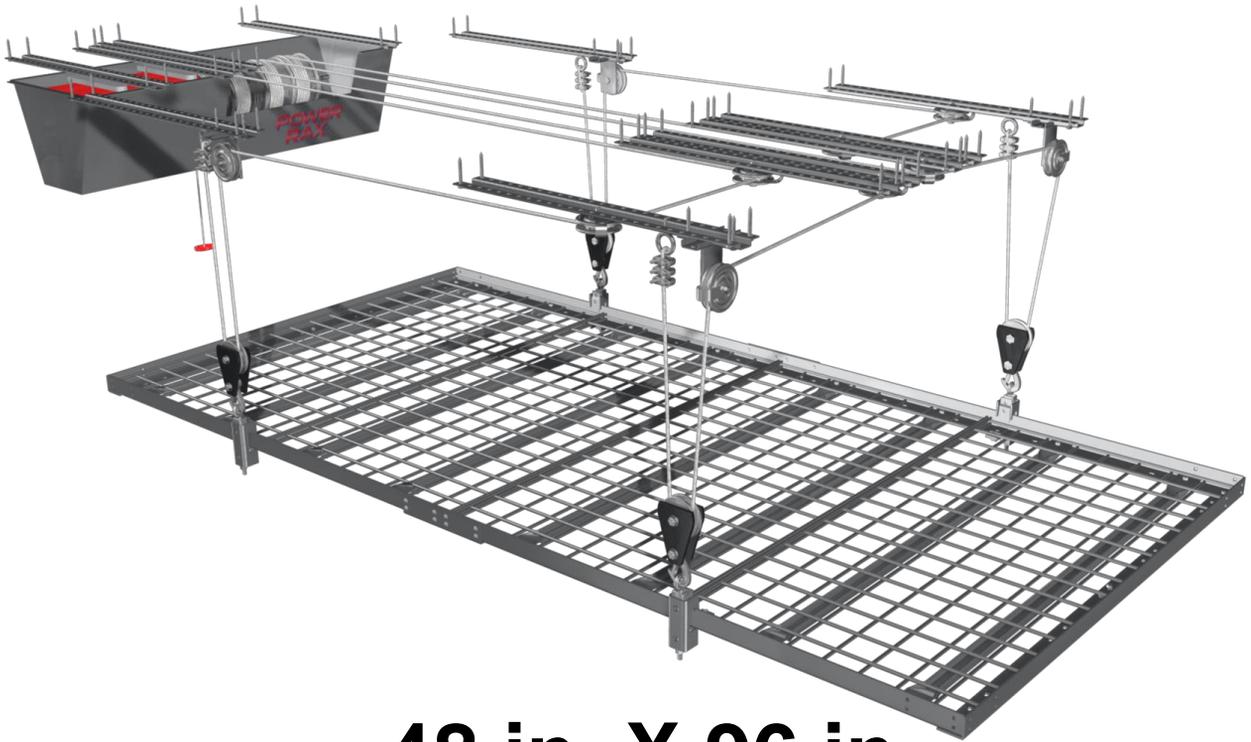


POWER RAX

MOTORIZED HOME STORAGE



48 in. X 96 in.

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

MODEL # PRM4X8

Patent Pending



Table of Contents

Table of Contents	PAGES
Installation Support	3
Safety Information	4-5
Required Tools	6
Hardware Kit Contents	7
Part List	8
Step 1	9-10
Step 2	11
Step 3	12-18
Step 4	19
Step 5	20-28
Step 6	29
Step 7	30
Step 8	31
Step 9	32
Step 10	33
Step 11	34-35
SPECIAL NOTES about operation	36
Step 12	37
Appendix I – Understanding Your Ceiling Support System	38
Appendix II – Storage Locator Worksheet	39
Appendix III – Proper Mounting	40
Appendix IV – Installation Help	41



Installation Support



Please Do Not Return This Product To The Store!

1-877-717-RACK (7225)

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 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 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 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

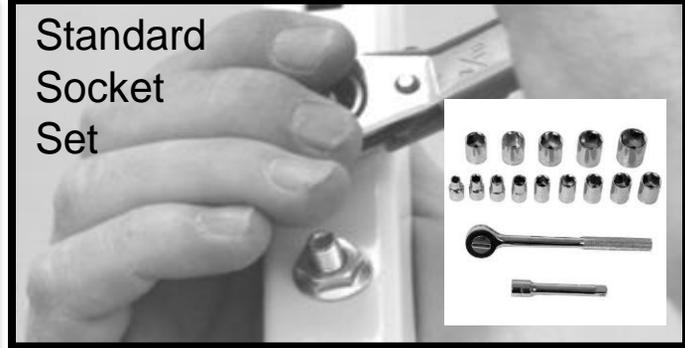
Failure to read and follow these installation instructions, per the manufacturer's guidelines, may result in serious injury or death. If you are uncomfortable installing yourself, please contact us or visit our website to identify an installer of our products.

Required Tools

Electric Drill with 1/8" bit



Standard
Socket
Set



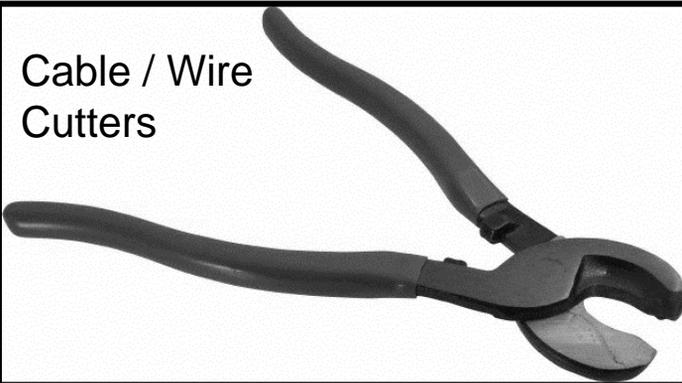
Stud
Finder



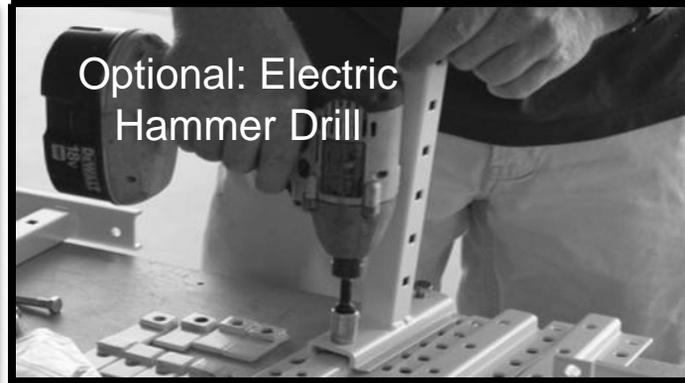
Tape
Measure
and Pencil



Cable / Wire
Cutters

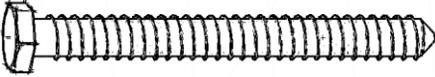
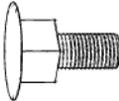
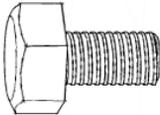
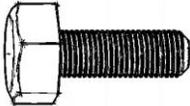
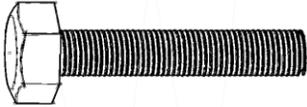
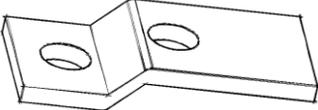
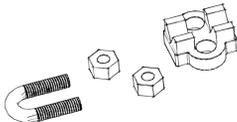


Optional: Electric
Hammer Drill



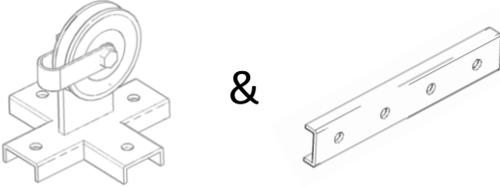
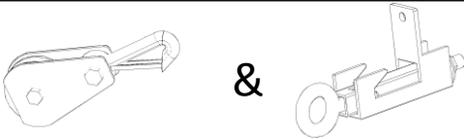
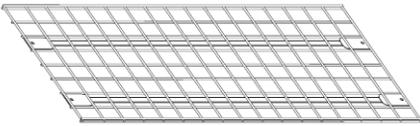
We recommend that you use the Storage Locator Worksheet (Appendix II), to note where you would like to install our products. You can also draw out the position / direction of your ceiling trusses, as it relates to our systems. Keeping good notes will ensure proper installation and support future installations.

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		x32
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

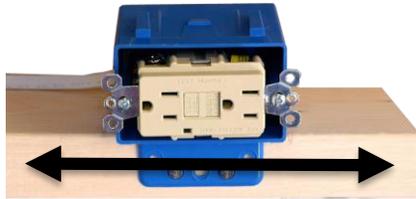
*Motor, shaft and spools not shown. **One or both bearings will be already assembled on the shaft.

1

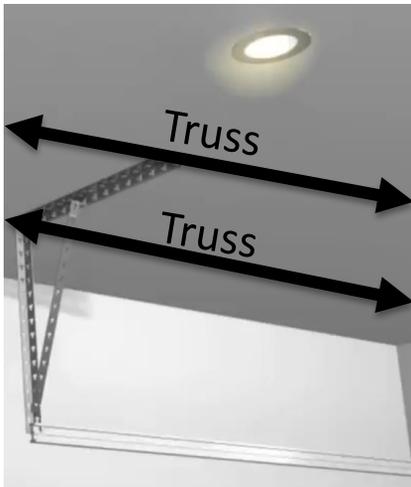
Determine your ceiling support system. To understand your truss direction, spacing or placement, you may need to enter your attic. You may also need to consult your builder or a licensed contractor. As an additional resource, refer to Appendix I.

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.

