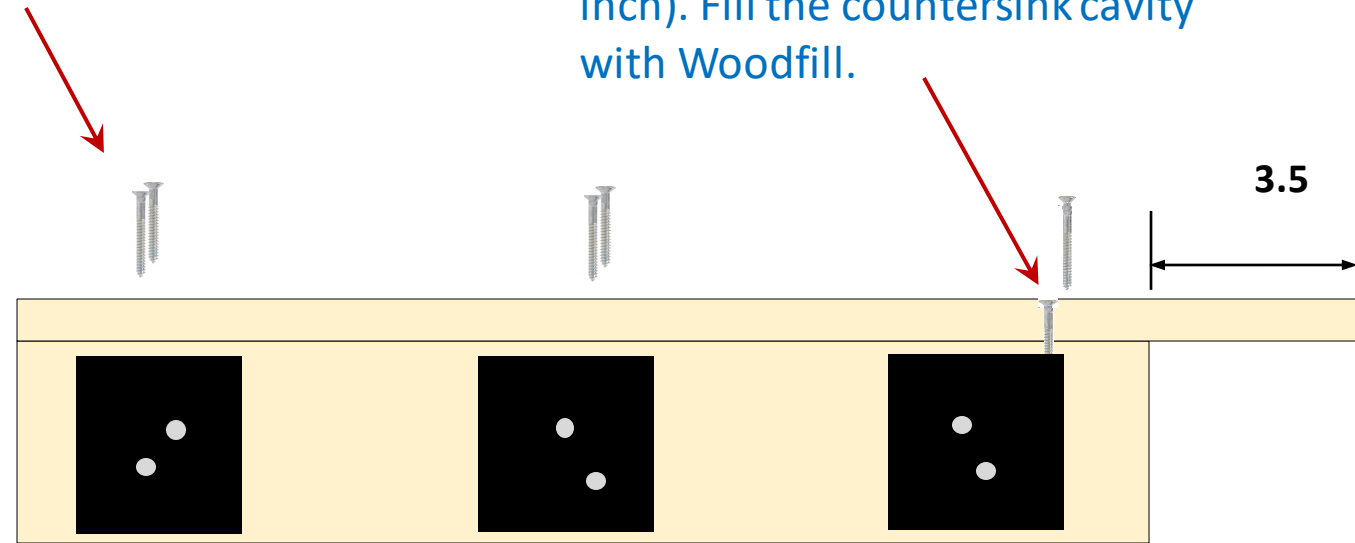
## Step 7 - Attach Side Plates To Side Braces

Place the Side Plate on the Side Brace. Make sure the Brace is centered within the Plate from top to bottom.



End View

Use the Plate holes as a template to drill pilot holes into the brace. Use wood screws to attach plate to brace.



