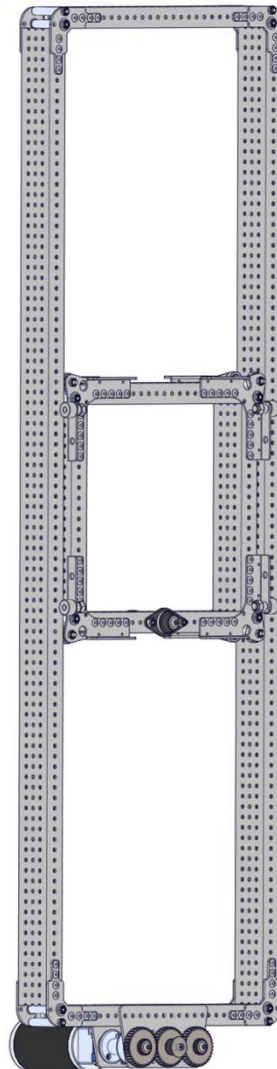
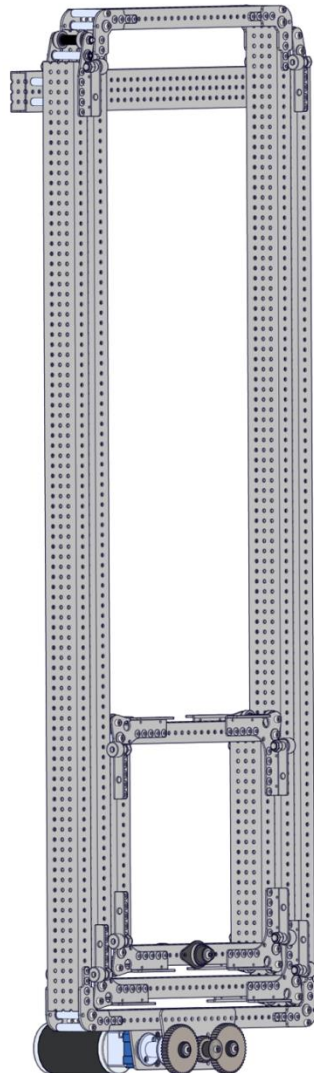


AndyMark[®]

Powered Elevator

(am-5551, am-5560, and more)

Assembly Guide









Revision #	Date	Author	Purpose
0	11/11/2024	E. Scime	Original Document

N. Massouda	12/17/2024
_____ Reviewer Name	_____ Date Reviewed


Need help with an AndyMark product? Contact us at support@andymark.com or (877)-868-4770.

Parts & Tools

Recommended Tools List


Component	Part #	QTY	Photo
5/32" Allen Wrench	am-2751	1	
3/8" Wrench	am-2745	1	
1/2" Wrench	am-2746	1	
Rivet Tool	am-2834	1	
Drill	N/A	1	
5/8" Drill Bit or Step Drill	N/A	1	

Internal Corner Parts List (am-5542)

Component	Part #	QTY	Photo
Powered Elevator Internal Corner Bracket	am-5556	2	



M8 Cam Follower	am-5545	2	
M8 x 1.25 Nylock Nut	am-1509	2	
3/16 in. Diameter 0.126 to 0.25 in. Grip Steel Rivet	am-1226	20	
5 mm ID 15 mm OD Shielded Flanged Bearing (F695ZZ)	am-5469	2	
0.319 in. ID 0.438 in. OD 0.313 in. Long Aluminum Spacer	am-1678	2	
8 mm ID 22 mm OD Shielded Bearing (608ZZ)	am-4456	2	
8 mm Flat Washer	am-1009	4	
0.330 in. ID 0.470 in. OD 1.180 in. Long Nylon Spacer	am-1610	1	
10-32 Nylock Jam Nut	am-1063	2	
0.192 in. ID 0.313 in. OD 2.000 in. Long Aluminum Spacer	am-1582	2	

10-32 x 2.5 in. Socket Head Cap Screw	am-1024	2	
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External Corner Parts List (am-5544)

Component	Part #	QTY	Photo
Powered Elevator External Corner Bracket, Side A	am-5558_A	1	
Powered Elevator External Corner Bracket, Side B	am-5558_B	1	
M8 Cam Follower	am-5545	2	
M8 x 1.25 Nylock Nut	am-1509	2	
3/16 in. Diameter 0.126 to 0.25 in. Grip Steel Rivet	am-1226	10	
5 mm ID 15 mm OD Shielded Flanged Bearing (F695ZZ)	am-5469	2	
0.319 in. ID 0.438 in. OD 0.313 in. Long Aluminum Spacer	am-1678	2	
8 mm ID 22 mm OD Shielded Bearing (608ZZ)	am-4456	2	






8 mm Flat Washer	am-1009	4	
0.330 in. ID 0.470 in. OD 1.180 in. Long Nylon Spacer	am-1610	1	
10-32 Nylock Jam Nut	am-1063	2	
0.192 in. ID 0.313 in. OD 2.000 in. Long Aluminum Spacer	am-1582	2	
10-32 x 2.5 in. Socket Head Cap Screw	am-1024	2	

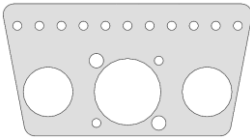
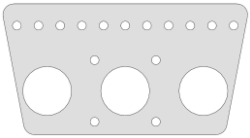




Passthrough Corner Parts List (am-5543)

Component	Part #	QTY	Photo
Powered Elevator Passthrough Corner Bracket	am-5557	2	
0.192 in. ID 0.375 in. OD 2.000 in. Long Aluminum Spacer	am-1600	2	
5 mm ID 15 mm OD Shielded Flanged Bearing (F695ZZ)	am-5469	2	



10-32 x 2.5 in. Socket Head Cap Screw	am-1024	2	
10-32 Nylock Jam Nut	am-1063	2	
3/16 in. Diameter 0.126 to 0.25 in. Grip Steel Rivet	am-1226	16	


Powertrain Parts List (am-5552/am-5553)

Component	Part #	QTY	Photo
Powered Elevator Powertrain Transmission Plate	am-5555	1	
Powered Elevator Powertrain Shaft Support Plate	am-5559	1	
10 feet of Rope 1/8 in. diameter	am-4559	3	
Climber in a Box Winch Spool Pulley	am-4647_2000	3	
Great Red Tacky Grease, 14.2 gram	am-2768	1	
3" Long 1/2" Hex Shaft	am-4883	2	



1/2 in. Hex ID 1.125 in. OD Shielded Flanged Bearing	am-2986	6	
1/2in. Hex 0.063in. Long Molded Spacer	am-3948-063	3	
1/2in. Hex 0.125in. Long Molded Spacer	am-3948-125	2	
1/2in. Hex 0.500in. Long Molded Spacer	am-3948-500	1	
1/4-20 x 0.5 in. Button Head Cap Screw	am-1039	4	
1/4 in. Flat Washer	am-1027	4	
10-32 x 0.5 in. Socket Head Cap Screw	am-1002	1	
#10 x 0.75 in. Fender Washer	am-1523	2	

Tensioning Kit Parts List (am-5588)

Component	Part #	QTY	Photo
3" Long 1/2 in. Hex Shaft	am-4883	1	






1/2 in. Hex Ratchet Plate	am-5271	1	
Bearing Retention Plate	am-5273	1	
1/2 in. Hex ID 1.125 in. OD Shielded Flanged Bearing	am-2986	1	
1/2in. Hex 0.375in. Long Molded Spacer	am-3948-375	1	
1/4-20 x 0.5 in. Button Head Cap Screw	am-1039	2	
10 feet of Rope 1/8 in. diameter	am-4559	1	
1/4 in. Flat Washer	am-1027	2	
10-32 x 2.75 in. Socket Head Cap Screw	am-1397	2	
10-32 Nylock Jam Nut	am-1063	2	

Crossbar Kit Parts List (am-5554)

Component	Part #	QTY	Photo
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10-32 Threaded 1 in. Long 0.375 in. Dia. Standoff	am-1701	4	
10-32 x 1.5 in. Socket Head Cap Screw	am-1014	4	
10-32 x 2.5 in. Socket Head Cap Screw	am-1024	4	

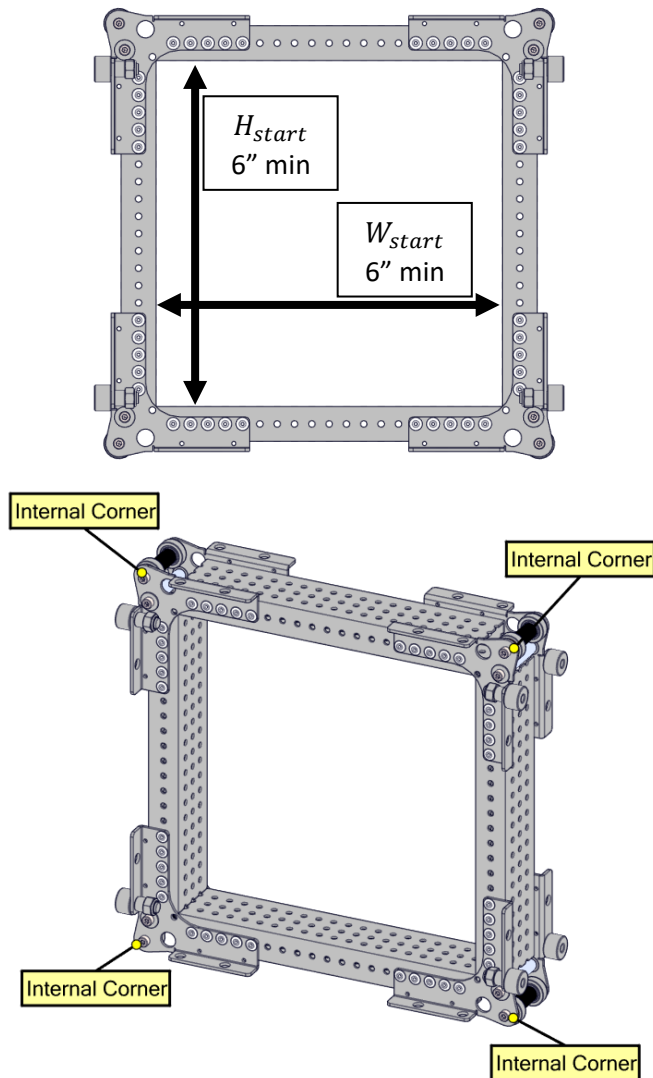
Assembly

The AndyMark Powered Elevator is a highly customizable product. This guide will describe how to assemble each type of corner and stage and what each is used for, but it is up to you to decide the best configuration for your elevator.

