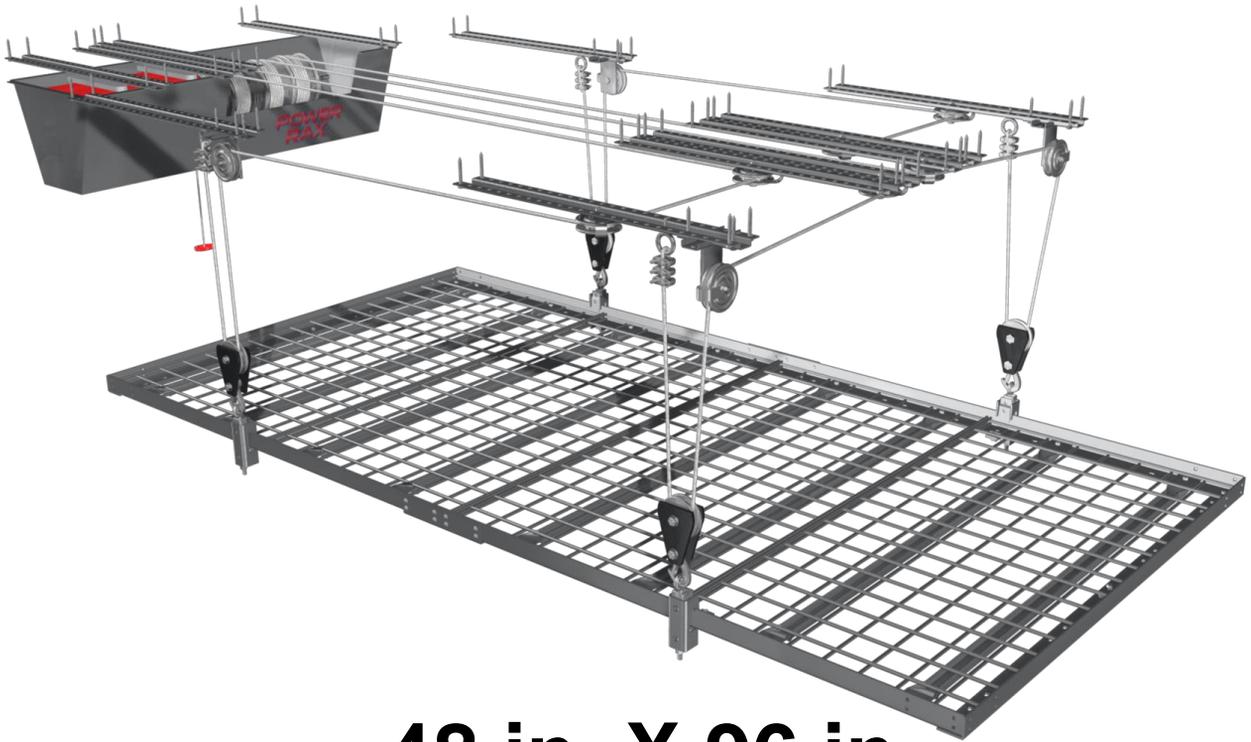


# **POWER RAX**

## **MOTORIZED HOME STORAGE**



**48 in. X 96 in.**

**500 Pound Capacity Motorized  
Overhead Storage Unit  
Installation Guide [OPTION A]**

**MODEL # PRM4X8**

**Patent Pending**



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# Installation Support

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**Please Do Not Return This Product To The Store!**

**1-877-717-RACK (7225)**

**[info@garageoc.com](mailto:info@garageoc.com)**

If there are any missing or damaged parts, please contact us immediately for replacement. In some cases, a new part can be shipped to you within 1-3 days.

Our quality control members hand check every box prior to shipment. We take this very seriously and want you completely satisfied.

If you find that installation of our products might be a little more technical than you anticipated, then we can simply guide you to a qualified installer and arrange for the installation. Our vast installation support network allows us to offer you the extra support you might need with busy schedules.

Please review our list of dealers at [www.powerrax.com](http://www.powerrax.com) or contact us for help. Refer to Appendix IV for additional installation help.



## Safety Information



---

**STOP: Ensure that you understand your ceiling support structure prior to installing.**

**Ensure that you know your load prior to loading items on your ceiling storage system.**

Our products are designed for installation into properly constructed wood ceiling joists, TGI's or floor joists. *Do not install into metal studs or ceiling concrete floors.* We do not warranty or make any claim to the construction of your home. If you have any questions about your homes construction, check with your local builder. If you are not comfortable with installing this product, call one of our authorized dealers for support.

Do not exceed the posted weight capacity of our units. We suggest that you weigh each item prior to loading. The weight capacities are based upon even distribution. Even distribution is the average of the total capacity, divided by the size of the unit. For example, a 500 LB capacity 4'x8' unit will have a per square foot weight capacity of 15.625 pounds. Do not exceed the posted capacity.



## Safety Information



You must read this entire manual before attempting to install this product. We also suggest you visit [www.powerrax.com](http://www.powerrax.com) to review our installation video. If you have any additional questions or need to speak with an installation professional, do not hesitate to call us directly. We will provide timely responses to your questions.

**1-877-717-RACK (7225) Monday - Friday 9am-5pm Arizona Time**

We have hundreds of qualified dealers throughout North America. Visit [www.powerrax.com](http://www.powerrax.com) to contact your local installer.



### Warning

#### **Electrical , Plumbing or Gas Lines May Be In The Ceiling or Walls**

Prior to drilling, you must identify where your electrical, plumbing and gas lines are inside your walls or ceilings. Failure to do so may result in damage or serious injury. Contact a professional to locate.



### Warning

#### **Be Aware of Falling Items or Personal Fall Hazard**

Be aware when climbing a ladder. Do not have your hands full when climbing. Do not lean out away from the ladder to load or install the system. Do not overreach or overextend from ladder.



### Warning

#### **Ceiling Joist, Truss and Wall Stud Overloading Potential**

This system is required to be installed into a minimum of 3 joists. If for some reason this system cannot be attached to 3 joists the weight rating must be reduced.



### Warning

#### **System May Be A Personal Injury Hazard**

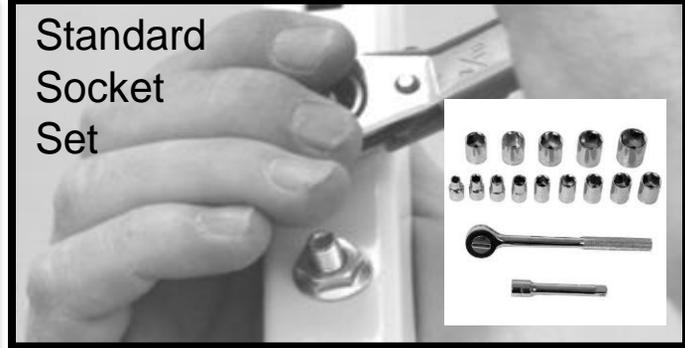
Failure to read and follow these installation instructions, per the manufacturer's guidelines, may result in serious injury or death. If you are uncomfortable installing yourself, please contact us or visit our website to identify an installer of our products.

# Required Tools

Electric Drill with 1/8" bit



Standard  
Socket  
Set



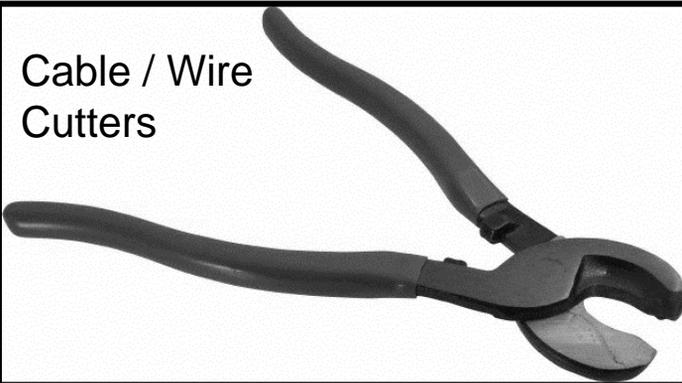
Stud  
Finder



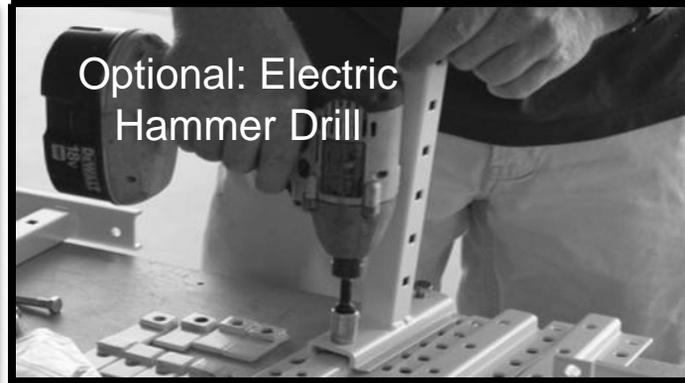
Tape  
Measure  
and Pencil



Cable / Wire  
Cutters

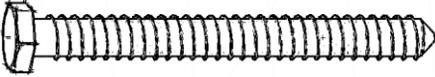
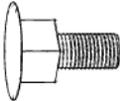
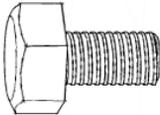
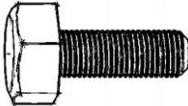
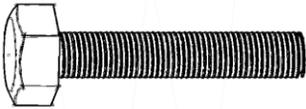
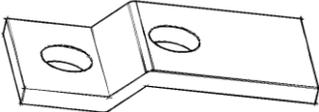
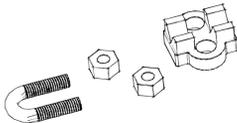


Optional: Electric  
Hammer Drill



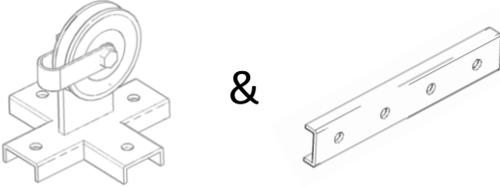
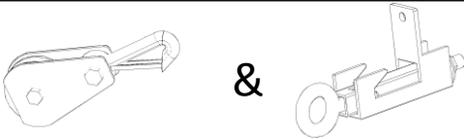
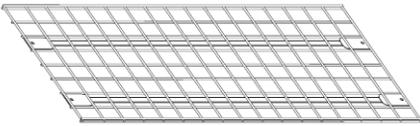
We recommend that you use the Storage Locator Worksheet (Appendix II), to note where you would like to install our products. You can also draw out the position / direction of your ceiling trusses, as it relates to our systems. Keeping good notes will ensure proper installation and support future installations.

# Hardware Kit Contents

Name	Picture	Quantity
Lag Screw		x48
Small Nut		x28
Small Carriage Bolt		x24
Small Bolt		x24
Medium Bolt		x20
Large Bolt		x12
Large Nut		x34
Rail Clamp		x8
Small Eye Bolt and Thimble		x4
Wire Clip		x12

**Note:** Extra hardware may be included in kit.

# Part List

Part Name	Picture	Quantity
Mounting Track		x12
Bearing** & Cross		x2
Cross w/Pulley & Mounting Coupler		x4
Pulley and strap		x6
Block & Rail Bracket		x4
Rail		x6
Universal Rail Connector		x2
2' x 4' Grids		x4

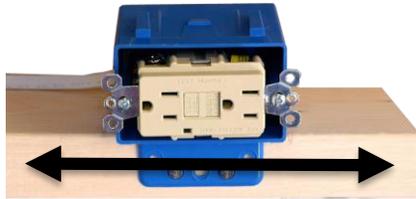
\*Motor, shaft and spools not shown. \*\*One or both bearings will be already assembled on the shaft.

