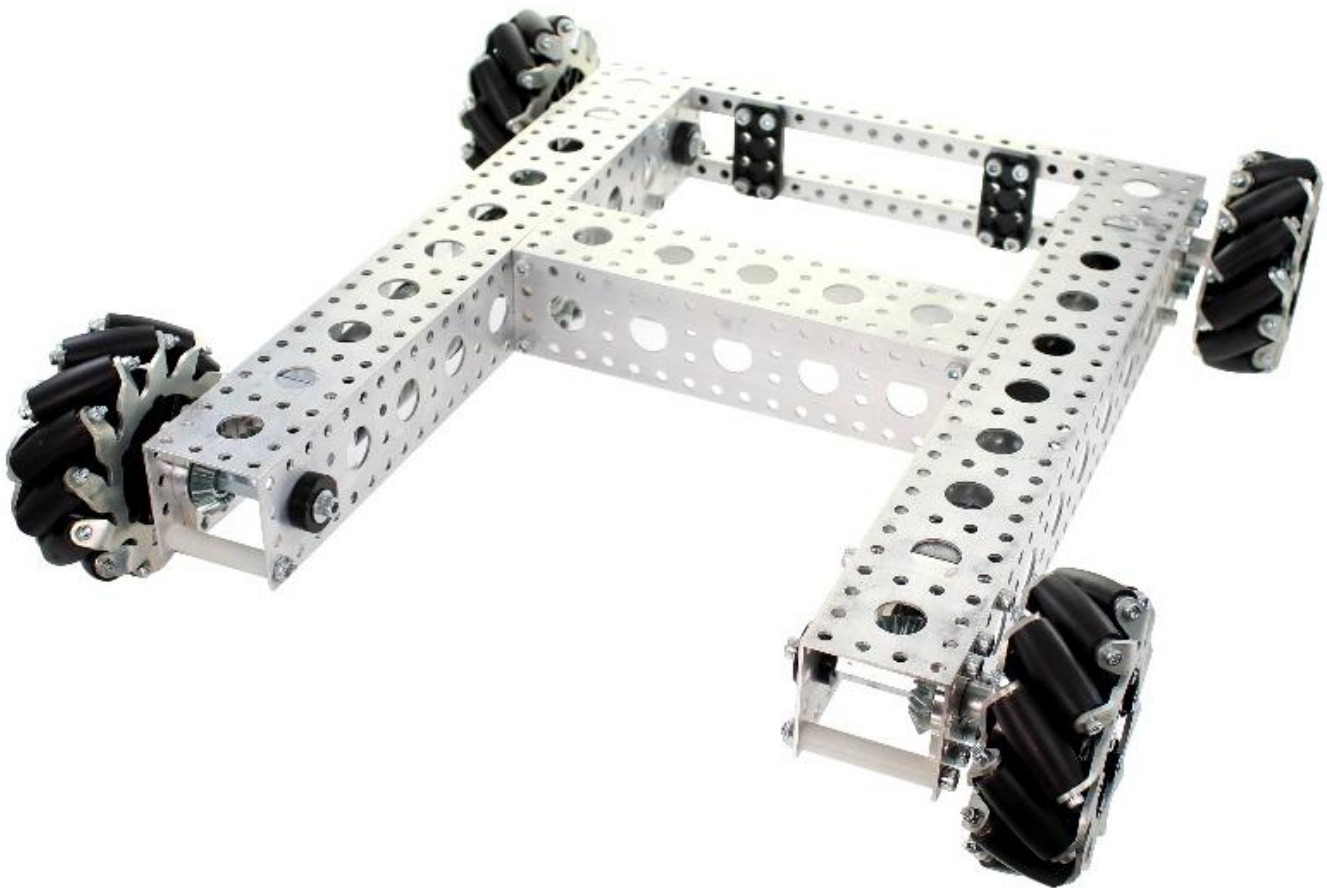


 AndyMark[®]
Robits Mecanum Channel Chassis
(am-5828)
Assembly Guide



Revision #	Date	Author	Purpose
0	8/27/2026	P. Yeung	Original Document

E. Scime	9/1/2026
Reviewer Name	Date Reviewed

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Parts & Tools

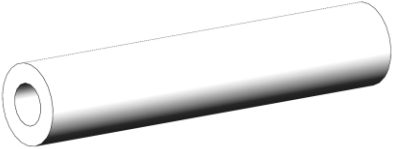
Recommended Tools List

Component	Part #	QTY	Photo
5/32" Ball End Hex Driver	am-2751	1	
3/8" Combination Wrench	am-4961	1	

Parts List

Component	Part #	QTY	Photo
0.25" 10-32 Socket Head Screw w/ Patch	am-1771	16	
1" 10-32 Socket Head Screw	am-1002	34	
0.75" 10-32 Socket Head Screw	am-1047	32	
2.25" 10-32 Socket Head Screw	am-1156	2	