Internal Corner	Carriage Stage	1 Stage Elevator	Powertrain
Passthrough Corner	Carriage Support Stage	2 Stage Elevator	Tensioning Kit
External Corner	Outer Stage		Crossbar Kit
	Addon Stage		
	Single Stage		

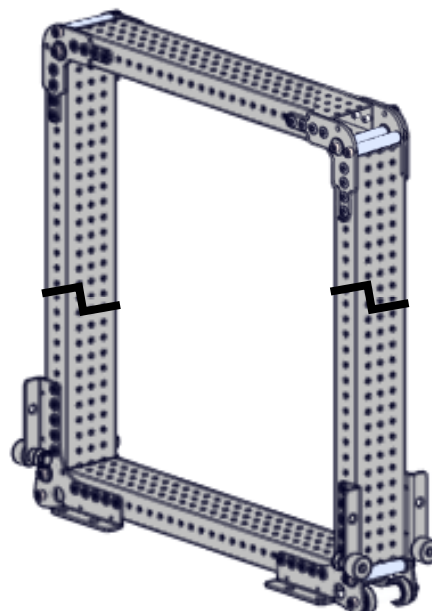
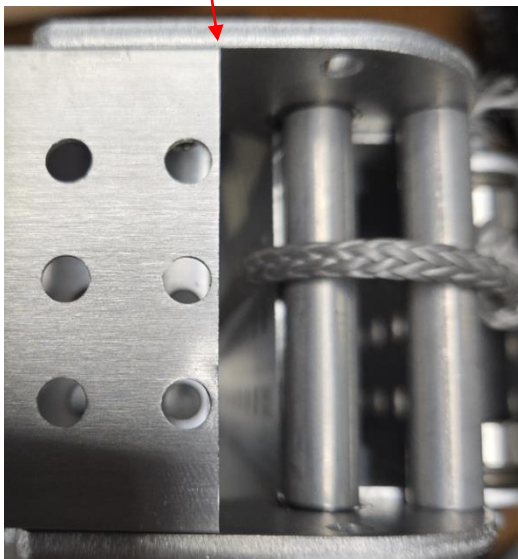
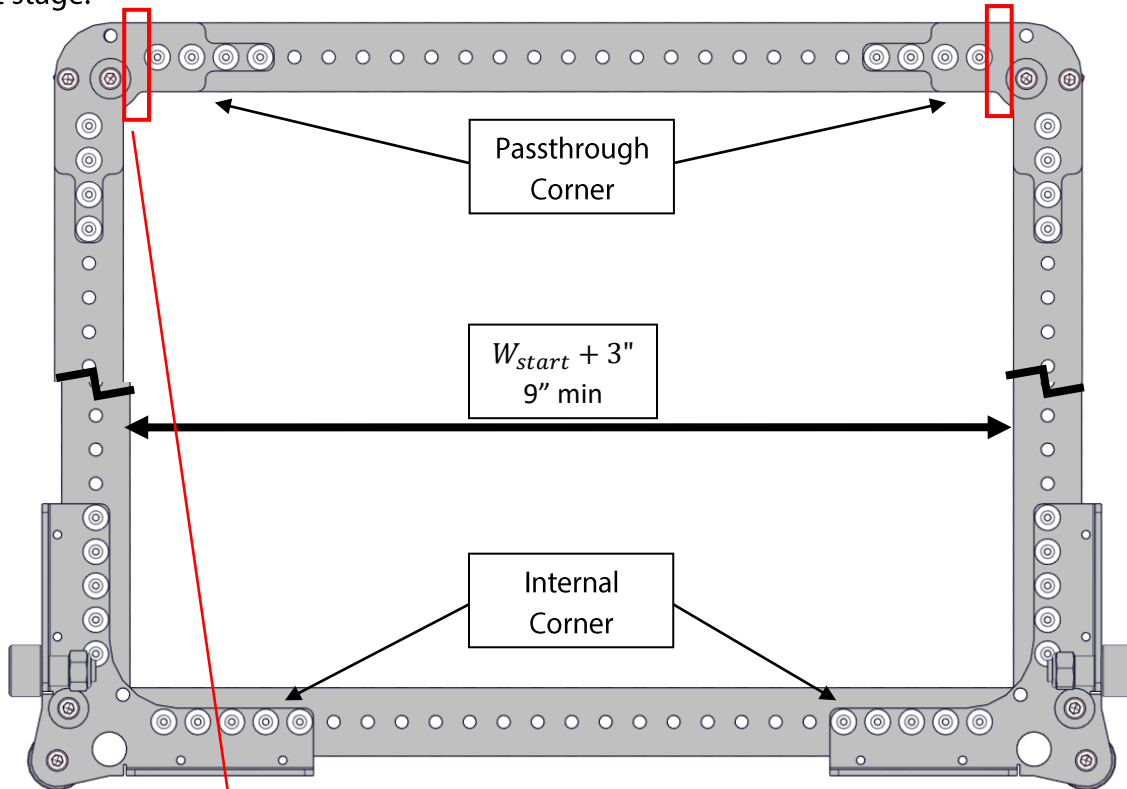
Carriage Stage (am-5546)

The Carriage Stage is the innermost stage of the elevator and has the largest range of travel. A Carriage Stage is constructed using [4] [Internal Corners](#). The size of the Carriage Stage sets the width for the entire elevator, and the extrusions used can be a minimum of 6" wide and 6" tall.



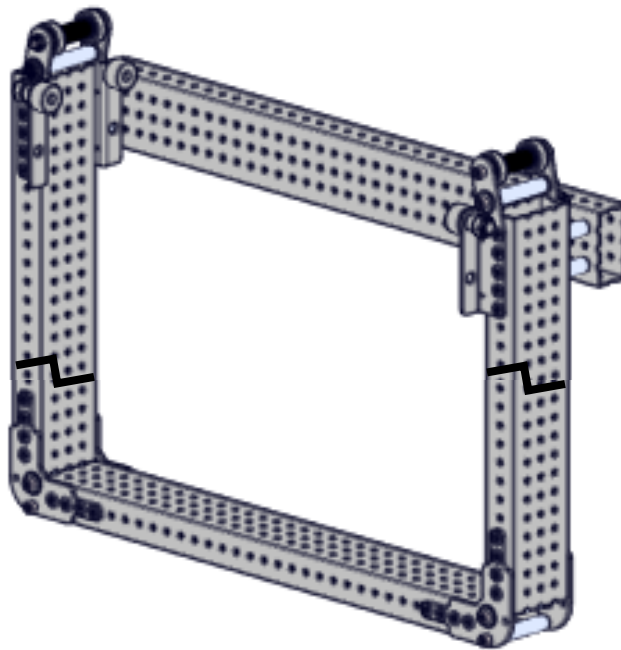
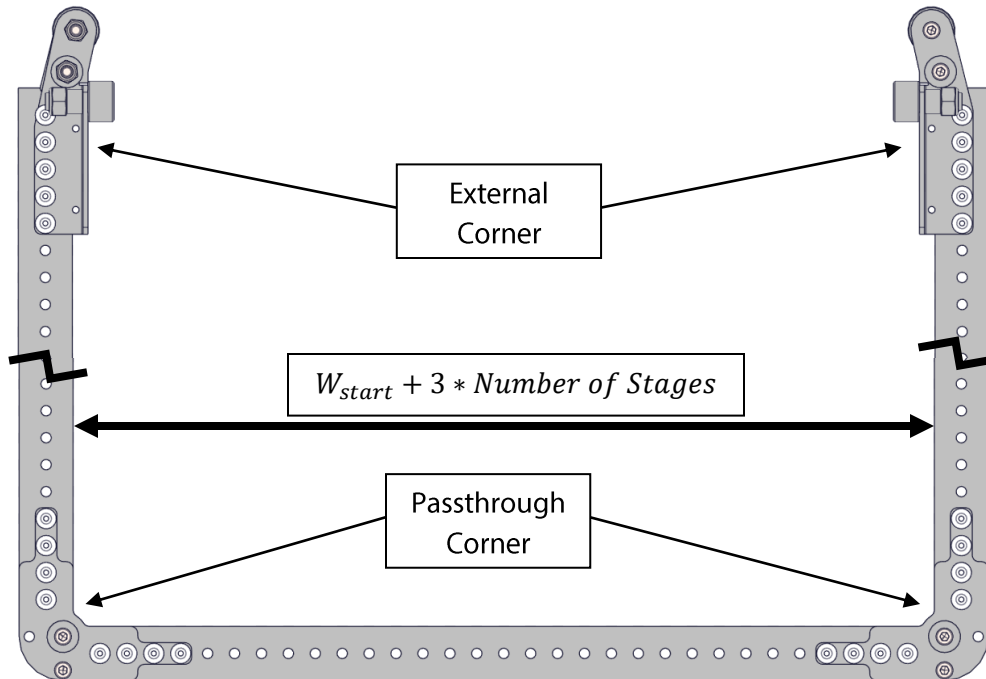
Carriage Support Stage (am-5547)

In multi-stage elevators, the Carriage Support Stage is always constructed around the Carriage Stage. It is built with [2] [Passthrough Corners](#) and [2] [Internal Corners](#). The extrusions used to set its width will be 3" longer than those used to set the Carriage Stage's width. The indicated tube ends should be cut shorter than normal to pass the string through into the next stage.



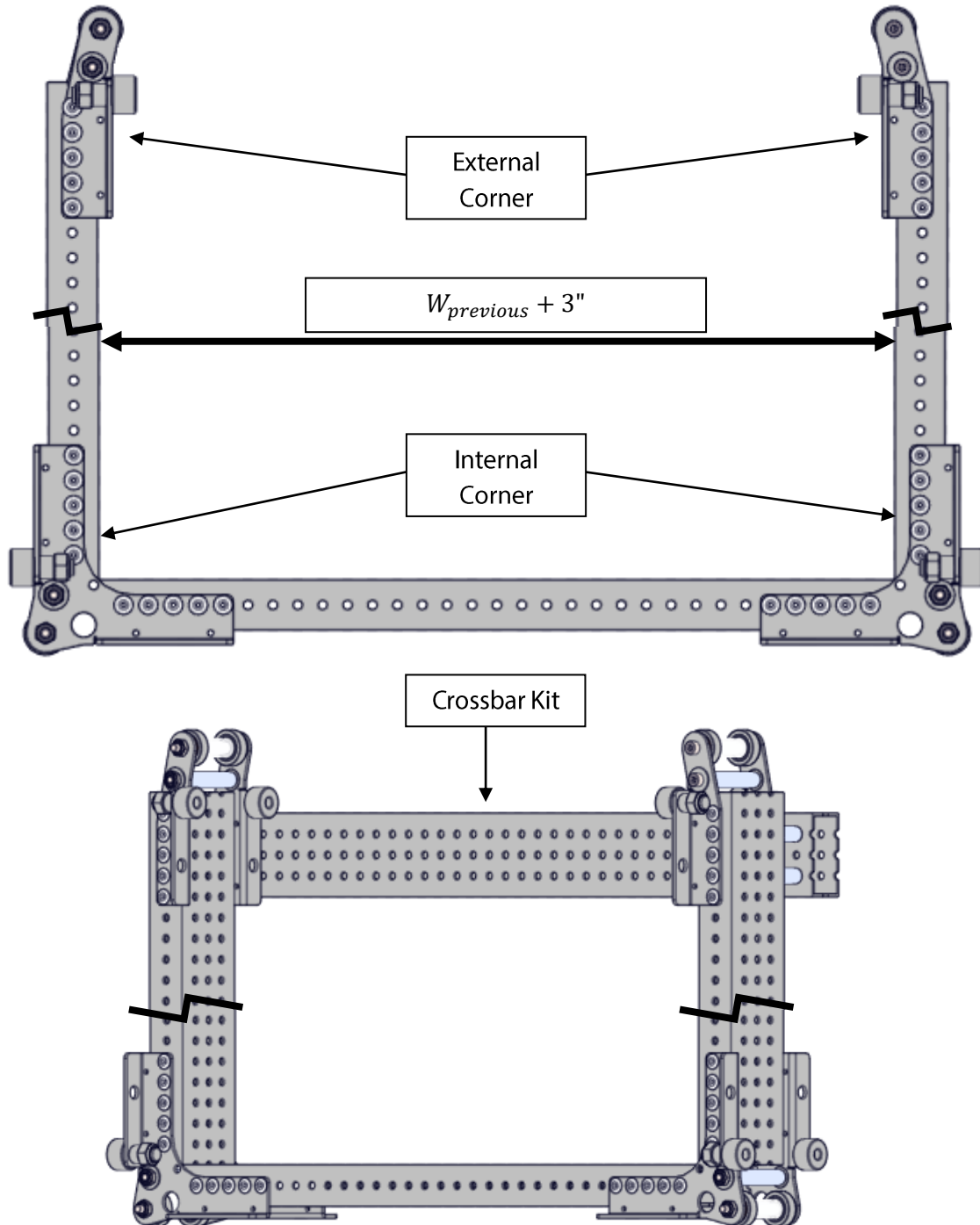
Outer Stage (am-5549)