# 1

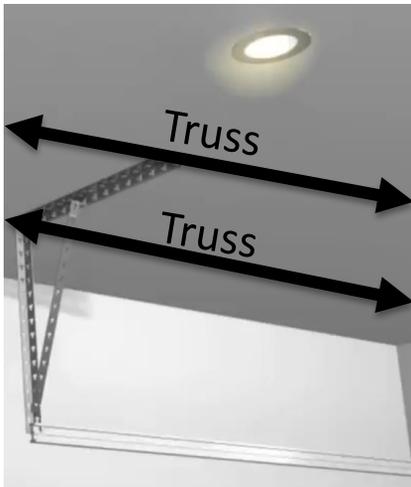
Determine your ceiling support system. To understand your truss direction, spacing or placement, you may need to enter your attic. You may also need to consult your builder or a licensed contractor. As an additional resource, refer to Appendix I.

## Tips:

The direction of your ceiling outlets will [typically] indicate the direction of your trusses



The location of your garage door support will indicate the location and/or spacing of your trusses.



or



Trusses will run perpendicular to track support.

*In this case you can measure the screws to estimate truss spacing.*

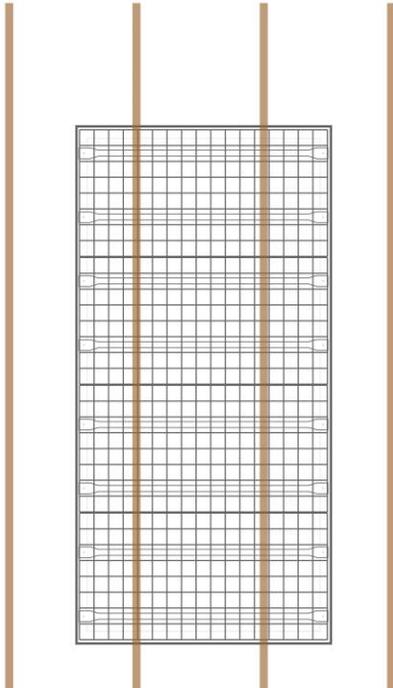
Track support will be attached to a single truss

# 1 Continued

You will need to determine the direction of your ceiling support system prior to installation, as there are 2 options:

**Option A:**  
Trusses run  
parallel to your 8'  
length.

*Requires Approximately 90" x 78" of  
clear ceiling space\*.*

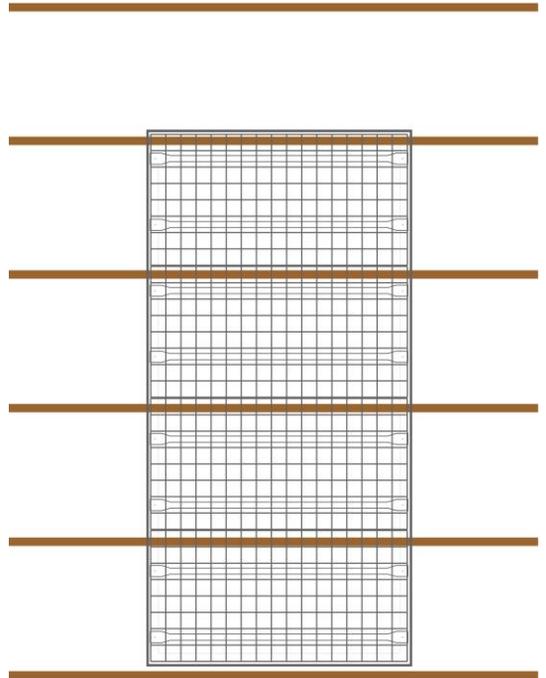


\*Footprint including rack is approximately: 108" x 78"

OR

**Option B:** Trusses run  
perpendicular to your 8'  
length.

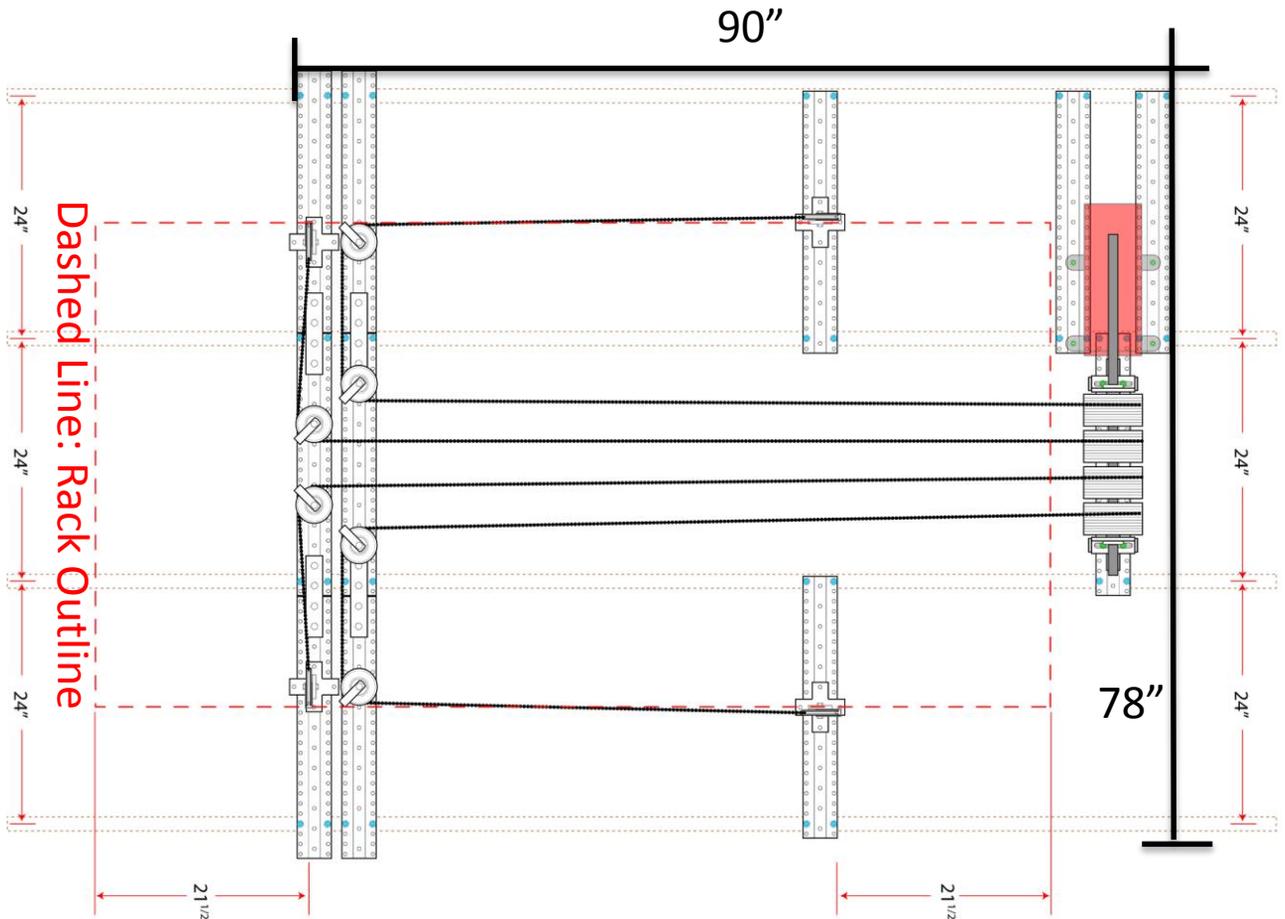
*Requires Approximately 96" x 52" of  
clear ceiling space\*\*.*



\*\*Footprint including rack is approximately: 118" x 52"

2

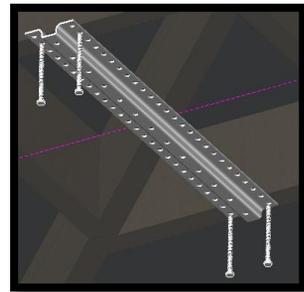
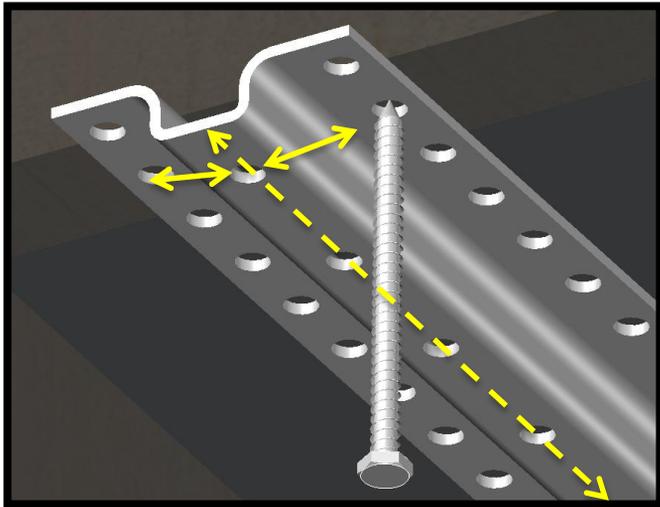
Determine what section of the garage will house your new Motorized Ceiling Storage Solution. Make sure there are no obstructions within the designated space (i.e., lights, attic door, sprinklers, etc.). If you have cabinets in your garage, make sure there is adequate clearance for doors to open. The image below represents our completed rack schematic. [This page is Option A, which trusses run Parallel to your 8' rack length].



Footprint including rack is approximately: 108" x 78"

3

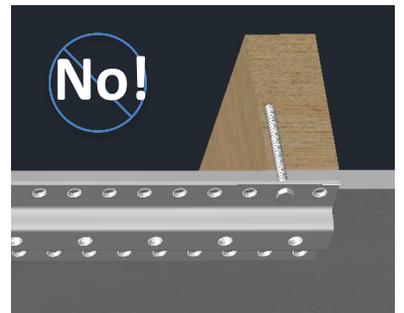
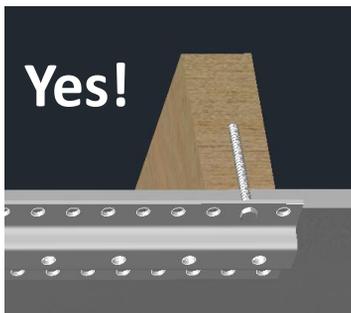
Measurements and instructions are provided on the following pages. Please note: the provided measurements are for the center of the mounting track (dashed line in the figure below).



