

Assembly Guide

2.25" HD Mecanum Intake Wheels

Creates am-4418R and am-4418L



Revisions:

12-06-21: Internal Release

10-10-23: Changed screw part number from am-1596 to am-1679

Tools Needed:

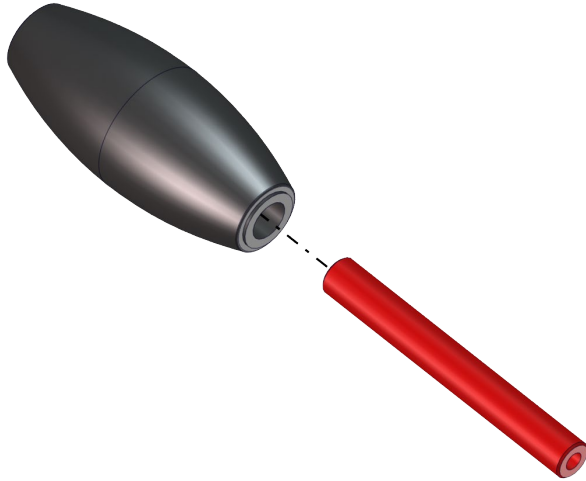
- Two, 1/16" Straight Tip Allen Wrenches
- Flat Work Surface

Parts Used:

Component	Product Number	Qty	Product Photo
4-40 x 0.250 in. BHCS with Nylon Patch	am-1679	13	
3/32 in. Diameter x 5/8 in. Long Steel Slotted Spring Pin	am-1597	2	
2.25 in. HD Mecanum Wheel Roller	am-4417	6	
2.215 in. HD Mecanum Roller Axle	am-4420	6	
2.25 in. HD Mecanum Wheel Hex Hub Half	Not Individually Available	2	
2.25 in. HD Mecanum Wheel Right Plate OR 2.25 in. HD Mecanum Wheel Left Plate	am-4418R_plate OR am-4418L_plate	2	

Roller-Axle Assembly

Step 1: Insert one Roller Axle (am-4420) axle into a Roller (am-4417.)



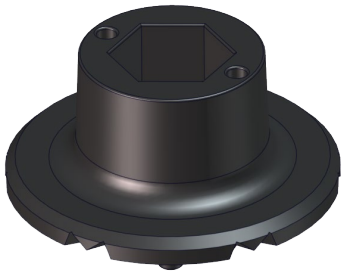
Step 2: Repeat with the remaining rollers and roller axles to create six total Roller Assemblies.



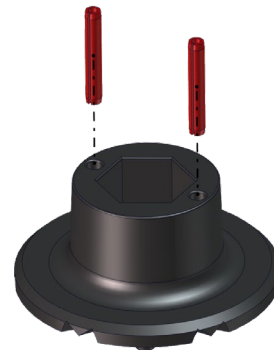
6X

Wheel Assembly

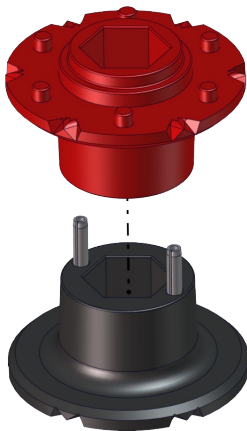
Step 1: Place one 2.25 in. HD Mecanum Wheel Hex Hub Half (am-4421_half) down, small end pointing up.



Step 2: Press the two 3/32 in. Diameter x 5/8 in. Long Steel Slotted Spring Pins (am-1597) into the two small holes surrounding the hex bore.

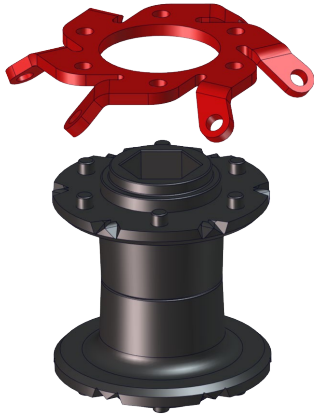


Step 3: Install the second Hub Half onto the Spring Pins, ensuring there is no gap between the Hub Halves.

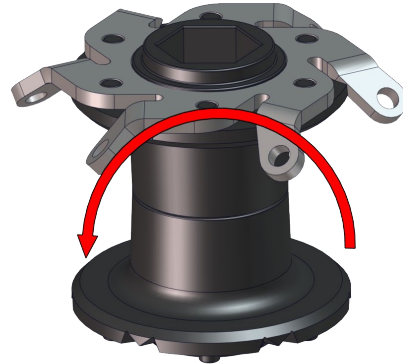


Wheel Assembly Continued

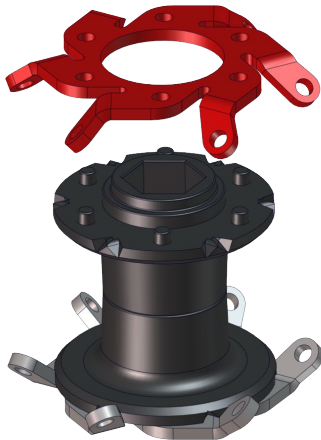
Step 4: Place a Wheel Plate onto the Hub Assembly. The six pins of the Hub Half will nest into the six center holes of the Plate.