Component	Part #	QTY	Photo
2.5" 10-32 Socket Head Screw	am-1024	2	
#10 Flat Washer	am-1026	8	
10-32 Nylock Jam Nut	am-1063	10	
1.875" Nylon Screw Spacer	am-1769	4	
0.25" Shaft Spacer	am-1698	12	
0.5" Shaft Spacer	am-1699	4	
NeveRest Hex Spacer	am-1766	4	
20 Tooth 0.375 in. Hex Bevel Gear	am-4869	8	

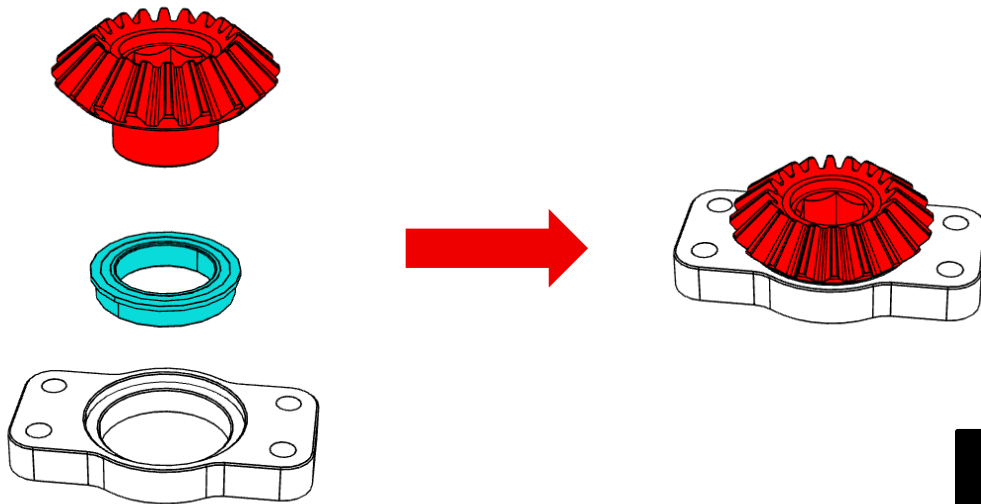
Component	Part #	QTY	Photo
15 mm ID 21 mm OD Shielded Flanged Bearing	am-5536	4	
Bevel Bearing Carrier	am-5048	4	
Robits Bushing	am-5021	4	
Robits Hex Shaft, 4"	am-5003-0400	4	
2x4 Plate Gusset	am-5006_2x4	2	
1/2" x 1/2" x 8" Robits Tube	am-5001-0800	2	
2" x 2" x 8" Robits Channel	am-5047-0800	1	
2" x 2" x 15.5" Robits Channel	am-5047-1550	2	

Component	Part #	QTY	Photo
2" x 2" Channel Mount	am-5049	6	
1/2" x 1/2" Robits Tube Plug (1x4 Hole)	am-5738_1x4	4	
3" or 4" BB Mecanum Wheels	am-5502 or am-4735	1 set	
NeveRest Hex Motors	various	4	

Frame Assembly

Frame Assembly – Step 1

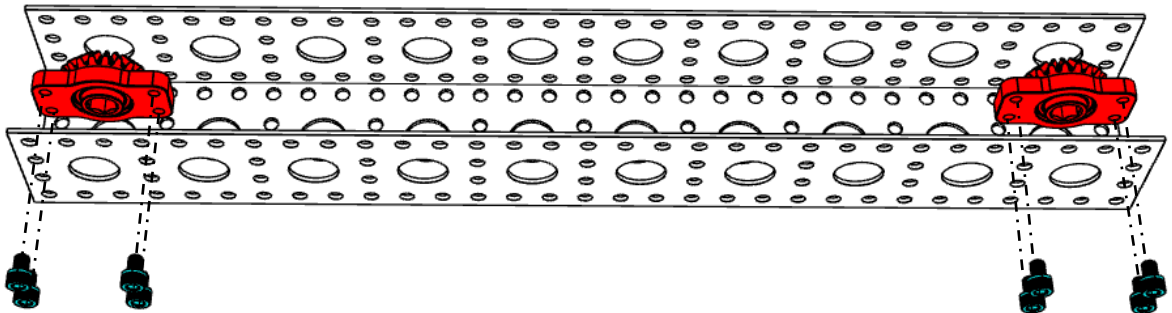
Insert [1] 15mm x 21mm bearing (am-5536) into [1] Bevel Bearing Carrier (am-5048) with [1] 20 Tooth Bevel Gear (am-4869). Repeat this process to make [4] total bevel assemblies.



4X

Frame Assembly – Step 2

Install [2] of the bevel assemblies to [1] 15.5" long 2" x 2 channel (am-5047-1550) using [8] 1/4" 10-32 screws (am-1771). Repeat this step once to make [2] channel assemblies.