Four lag screws secure each mounting track into two trusses

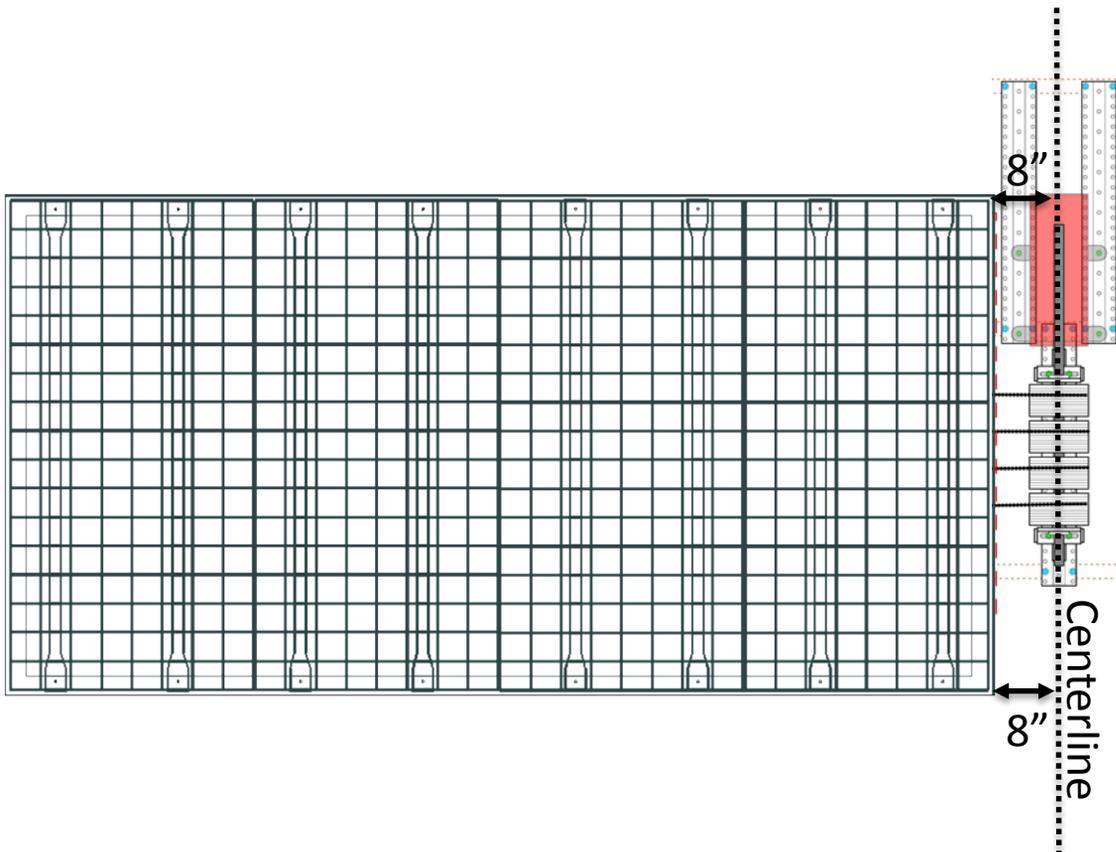
From the center of the mounting track measure 1 1/8" in each direction to pinpoint the appropriate drilling locations (shown above in the solid lined arrows).

Ensure the lag screw is in the center of the truss. Refer to Appendix III for additional information regarding proper mounting.



## 3 Continued

When preparation is complete: installation will begin with the motor and spools. Three mounting tracks will be used in this step, two to secure the motor to the ceiling and one to secure the spools. The recommended distance is approximately 8" to the center of the motor from the 4' end of the deck\* (this allows space for the mounting of the case without impeding your storage area). Continued information on following page.



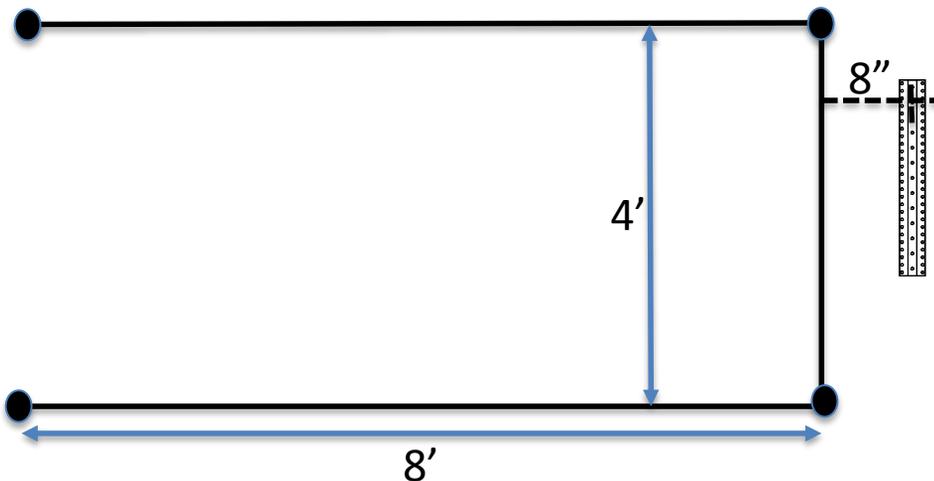
\*You CAN install the motor inside your storage area, if preferred, but you may lose that additional storage space.

You also have the ability to move the motor back more than 8".

## 3 Continued

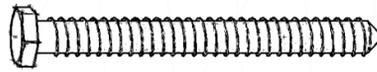
Included in the kit is a string with 4 thumbtacks that you may choose to use as a guide (the string forms a “U” shape shown below):

When installing the motor mark the ceiling 8” from where you would like the edge of the deck, and 12” from the corner of the deck [view from above]. Below is the deck outline with representative marking of this location. Where these two lines intersect is representative of the center of your motor and mounting track.





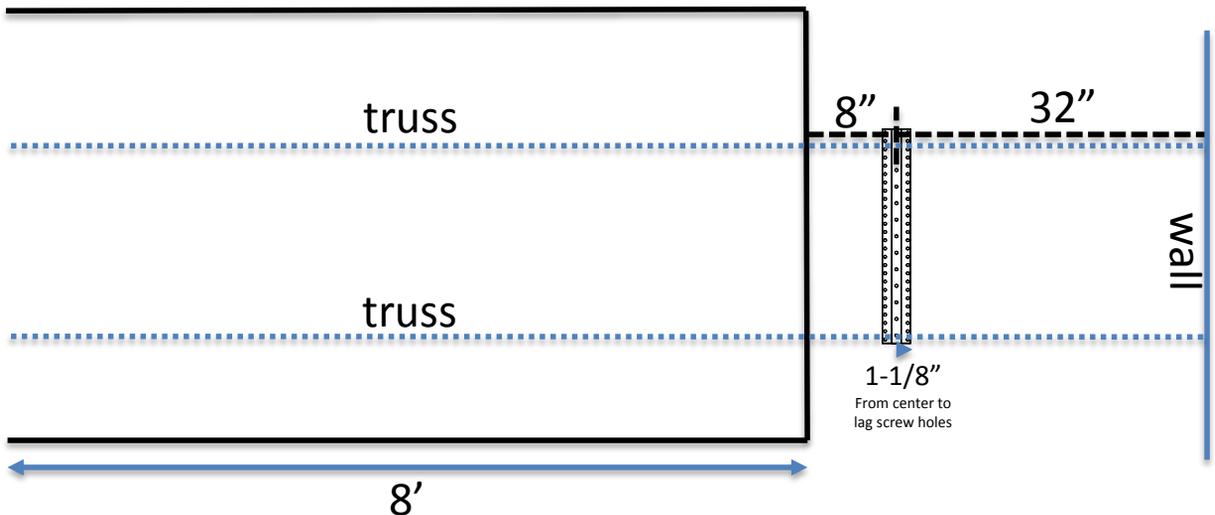
Hardware Required:



x4

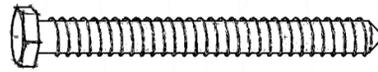
## 3 Continued

Now that we have our starting point, we will begin installation of the mounting tracks. If you are following option A installation, you will use this point to install the first mounting track. Using this point you will find the closest truss to that location. Using that truss, measure 8" from the end of the rack to the center of the truss\*. You will want to pick the closest wall/fixed point to ensure that your installation is square. In our case we will say 8" from the rack is equal to 32" from our closest wall. To install the mounting tracks we will measure 1-1/8" to the left or right of this mark to pilot and secure our first lag screw. *Snug the screw, but do not over tighten.* From there, we will pull our measurement from the wall and ensure the center of our mounting track is 32" to the center [do this by pivoting the track on the lag you installed, if the track will not move you may have to loosen your first screw] once square, pilot and install the following 3 lag screws. All mounting tracks need to be installed into 2 *separate* trusses!



\*It is highly recommended you probe to ensure you have found the center of the truss – for more information on this please see Appendix III.

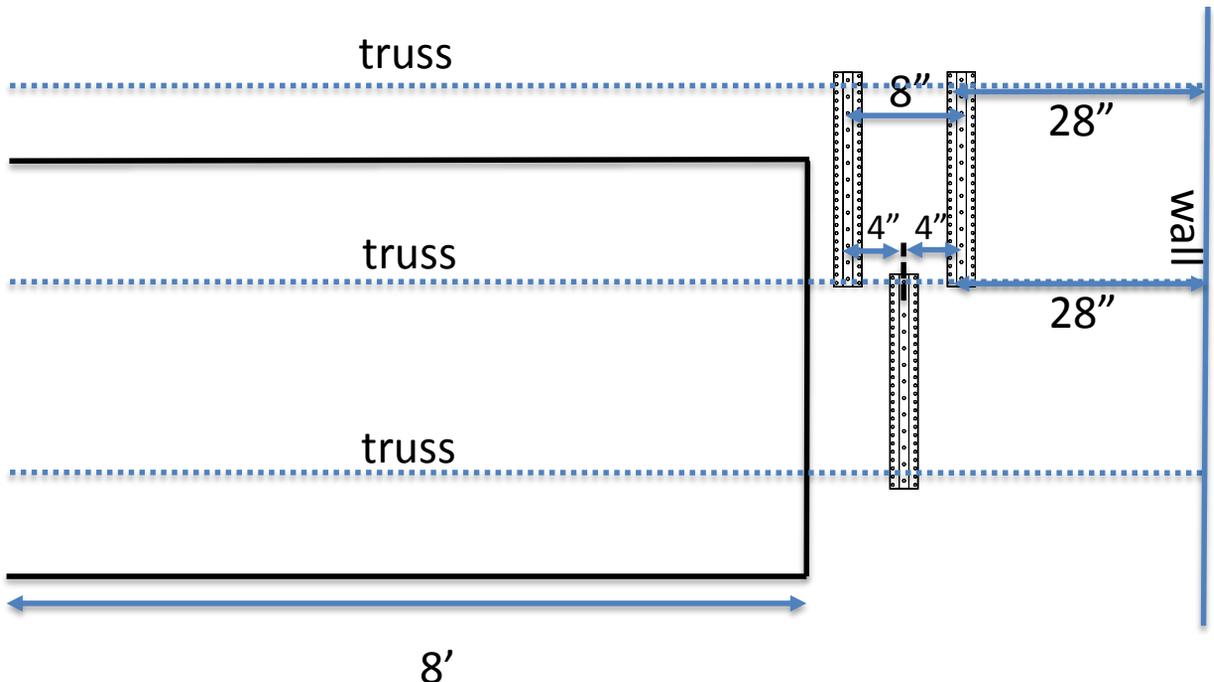
Hardware Required:



**x8**

## 3 Continued

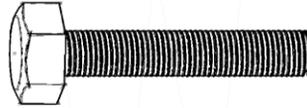
Now that we have installed our first mounting track to support our spools, two need to be installed to support the motor. These two mounting tracks each need to be 4" left and right of the current installed track, center to center, making sure their center holes are 8" apart. The four lag screws will be installed on the same truss as the 2 from the original track. Remember to measure over 1-1/8" to pilot and square each track using a fixed point. Always use a fixed point to ensure the tracks are square, using our wall the center of the closest track should measure 28" to the center.\*\*



\*It is highly recommended you probe to ensure you have found the center of the truss – for more information on this please see Appendix III.

\*\*It is vital that these mounting tracks are 8" center to center and square, as the motor will be very hard to install, or may not function properly if misaligned.

