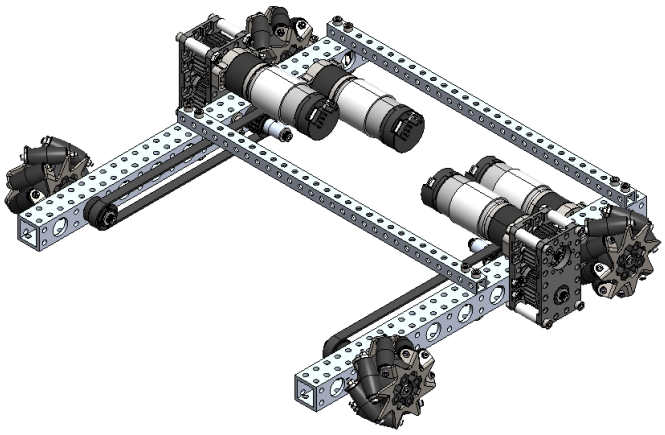
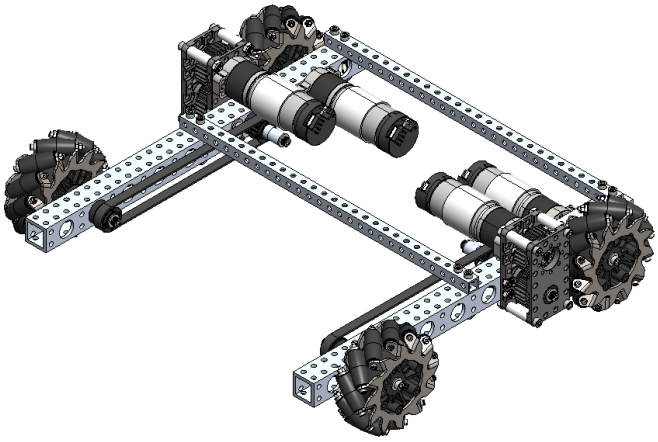
AndyMark®

Robits Mecanum Chassis

(am-5635)

Assembly Guide





Revision #	Date	Author	Purpose
0	8/28/2026	E. Scime	Original Document

P. Yeung	9/3/2026
Reviewer Name	Date Reviewed

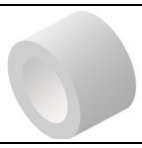
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Recommended Tools List

Component	Part #	QTY	Photo
Fold Up 12 Set Hex	am-3864	1	
5mm-5.5mm Wrench	am-4486	1	
3/8in Wrench	am-4961	1	

Robits Mecanum Chassis Parts List (am-5635)

Component	Part #	QTY	Photo
0.5″ 10-32 Socket Head Cap Screw	am-1002	8	
#10 Flat Washer	am-1026	20	
1.25″ 10-32 Socket Head Cap Screw	am-1041	8	
0.75″ 10-32 Socket Head Cap Screw	am-1047	4	
1.5″ 10-32 Socket Head Cap Screw	am-1014	8	

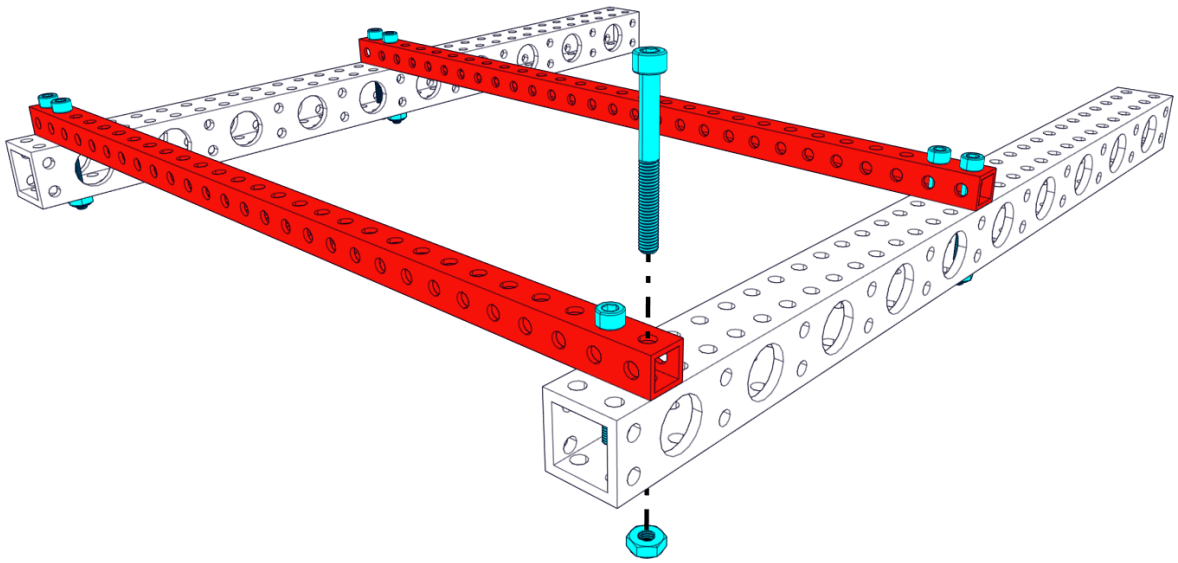
Component	Part #	QTY	Photo
1.75″ 10-32 Socket Head Cap Screw	am-1048	16	
10-32 Nylock Jam Nut	am-1063	24	
1″ #10 Spacer, Nylon	am-1696	8	
0.430″ ID x 0.500″ OD x 0.25″ Long Aluminum Spacer	am-1698	10	
0.430″ ID x 0.500″ OD x 0.5″ Long Aluminum Spacer	am-1699	6	
0.25″ #10 Spacer, Nylon	am-1700	4	
12mm M3 Socket Head Cap Screw	am-1706	8	
14T Pulley Half, 0.375″ Hex Bore	am-4960_half	8	
0.5″ x 0.5″ x 14.0″ Robits Tube	am-5001-1400	2	
1″ x 1″ x 15.5″ Robits Tube	am-5002-1550	2	