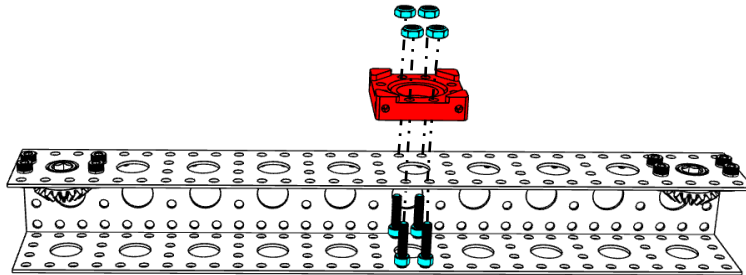


2X

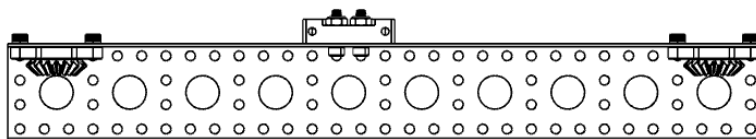
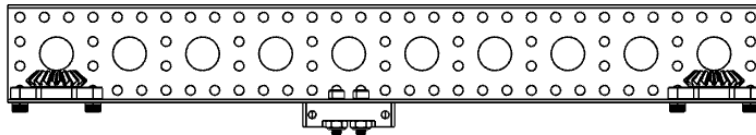
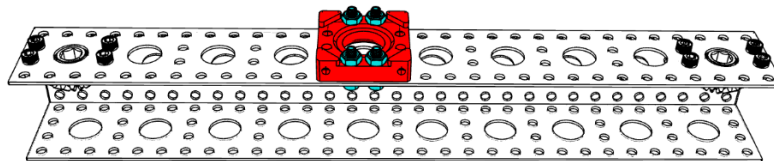
Frame Assembly – Step 3

Install [1] 2" x 2" channel mount (am-5049) to the 15.5" long channel using [4] 3/4" 10-32 screws (am-1047) and [4] 10-32 nylock nuts (am-1063) onto each assembly. The assemblies are mirrored, not identical.

Side 1

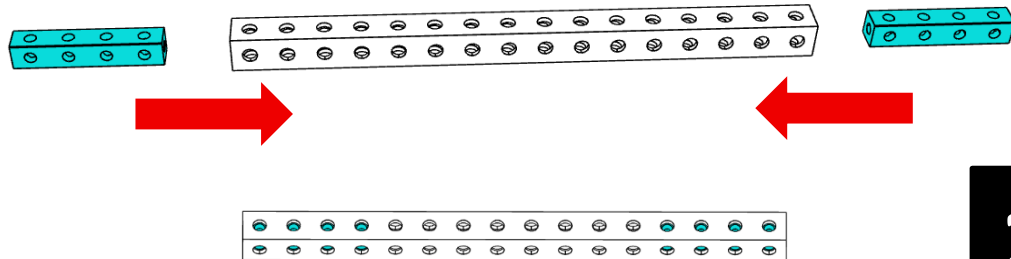


Side 2



Frame Assembly – Step 4

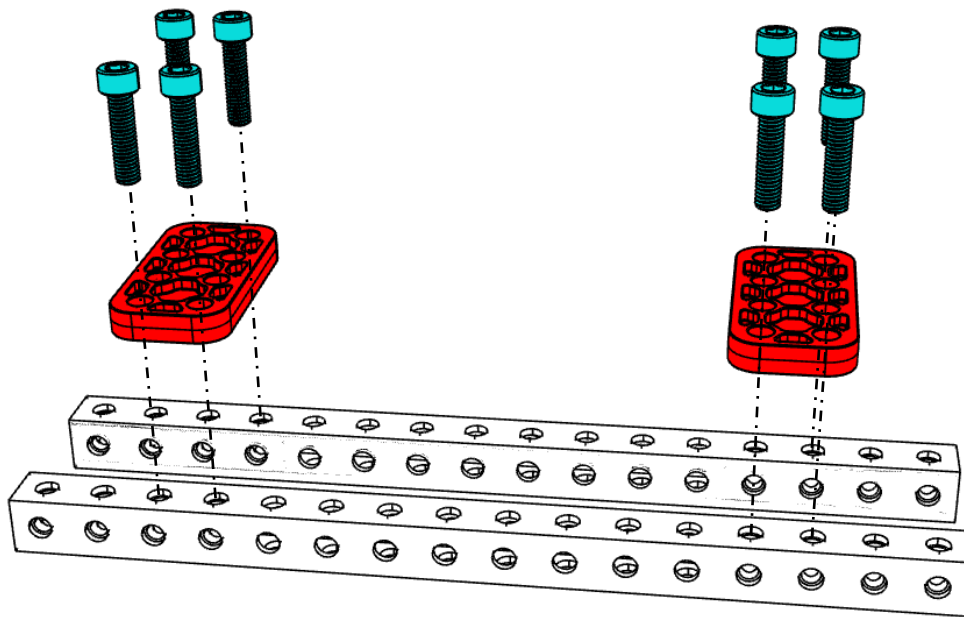
Insert [2] 4-hole 1/2" x 1/2" tube plugs (am-5738_1x4) into [1] 8" long 1/2" x 1/2" tube (am-5001-0800) until the ends are flush. Repeat this step to create [2] total tube assemblies