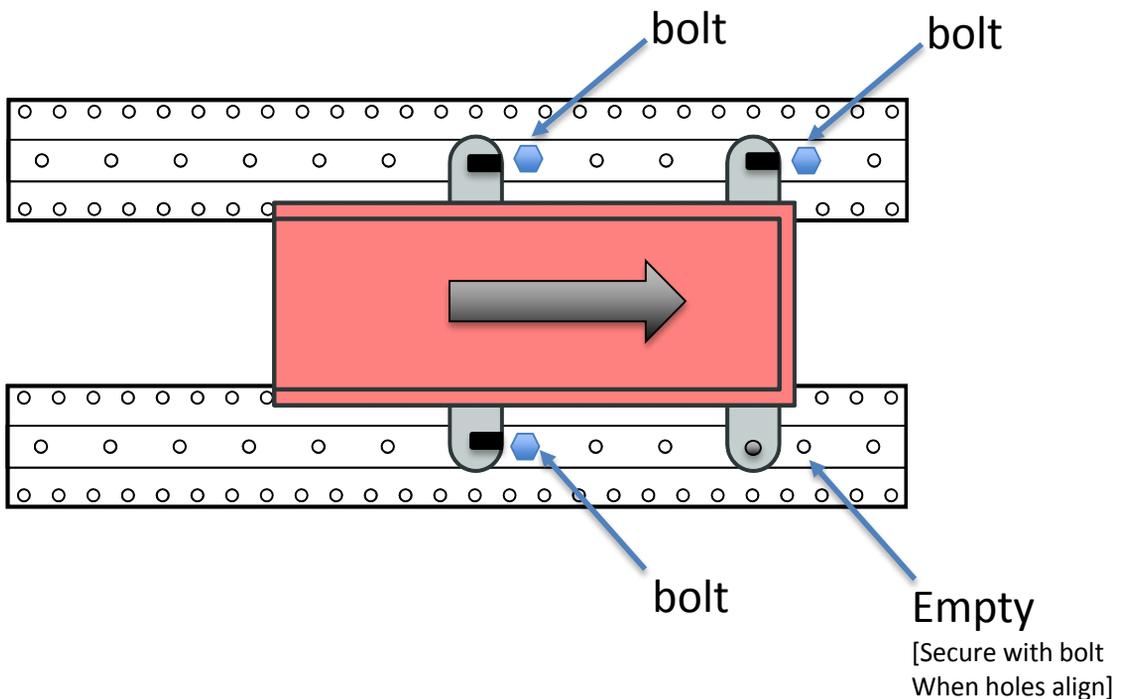
Hardware Required:



**x4**

## 3 Continued

Now that both mounting tracks are installed to support the motor, install the 3 large bolts corresponding to the slotted holes on the motor. These bolts need to be started into the mounting tracks with about 1" of thread hanging down. [If the motor and spools are already attached you can hang it as one unit, or you can remove the 3 bolts that attached the motor and spools]. The motor feet slots will slide over the bolts\*. The foot with the single hole will need to be aligned and a final large bolt will prevent the motor from moving. Tighten all four bolts completely.



\*Please note: the motor is heavy and although one person can install it, it may require additional help.



Hardware Required:



x8



x2

## 3 Continued

Now that the motor has been successfully installed, the easiest method to install the spools is to insert the 3 small driveshaft bolts (if disconnected), connecting the motor and spools. Once this unit is connected and the bolts are tight, spin the bearing so the flat edge is toward the ceiling (you may need to slightly pull down on the shaft). Slide the flat cross between the bearing and mounting track. Align the holes of the bearing with the cross and mounting track installing 2 medium bolts per bearing.

Repeat this step for the second bearing.

Complete

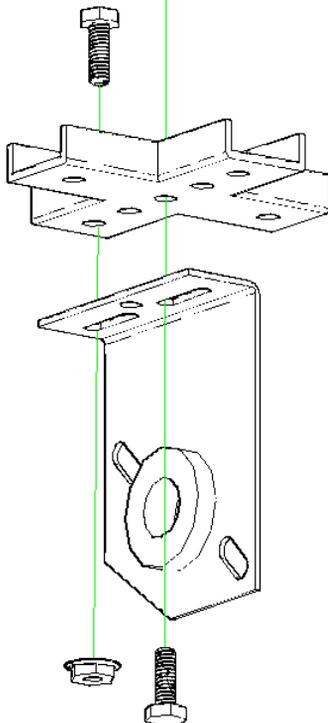
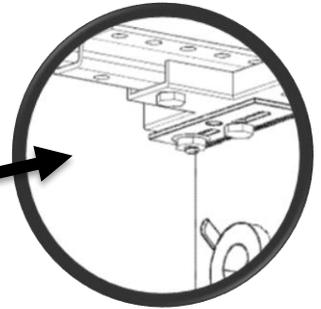


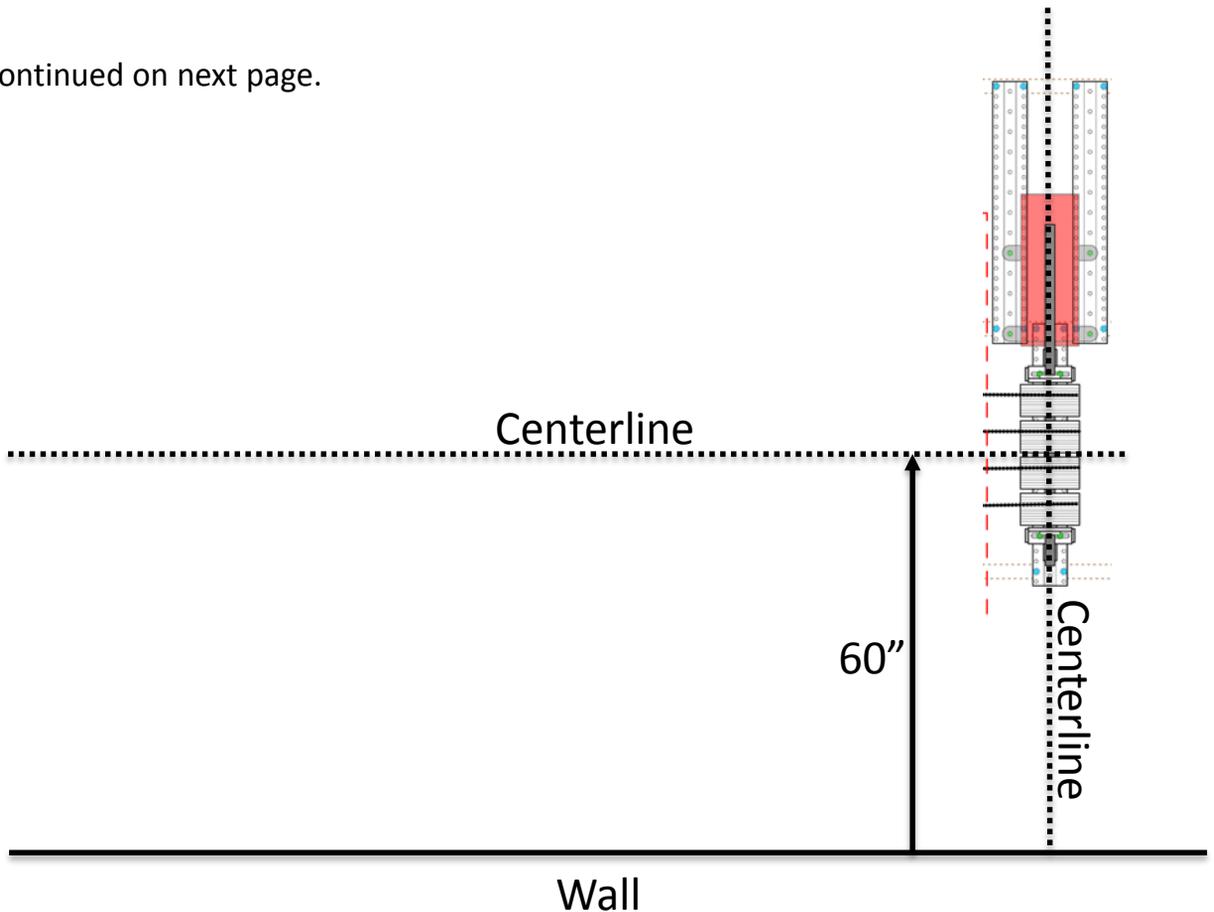
Image represents how to secure the bearings to the mounting track. The shaft and spools have been omitted to provide a clear view.

Please note: this image is representative of proper installation only, your bearing may use different holes and fall in a different location on the track, every installation is different.

4

Now that the motor and shaft have been successfully installed, we will continue with the pulley system. To find out starting point we will find the nearest wall or fixed point. We need to find the centerline of the spools [there are 4 total spools, the space between the center 2 spools is the distance we need to determine]. For our example: the centerline is 60" from the south wall [your distance will vary].

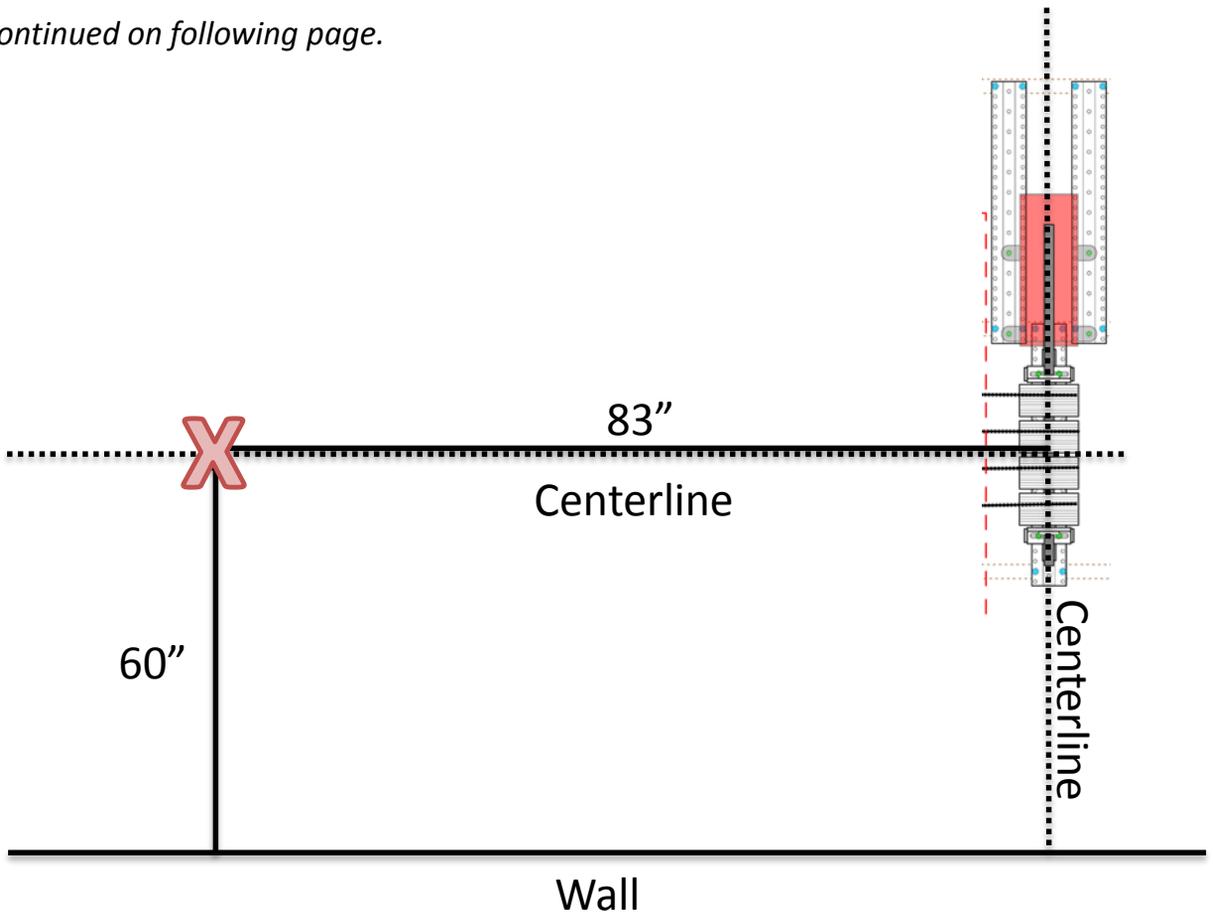
Continued on next page.