In multi-stage elevators, the Outer Stage is always the outermost stage of the elevator. It is constructed with [2] [External Corners](#) and [2] [Passthrough Corners](#). A [Crossbar Kit](#) should always be used with this stage to maintain its rigidity.



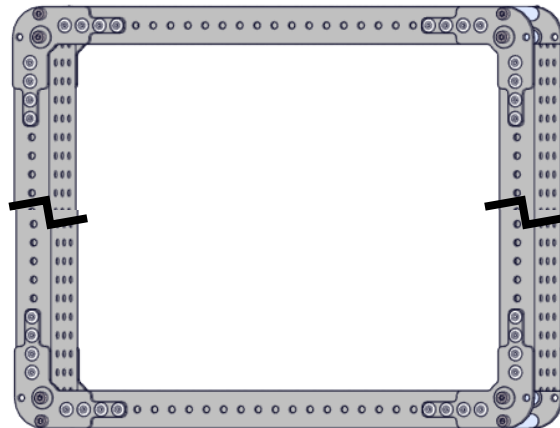
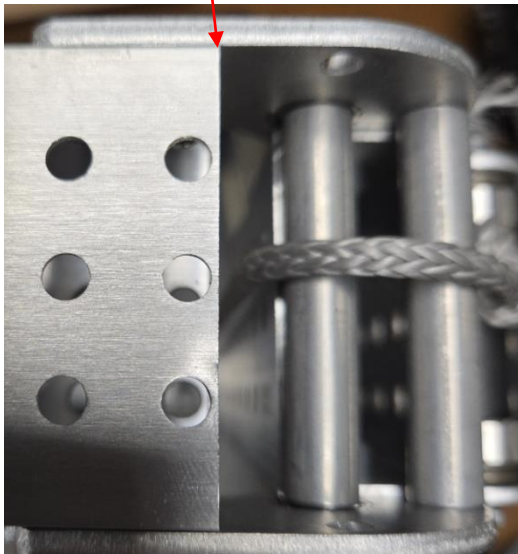
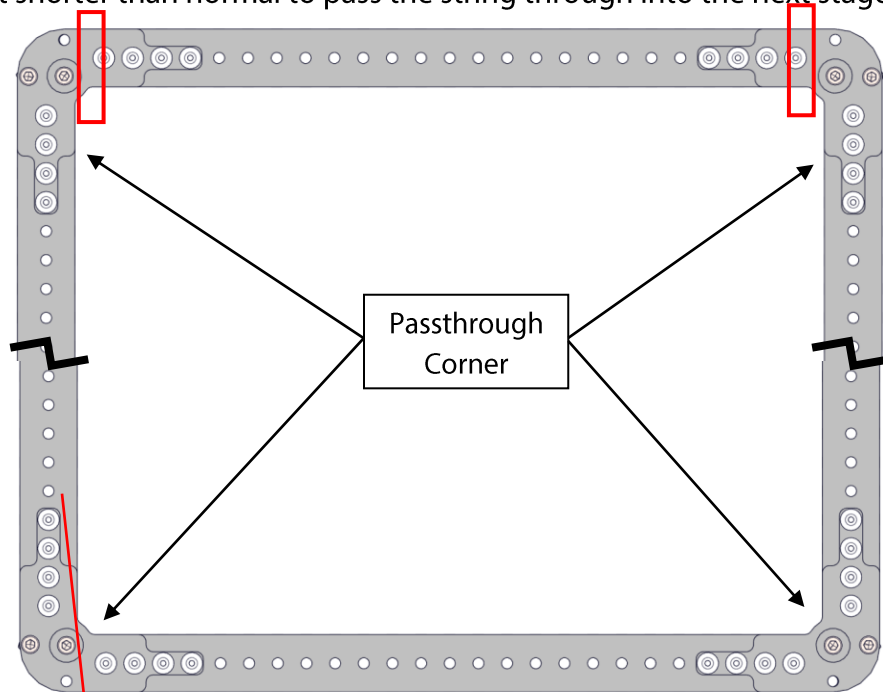
Addon Stage (am-5548)

Addon stages can be added between Carriage Support Stages and Outer Stages to increase the maximum travel of the elevator. It is constructed using [2] [External Corners](#) and [2] [Internal Corners](#). A [Crossbar Kit](#) should be used to support each stage. It will be 3" wider than the preceding stage.



Single Stage

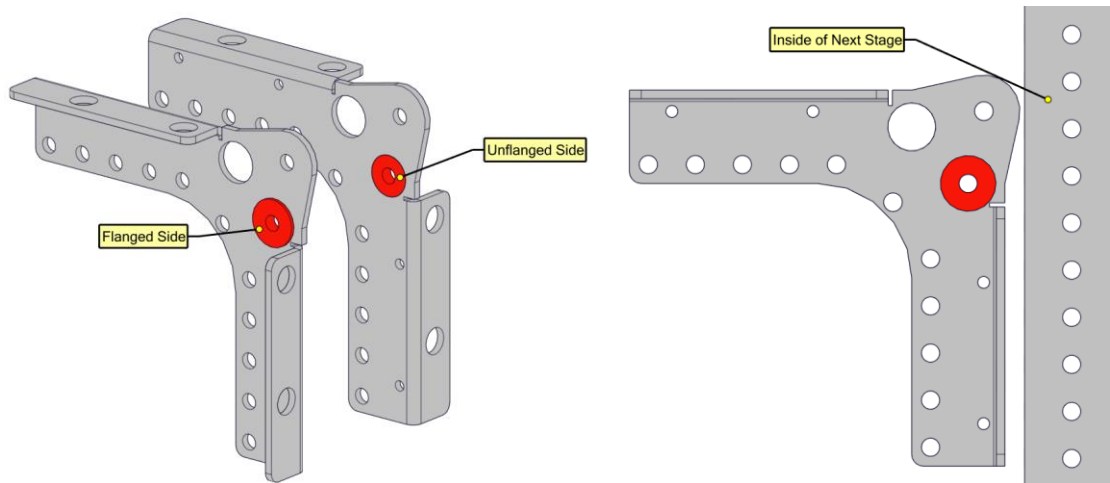
Single Stages are for use only in a 1-stage elevator. They are constructed with [4] [Passthrough Corners](#). It will be 3" wider than the [Carriage Stage](#) running inside it. The indicated tube ends should be cut shorter than normal to pass the string through into the next stage.



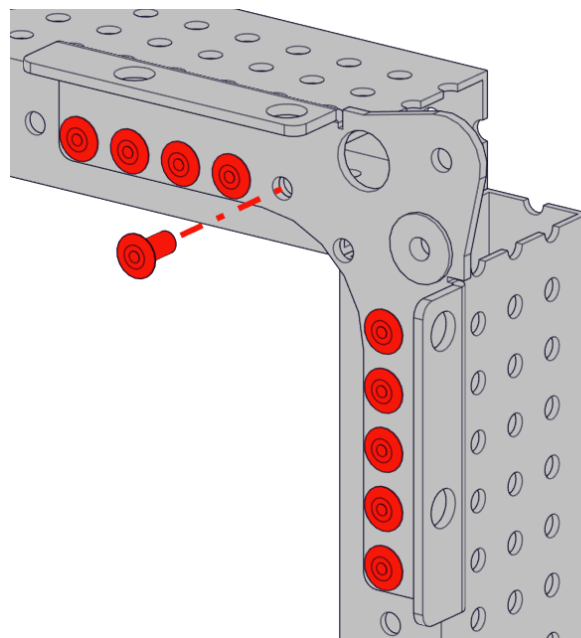
Internal Corner (am-5542)

This corner is used in locations where one stage rides inside of another.

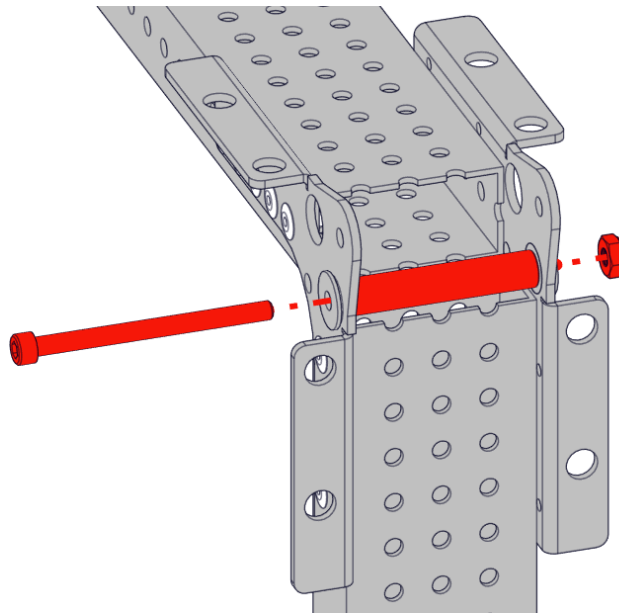
Step 1: Press in [1] M5 bearing (am-5469) into each Internal Corner Bracket (am-5556) in the location closest to the inside of the next stage as shown, with the bearing flanges facing towards the outsides of the elevator.