Side View

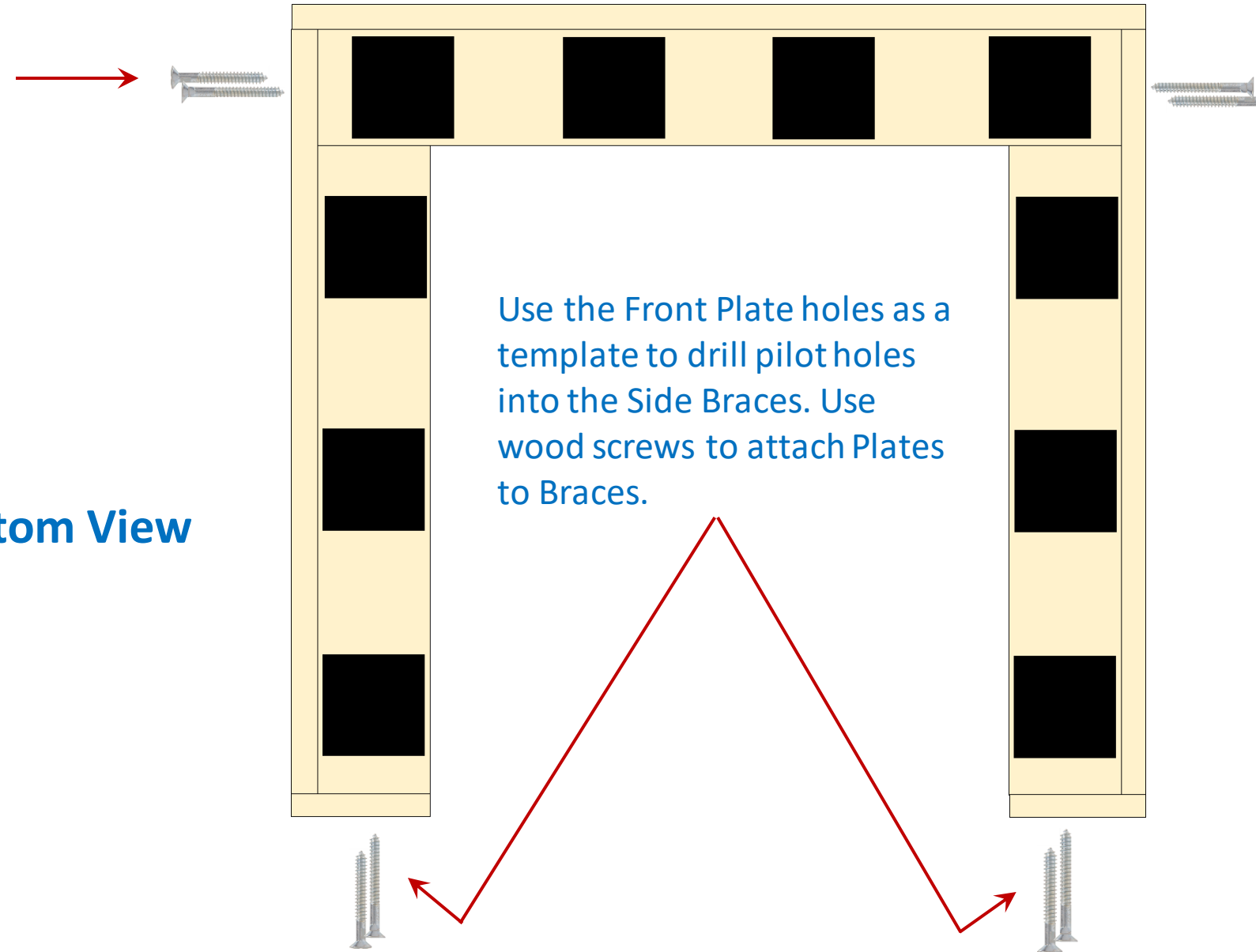
Tighten screws enough to allow the screws to self countersink within the wood (about 1/8 inch). Fill the countersink cavity with Woodfill.