Component	Part #	QTY	Photo
3″ Robits Shaft	am-5003-0300	2	
4″ Robits Shaft	am-5003-0400	2	
30T Robits Gear	am-5020_30	4	
Robits Bushing	am-5021	10	
Robits Pass Through Plate	am-5023	4	
90T 5mm HTD Belt 9mm Wide	am-5209_90T	2	
NeveRest Hex Gearmotor 1″ Shaft	am-5550_0100	2 or 0	
NeveRest Hex Gearmotor 2″ Shaft	am-5550_0200	2 or 0	
3″ or 4″ BB Mecanum Wheel	am-4735 or am-5502	1 set or 0	

Assembly – Chassis

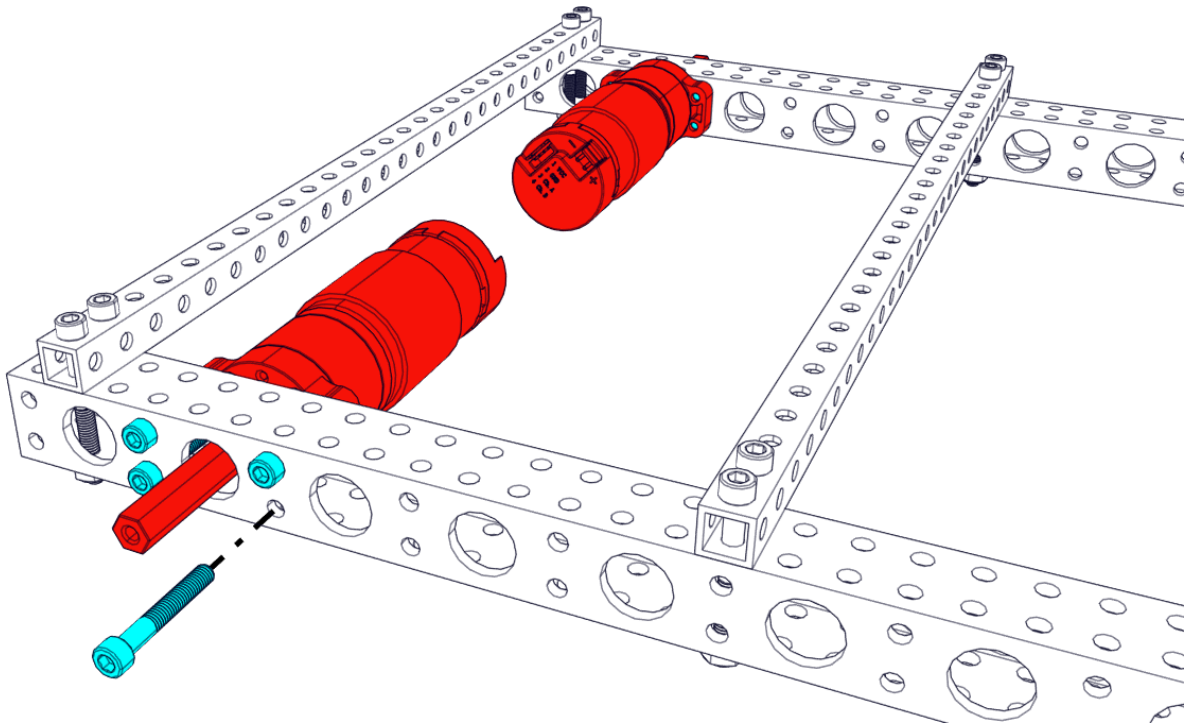
Step 1

Connect [2] 15.5″ long 1" by 1" tubes (am-5002-1550) using [2] 14″ long 1/2" by 1/2" tubes (am-5001-1400), [8] 1.75″ 10-32 bolts (am-1048) and [8] 10-32 nuts (am-1063).