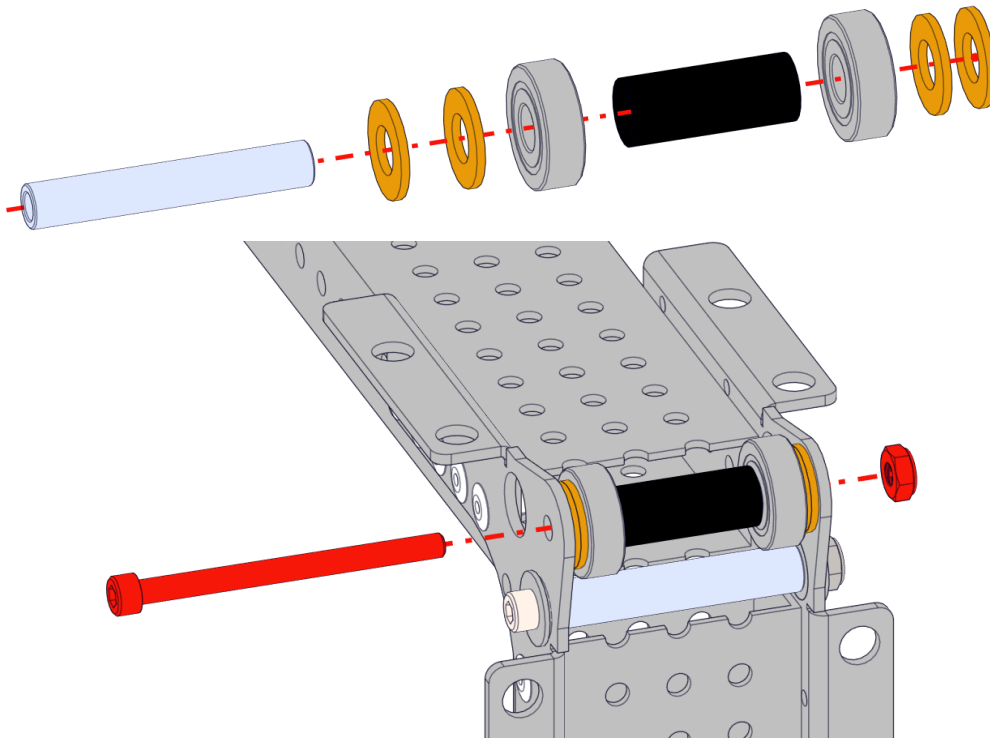
Step 2: Rivet [1] Internal Corner Bracket with bearing installed to the end of [2] pieces of pre-drilled extrusion using up to [10] rivets (am-1226).



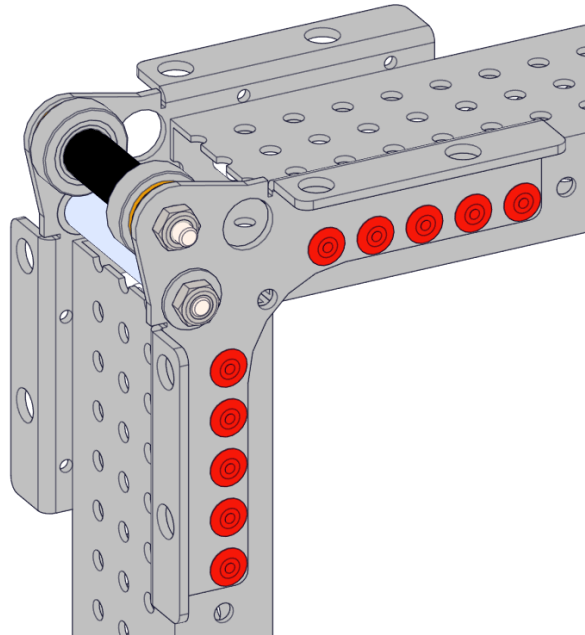
Step 3: Slide a 2.5" 10-32 screw (am-1024) through one of the bearings, through a 2" spacer (am-1582), through the bearing on the other plate, and then secure it with a 10-32 nut (am-1063).



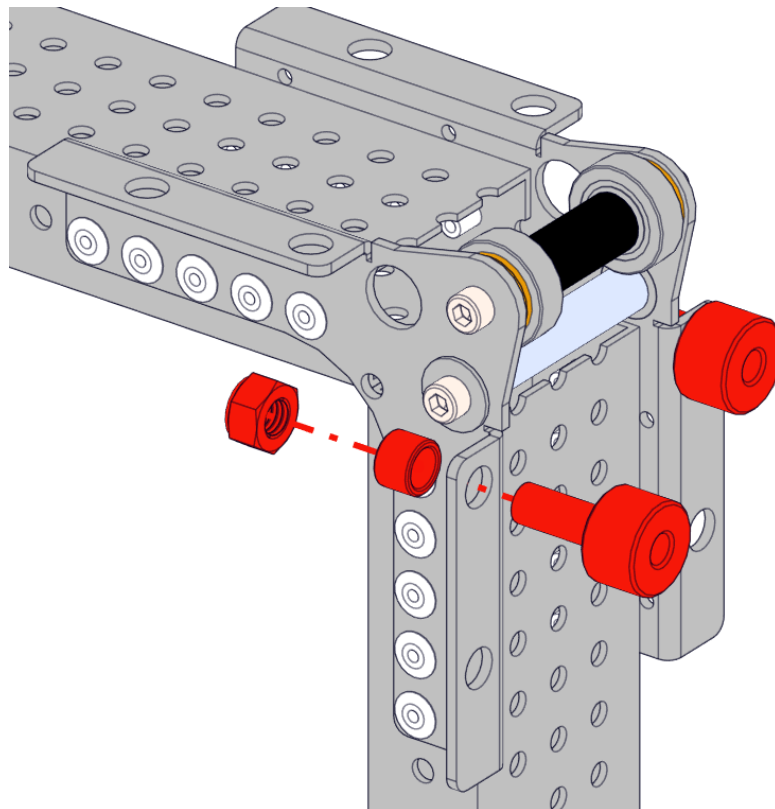
Step 4: Slide [2] 5/16" washers (am-1009) over a 2" spacer (am-1582), then an 8mm bearing (am-4456), then a 1.18" spacer (am-1610), then a second 8mm bearing, then [2] more 5/16" washers. Place this stack between the two brackets and secure it in place as shown with a 2.5" 10-32 screw (am-1024) and 10-32 nut (am-1063). Make sure the bearings spin freely when tightened



Step 5: Rivet the second Internal Corner Bracket (am-5556) to the drilled extrusion using up to [10] rivets (am-1226).



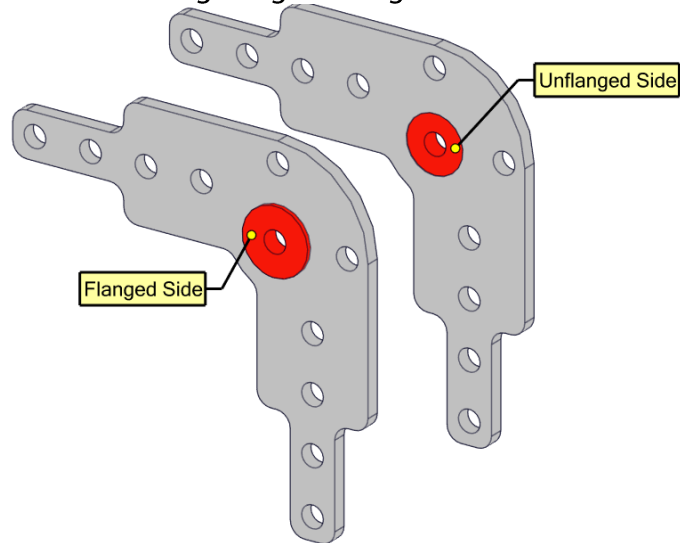
Step 6: In the locations closest to the M5 bearings, attach [2] cam followers (am-5545) using [1] 5/16 spacer (am-1678) and [1] M8 locknut (am-1509) each as shown. Discard the nuts that come pre-installed on the Cam Followers.



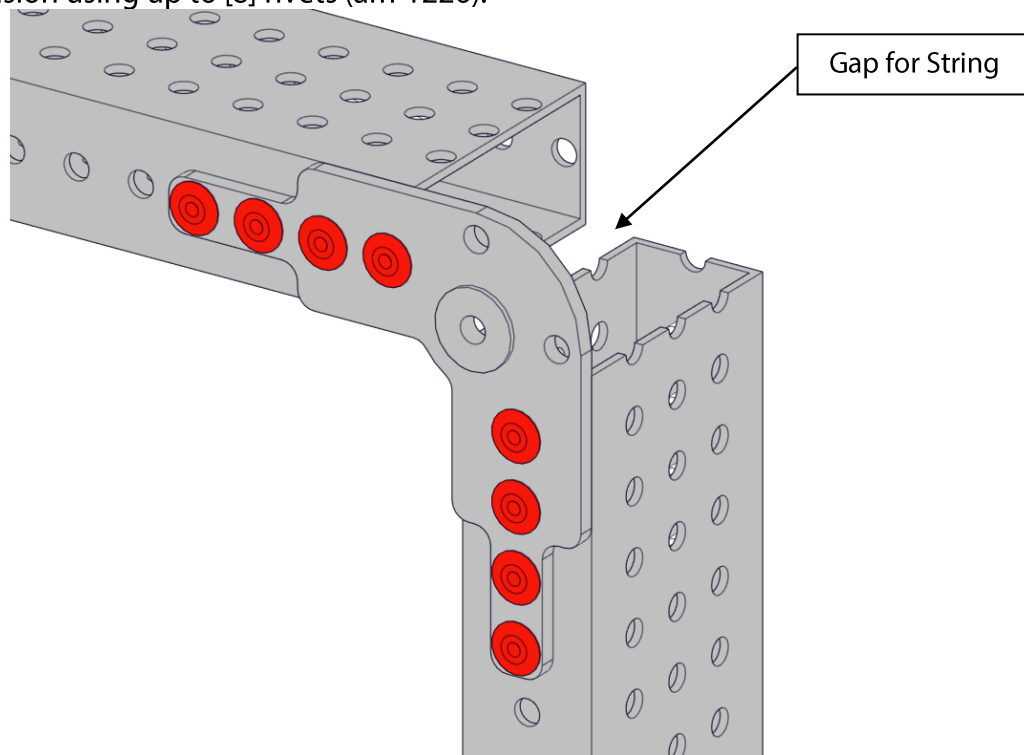
Passthrough Corner (am-5543)

This corner is used in locations where a rope will pass through and this corner of the elevator will never pass by another stage.

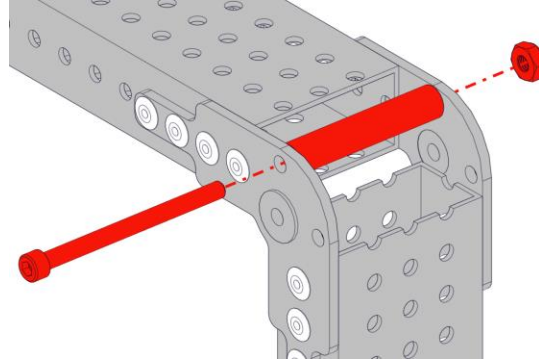
Step 1: Press in [1] M5 bearing (am-5469) into each Passthrough Corner Bracket (am-5557) in the location shown, with the bearing flanges facing towards the outsides of the elevator.



