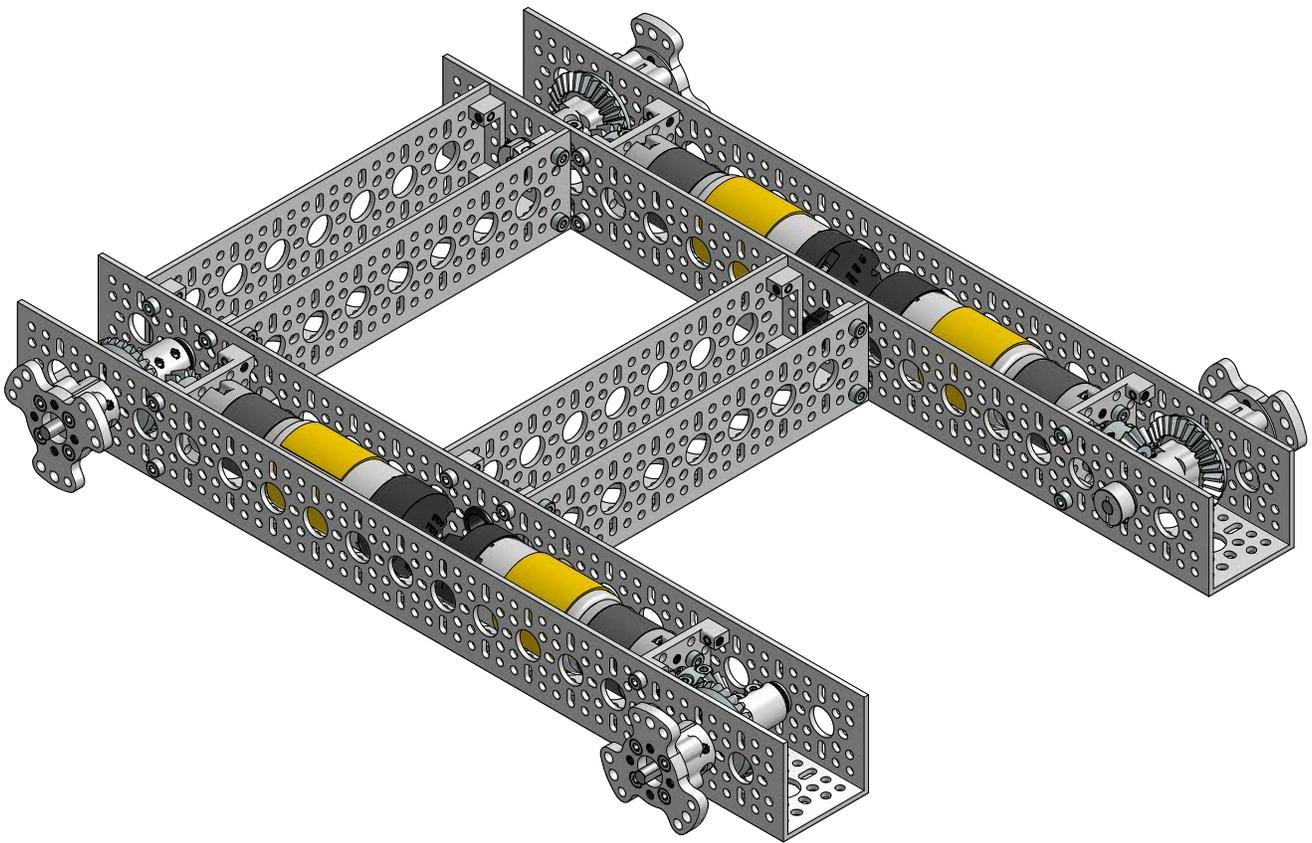


# Assembly Instructions for **Strafer Chassis Kit (No Wheels)**

SKU: 3209-0001-0001



# Kit Contents:

Shim, 0.25mm Thickness  
SKU: 2807-0609-0250  
**QTY: 12** (one 12 pack)



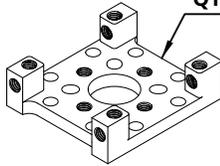
Ball Bearing, 6mm Bore  
SKU: 1611-0514-0006  
**QTY: 8** (four 2 packs)