2X

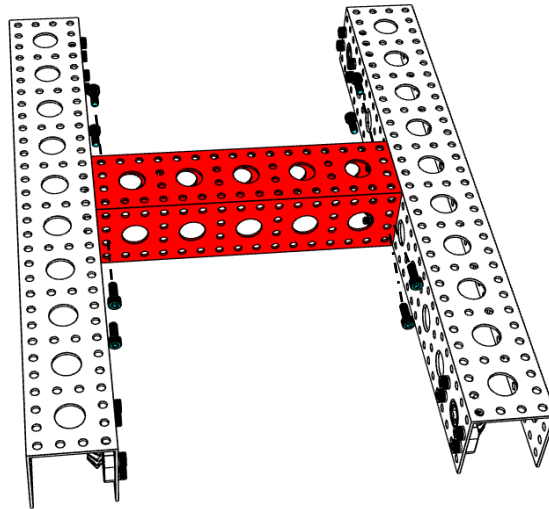
Frame Assembly – Step 5

Fasten [2] 2x4 plate gussets (am-5006_2x4) to the tube assemblies from step 4 using [8] 3/4" 10-32 screws (am-1047).



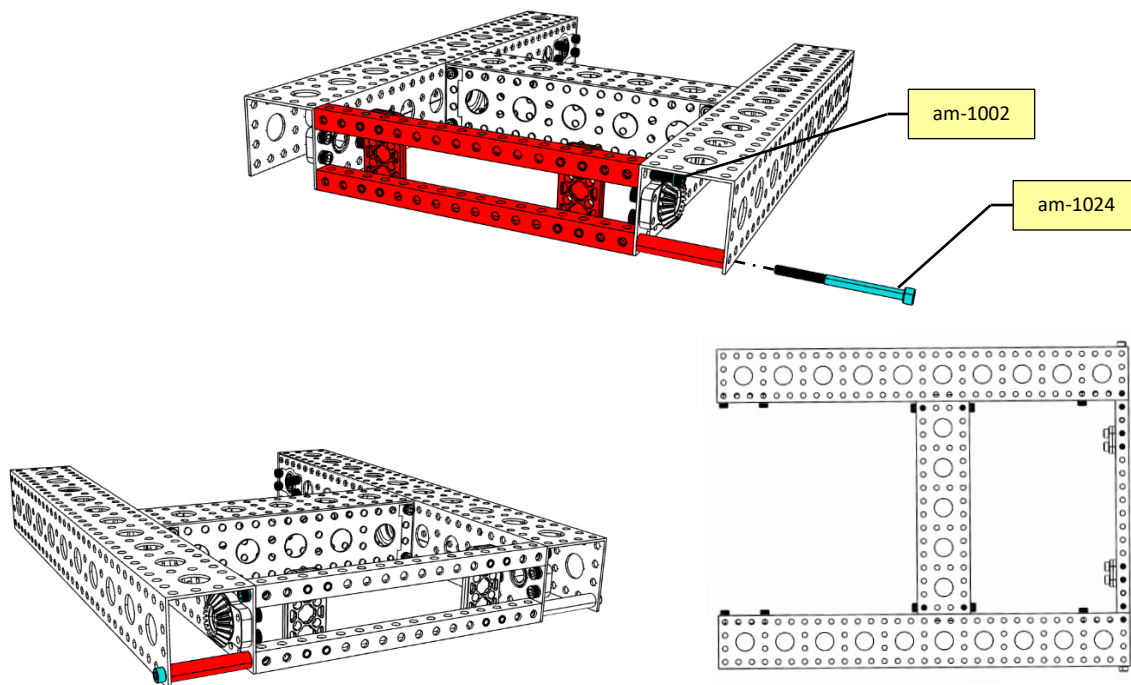
Frame Assembly – Step 6

Connect the [2] 15.5" long channel assemblies using [1] 8" long 2" x 2" channel (am-5047-0800) and [8] 1/2" 10-32 screws (am-1002).



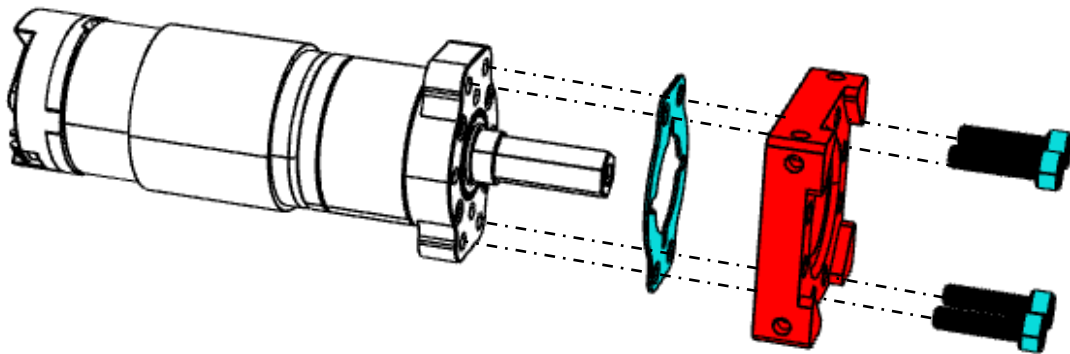
Frame Assembly – Step 7

Install the tube assembly from step 5 to the end of the channel using [2] 1/2" 10-32 screws (am-1002), [2] 1.875" screw spacers (am-1769), and [2] 2.5" 10-32 screws (am-1024).