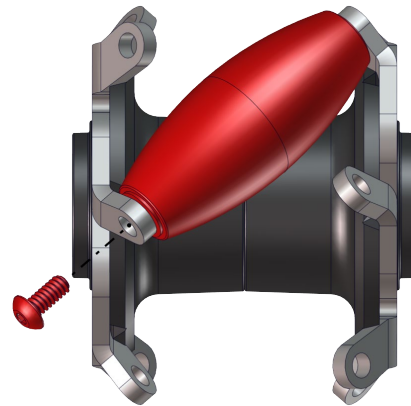
Step 5: Flip the assembly over.



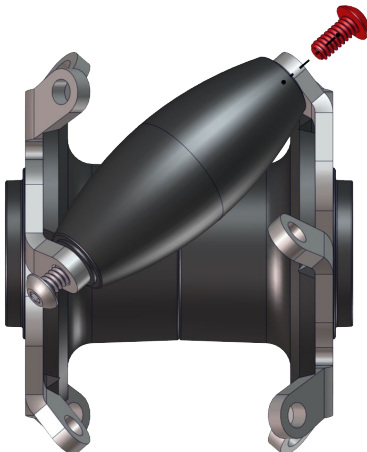
Step 6: Place a second Plate onto the other Hub Half. Two right plates make a right wheel and two left plates make a left wheel.



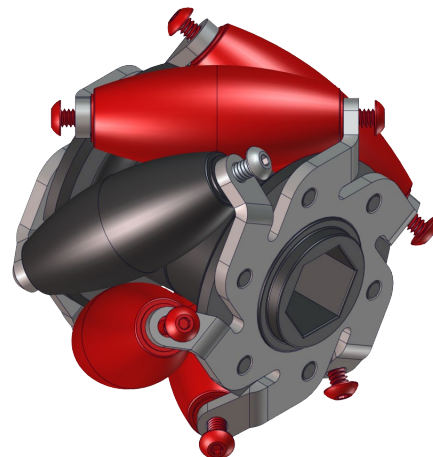
Step 7: Hold a Roller Assembly in between the two plates and loosely thread a 4-40 x 0.250 in. Button Head Cap Screw (am-1679) into the Roller Assembly. **Do not fully tighten the screw.**



Step 8: Loosely install a second Screw into the opposing end of the Roller Assembly.

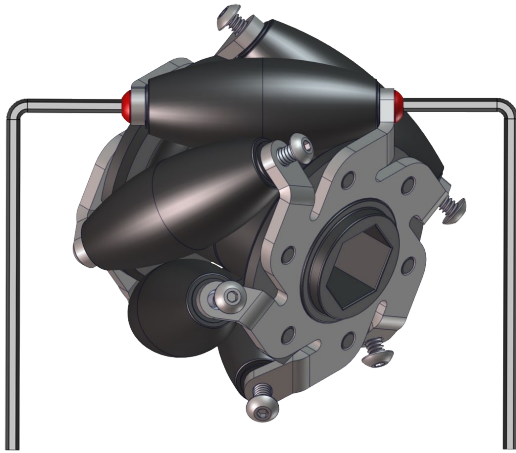


Step 9: With one Roller Assembly loosely attached, work around the wheel loosely installing the remaining five Roller Assemblies.

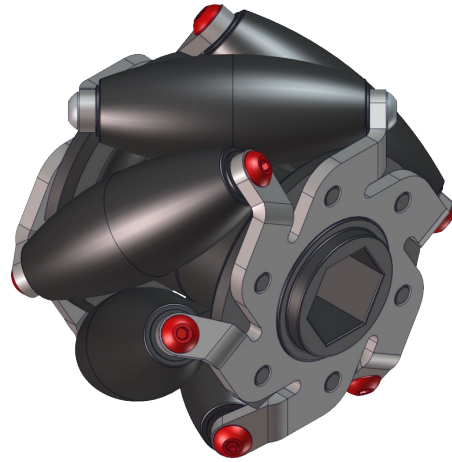


Wheel Assembly Continued

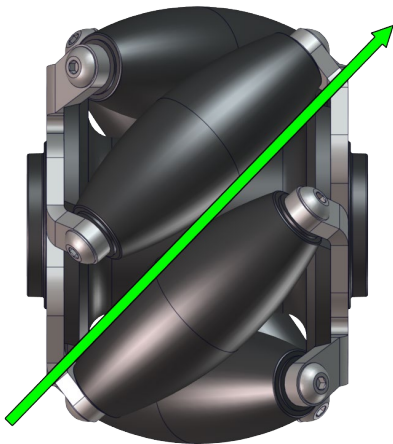
Step 10: Secure **ONE** Roller Assembly by using the included 1/16" Allen wrenches to tighten **BOTH** screws simultaneously.



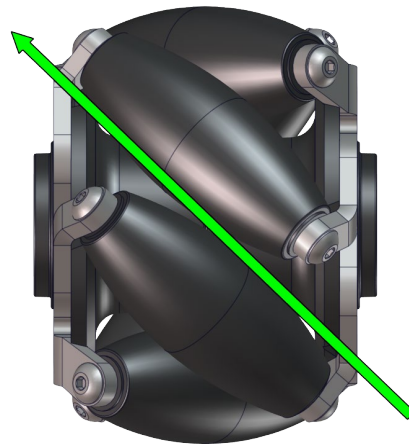
Step 11: Tighten the remaining screws in the same manner.



These steps have shown a Right Wheel assembly. A Right Wheel can be identified by the rollers ascending to the right when the wheel is viewed from the front or back face as shown in the first image below. The second image shows a Left Wheel, which is assembled using the same steps, but with Left Plates.



Right



Left