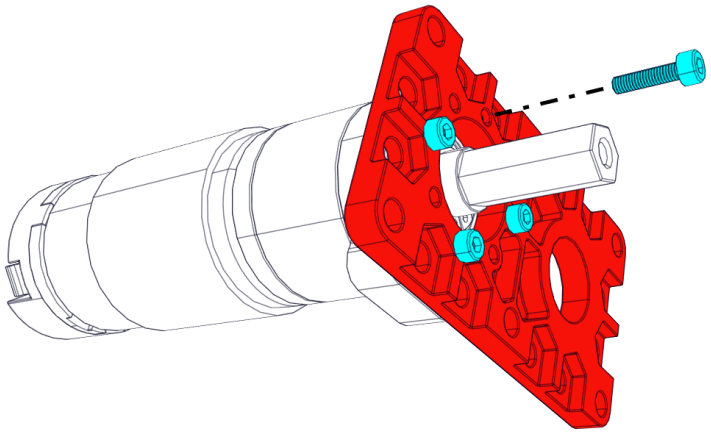
Step 2

Attach [2] NeveRest Hex Motors with 2″ long motor shafts to the 1x1 tubes using [8] 1.25″ 10-32 screws (am-1041). Note: Be sure to align the e-clip on the motor with the hole in the tube.



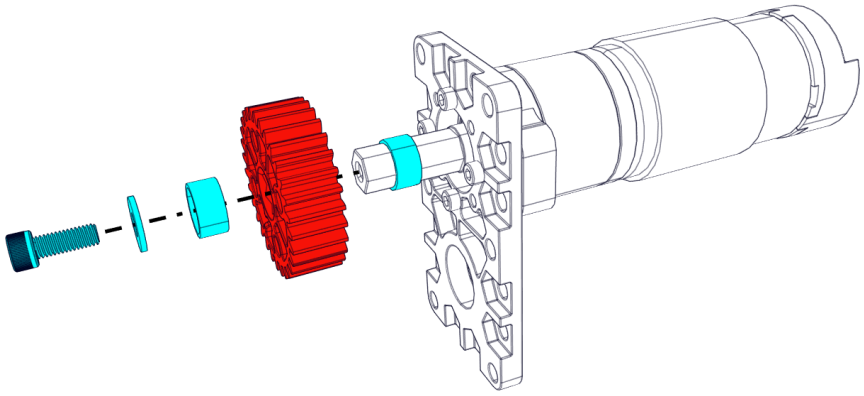
Step 3

Install [1] NeveRest Hex Motor with 1″ long motor shaft on [1] Pass Through Plate (am-5023) using [4] 12mm M3 screws (am-1706).



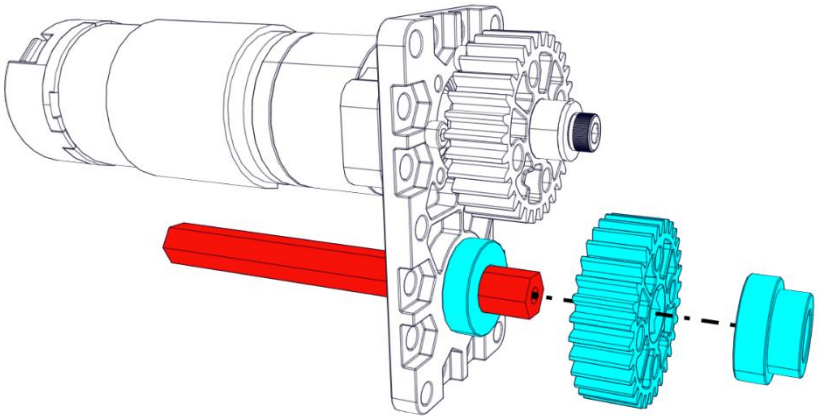
Step 4

Affix [2] 0.25″ shaft spacers (am-1698) and [1] 30 tooth gear (am-5020_30) and cap it with [1] #10 washer (am-1026) and [1] 0.5″ 10-32 screw (am-1002).