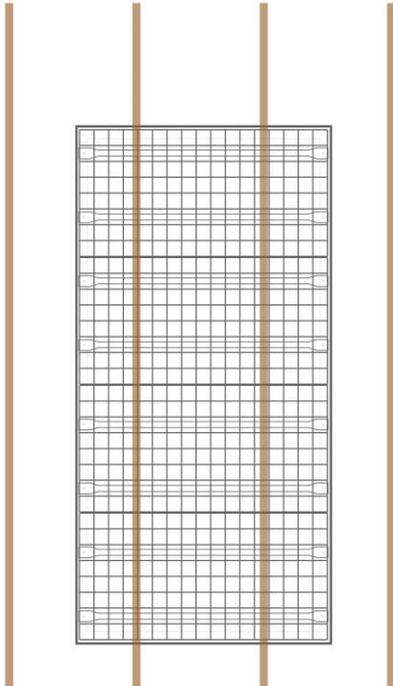
Track support will be attached to a single truss

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*.*

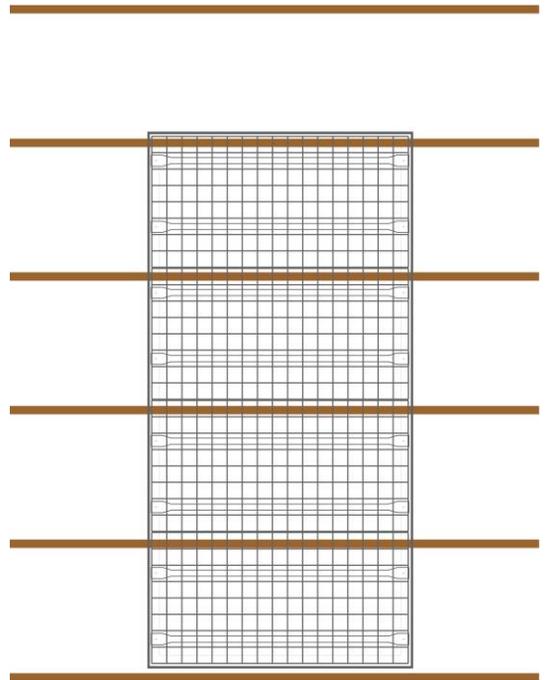


*Footprint including rack is approximately: 108" x 78"

OR

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

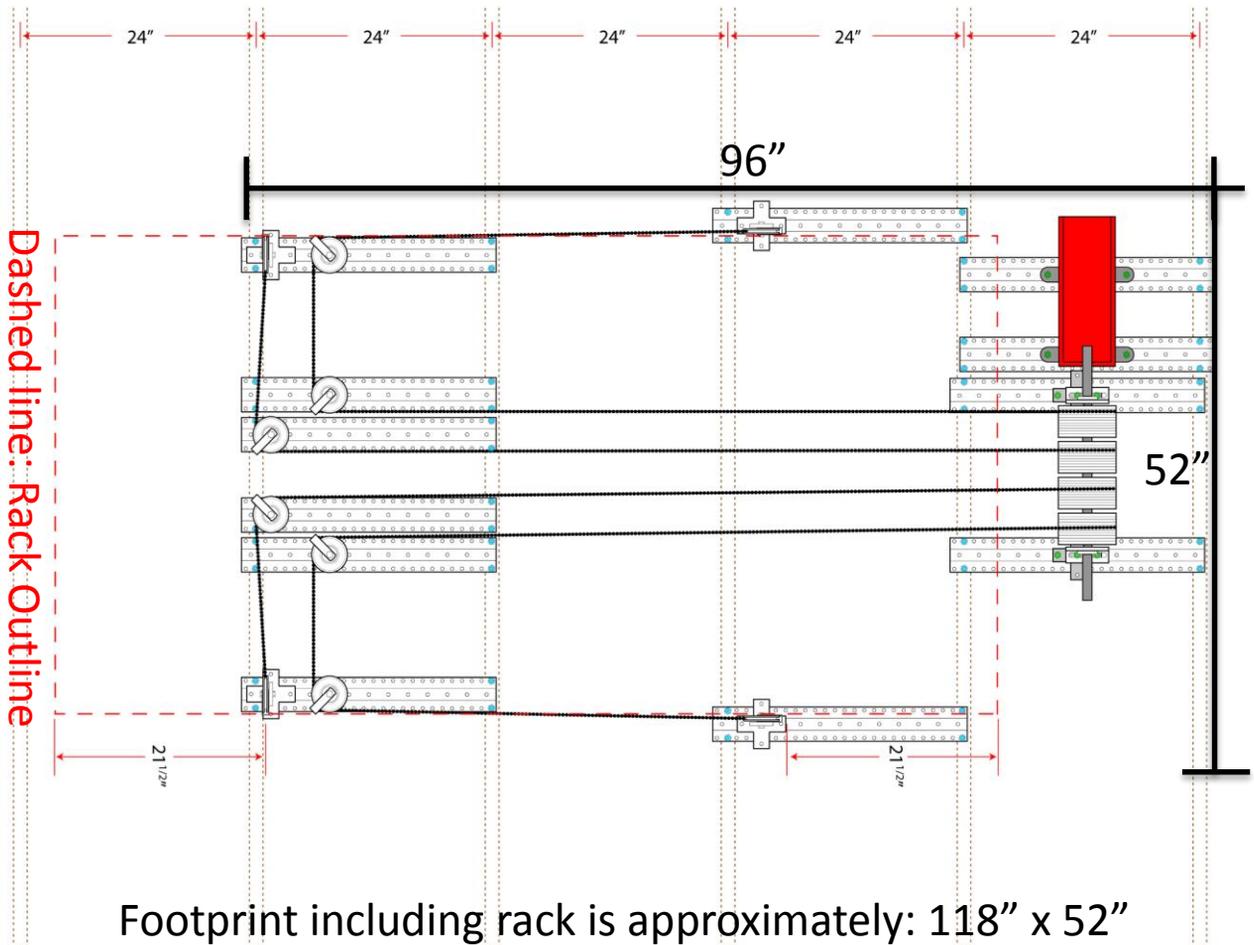
*Requires Approximately 96" x 52" of
clear ceiling space**.*



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

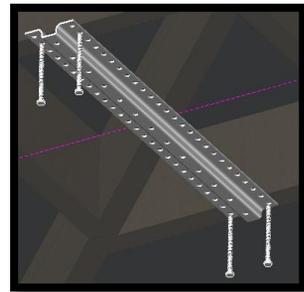
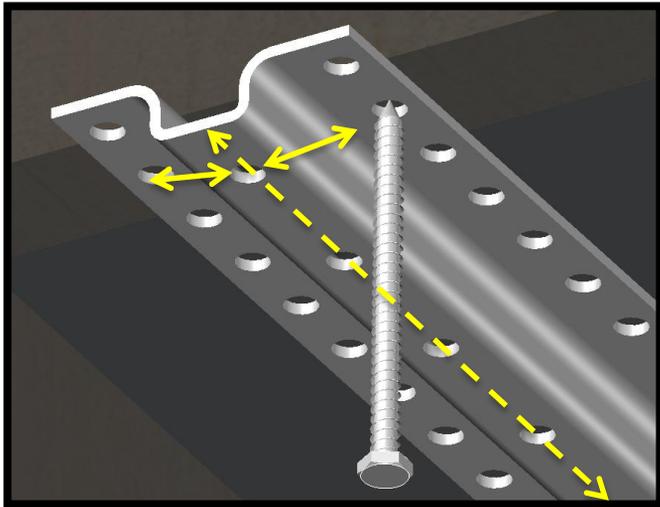
2

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 B, which trusses run perpendicular to your 8' rack length].



3

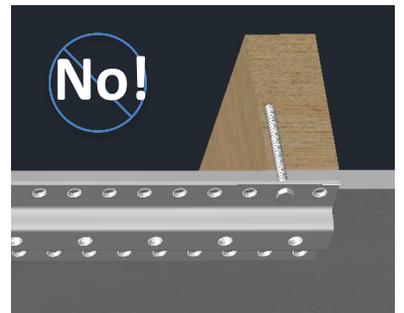
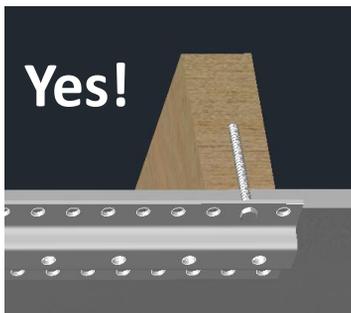
Measurements and instructions are provided on the following pages. Please note: the provided measurements are for the center of the mounting track (dashed line in the figure below).



Four lag screws secure each mounting track into two trusses

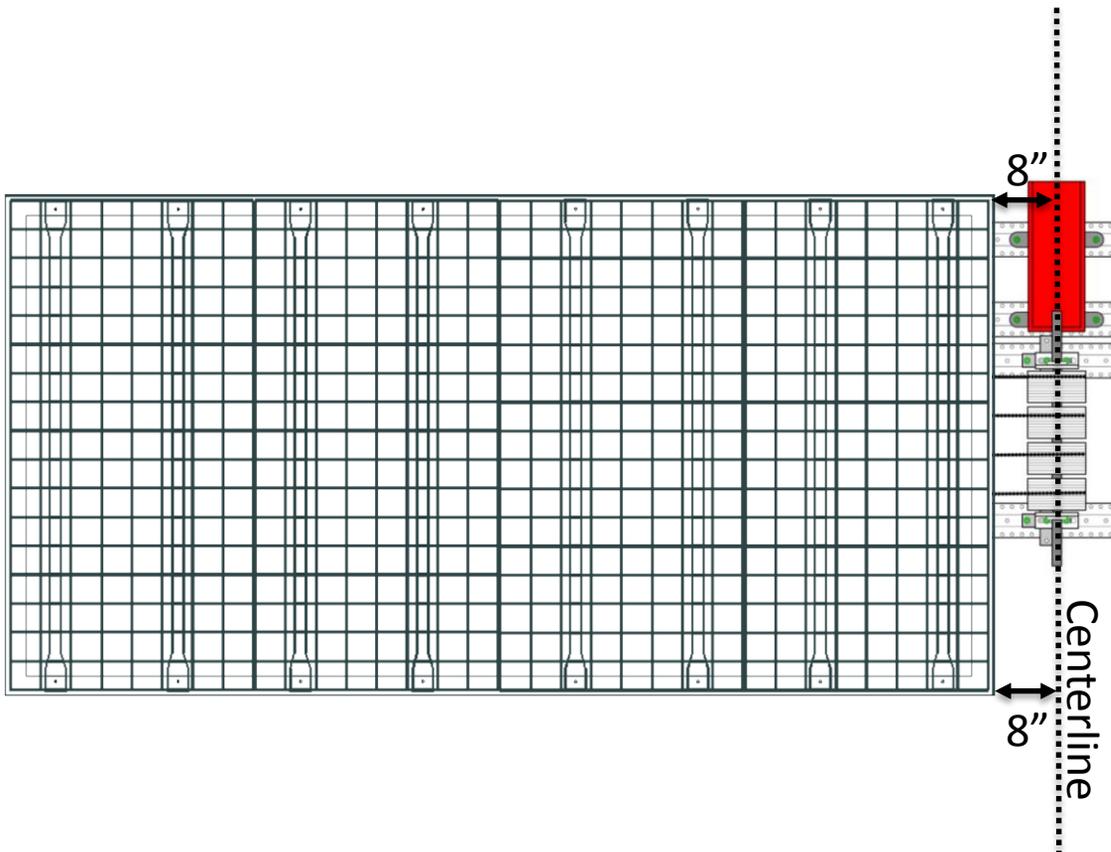
From the center of the mounting track measure 1 1/8" in each direction to pinpoint the appropriate drilling locations (shown above in the solid lined arrows).