Frame Assembly – Step 8

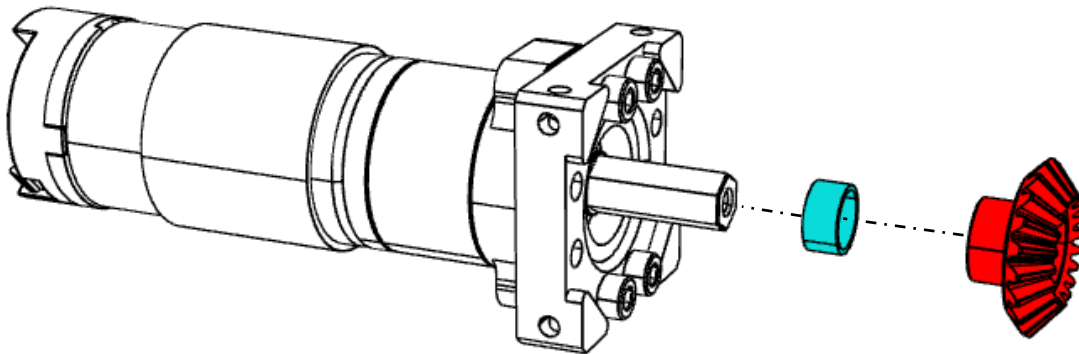
Attach [1] NeveRest Hex Motor to [1] 2" x 2" channel mount (am-5049) with [1] NeveRest Hex spacer (am-1766) between them using [4] 3/4" long 10-32 screws (am-1047). Repeat to make [4] motor assemblies.



4X

Frame Assembly – Step 9

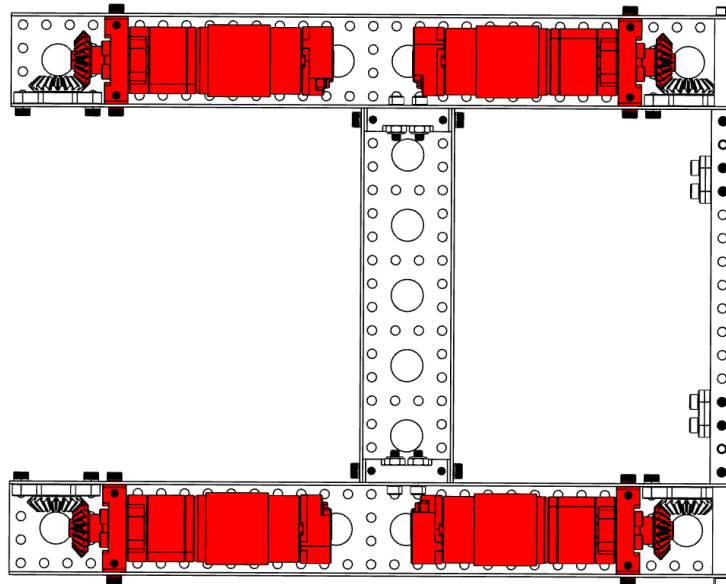
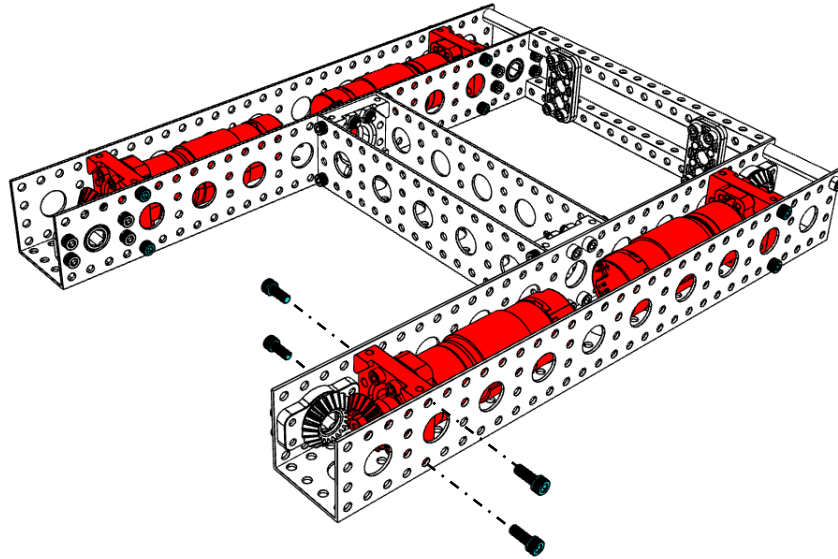
Install [1] 1/4" shaft spacer (am-1698) and [1] 20 Tooth Bevel Gear (am-4869) on to the motor shaft. Repeat this step to create [4] total motor assemblies.