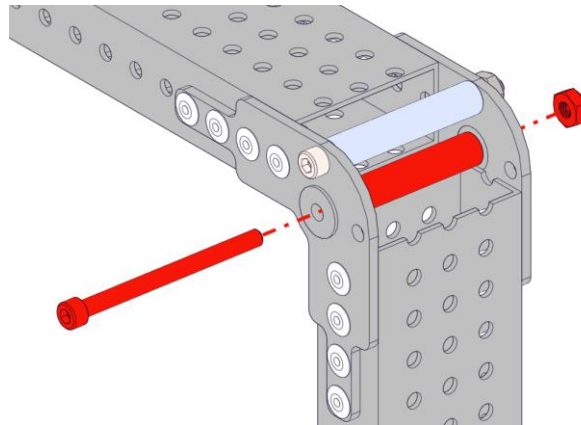
Step 2: Rivet [1] Passthrough Corner Bracket and bearing assembly to the end of [2] pieces of drilled extrusion using up to [8] rivets (am-1226).



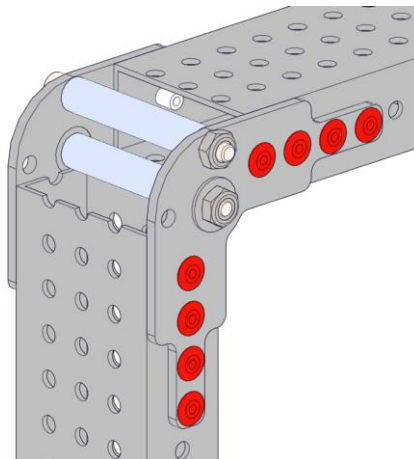
Step 3: Slide a 2.5" 10-32 screw (am-1024) through one of the two holes remaining in the bracket, through a 2" spacer (am-1600), through the same hole on the other plate, and then secure it with a 10-32 nut (am-1063). Select which hole to insert the screw through based on the path of the string through your elevator – the string should always touch this spacer to protect it from getting contacted by the corner of your extrusion.



Step 4: Slide a 2.5" 10-32 screw (am-1024) through one of the bearings, through a 2" spacer (am-1600), through the bearing on the other plate, and then secure it with a 10-32 nut (am-1063).



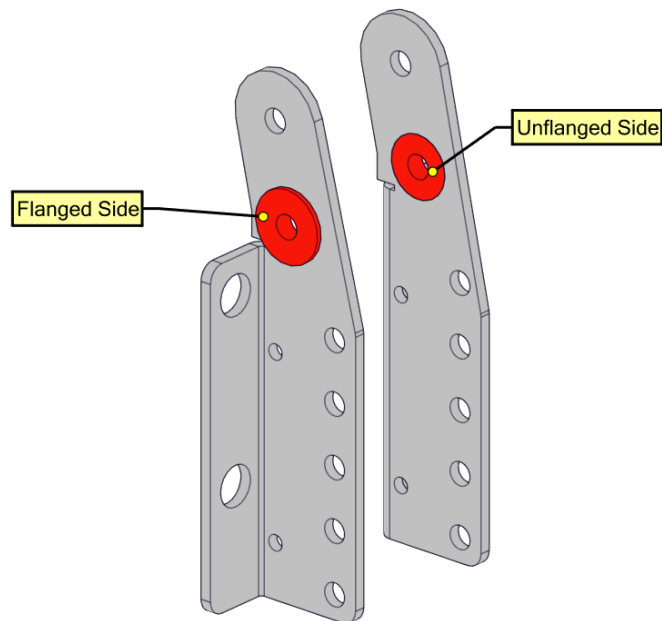
Step 5: Rivet the second Passthrough Corner Bracket (am-5556) to the drilled extrusion using up to [8] rivets (am-1226).



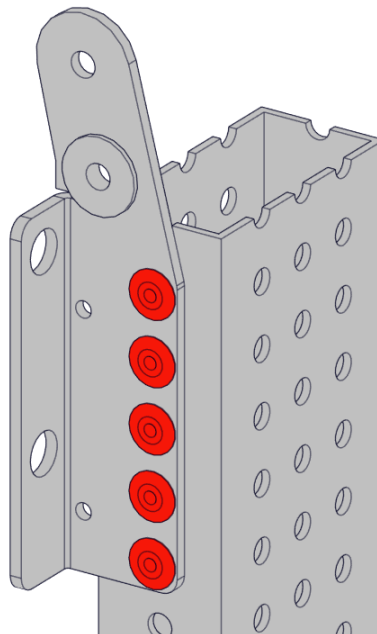
External Corner (am-5544)

This corner is used in locations where one stage rides inside of another and does not have a top bar.

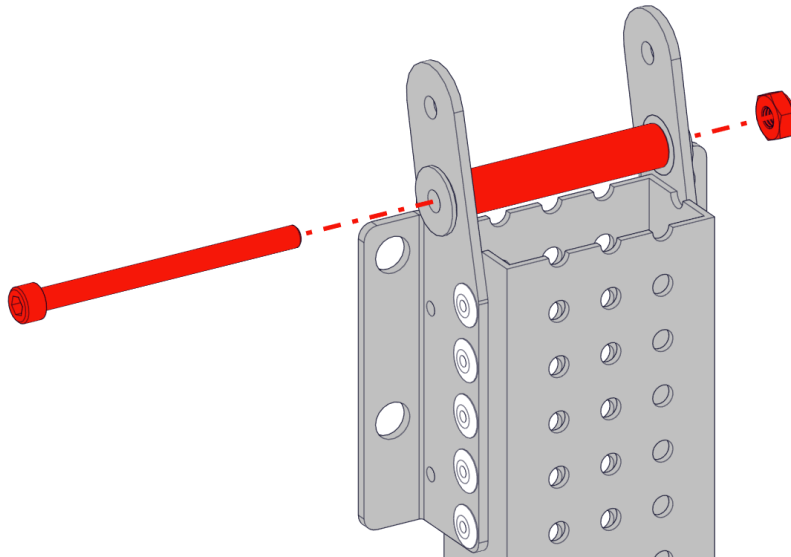
Step 1: Press in [1] M5 bearing (am-5469) into each External Corner Bracket (am-5558_A, am-5558_B) in the locations shown, with the bearing flanges facing towards the outsides of the elevator.



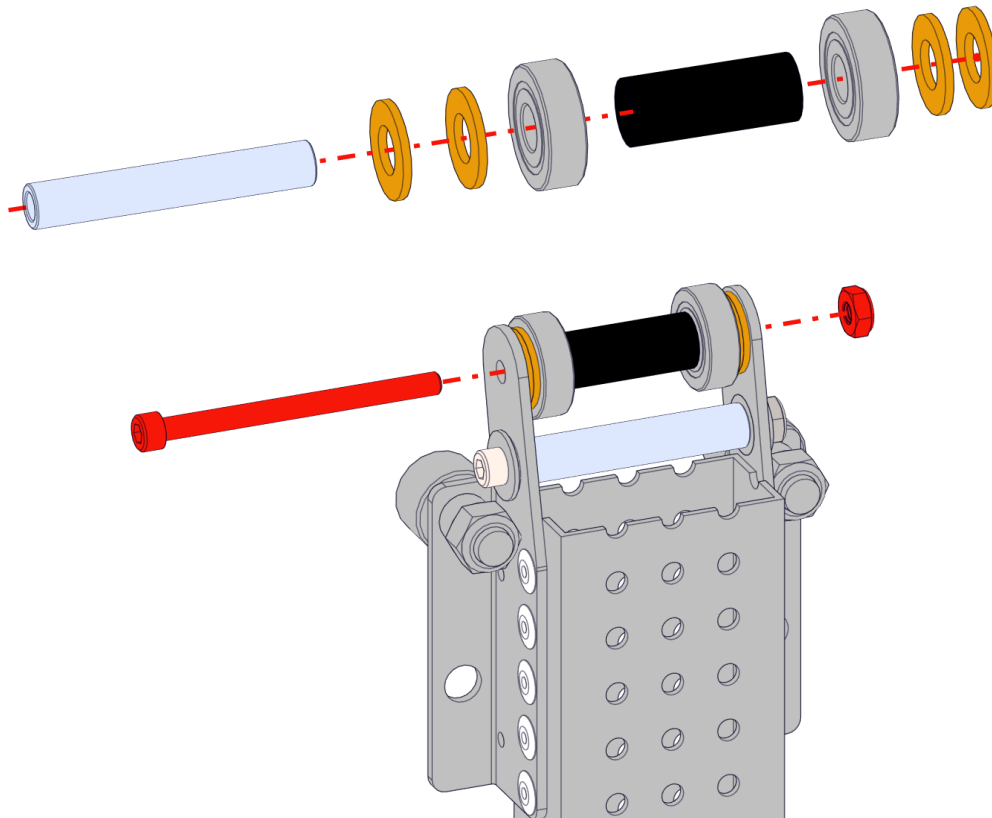
Step 2: Rivet [1] External Corner Bracket with bearing installed to the end of [1] piece of drilled extrusion using up to [5] rivets (am-1226) each.



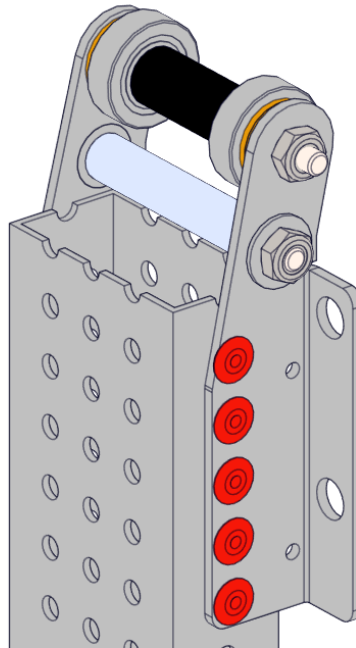
Step 3: Slide a 2.5" 10-32 screw (am-1024) through one of the bearings, through a 2" spacer (am-1582), through the bearing on the other plate, and then secure it with a 10-32 nut (am-1063).



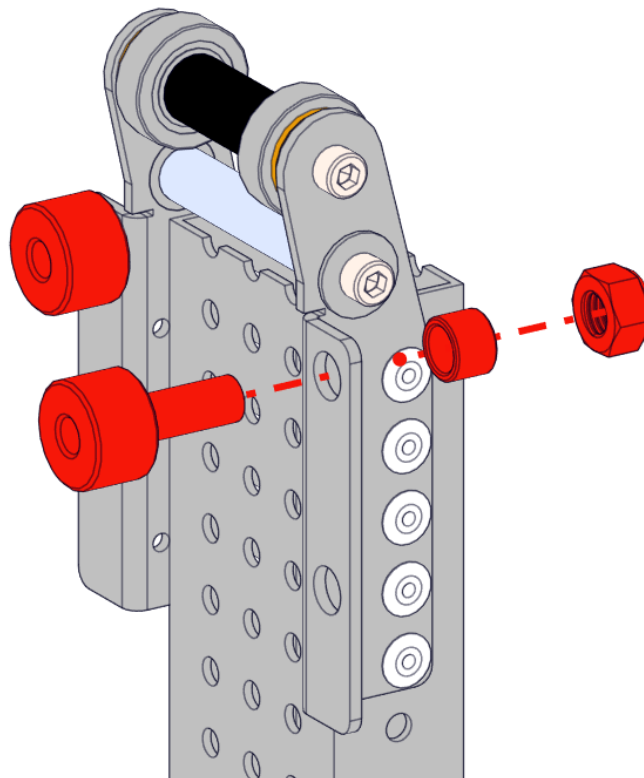
Step 4: Slide [2] 5/16" washers (am-1009) over a 2" spacer (am-1582), then an 8mm bearing (am-4456), then a 1.18" spacer (am-1610), then a second 8mm bearing, then [2] more 5/16" washers. Place this stack between the two brackets and secure it in place as shown with a 2.5" 10-32 screw (am-1024) and 10-32 nut (am-1063).