Clamping Collar, 6mm Bore  
SKU: 2910-0816-0006  
**QTY: 4**



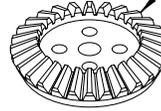
Quad Block Pattern Mount  
SKU: 1201-0043-0002  
**QTY: 4**



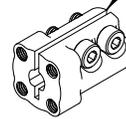
Pinion Bevel Gear, 14 Tooth, 6mm D-Bore  
SKU: 2306-0006-0014  
**QTY: 4**



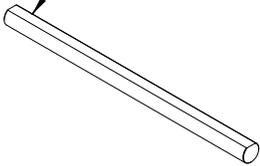
Hub Mount Bevel Gear, 28 Tooth  
SKU: 2307-0006-0028  
**QTY: 4**



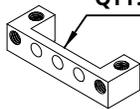
Bevel Gear Hub  
SKU: 1306-0016-1006  
**QTY: 4**



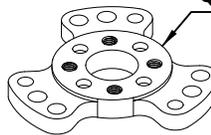
6mm D-Shaft, 90mm Length  
SKU: 2101-0006-0090  
**QTY: 4**



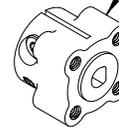
Dual Block Mount  
SKU: 1205-0001-0002  
**QTY: 8** (four 2 packs)



Wheel Adaptor  
SKU: 1206-0016-0005  
**QTY: 4** (two 2 packs)



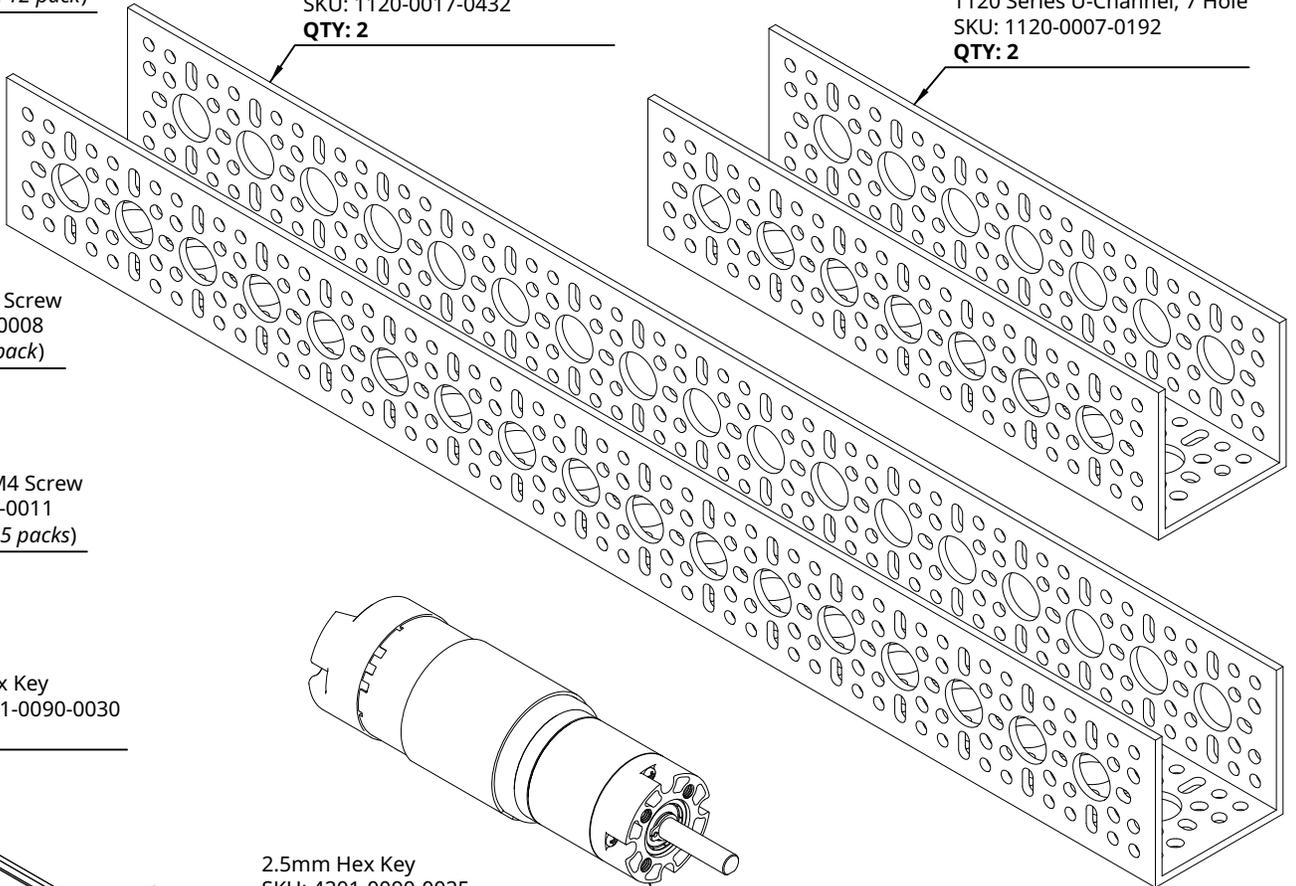
Hyper Hub, 6mm D-Bore  
SKU: 1310-0016-1006  
**QTY: 4**