4X

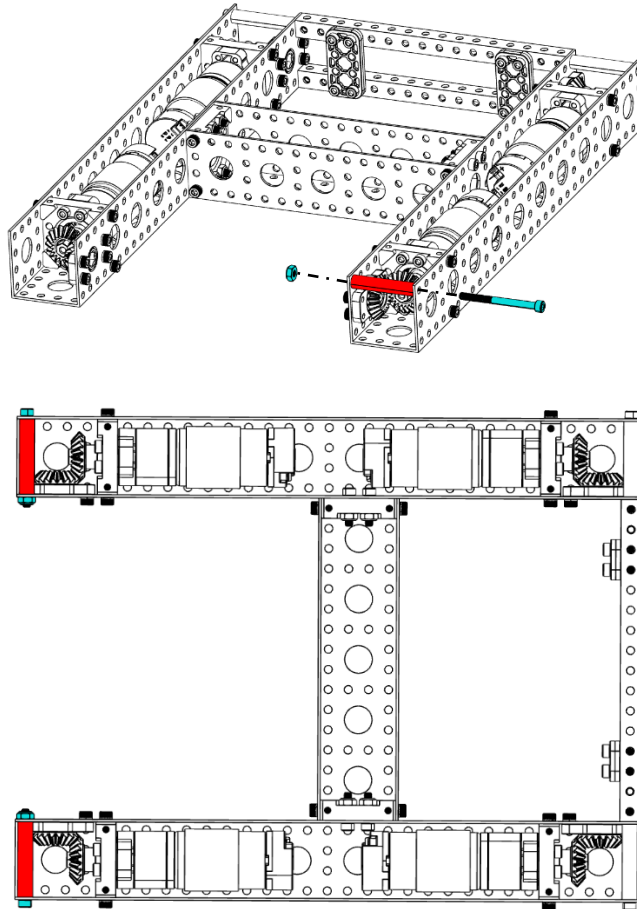
Frame Assembly – Step 10

Insert the motor assemblies from step 9 into the 2" x 2" channel, making sure to align the teeth on the bevel gears until they mesh, and fasten with [16] 1/2" 10-32 screws (am-1002).



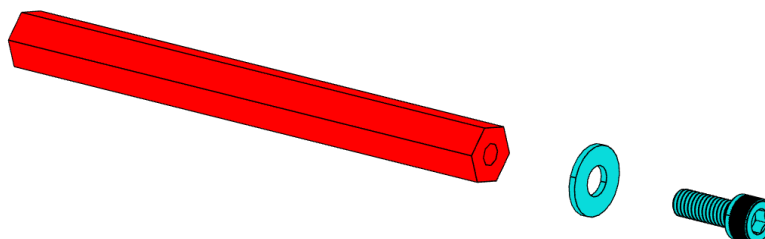
Frame Assembly – Step 11

Install [2] 1.875" screw spacers (am-1769) inside the channel using [2] 2.25" 10-32 screws and [2] 10-32 nylock nuts.



Frame Assembly – Step 12

Install [1] 1/2" 10-32 screw (am-1002) and [1] #10 washer to the end of [1] 4" hex shaft (am-5003-0400). Repeat this step to create [4] total shaft assemblies.