Step 5: Rivet the second External Corner Bracket (am-5558_A or am-5558_B) to the drilled extrusion using up to [5] rivets (am-1226).

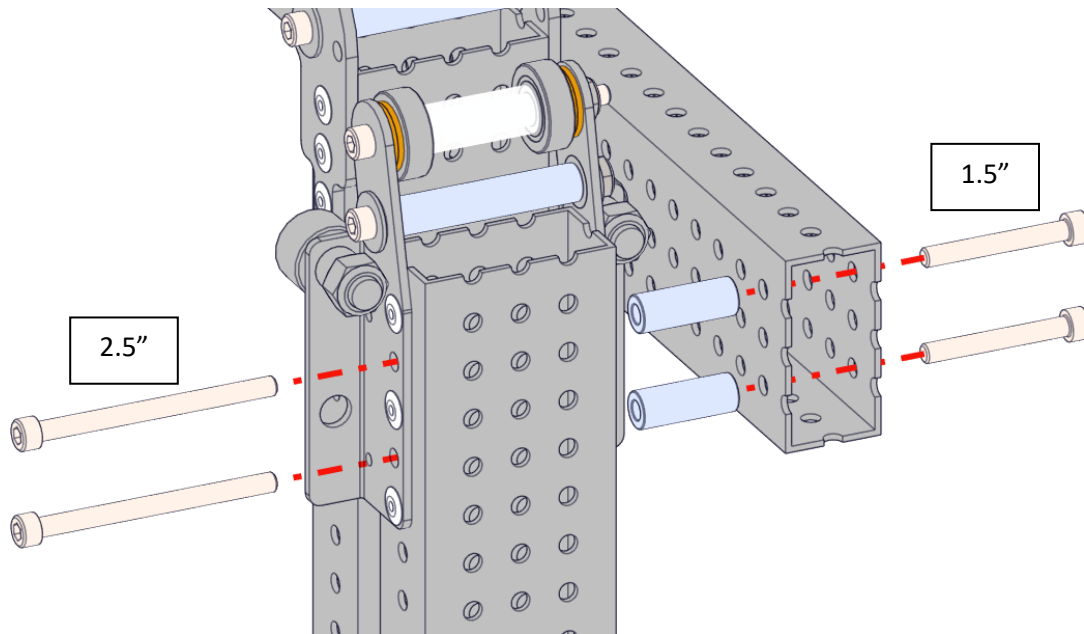


Step 6: In the locations closest to the M5 bearings, attach [2] cam followers (am-5545) using [1] 5/16" spacer (am-1678) and [1] M8 Nut (am-1509) each as shown. Discard the nuts that come installed on the Cam Followers.



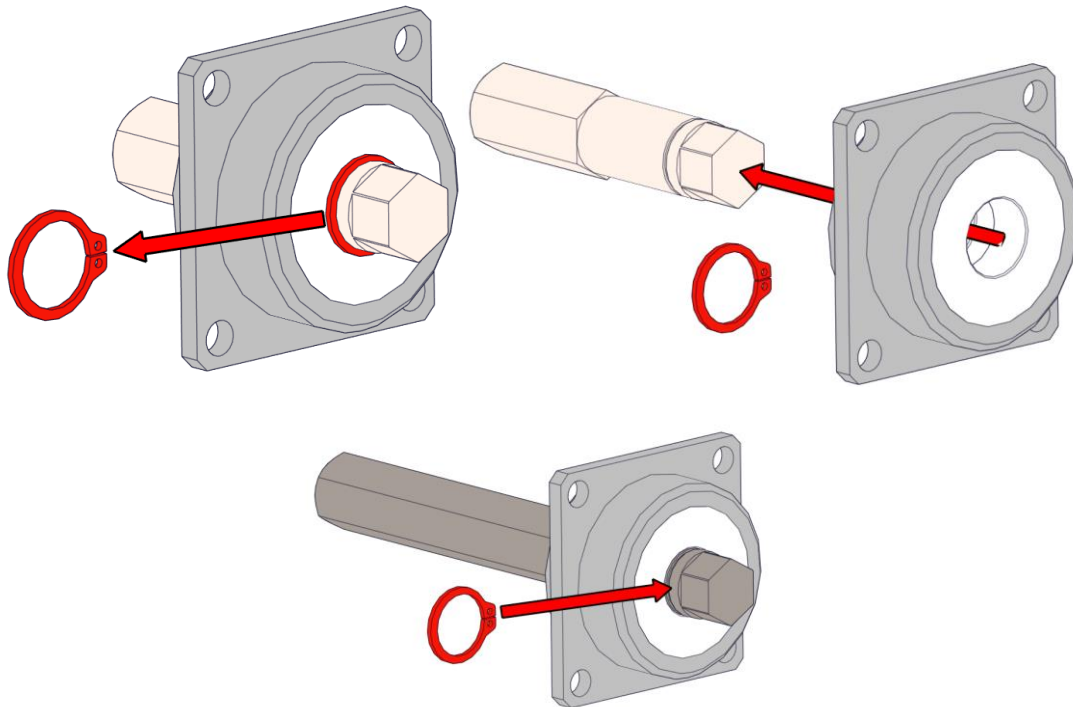
Crossbar Kit (am-5554)

Crossbar kits are used to make stages with External Corners more rigid. To install a crossbar, simply cut an extrusion to the outside width of the stage one is putting it on, then secure it in place with [2] standoffs (am-1701), [2] 2.5" 10-32 screws (am-1024), and [2] 1.5" 10-32 screws (am-1014) as shown.

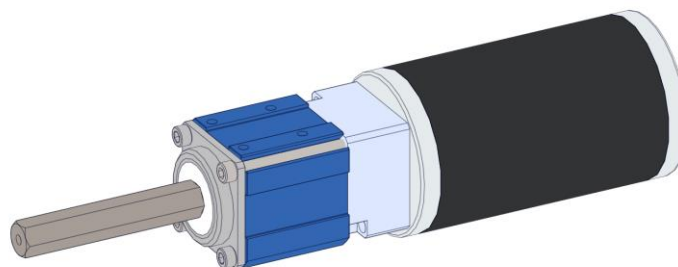


Powertrain (am-5552 or am-5553)

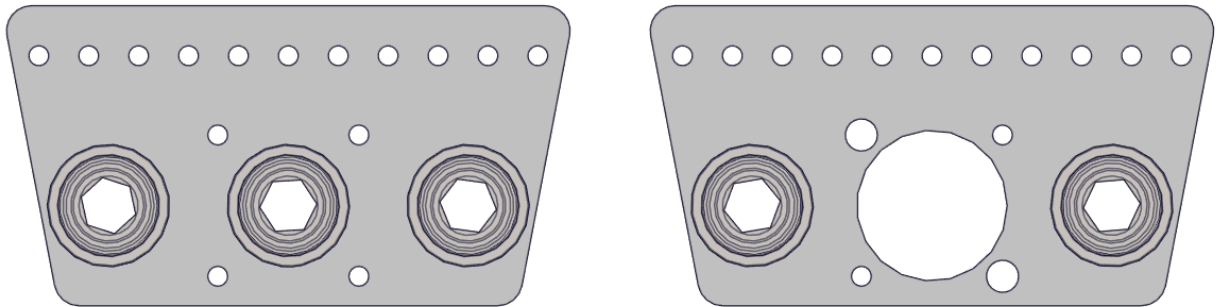
Step 1: If not ordered with a three inch shaft, swap the included shaft on a Sport Gearbox with the included 3" shaft by removing the retaining clip and replacing the shaft and then reattaching the retaining clip, or otherwise extend the shaft of your planetary gearbox to 3".



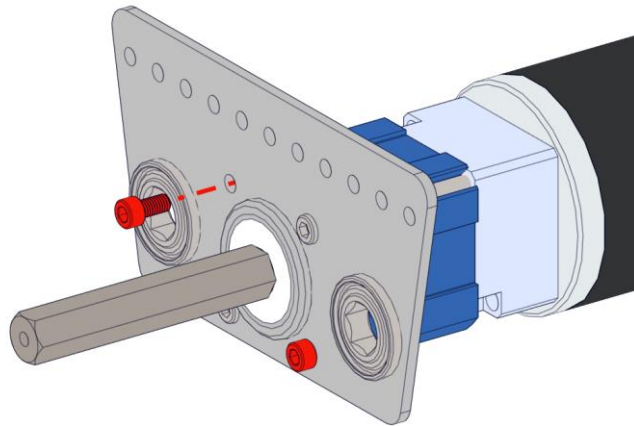
Step 2: Prepare the Sport Gearbox with a CIM style motor by following the instructions [here](#), or construct a similar planetary gearbox with a 3" output shaft and a 2" bolt circle.



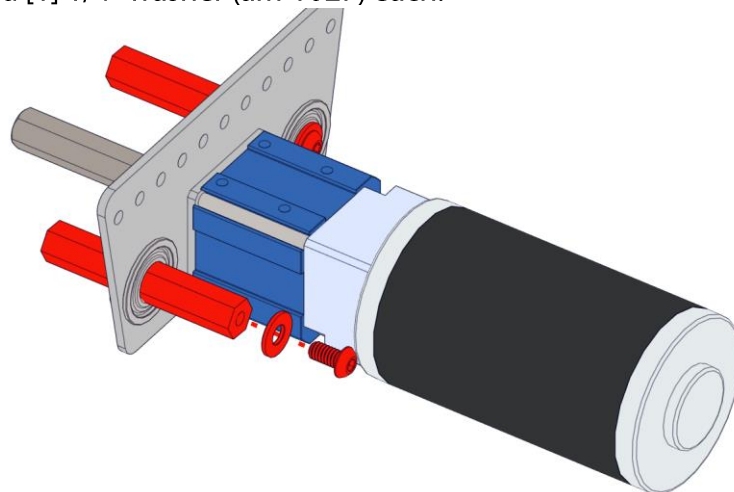
Step 3: Press [5] 1/2" hex bearings (am-2986) into all the properly sized holes on both the Motor Mounting Plate (am-5555) and Shaft Support Plate (am-5559) as shown.