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. Four mounting tracks will be used in this step, two to secure the motor to the ceiling and two to secure the spools. The recommended distance is approximately 8" to the center of the motor from the end of the deck* (this allows space for the mounting of the case without impeding your storage area). Continued information on following page.

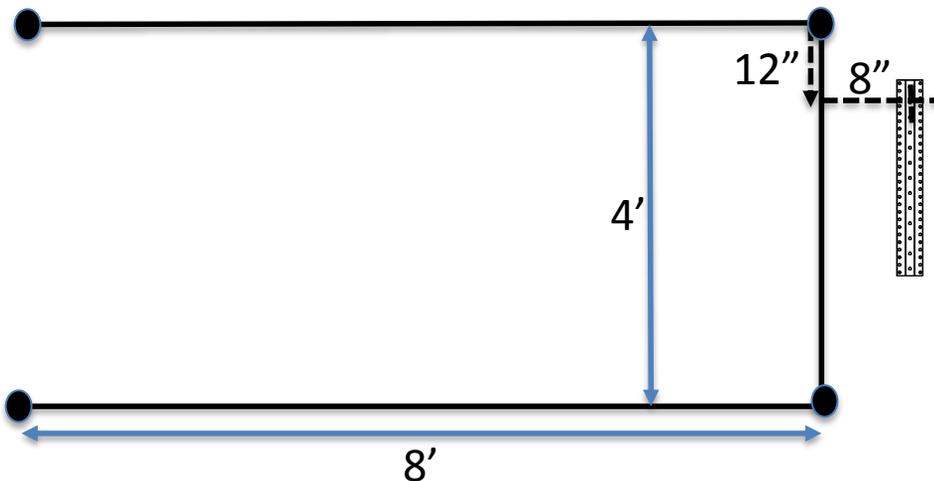


*You CAN install the motor inside your storage area, if preferred, but you may lose that additional storage space.

3 Continued

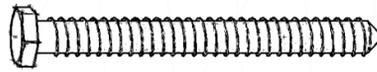
Included in the kit is a string with 4 thumbtacks that you may choose to use as a guide (the string forms a “U” shape shown below):

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.





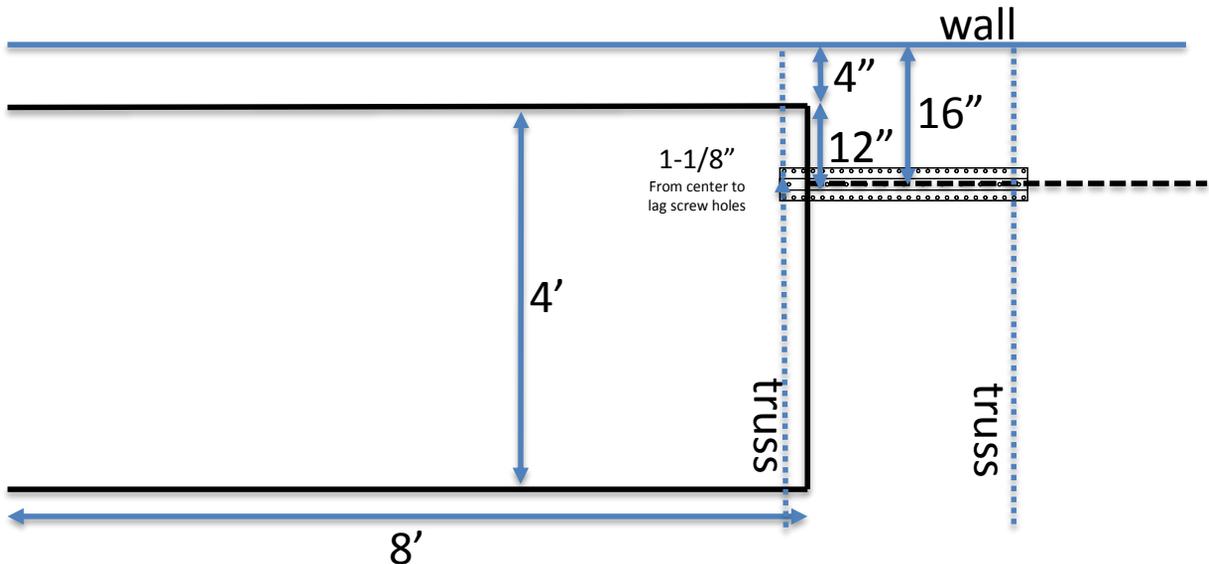
Hardware Required:



x4

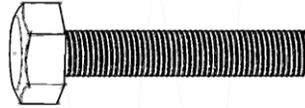
3 Continued

Now that we have our starting point, we will begin installation of the mounting tracks. If you are following option B 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 12" 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 12" from the rack is equal to 16" 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 16" 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 DO NOT RELY SOLELY ON THE STUD FINDER – for more information on this please see Appendix III. 15

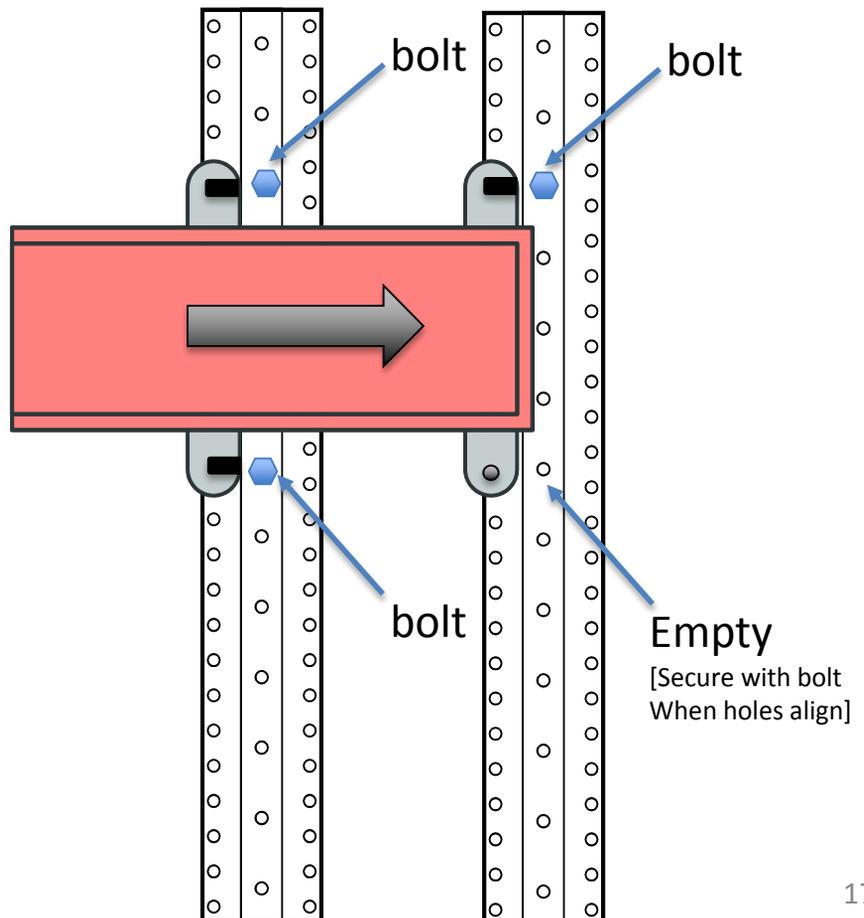
Hardware Required:



x4

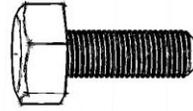
3 Continued

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.

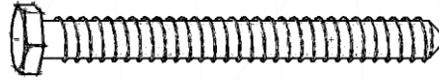


*Please note: the motor is heavy and although one person can install it, it may require additional help.

Hardware Required:



x4

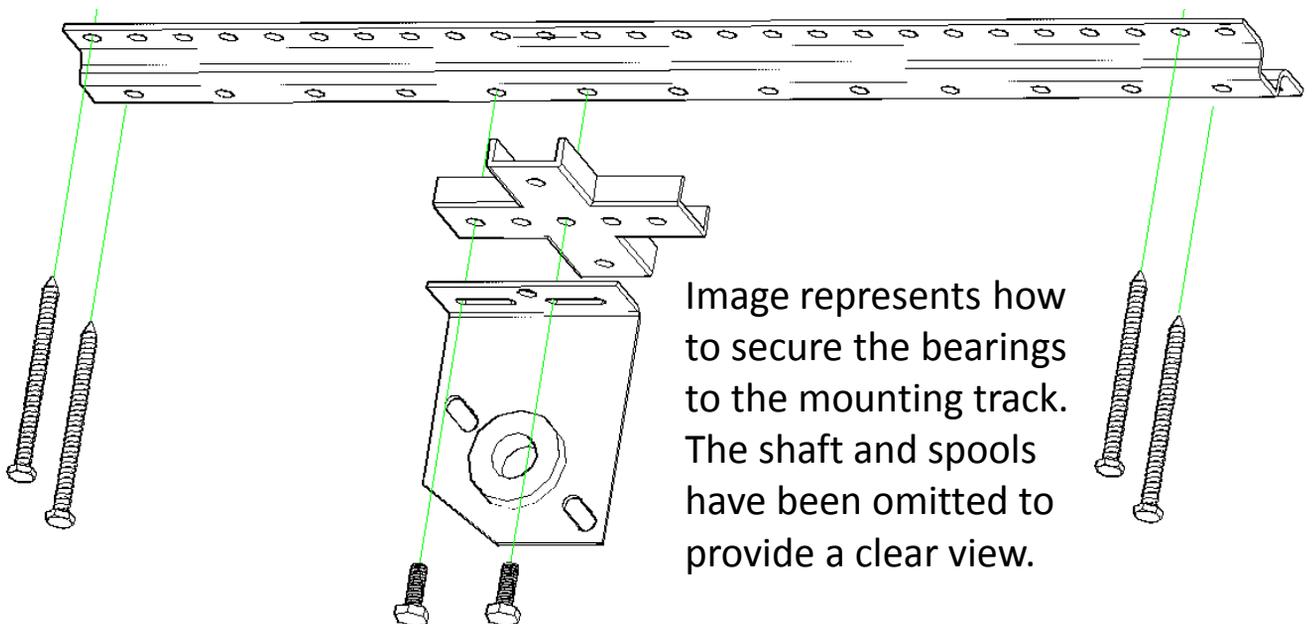


x8

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. Slide the mounting track and flat cross between the bearing and ceiling. Align the holes of the bearing with the cross and mounting track with the ability to secure to the ceiling with lag screws, into the same 2 trusses as your motor.