# PAC Platform

## Step 8 - Attach Braces and Back Plates

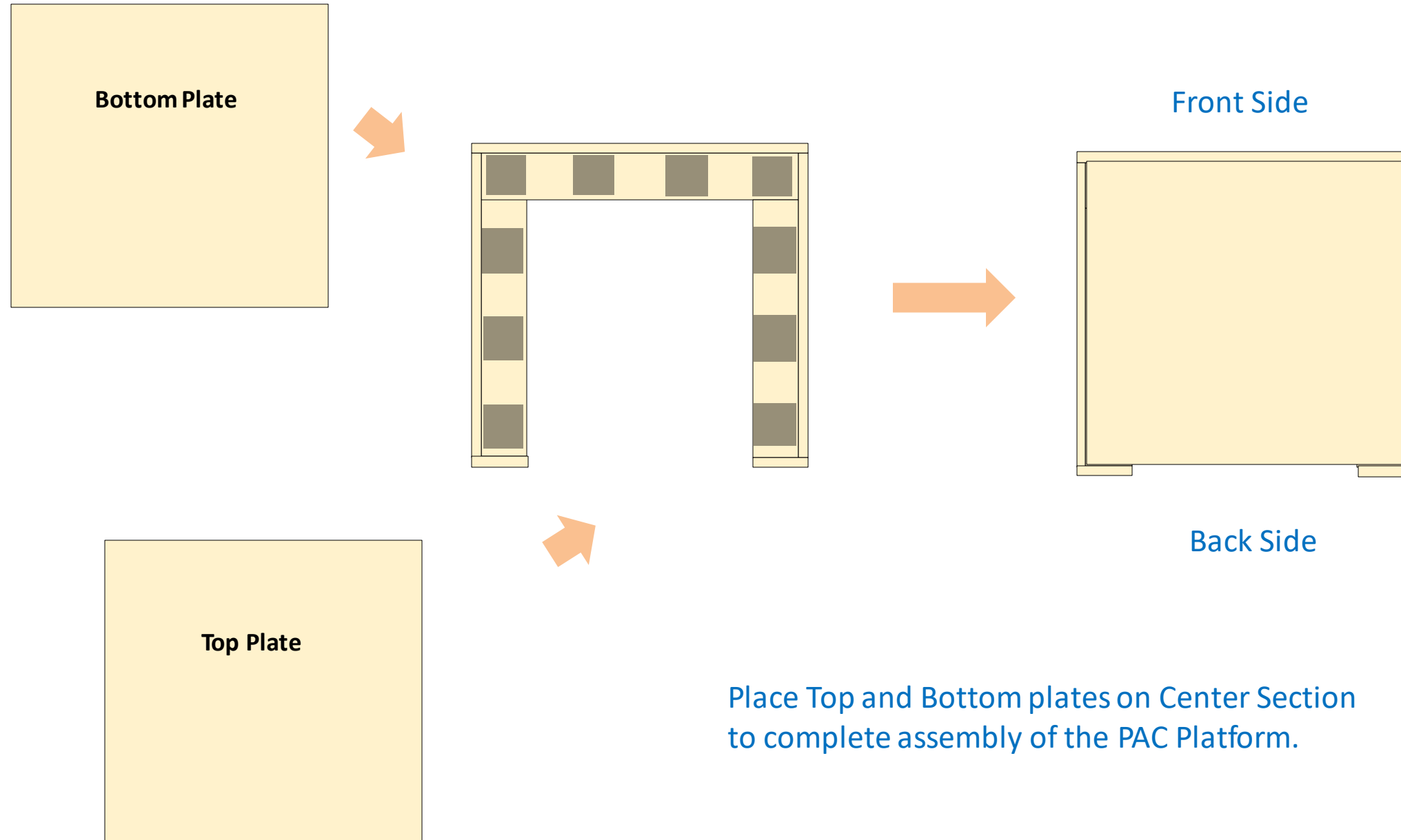
Use the Side Plate holes as a template to drill pilot holes into the Front Brace. Use wood screws to attach Plates to Brace.



Top & Bottom View

# PAC Platform

## Step 9 - Add Top and Bottom Plates



Place Top and Bottom plates on Center Section to complete assembly of the PAC Platform.

# PAC Platform



## Step 10 - Add The Drain Hose & Water Tank



Cut a 1' piece off the 10' Drain Hose. Insert the 1' Drain Hose on the PAC drain nozzle.



Place the Water Tank under the platform to collect water from the Drain Hose.



Monitor the amount of water accumulating in the Water Tank during and after PAC operation. When full, plug the PAC's drain nozzle and empty the water.

# PAC Platform

## Step 11 - Finish Installation

Place a rubber Caster Cup under each caster to keep the PAC from moving on the Platform. The casters will also help to reduce noise and vibration.



Now you can enjoy your PAC with reduced noise and a means to collect the water produced by the air conditioning process. However, if you live in a humid environment and find that monitoring/emptying the Water Tank is becoming a full time job, you may want to add a Water Pump to automatically dispose of the water. Check out the Water Pump project ([SlideDeck 1C](#)) for details.