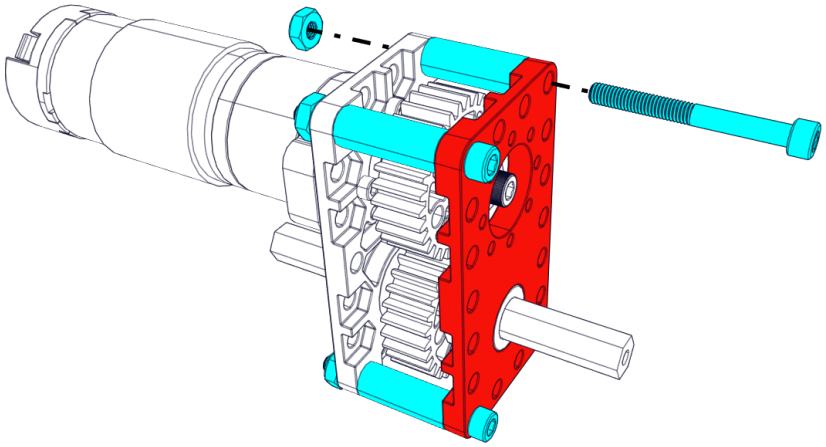
Step 5

Slide [2] Robits Bushings (am-5021) and [1] 30 tooth gear (am-5020_30T) onto [1] 4″ hex shaft (am-5003-0400) and insert one of the bushings into the Pass Through Plate.



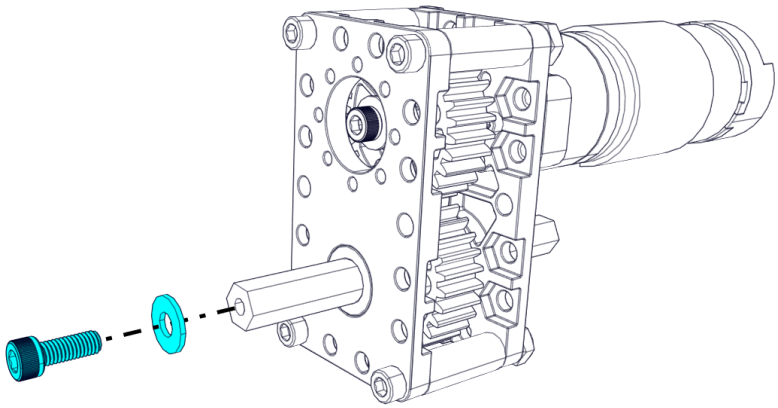
Step 6

Attach [1] Pass Through Plate (am-5023) using [4] 1.75" 10-32 screws (am-1048), [4] 1" screw spacers (am-1696), [4] 10-32 nuts (am-1063).



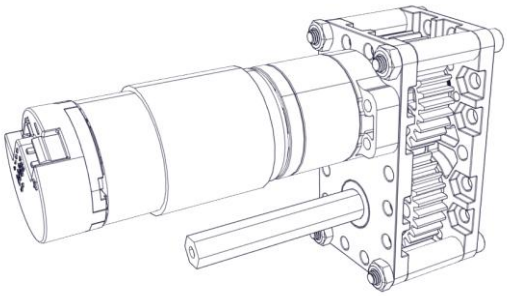
Step 7

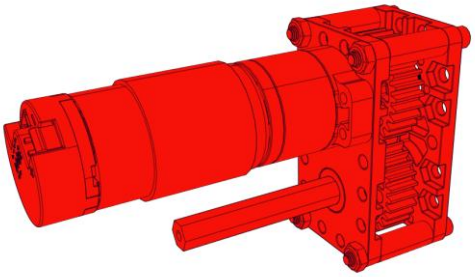
Capture the end of the bottom shaft with [1] #10 washer (am-1026) and [1] 0.5" 10-32 screw (am-1002).



Step 8

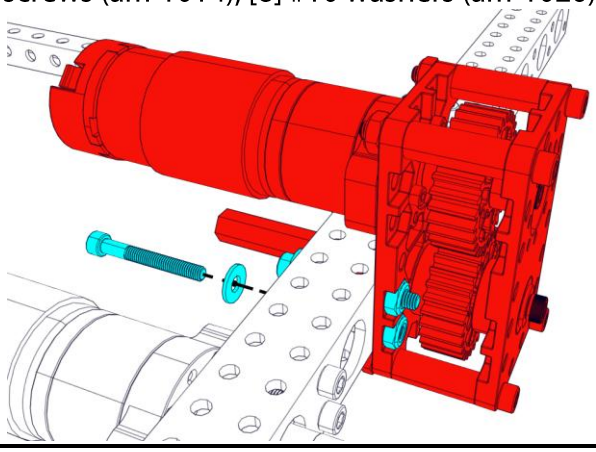
Repeat Steps 3-8 to construct a second gearbox.