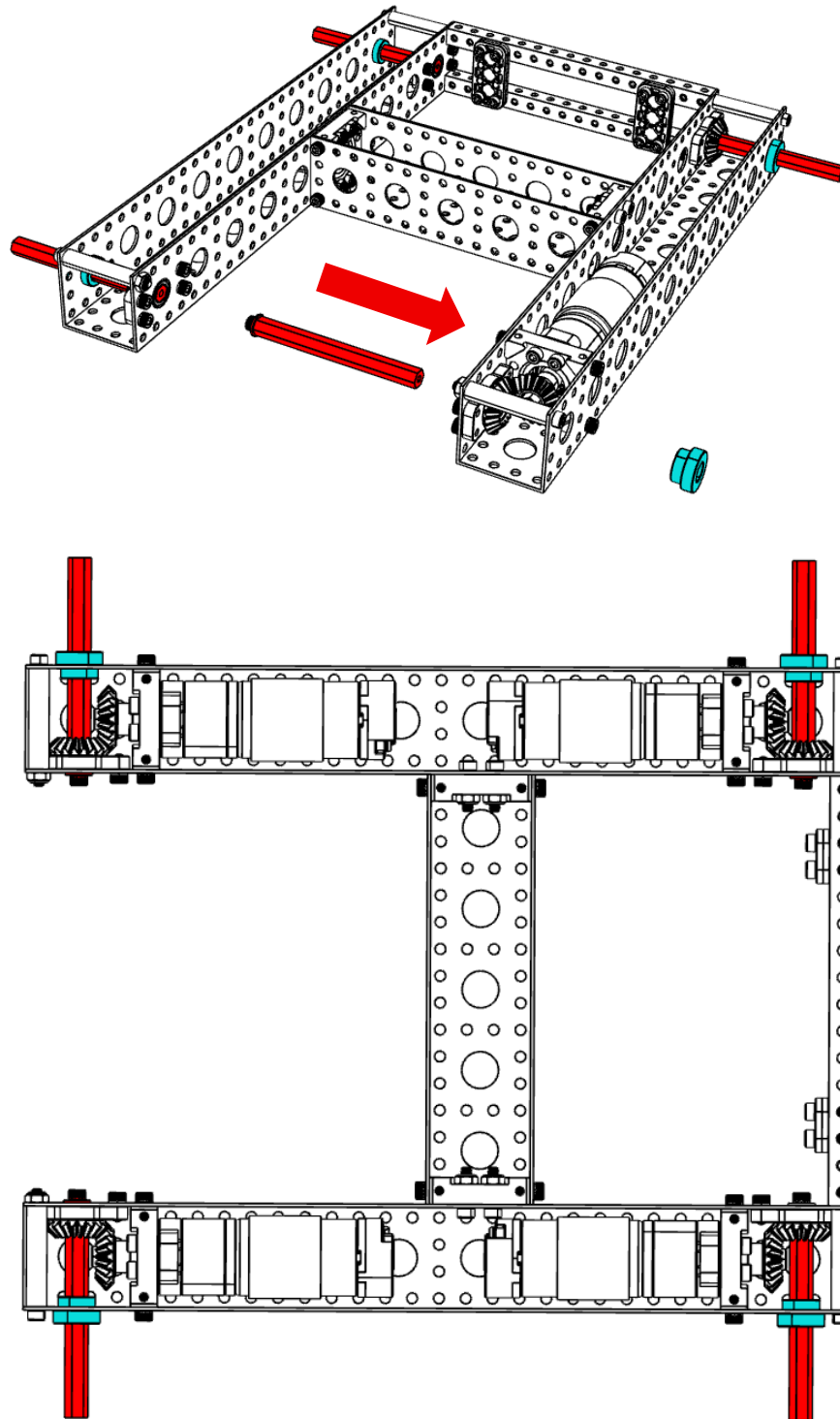


4X



Frame Assembly – Step 13

Insert the [4] shaft assemblies from step 12 into the bevel assemblies along with [4] Robits bushings (am-5021) from the opposite side.



Wheel Assembly

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

[3 Inch BB Mecanum Wheel Assembly Guide](#)



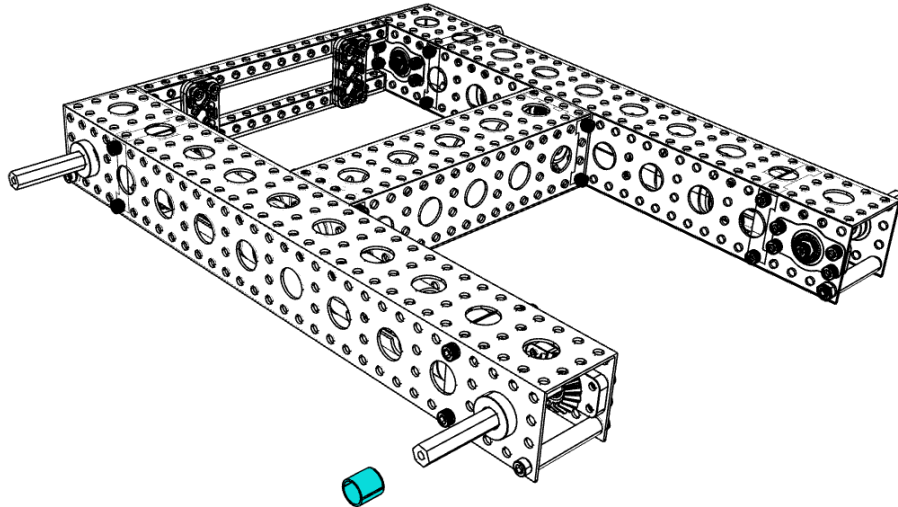
[4 Inch BB Mecanum Wheel Assembly Guide](#)