## 4 Continued

Now that we have the distance we will carry that number to the location of our mounting tracks. The distance from the center of the spools to the center of the mounting tracks is constant at 83" – Where these two lines intersect is the center of the mounting track installation.

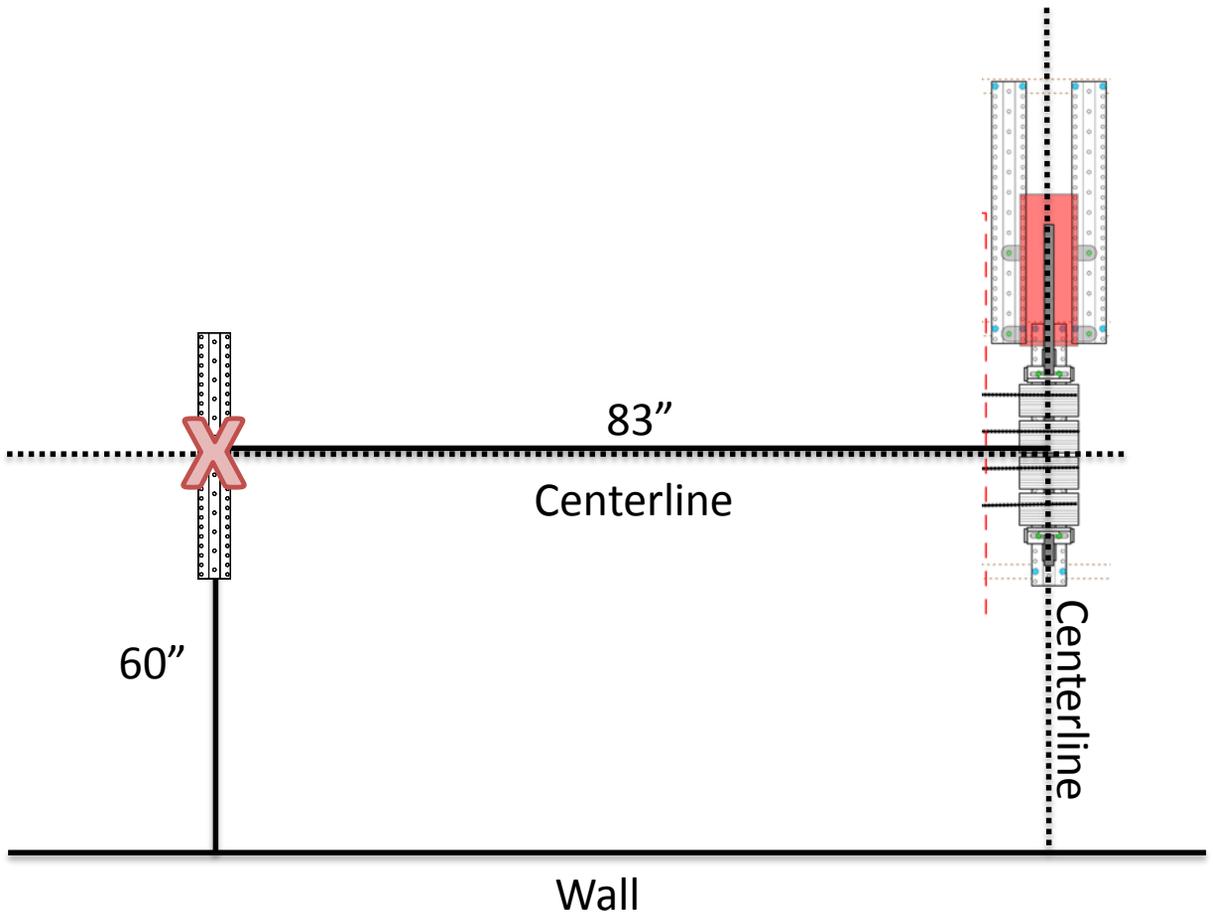
*Continued on following page.*



# 4 Continued

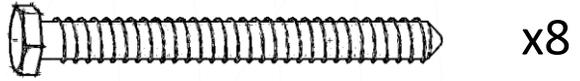
The center hole of the mounting track should be centered over this "X". You will find the nearest 2 trusses to mount this track, using the 4 lag screws.

Continued on following page.



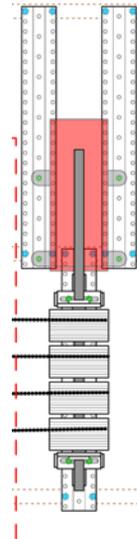


Hardware Required:



## 4 Continued

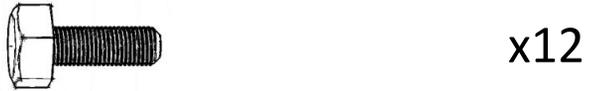
You will need to use 2 mounting track couplers and create one straight line of 3 mounting tracks. One on each side of the current mounting track. Use 4 medium bolts per coupler to connect the tracks into one continuous line.



**These 3 tracks need to be installed into a minimum of 4 separate trusses.**

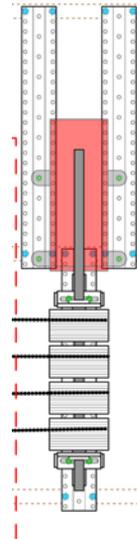
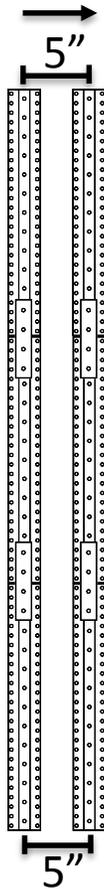


## Hardware Required:



5

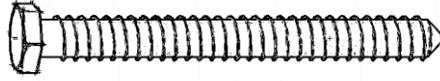
After installing the first set of mounting tracks, you will duplicate this process, moving the tracks (center to center), 5" toward the motor.



**These 3 tracks need to be installed into a minimum of 4 separate trusses.**



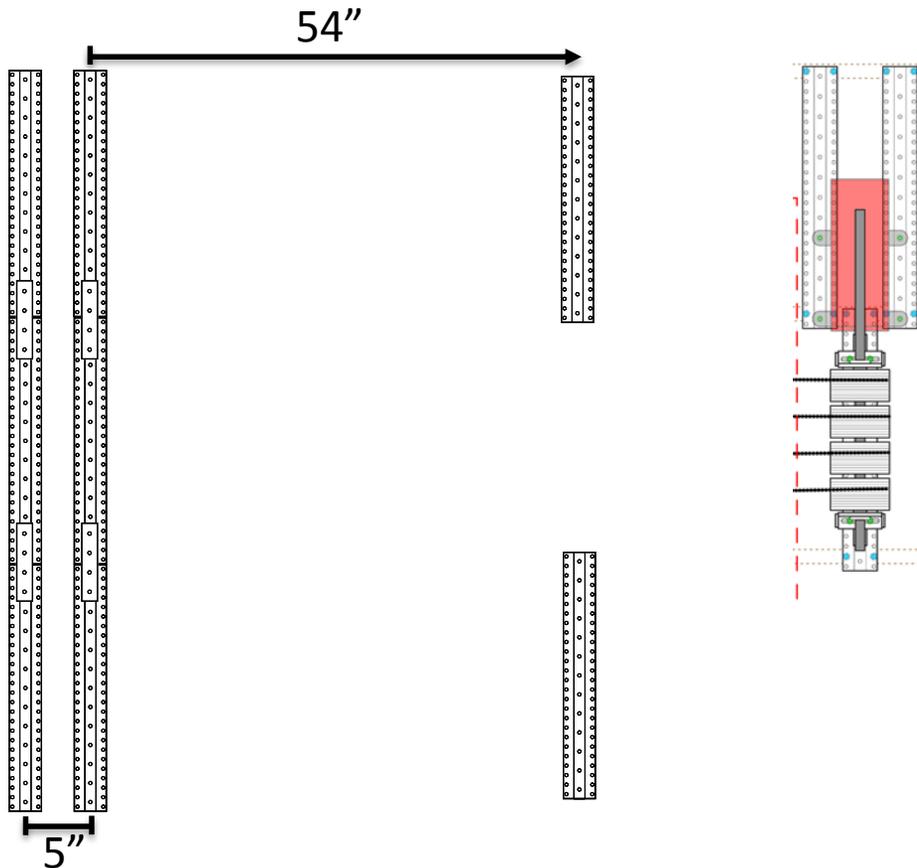
## Hardware Required:



x8

6

After installing the second set of mounting tracks, you will duplicate this process, installing only the outside two tracks (center to center), 54" toward the motor. These two tracks will not align with the outside two tracks because they need to be installed on two separate trusses and are not coupled.

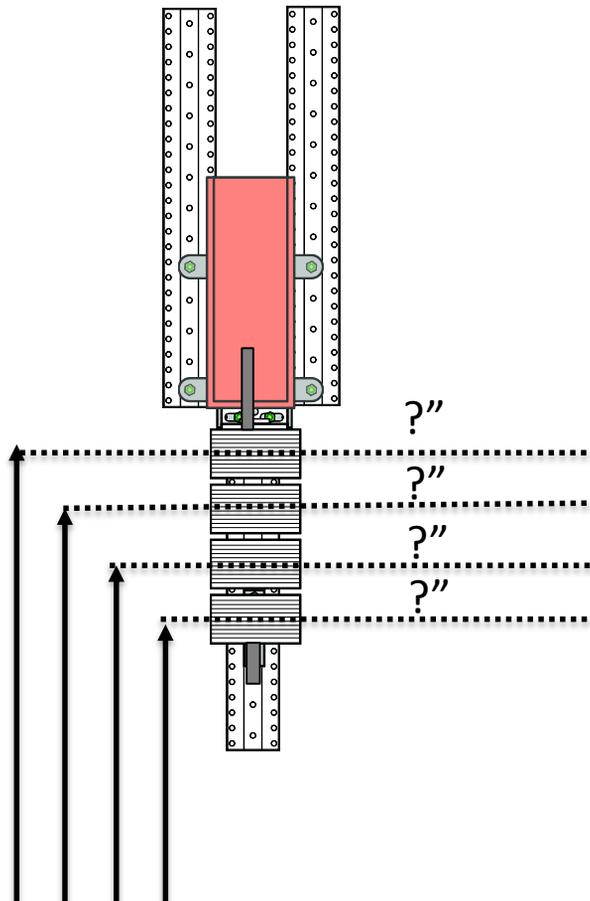


**These 3 tracks need to be installed into a minimum of 4 separate trusses.**

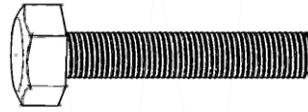
7

To determine the location of the pulleys: use a fixed point and measure the center of each individual spool.