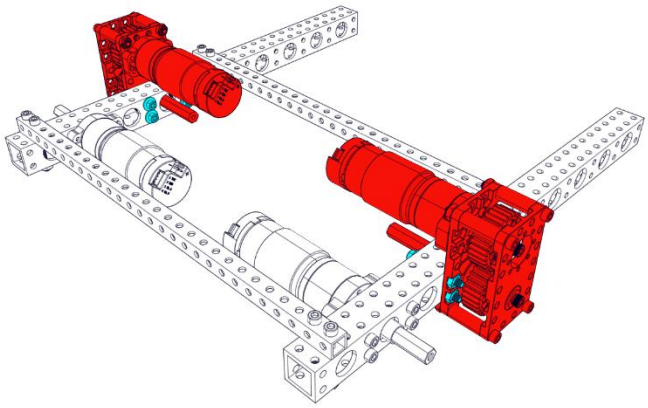




Step 9

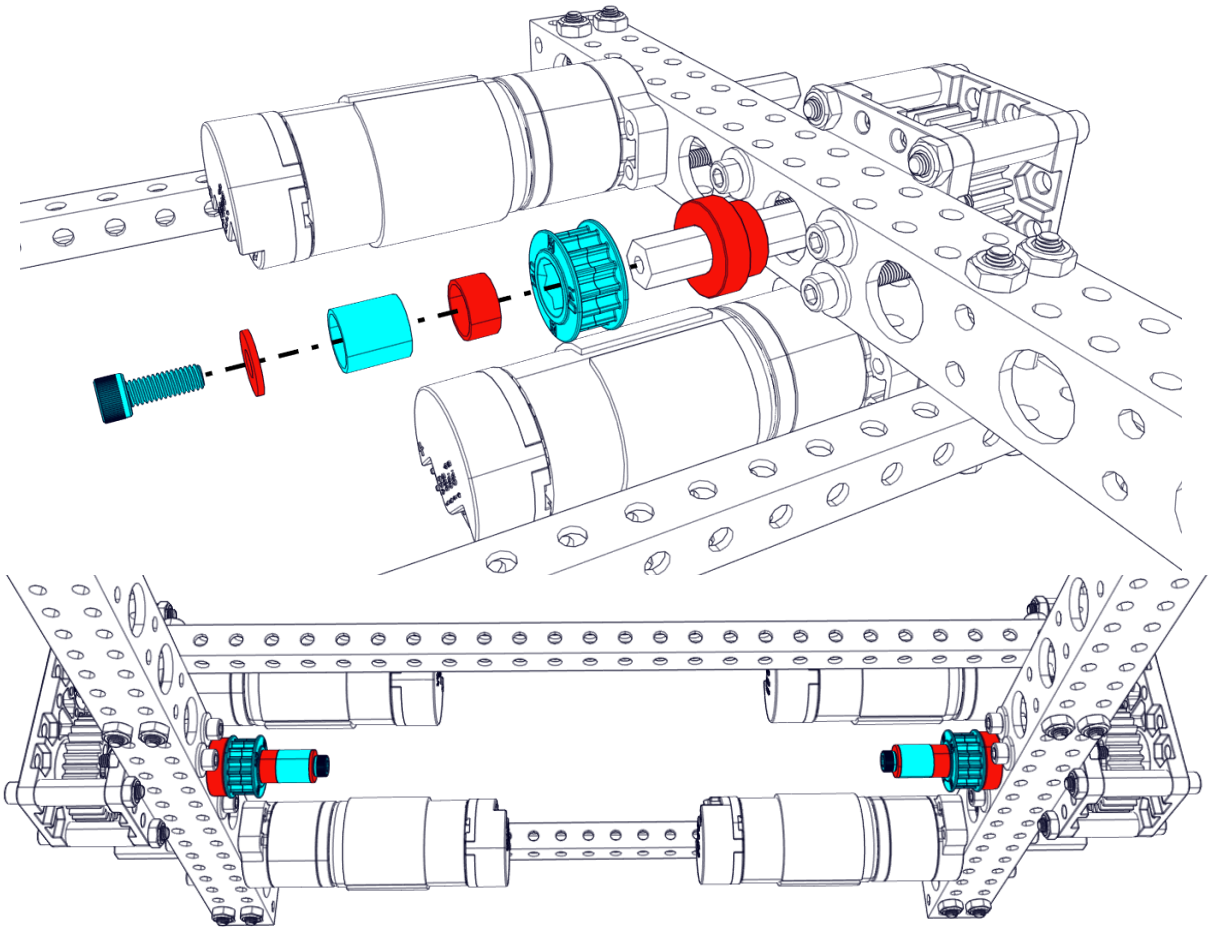
Attach the [2] gearbox assemblies from Step 8 to the rest of the frame using [8] 1.5″ 10-32 screws (am-1014), [8] #10 washers (am-1026), and [8] 10-32 nuts (am-1063).