Repeat this step for the second bearing, placing it close to the last spool.



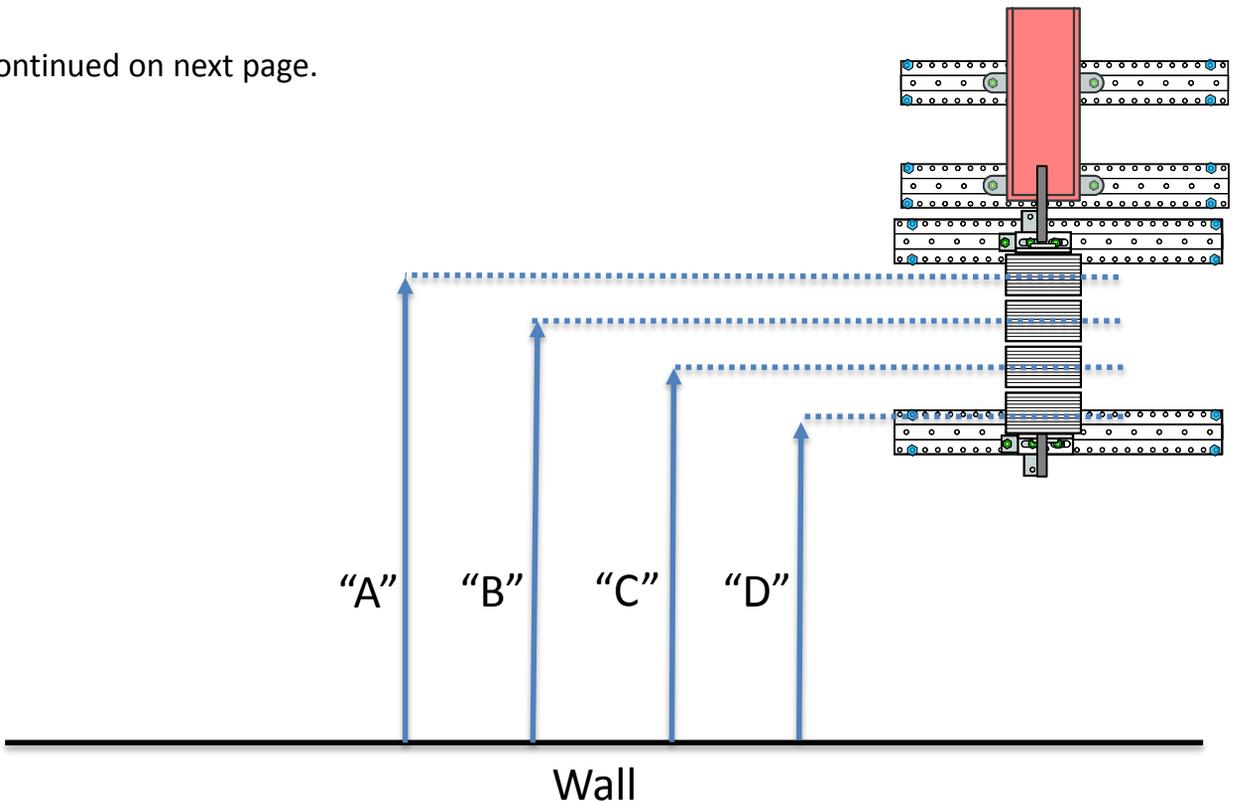
Please note: this image is representative of proper installation only, your bearing may use different holes and fall in a different location on the track, every installation is different.

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 each spool [there are 4 total spools]. We will label them A,B,C and D for simplicity.

Please write your measurements on this page; you will need them for the following steps.

Continued on next page.

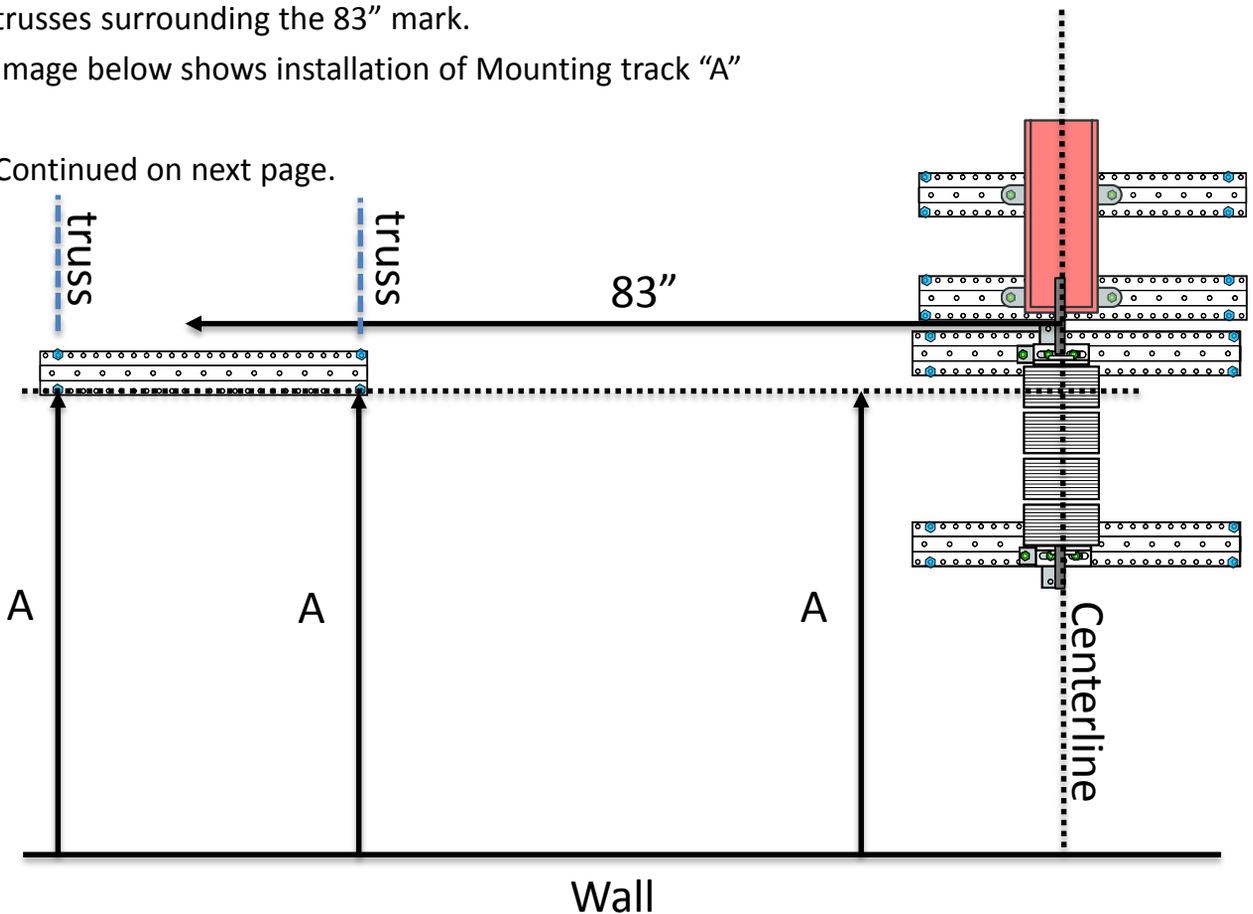


5

Now that we have the measurements to the center of each pool, installation of the four center mounting tracks should be simple. The measurement to the center equates to the inside lag screw position. Please see image below. The centerline of the motor is used for correctly spacing the mounting tracks. From the center of the motor the distance should be roughly 83" this 83" is used as a guide, you will need to find the 2 trusses surrounding the 83" mark.

Image below shows installation of Mounting track "A"

Continued on next page.