We highly recommend writing your numbers on the lines below, you will need these numbers for the following step.



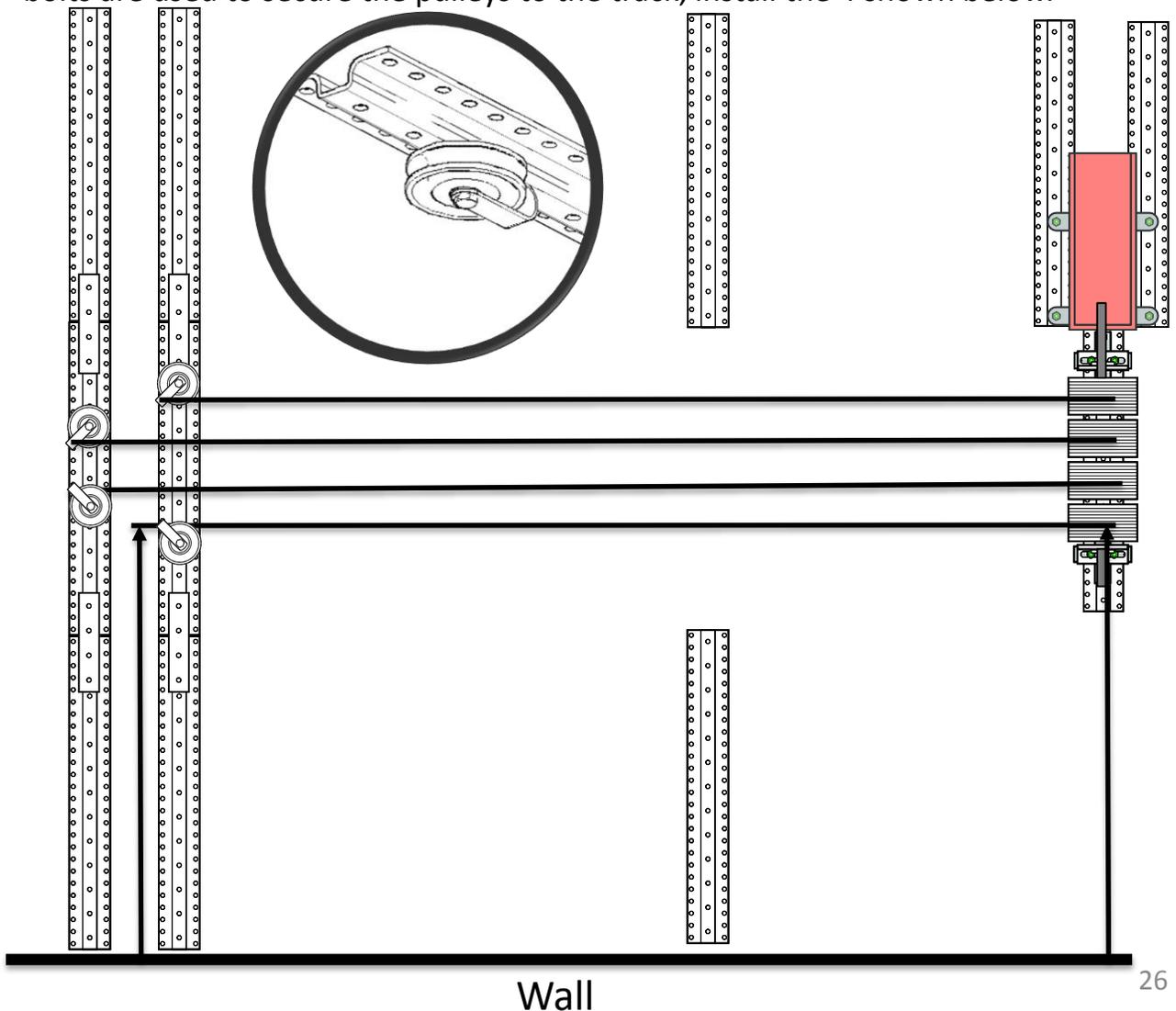
Hardware Required:



**x4**

# 7 Continued

The center of each spool [measurements from the previous step] are used to properly set the pulley locations. Each spool center relates to the groove of each pulley. The line below represents the path we want the cable to travel. The pulleys for the outside spools are put on the mounting tracks closer to the motor. Large bolts are used to secure the pulleys to the track, install the 4 shown below.



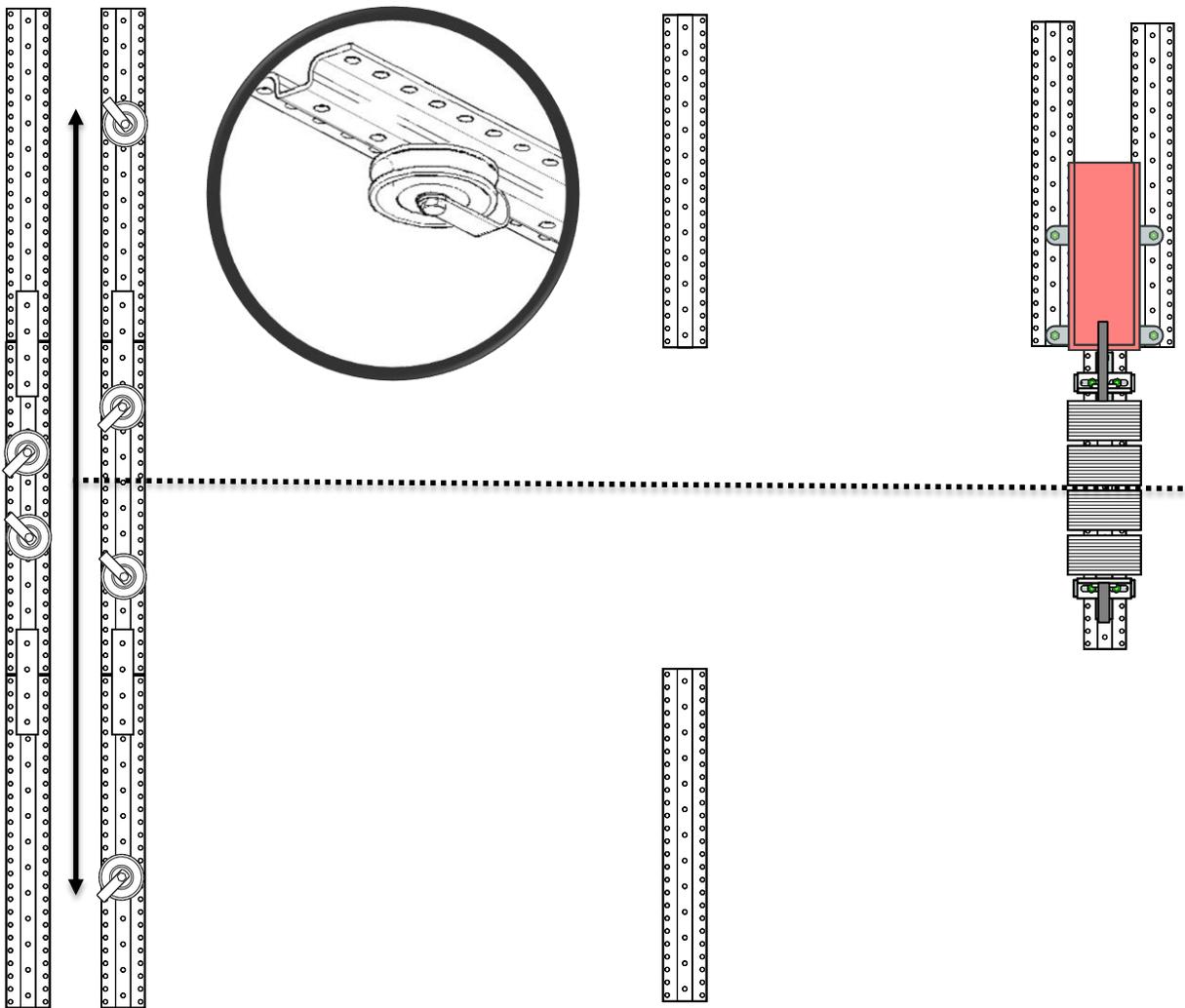
Hardware Required:



**x2**

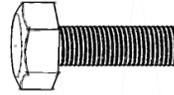
# 7 Continued

Once the four pulleys have been set, the final 2 horizontal pulleys need to be installed. The location of these are set by determining the edge of the rack. They should be 49" to the outside grooves. Roughly 24" to each side from the center. Note: the rack is 48" + 1/2" on each side for the lifting locations gives us the 49".



Wall

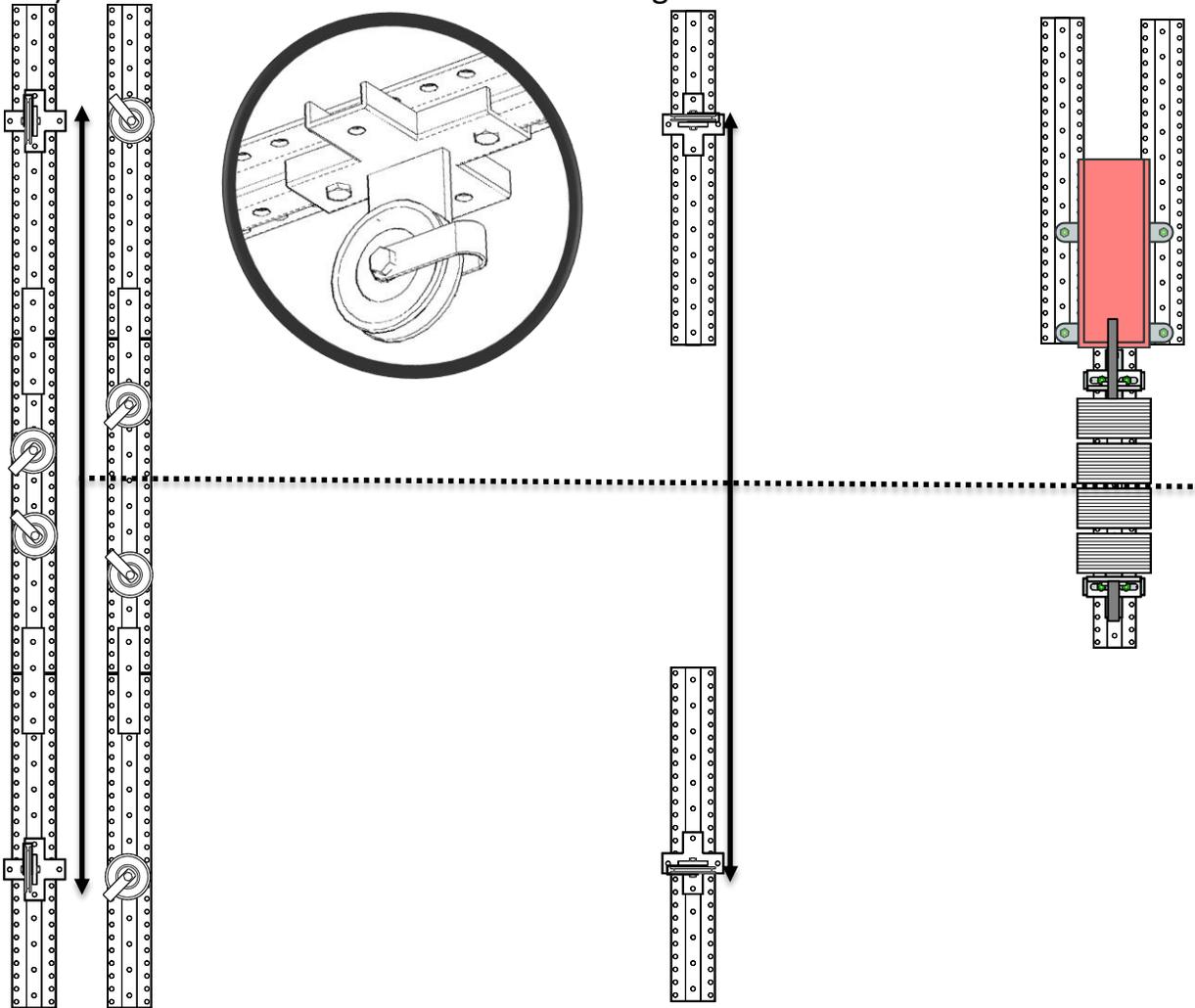
Hardware Required:



**x8**

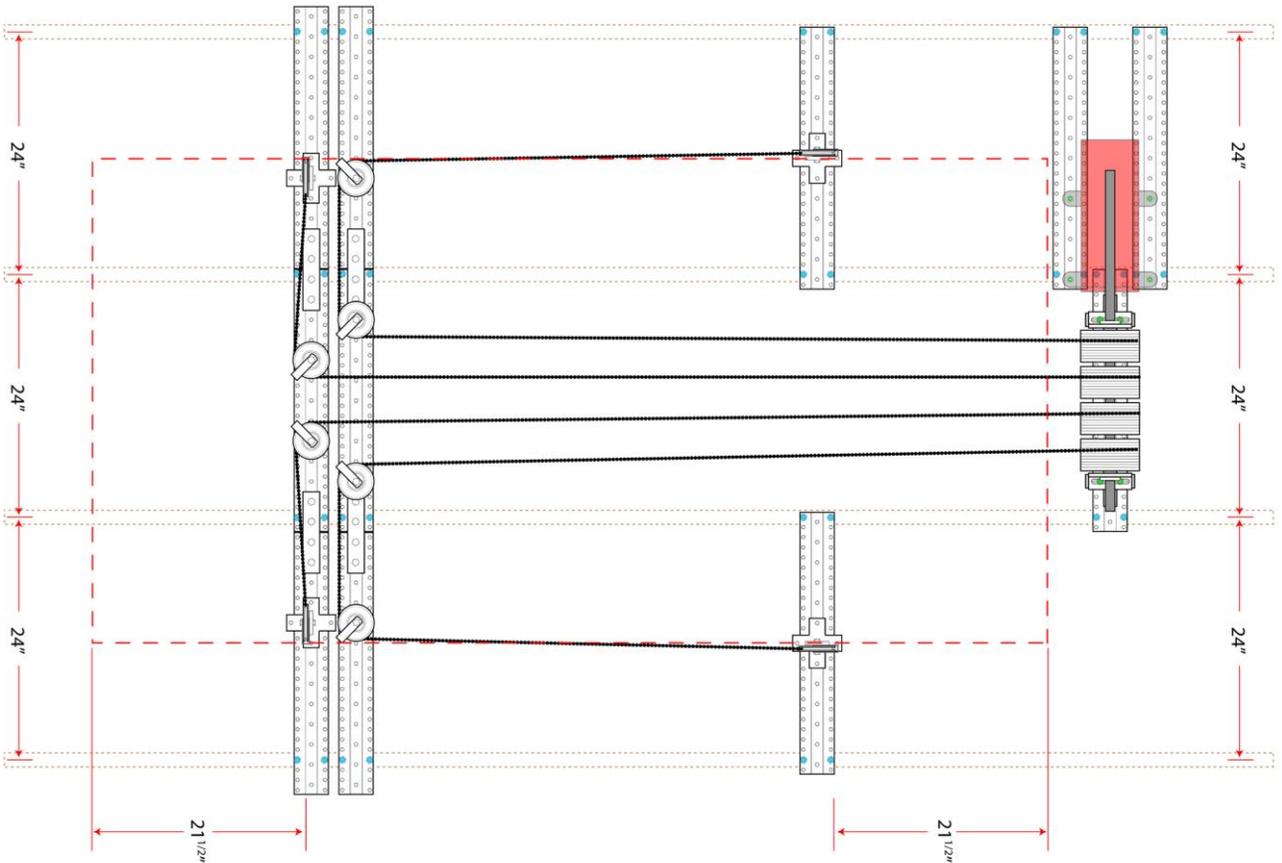
8

Once the horizontal pulleys have been set, it is time to install the vertical pulleys and string the cable. To install the vertical pulleys 2 medium bolts will secure each pulley to the mounting track (shown below). The 4 pulleys should be mounted so the pulley groove is roughly 49" apart across the rack (49" in the arrow directions below). These crosses are meant to turn 90 degrees.



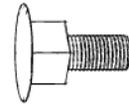
## 9

Now that you have the ceiling mounts installed, you will need to remove the tape from the spools and plug in the motor. While pulling on the cables slowly release the cables until you have only one full wrap on the spools remaining **[all four spools should always have one full wrap of cable, do not run below this point, each cable should be marked with red, if you see the red portion of the cable immediately stop the downward position]**. With all of the tape removed, you need to run the cable through the pulleys as the schematic below illustrates. Once through the vertical pulleys, you should have a lot of excess suspended.





Hardware Required:



x24

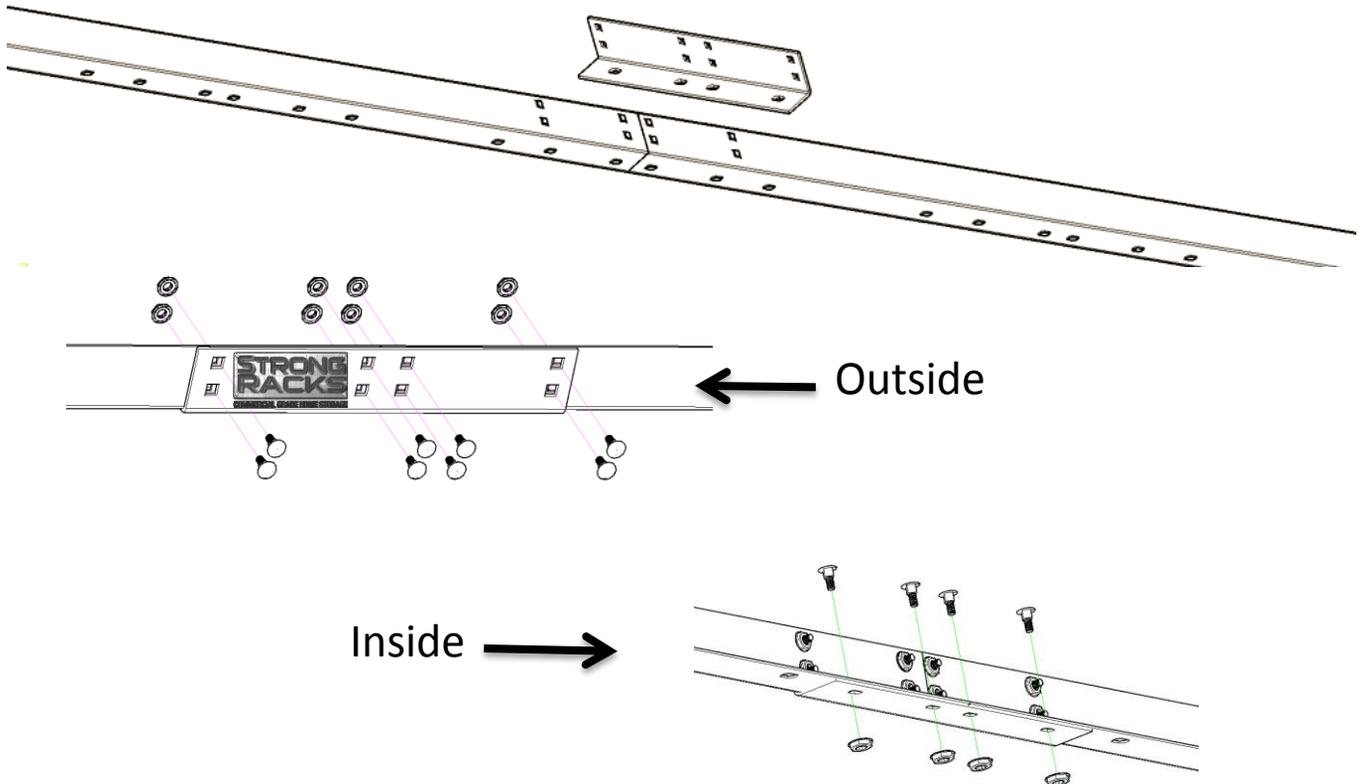


x24

# 10

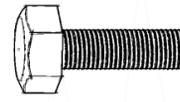
To assemble the sides of the platform, begin by laying two 4' Rails end to end. Use Universal Rail Connector, along with twelve Small Carriage Bolts and twelve Small Nuts, to join the two 4' Rails. Repeat with other two 4' Rails and second Universal Rail Connector.

Note: Bolts on the bottom should have heads facing up (this will allow the grids to sit flat).



**Completely Tighten** both sets to creating the two 8' lengths.

Hardware Required:



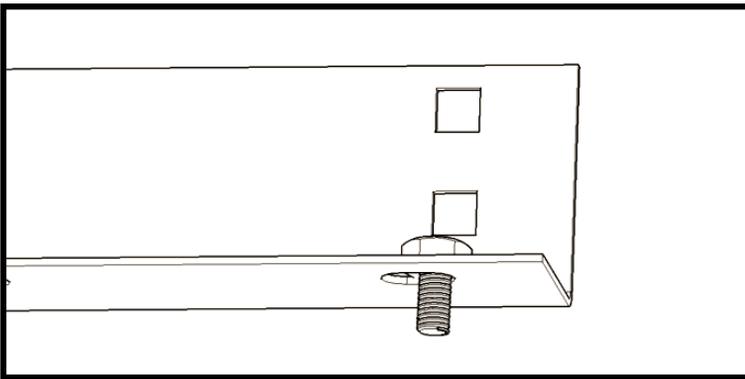
**x4**



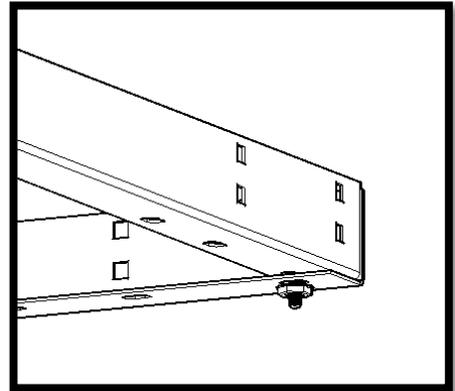
**x4**

**11**

To assemble the end of the platform, begin by laying two 8' Rails side by side. Use 2 medium bolts and large nuts, to join each the two 4' Rails to the 8' sections to create one continuous perimeter.



Drop one Small Bolt (C) into each end of both 8' rails.