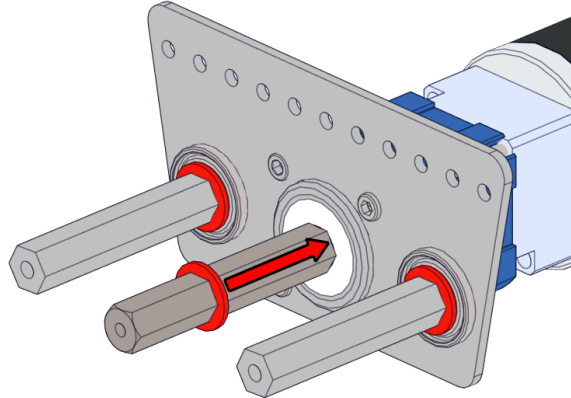
Step 4: Attach the Sport Gearbox to the Motor Mounting Plate (am-5555) using [2] 0.5" 10-32 screws (am-1002) with the bearing flanges on the same side as the motor.



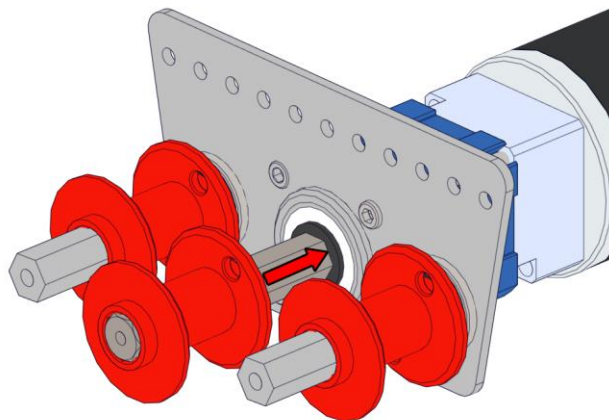
Step 5: Slip [2] 3" hex shafts (am-4883) through the motor plate as shown, using [1] 0.5" 1/4-20 screw (am-1039) and [1] 1/4" washer (am-1027) each.



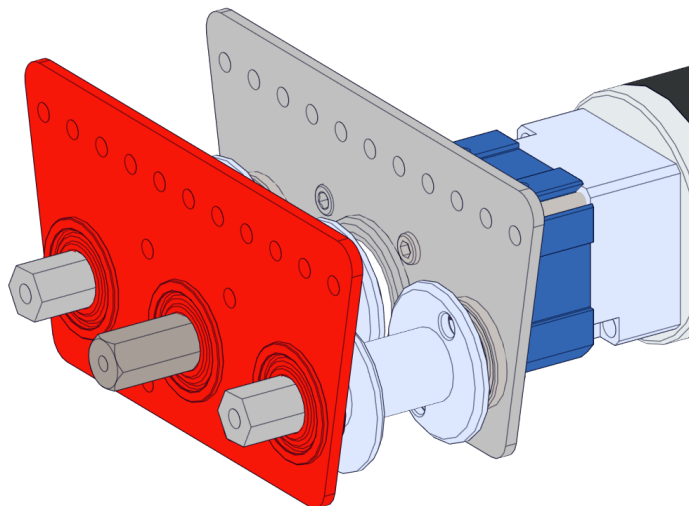
Step 6: Slide [1] 1/16" hex spacer (am-3948-063) over each of the three shafts as shown.



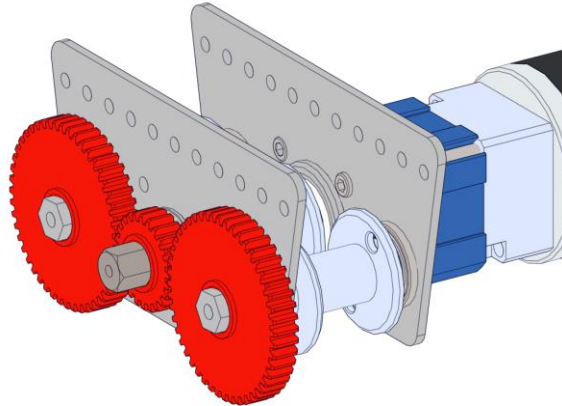
Step 7: Slide [1] spool (am-4647-2000) over each of the three shafts as shown.



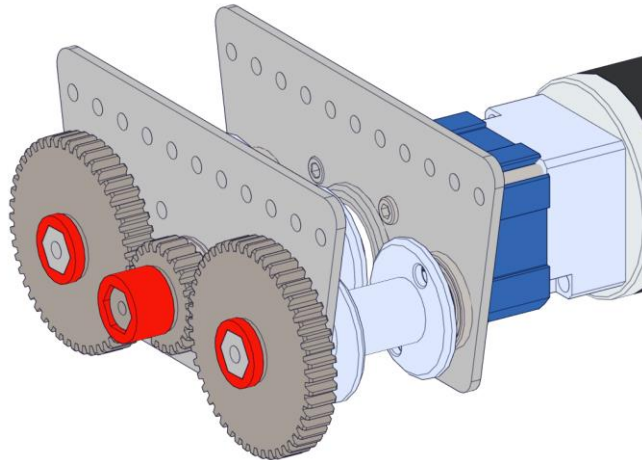
Step 8: Put on the other plate with the bearings already pressed in from step 3 with the flanges facing away from the motor.



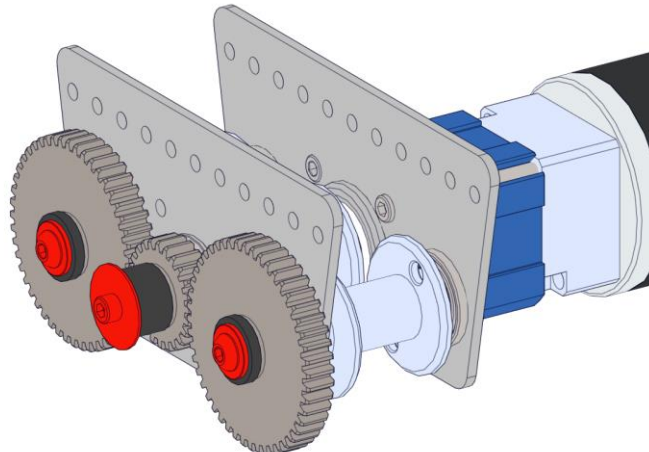
Step 9: Place the included gears on each shaft. If you have gears of different sizes, the smallest gear goes in the center.



Step 10: On the two outer hex shafts, place 1/8" spacers (am-3948-125). On the center hex shaft, place a 1/2" spacer (am-3948-500).



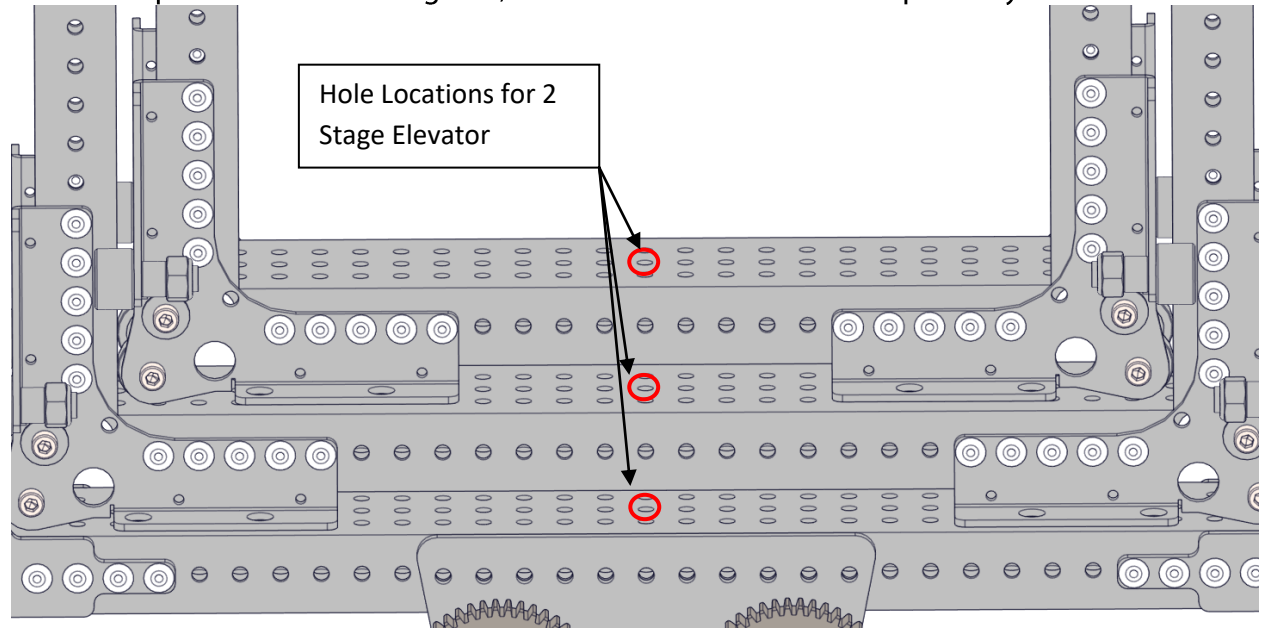
Step 11: Secure the two outer hex shafts with [1] 0.5" 1/4-20 screw (am-1039) and [1] 1/4" washer (am-1027) each. The center shaft should be secured with a 1/2" 10-32 (am-1002) screw and #10 fender washer (am-1523).



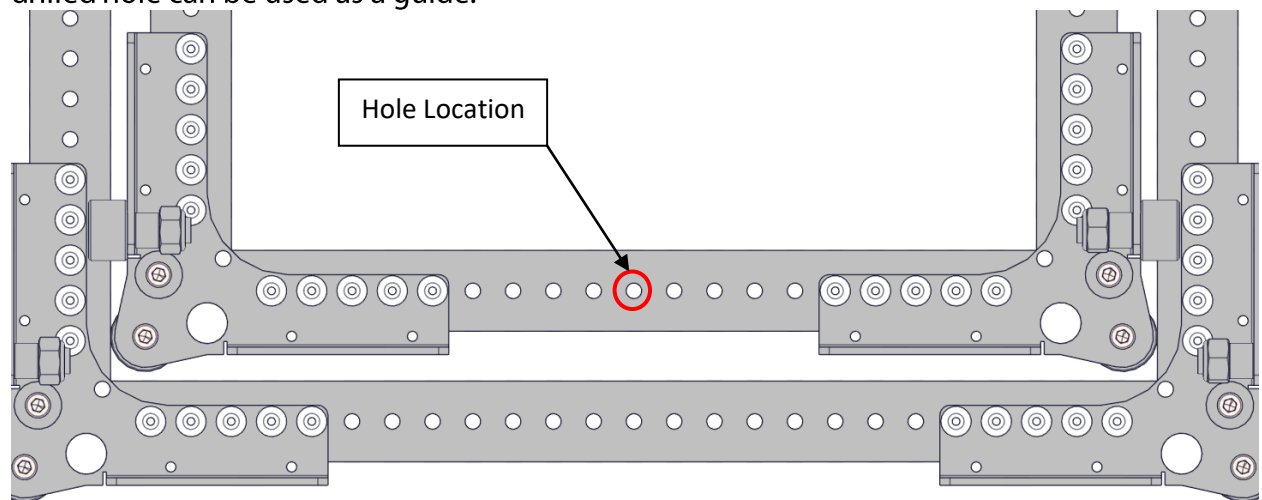
Tensioning Kit (am-5588)

The Tensioning Kit can be used in any elevator with a Powertrain installed. It allows the user to tension a down-rope (rope that pulls down on the elevator to provide force in addition to gravity to compress the elevator).