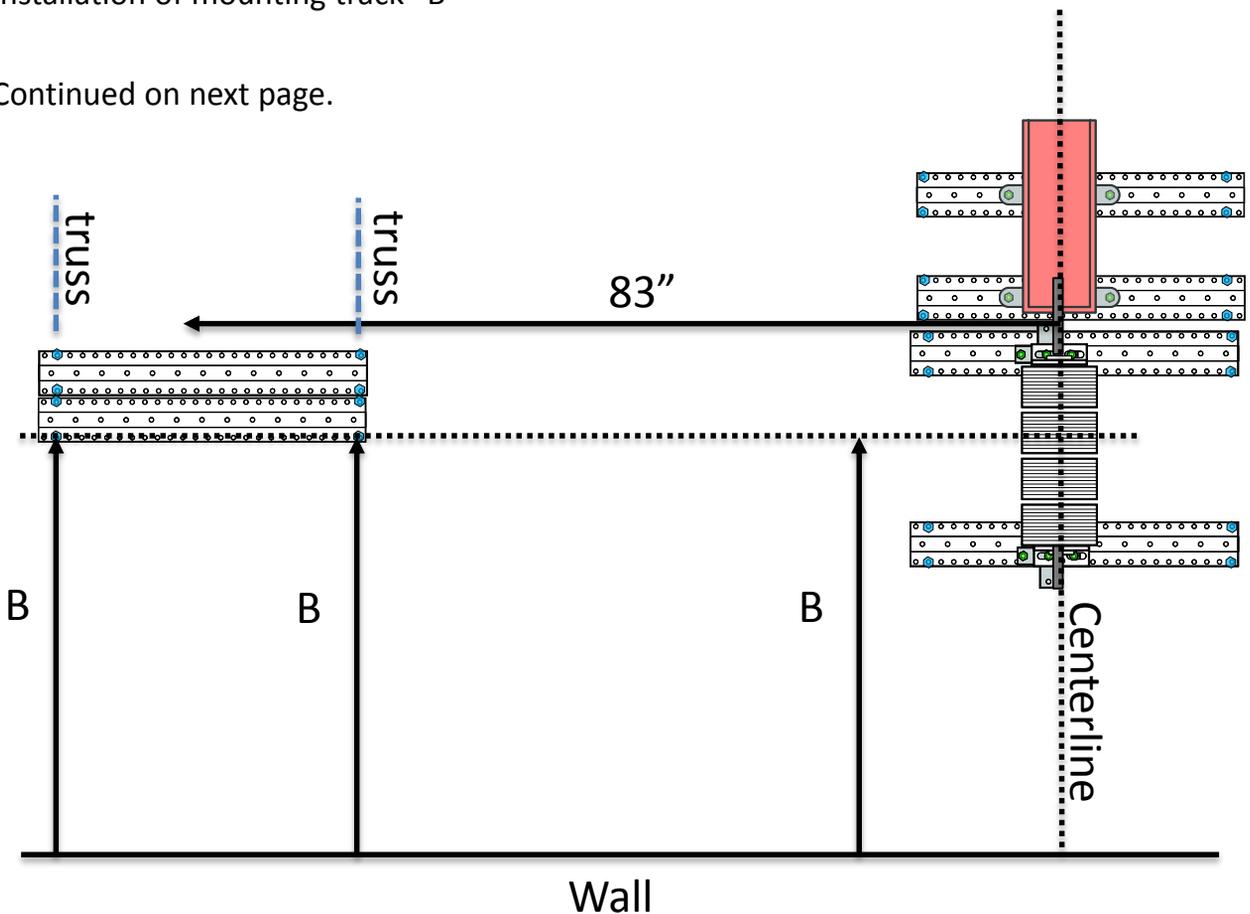


5

Now that we have the measurements to the center of each pool, installation of the four center mounting tracks should be simple. The measurement to the center equates to the *inside* lag screw position. Please see image below.

Installation of mounting track "B"

Continued on next page.

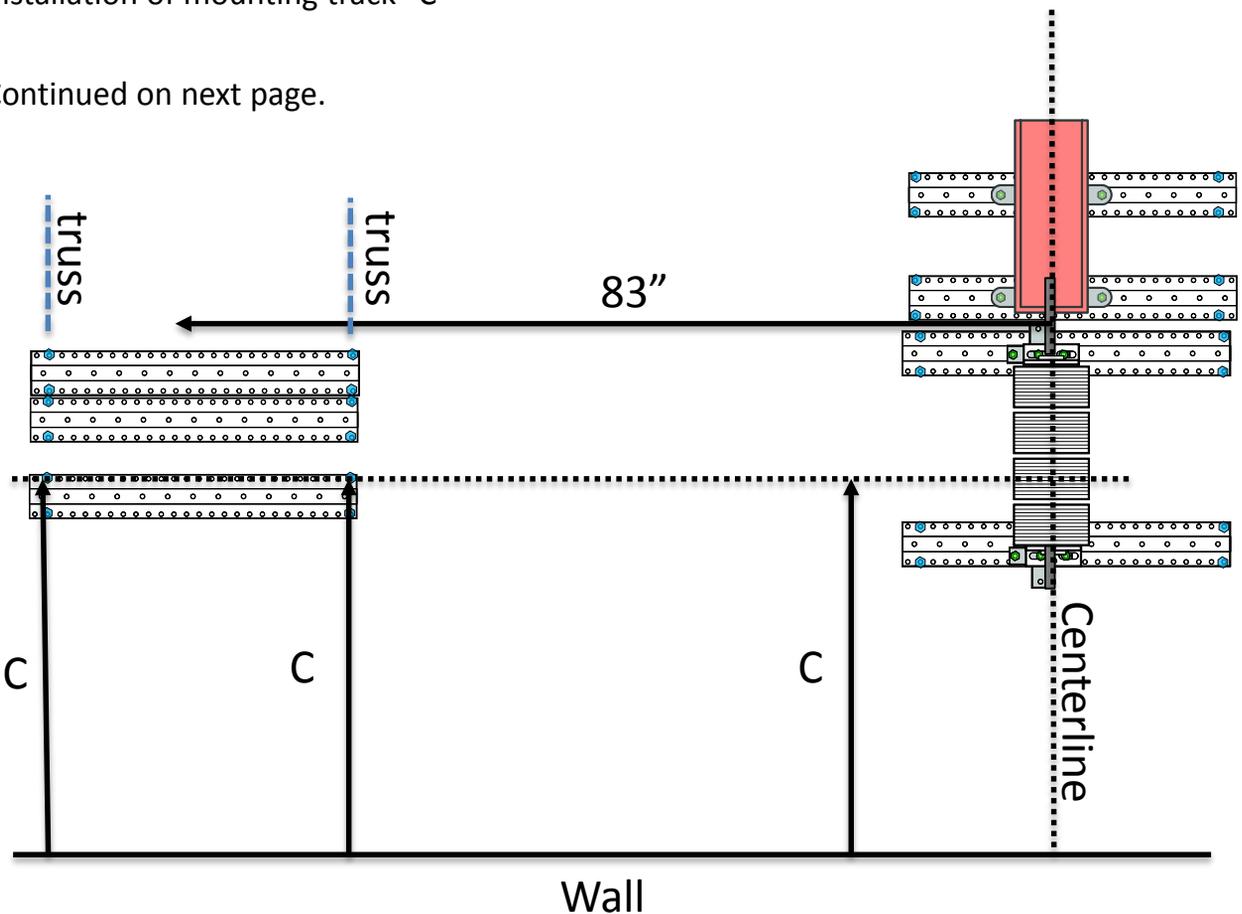


5

Now that we have the measurements to the center of each pool, installation of the four center mounting tracks should be simple. The measurement to the center equates to the *inside* lag screw position. Please see image below.

Installation of mounting track "C"

Continued on next page.

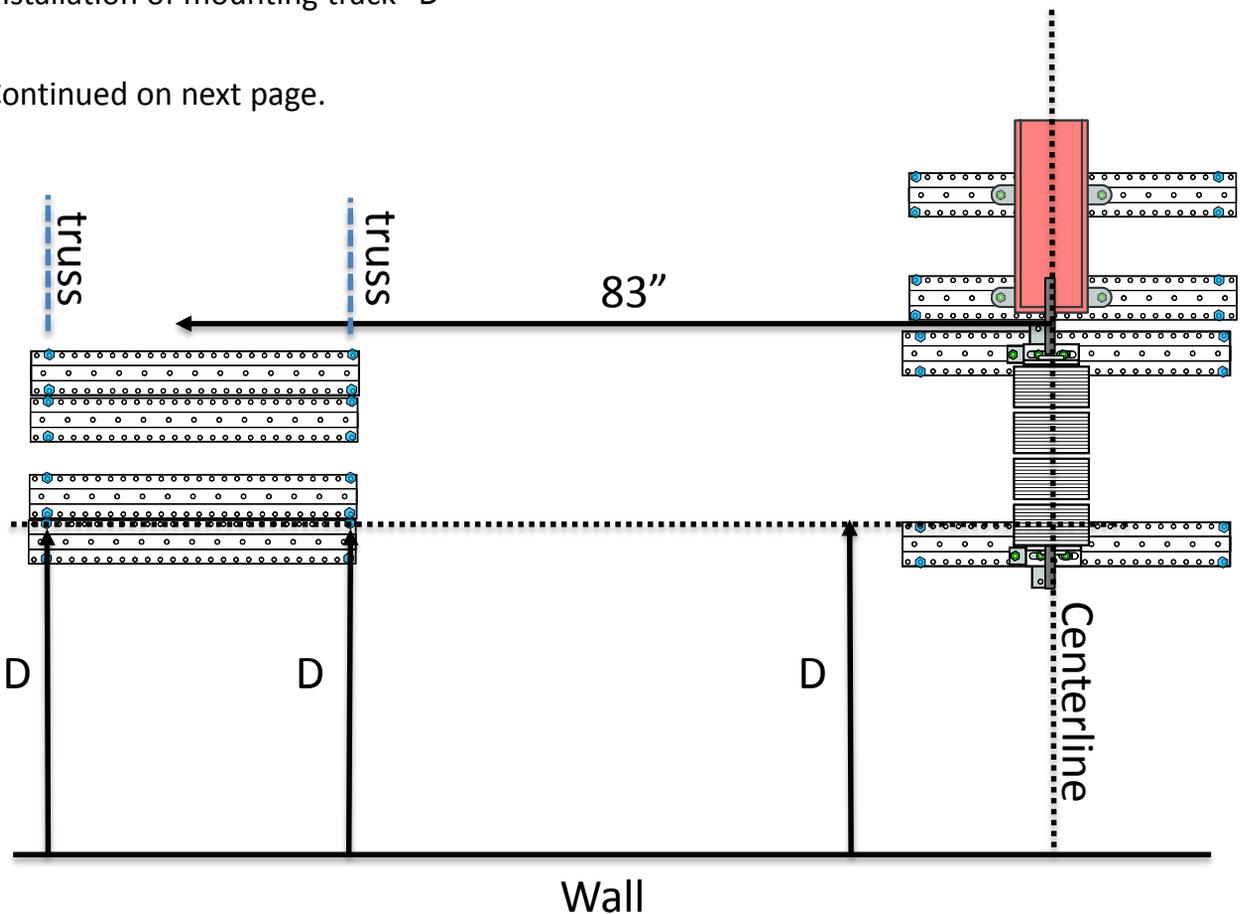


5

Now that we have the measurements to the center of each pool, installation of the four center mounting tracks should be simple. The measurement to the center equates to the *inside* lag screw position. Please see image below.