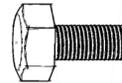


Secure the 4' rail under both 8' sections

**Leave bolts loose, until grids have been installed.**



Hardware Required:



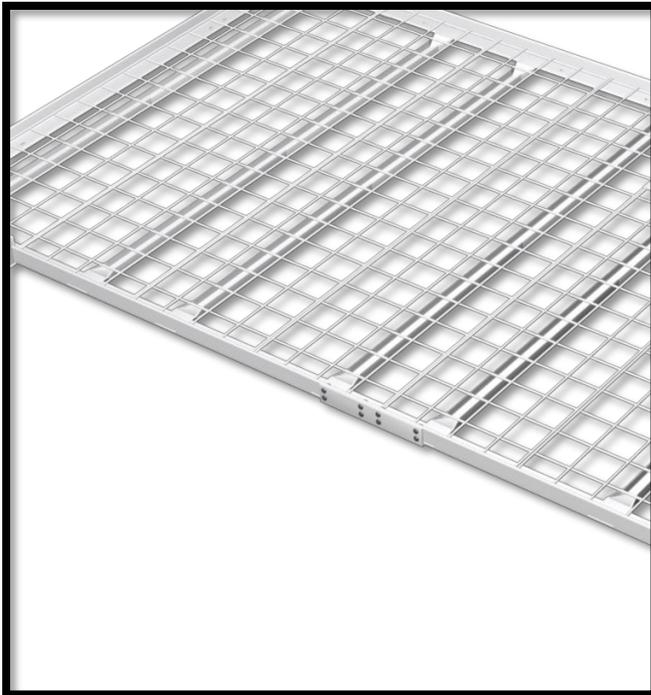
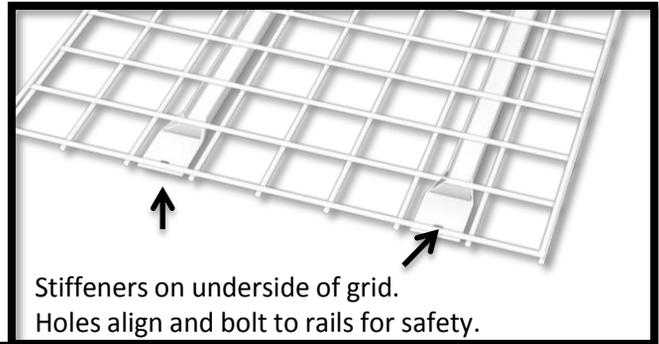
**x16**



**x16**

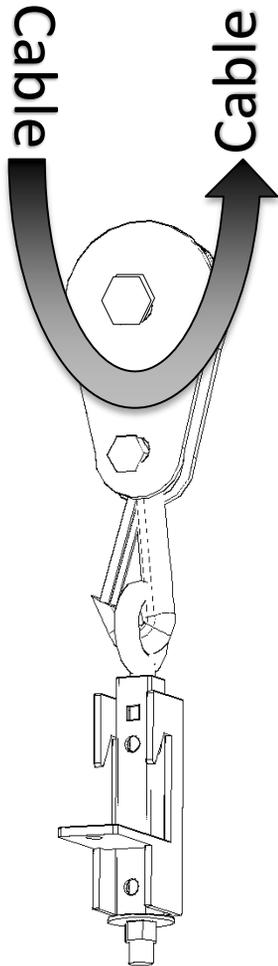
# 12

To complete the platform install the 4 grids, as shown below. Using 4 small bolts and 4 large nuts, secure each grid to the 8' rails.



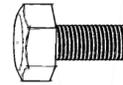
The grids may need to be rotated to align holes, but stiffeners should always remain underneath grid for support.

12



The cable needs to be first strung through each block.

Hardware Required:

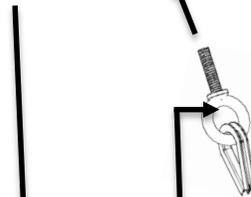
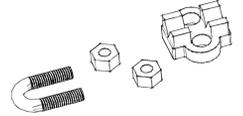
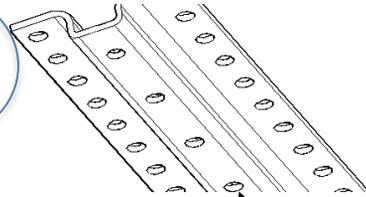


**x16**

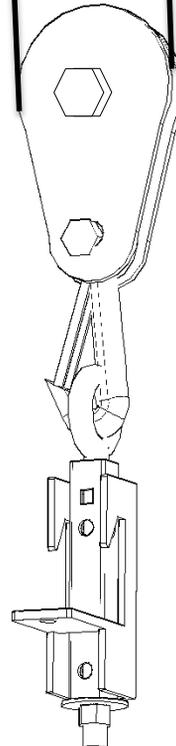


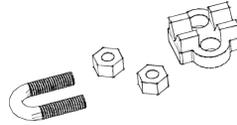
**x16**

12



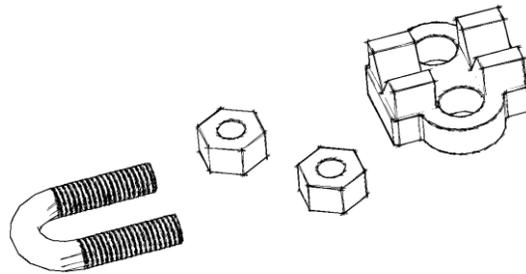
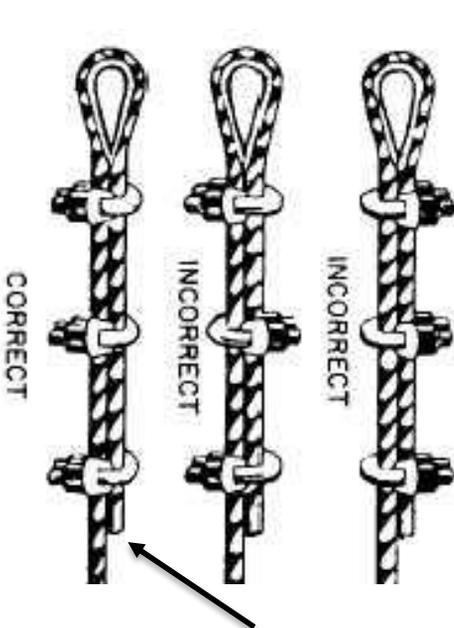
The cable end is to be taken back to the mounting track above. With the location determined by holding the taught cable directly above the block, insert a small eye bolt with thimble in corresponding hole of the mounting track above. Attach one wire clip per cable, as a temporary hold, more information on the following page.





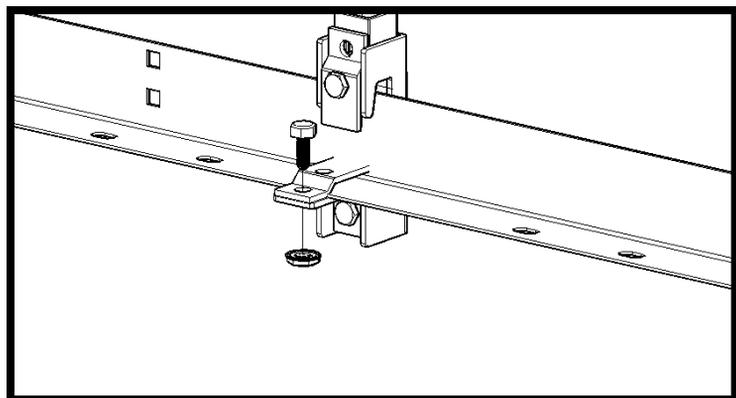
# 12 Continued

To complete the installation, you need to ensure the rack is level. Raise or lower each cable, ensuring there is tension on the cable at all times. Use three Wire Clips per cable to secure each cable in the position where the rack is perfectly level. Please reference the image below to ensure your clips are installed appropriately. **Ensure all of the cables are properly in the groove of each pulley, this is a vital step! Before running the unit up or down all cables should be visually checked. Cables always need to have tension to prevent them from jumping their intended course, this unit is not designed to go to the ground/floor. Taking the weight off the cables will result in incorrect operation.**



The 4 Rail brackets with eye bolts should be secured to the rail as shown below (grids omitted for clarity). Using a small nut for the upper clamp and a medium bolt with large nut for the lower part of the rail. These should be installed directly below the cable for optimum performance.

When all connections are tight and the rack is level, you will need to cut the excess cable below the last wire clip. **Do Not** Cut the cable on the side going to the rack, just the loose end.





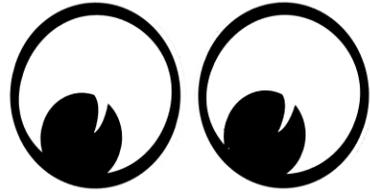
## SPECIAL NOTES:

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**Ensure all of the cables are properly in the groove of each pulley, this is a vital step!**

**Before running the unit up or down all cables should be visually checked. Cables always need to have tension to prevent them from jumping their intended course, this unit is not designed to go to the ground/floor.**

**Taking the weight off the cables will result in incorrect operation.**



13

Congratulations! Stand back and admire your completed PowerRax Motorized Storage Solution.



Now you can load your system. Refer to Appendix V for additional accessory options.



# Appendix I – Understanding Your Ceiling Support Systems

**There are 4 standard type of roof structures:**

1. Living Space above the garage area.
2. Flat roofs.
3. “Hip” / Truss roofs.
4. Traditional “Gable” roofs.



It is important to identify the type of roof structure you have, to start the process of installation. Once you identify the type of roof structure you have, you can understand the type of construction you have in your ceiling.

We will attempt to demonstrate the type of ceiling or truss systems but these types may vary. If you have any questions on the type of roof structure you have, we recommend contacting your builder, viewing your ceiling trusses via your attic access or contacting a qualified representative to help you.

# Appendix II – Storage Locator Worksheet



## Storage Locator Worksheet

Notes:
Sprinklers:
Lights:
Obstructions:

Floor to ceiling height

Clearance above garage

Width of Garage

Length of Garage

2<sup>nd</sup> Story

Hip

Flat

Vault

### Roof Line Type

Please note garage doors, openers and show position of garage door/motor tracks. Dashed line represents position of garage door when open.

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## Appendix III – Proper Mounting

- It is recommended to use a stud finder and physically inspect your crawl space to locate your truss direction. You can also make note of any electrical, plumbing or gas lines that may be around your truss system.
- Always install the lag screws directly into the center of a truss. With appropriate installation, you should never encounter utility lines.
- We recommend probing to find the edges of your truss. This is the most reliable method of finding the center of your truss and ensures proper installation of the lag screws.
- Because our lag screws are designed to be contained inside of solid wood trusses, they are 3" in length. If you find that you have pre-fabricated wood trusses such as TGI's, we recommend that you slowly tighten your lag screws into the mounting track. Some pre-fabricated trusses are thin, and your lag screws may penetrate the back side.
- If you cannot view your trusses due to a living space being above your garage, you can purchase 2 1/2" steel lag screws to replace the 3" lag screws that are provided in your hardware kit.
- In every situation, it is best to consult with your builder or a professional to help with your project.





# Appendix IV – Need Installation Help?



Visit [www.strongracks.com](http://www.strongracks.com) to locate your nearest installer or watch our detailed installation video. Some homeowners prefer to stream this video in their garage while installing our products.

While our installation videos provide a high level of detail, you must still thoroughly read through this installation guide prior to starting your project.

### Search Dealers

Postal Code  Show results within

Keyword

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State

Found 127 locations that matched your search.

**The Garage Organization Company of Arizona**  
2401 West Phelps Rd  
Unit C  
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<http://www.thegarageorganization.com>

**The Garage Organization Company**  
2401 W. Phelps Rd.  
Unit C  
Phoenix, Arizona 85023  
877-797-7225  
<http://www.garageoc.com>

**The Garage Store**  
Alberta, CA T2G4M6  
403-258-1110

**Amazing Space**  
Sioux Falls, SD 57106  
605-336-8248

### Dealer Locator