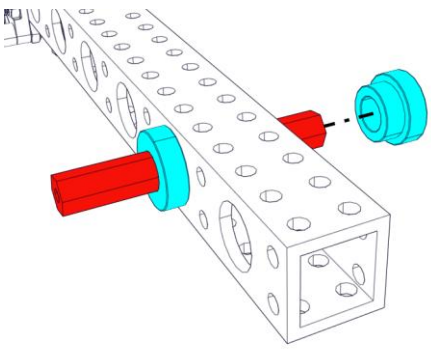
Step 10

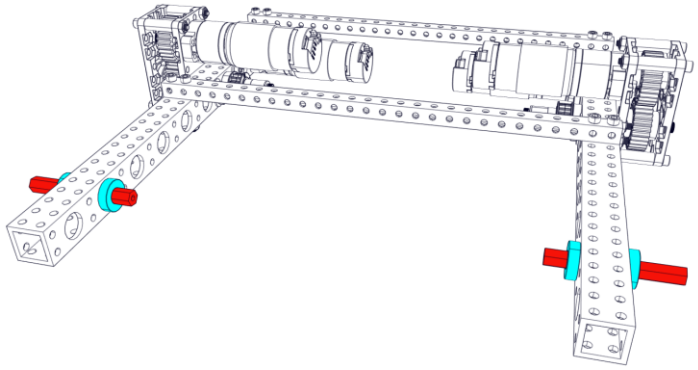
Slide [1] Robits Bushing (am-5021), [2] 14 Tooth Pulley Halves (am-4960_half), [1] 0.25″ shaft spacer (am-1698), and [1] 0.5″ shaft spacer (am-1699) onto each gearbox shaft, and cap it with [1] 0.5″ 10-32 screw (am-1002) and [1] #10 washer (am-1026). Do this for both gearboxes.



Step 11

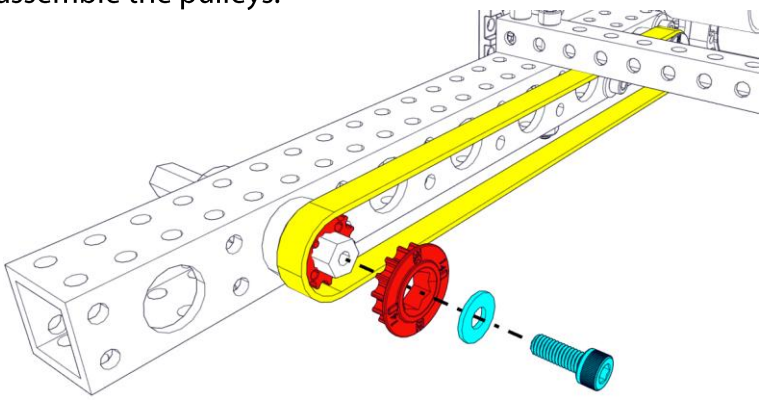
On the other end of the frame, slide [4] Robits Bushings (am-5021) through the 1x1 tubes and then slide [2] 3" hex shafts (am-5003-0300) through them.

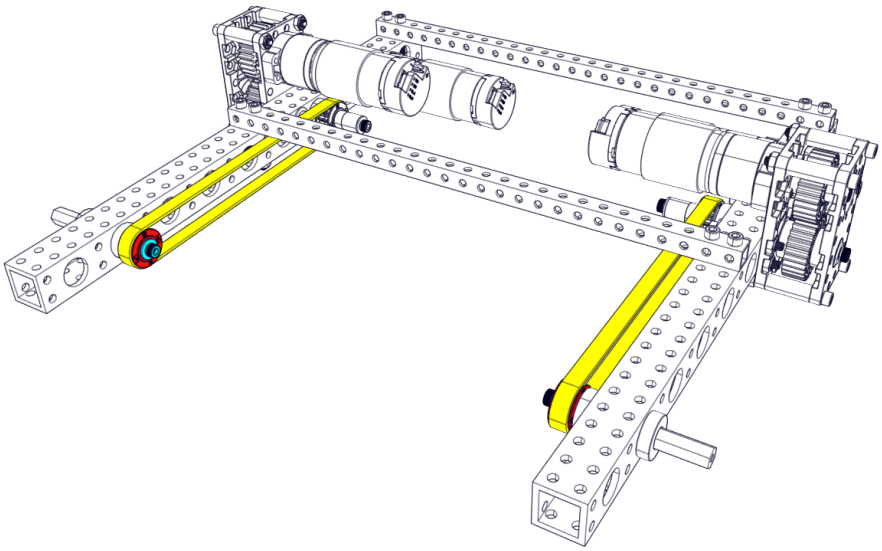




Step 12

Place [2] 14 tooth pulley halves (am-4960_half) onto each shaft and secure them in place with [1] 0.5" 10-32 screw (am-1002) and [1] #10 washer (am-1026). Make sure to position [1] 90 tooth belt (am-5209_90T) between the new shafts and the shafts on the already-attached gearboxes as you assemble the pulleys.





All configurations require the assembly of (4) BB Mecanum Wheels. Follow these guides to assemble your wheels!