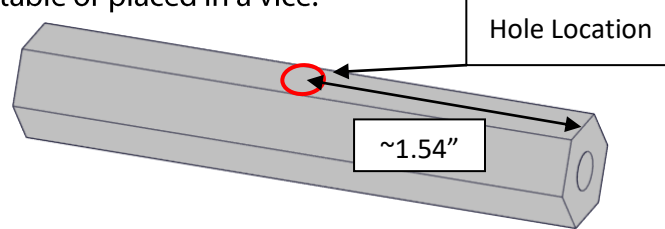
Step 1: Drill a 5/8" vertical hole in each stage in the horizontal center of the lift. You can use the center pre-drilled hole as a guide, the hole does not have to be perfectly centered.



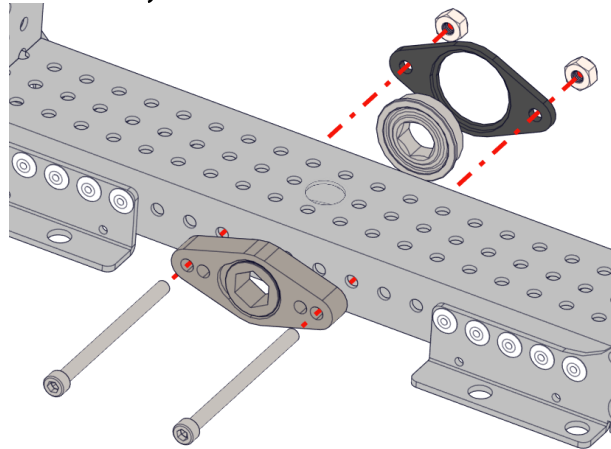
Step 2: Drill [1] 5/8" horizontal hole in the innermost stage of the elevator. The center pre-drilled hole can be used as a guide.



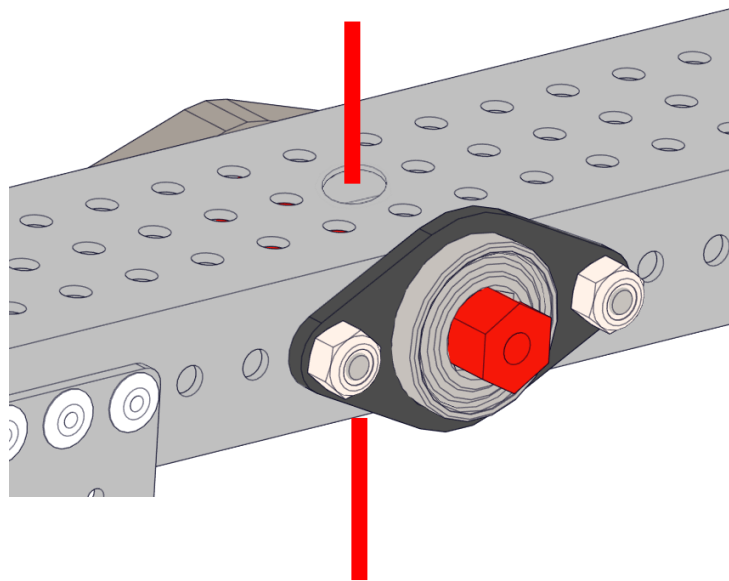
Step 3: Drill a 0.201" or larger hole in the included hex shaft (am-4883). To do this, the shaft should be clamped to a table or placed in a vice.



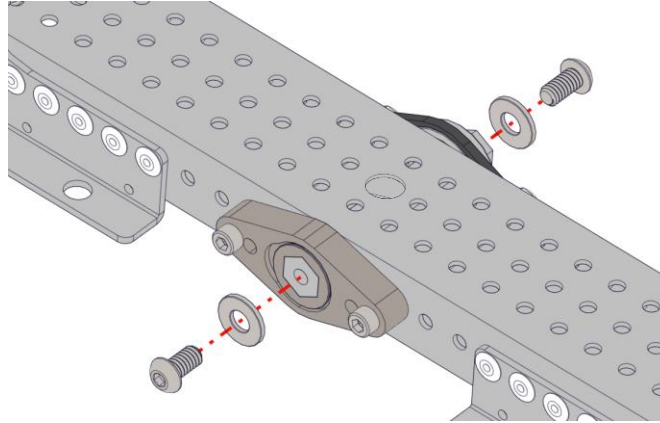
Step 4: Affix the Ratchet Plate (am-5271), hex bearing (am-2986), and bearing mount (am-5273) using [2] 2.75" 10-32 screws (am-1397) and [2] 10-32 nuts (am-1063). Make sure the assembly is centered on the holes you drilled.



Step 5: Insert the hex shaft into the assembly, and then pass a rope through the holes. Tie it into a knot so that the rope cannot pass back through.

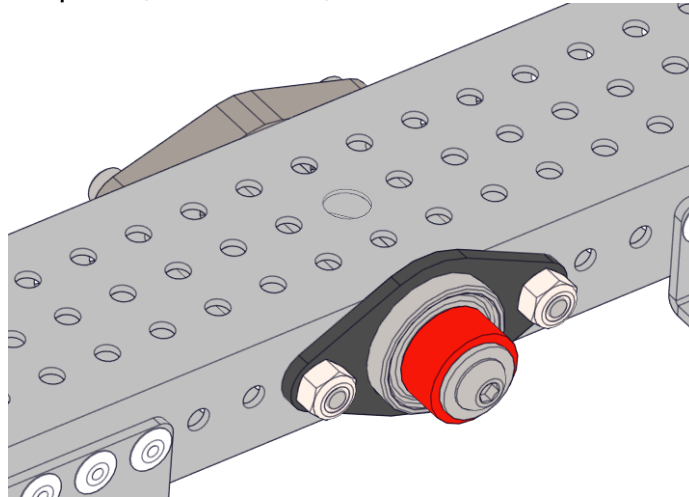


Step 6: Secure the hex shaft with [2] 0.5" 1/4-20 button head screws (am-1039) and [2] 1/4" washers (am-1027). The shaft will slide within the assembly for now, but the exposed hex shaft can be used to tension the rope with a 1/2" wrench once the rest of the elevator is strung.



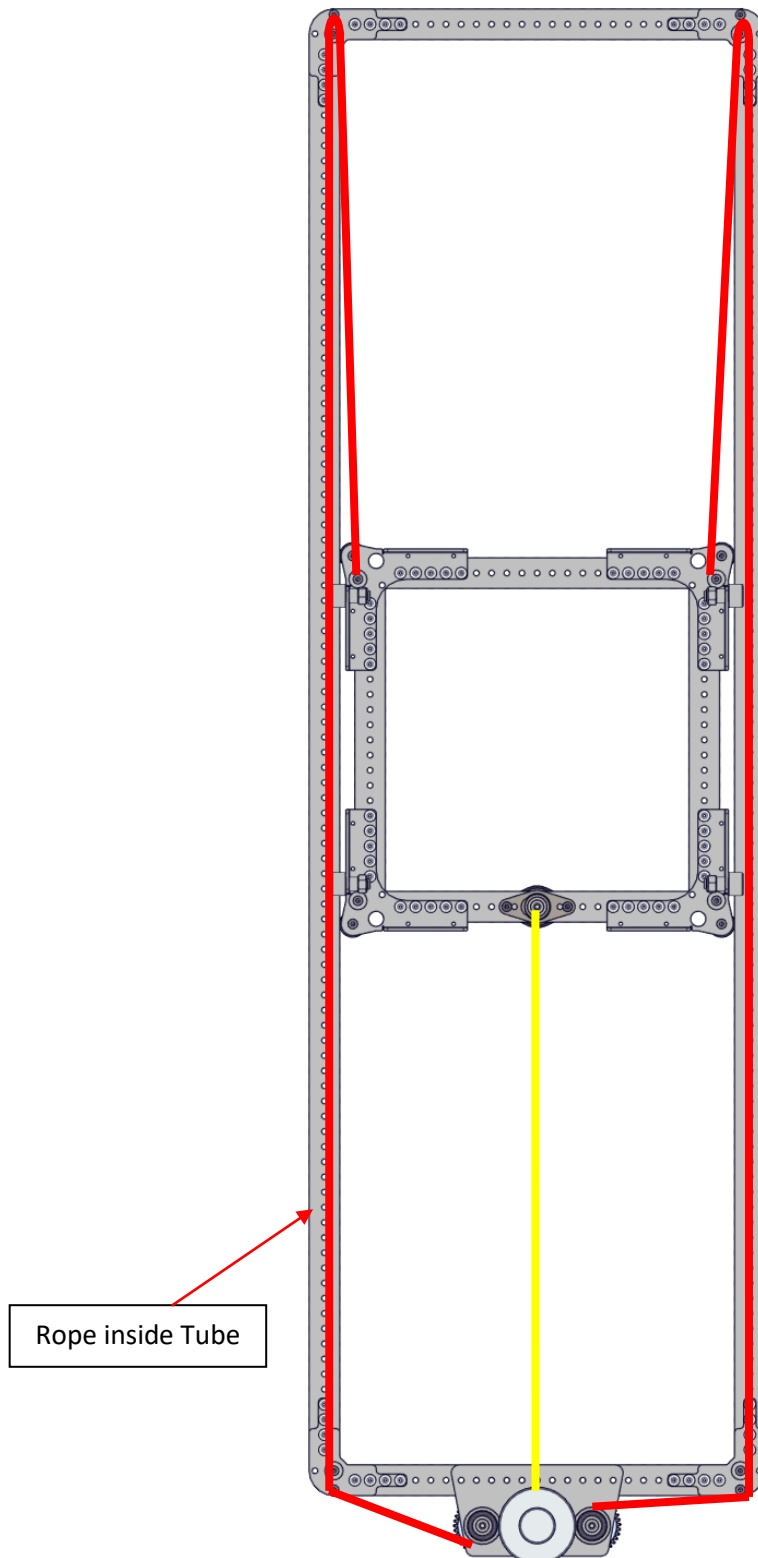
Step 7: String the elevator according to the example diagrams on pages 32 & 33. When tying the center rope, refer to Step 8 below.

Step 8: Put the elevator into its most extended configuration. Tighten the rope until it is taut. Slide the 0.375" spacer (am-3948-375) onto the hex shaft to fix the hex shaft in place.



1 Stage Elevator (am-5560)

A 1 Stage Elevator contains a [Single Stage](#), a [Carriage Stage](#) and the 1 Stage [Powertrain](#) Kit to provide power. Rope is routed as shown.



2 Stage Elevator (am-5551)

A 2 Stage Elevator contains a [Carriage Stage](#), [Carriage Support Stage](#), [Outer Stage](#), and the 2 Stage [Powertrain](#) Kit to provide power. Rope is routed as shown.