3" BB Mecanum Wheel Configuration

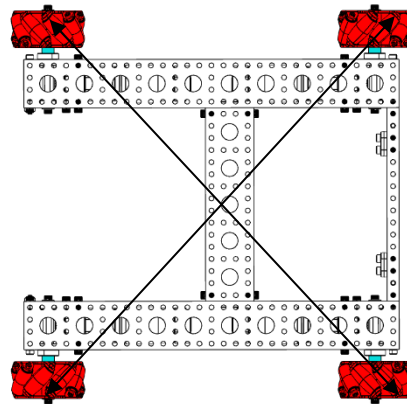
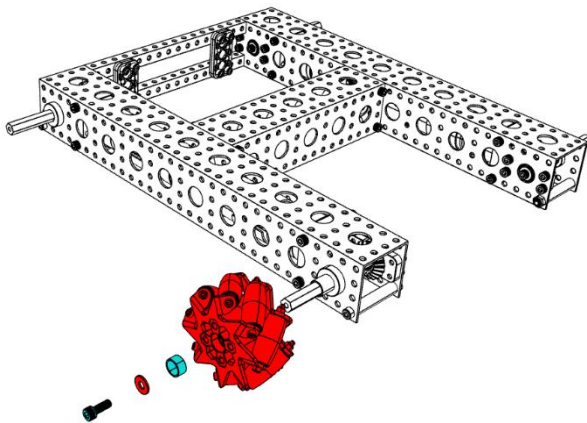
3" BB Wheel – Step 1

For the 3" BB wheel option, install [1] 1/2" shaft spacer (am-1699) onto the hex shaft.



3" BB Wheel – Step 2

Install [1] 3" BB mecanum wheel (am-5502) onto the shaft along with [1] 1/4" shaft spacer and retain with [1] #10 washer (am-1002) and [1] 1/2" 10-32 screw (am-1026). Repeat steps 1 & 2 to install all [4] wheels, making sure the rollers form an X when viewed from above.

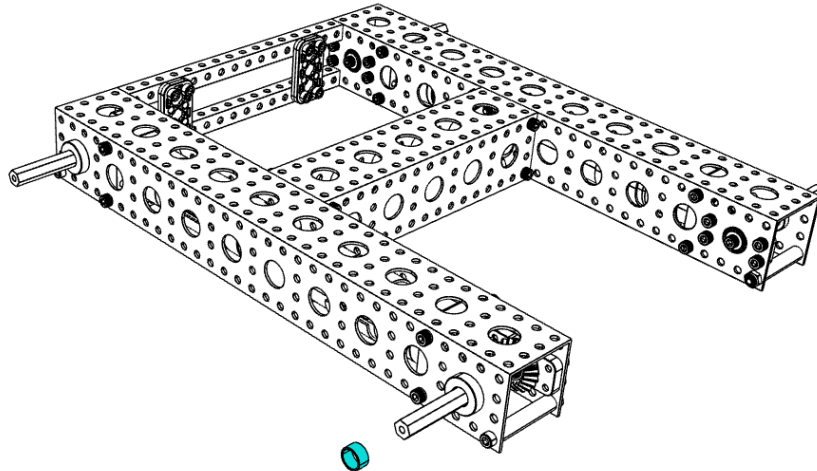


4X

4" BB Mecanum Wheel Configuration

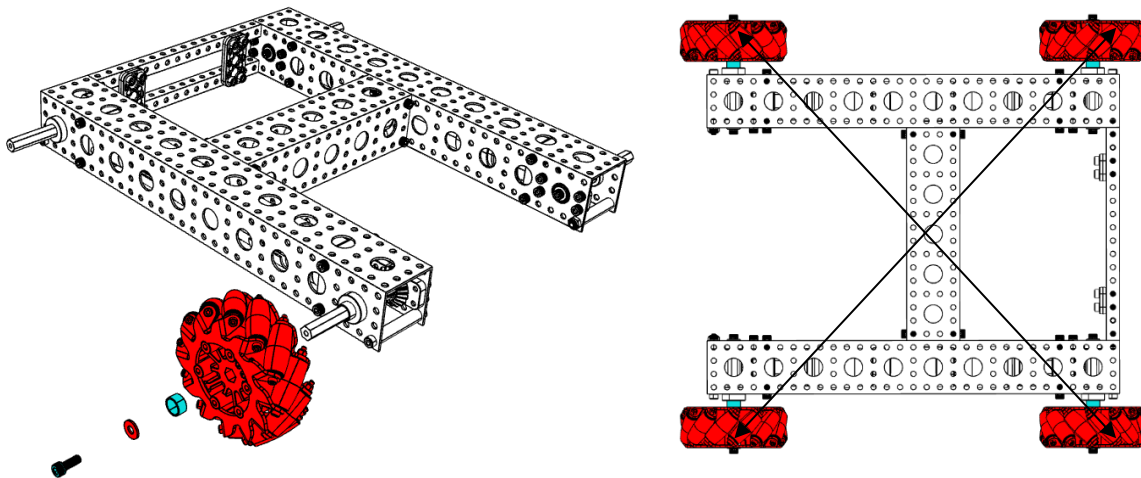
4" BB Wheel – Step 1

For the 4" BB wheel option, install [1] 1/4" shaft spacer (am-1698) onto the hex shaft.



4" BB Wheel – Step 2

Install [1] 4" BB mecanum wheel (am-4735) onto the shaft along with [1] 1/4" shaft spacer (am-1698) and retain with [1] #10 washer (am-1002) and [1] 1/2" 10-32 screw (am-1026). Repeat steps 1 & 2 to install all [4] wheels, making sure the rollers form an X when viewed from above.



4X