3 Inch BB Mecanum Wheel Assembly Guide



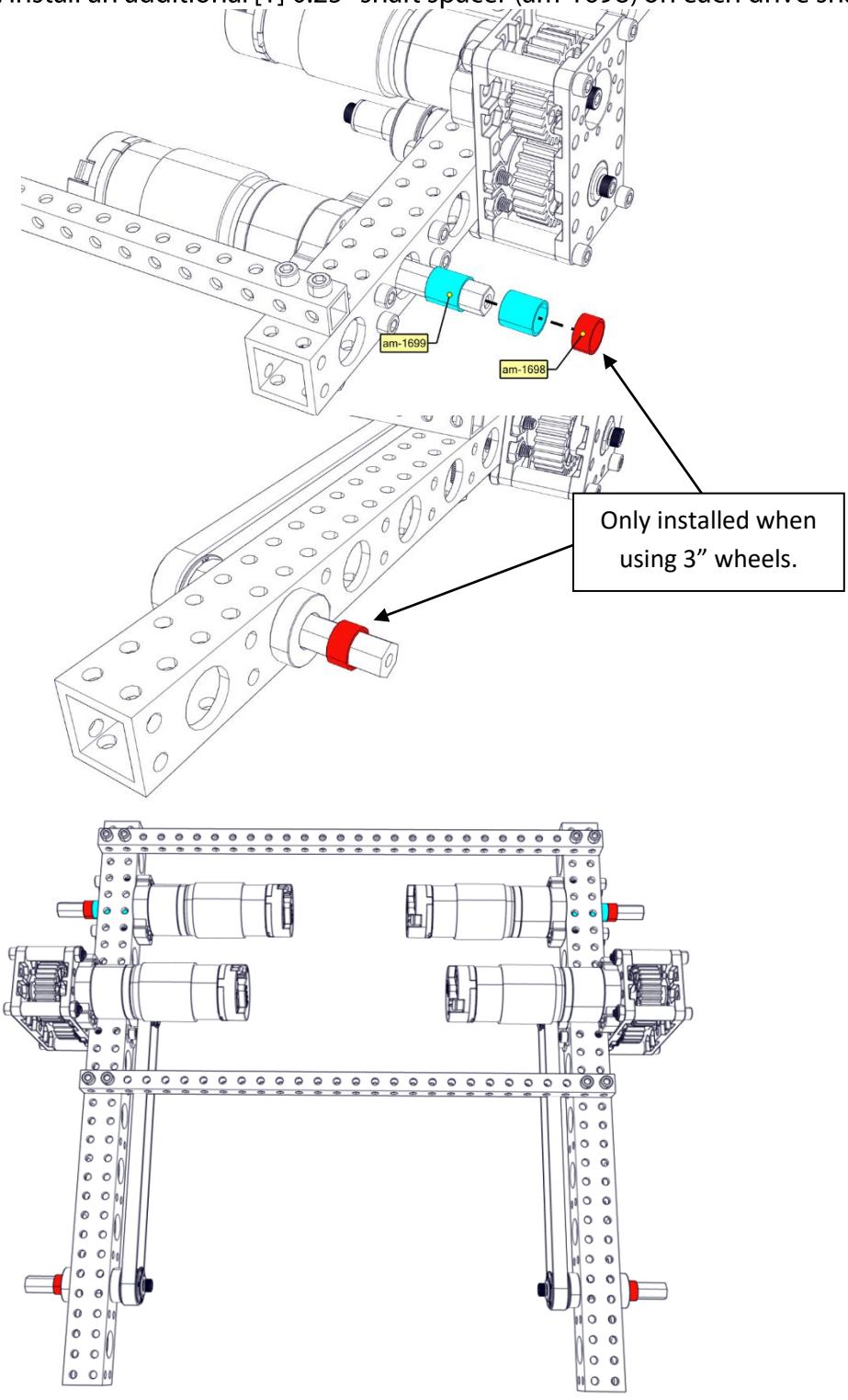
4 Inch BB Mecanum Wheel Assembly Guide



Step 13

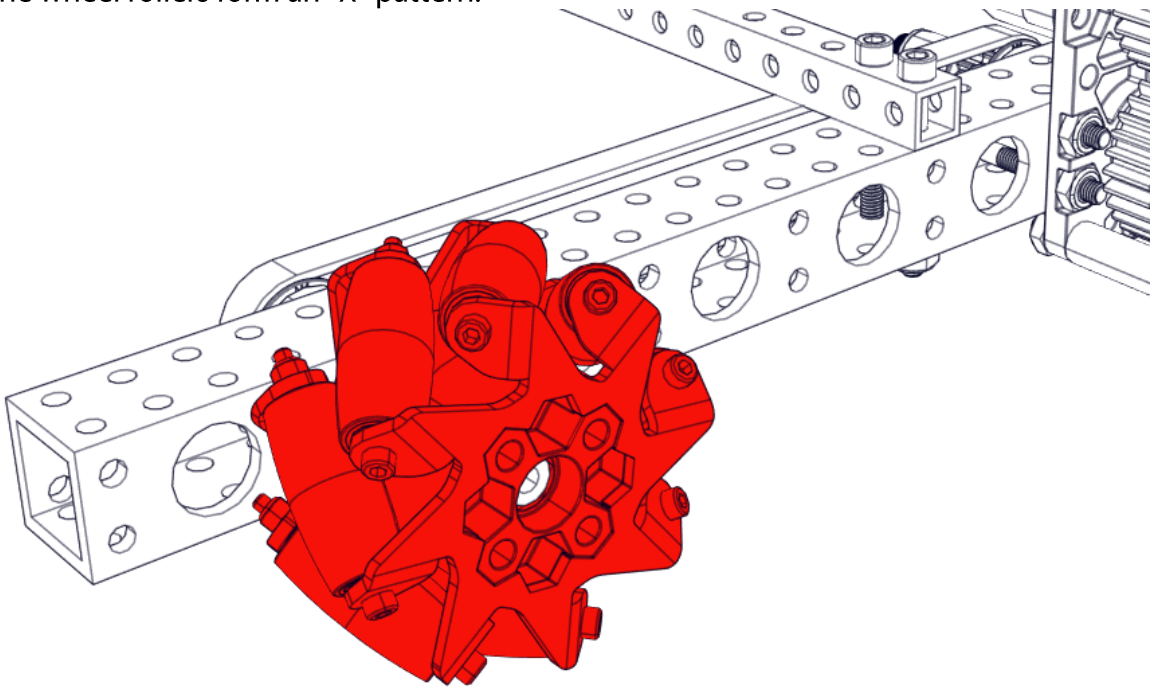
For both 3″ wheels and 4″ wheels: on each motor shaft at the rear of the assembly, install [2] 0.5″ shaft spacers (am-1699).

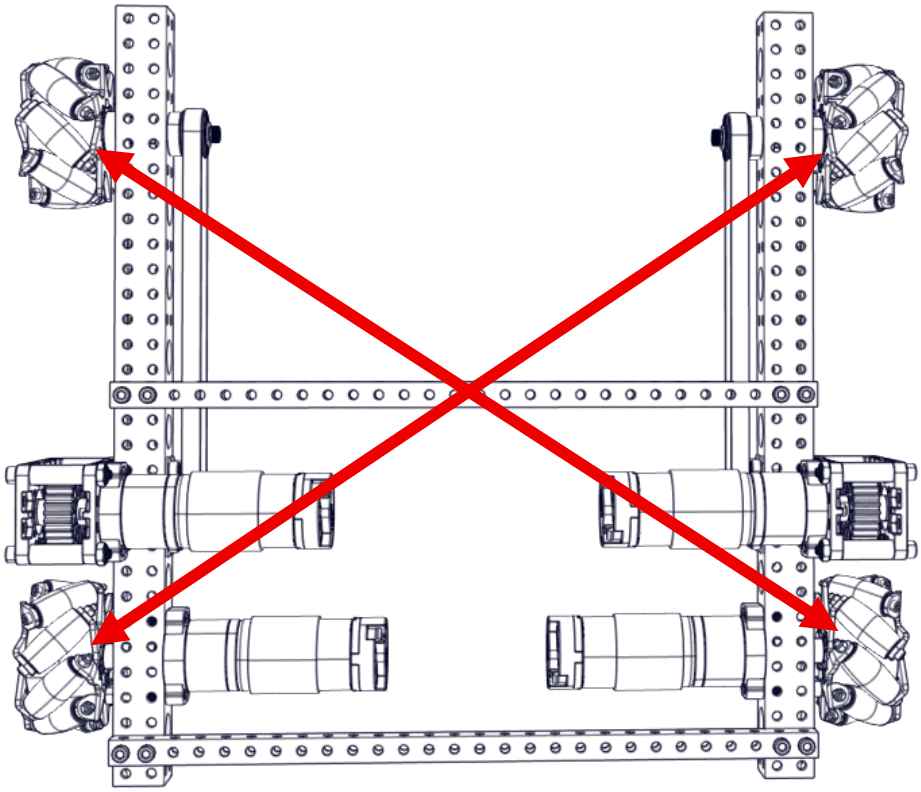
For 3″ wheels only: install an additional [1] 0.25″ shaft spacer (am-1698) on each drive shaft.



Step 14

Slide your 3" or 4" Mecanum wheels onto each drive shaft. Ensure that when viewed from the top, the wheel rollers form an "X" pattern.





Step 15

Secure all wheels using [1] 0.25" screw spacer (am-1700), [1] #10 washer (am-1026), and [1] 0.75" 10-32 screw (am-1047) each.