Installation of mounting track "D"

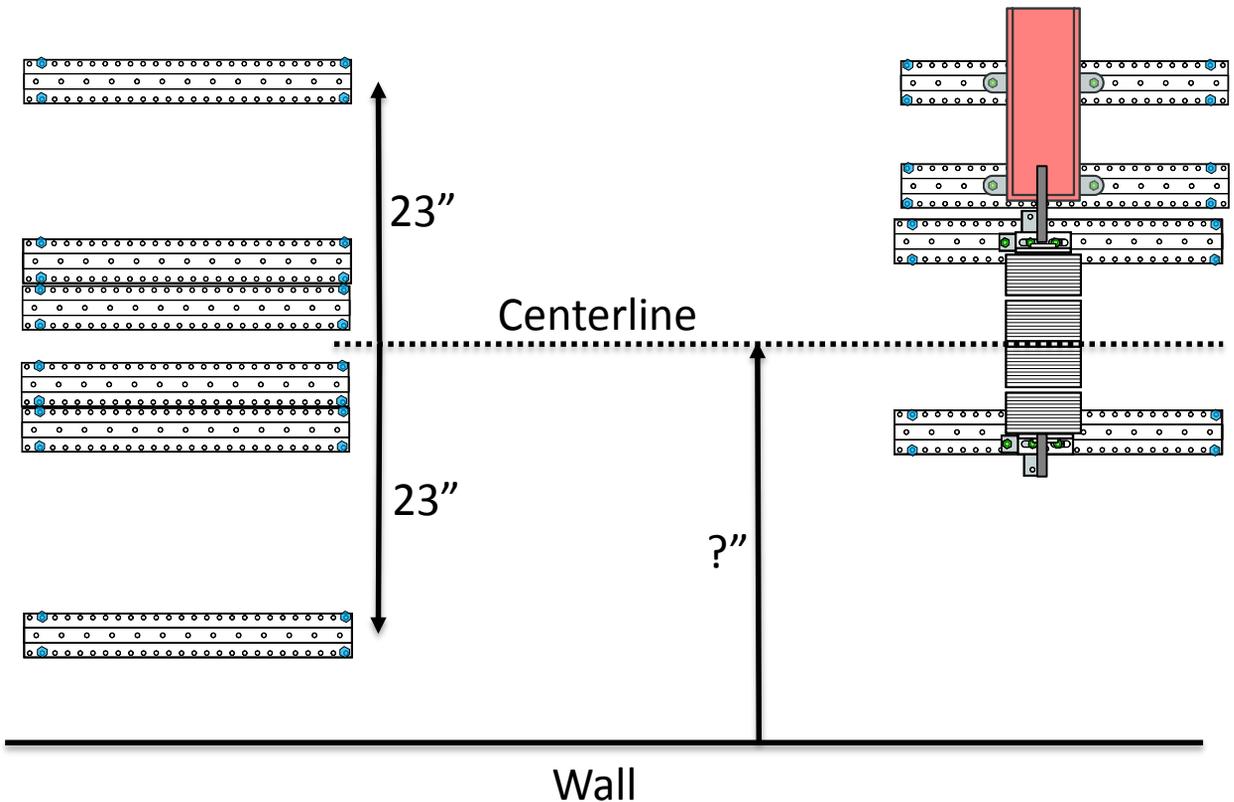
Continued on next page.



5

Now that we have all 4 of the center mounting tracks installed, we will continue by installing the remaining 4 tracks. From the centerline (center of the middle two spools). From the centerline we need to install the first 2 tracks using the same 2 trusses, 46" apart center to center, or 23" to the center of the track from the centerline.

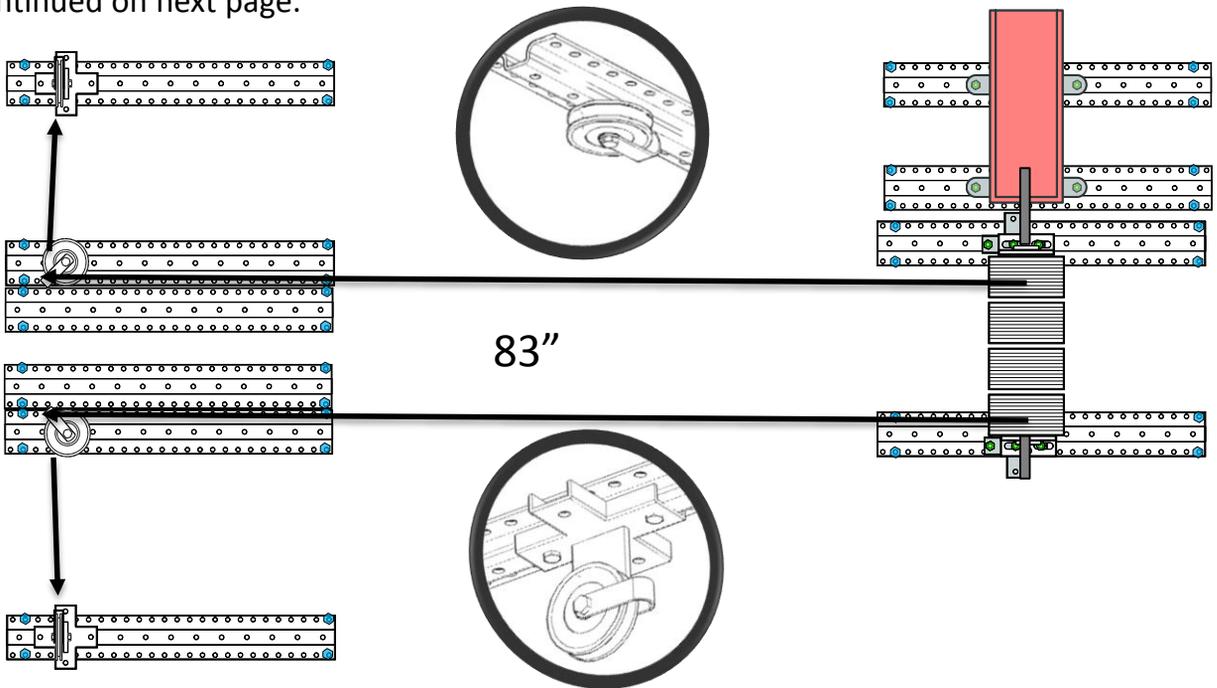
Continued on next page.



5

Before we can determine the location of the final 2 mounting tracks we must install the first set of pulleys. To install the horizontal pulleys: one large bolt is inserted through the clip and pulley into the mounting track. To install the vertical pulley 2 medium bolts are installed into the mounting track through the cross. Please see images below. Distance should be approximately 83" from center of spools to the groove in the rear of the horizontal pulley. Vertical pulleys should be installed so they are in line with horizontal pulleys. Please install the only the four pulleys shown.

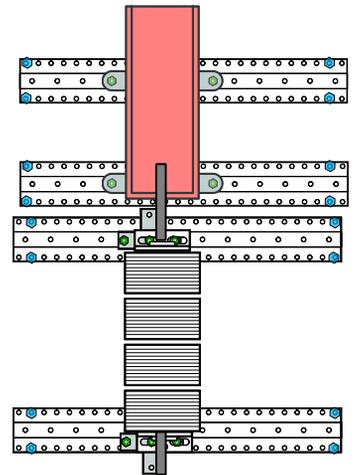
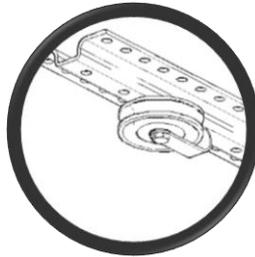
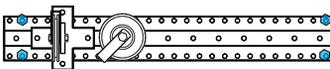
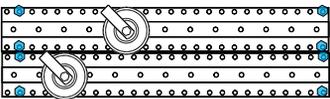
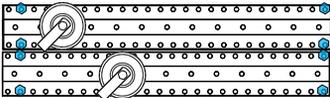
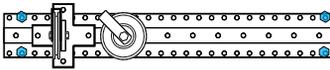
Continued on next page.



5

The center two horizontal pulleys are installed closer to the motor, as to not interfere with the others. Their position on the mounting track is not vital. Ensure the cable guides are pointed in the same direction as the image below. [Cable guides are the “C” shaped piece bolted to the pulley]. The outside 2 horizontal pulleys should be aligned with the position of the center 2.

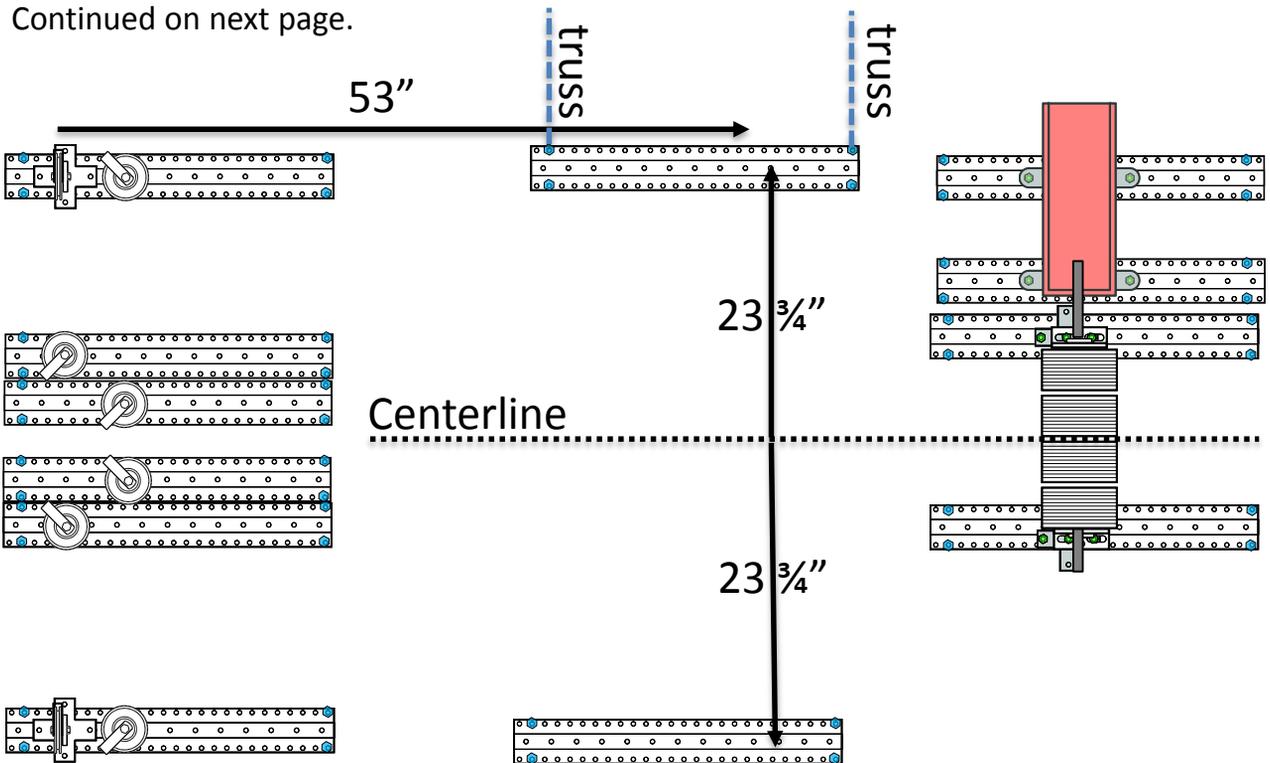
Continued on next page.



5

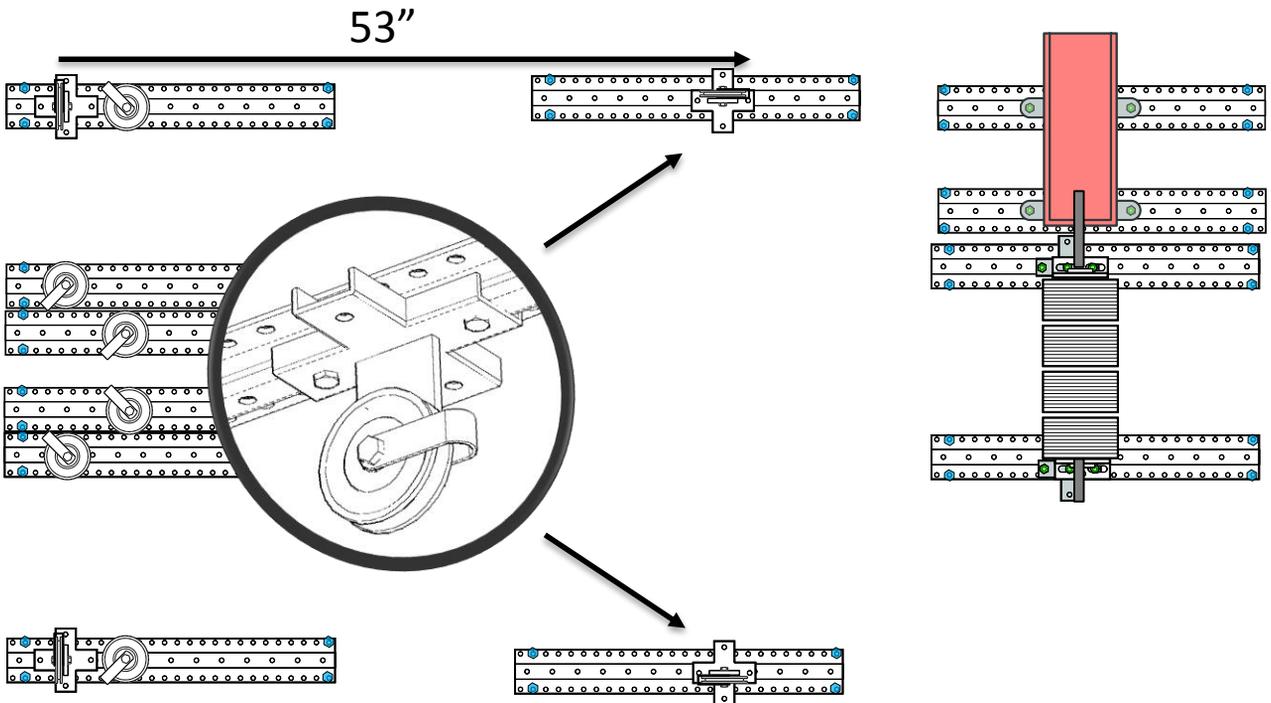
Now that all the rear pulleys have been installed, the final 2 mounting tracks can be set. They need to be installed so that 53" from the rear vertical pulley falls on the track, between 2 trusses, each is then 23 3/4" to center from the centerline. Please refer to the image below.

Continued on next page.



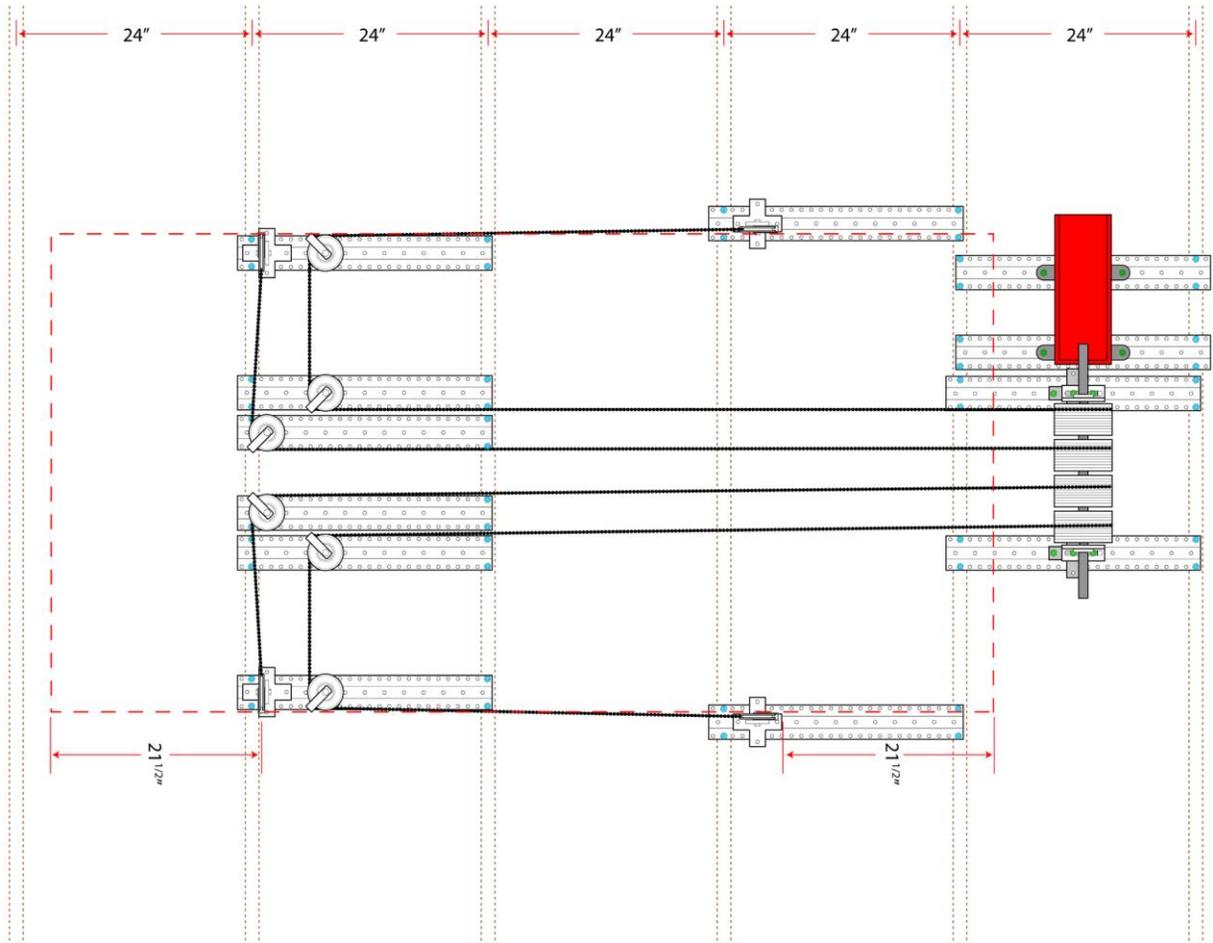
5

Now that the final 2 tracks have been installed the final 2 vertical pulleys need to be installed. These should be as close to 53" from the rear vertical pulleys as possible, this number provides the best support for the 4x8' platform.



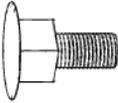
6

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.





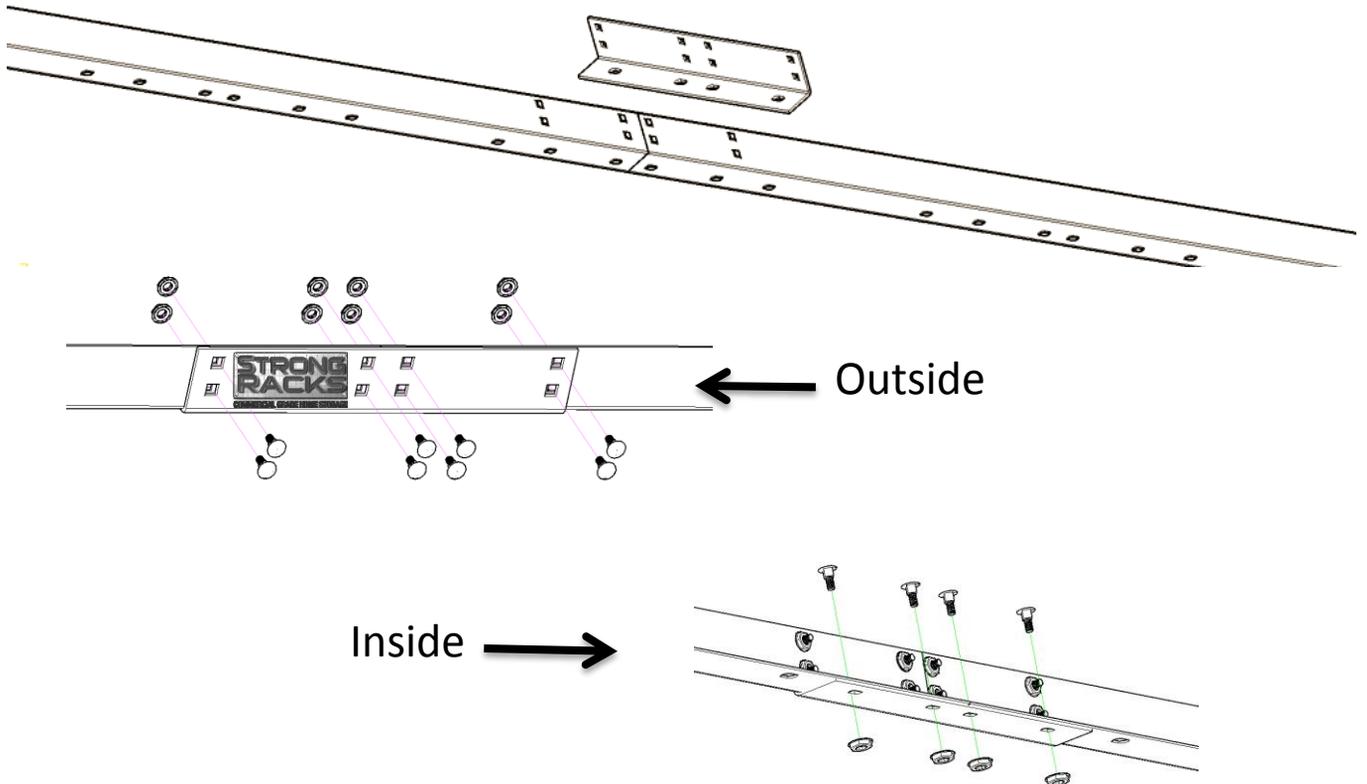
Hardware Required:

- D:**  **x24**
B:  **x24**

7

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.

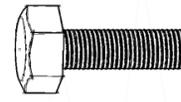
Note: Bolts on the bottom should have heads facing up (this will allow the grids to sit flat).



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



Hardware Required:



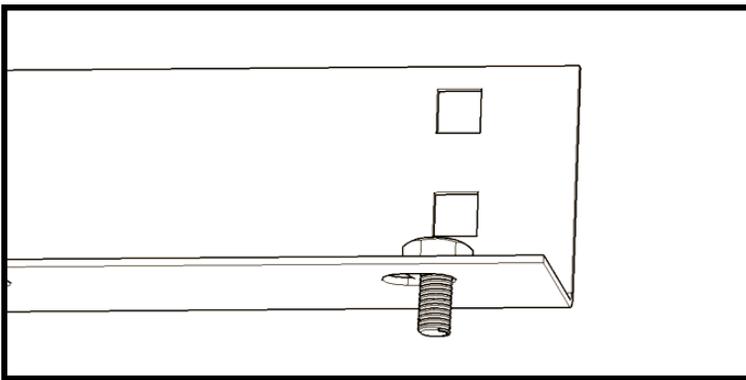
x4



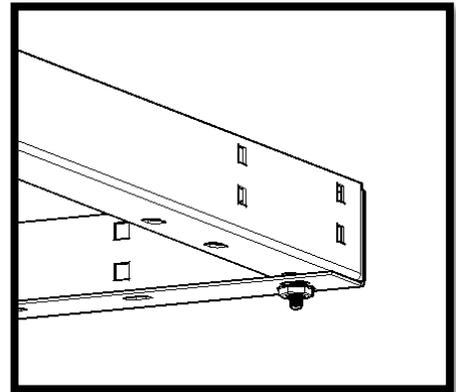
x4

8

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.

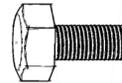


Secure the 4' rail under both 8' sections

Leave bolts loose, until grids have been installed.



Hardware Required:



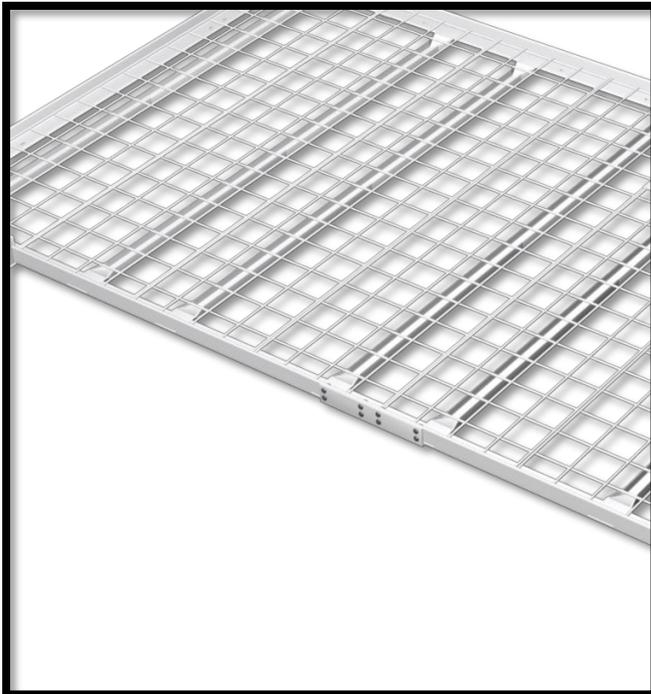
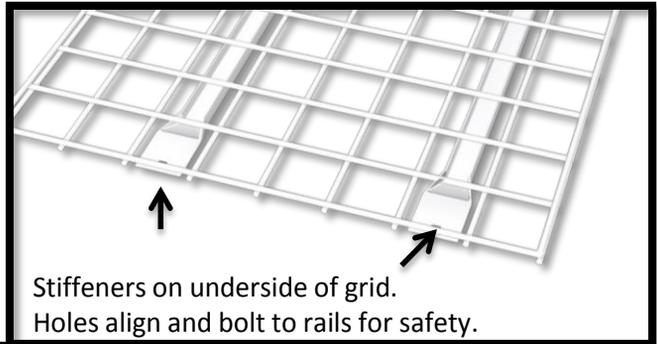
x16



x16

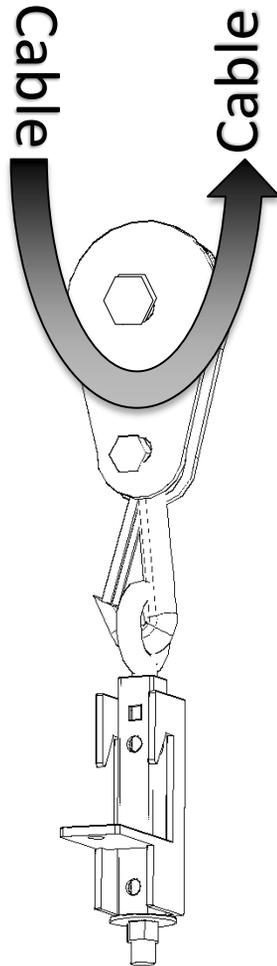
9

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.



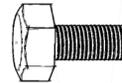
The grids may need to be rotated to align holes, but stiffeners should always remain underneath grid for support.

10



The cable needs to be first strung through each block.

Hardware Required:

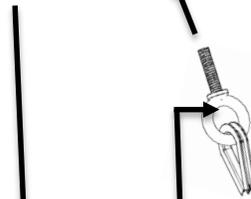
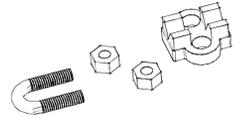
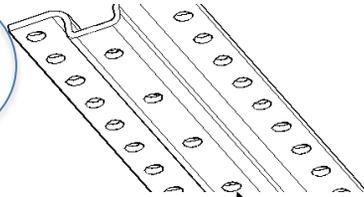


x16

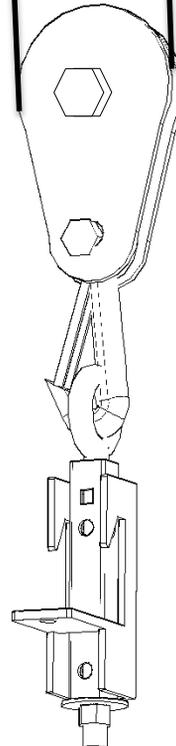


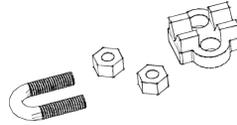
x16

11



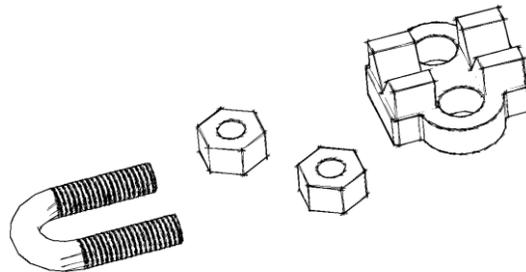
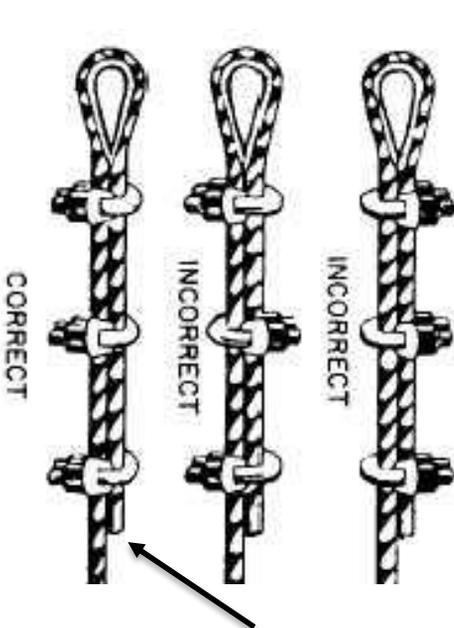
The cable end is to be taken back to the mounting track above. With the location determined by holding the taught cable directly above the block, insert a small eye bolt with thimble in corresponding hole of the mounting track above. Attach one wire clip per cable, as a temporary hold, more information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





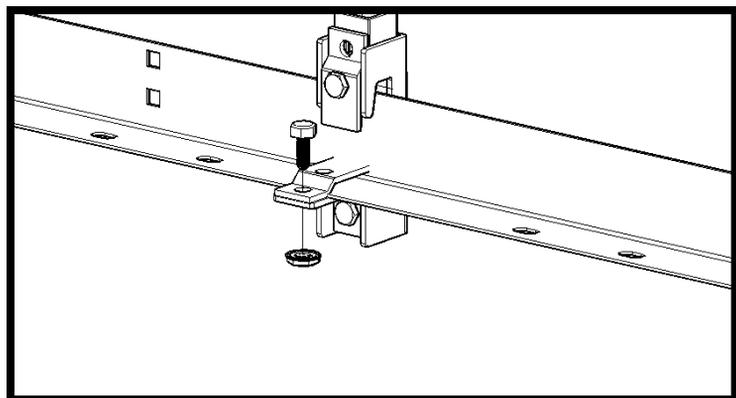
11 Continued

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.



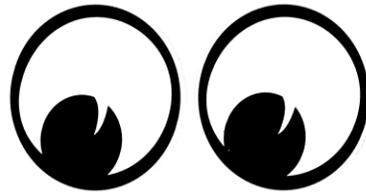


SPECIAL NOTES:

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.



12

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:

Roof Line Type

Hip

Flat

2nd Story

Vault

Floor to ceiling height

Clearance above garage

Width of Garage

Length of Garage

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



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.powerrax.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

Dealer Locator

Postal Code Show results within

Keyword

Tag

State

Found 127 locations that matched your search.

- The Garage Organization Company of Arizona**
2401 West Phelps Rd
Unit C
Phoenix, Arizona
623-516-8099
<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