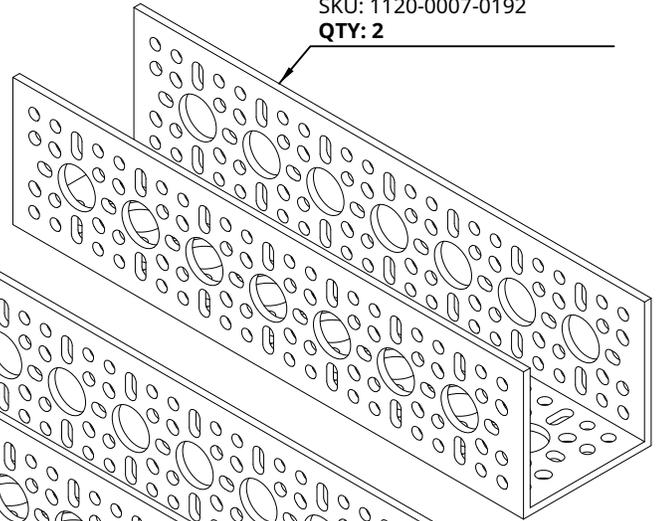
Plastic Grommet  
SKU: 2911-0014-0001  
**QTY: 12** (one 12 pack)



1120 Series U-Channel, 17 Hole  
SKU: 1120-0017-0432  
**QTY: 2**



1120 Series U-Channel, 7 Hole  
SKU: 1120-0007-0192  
**QTY: 2**



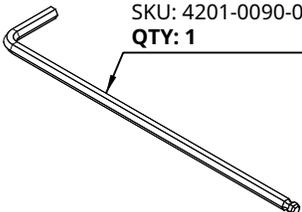
8mm Length M4 Screw  
SKU: 2800-0004-0008  
**QTY: 25** (one 25 pack)



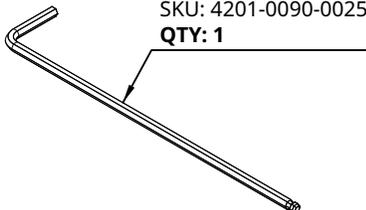
11mm Length M4 Screw  
SKU: 2800-0004-0011  
**QTY: 75** (three 25 packs)



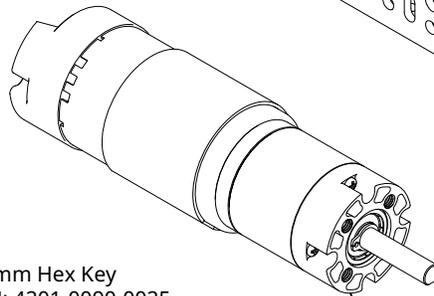
3mm Hex Key  
SKU: 4201-0090-0030  
**QTY: 1**



2.5mm Hex Key  
SKU: 4201-0090-0025  
**QTY: 1**



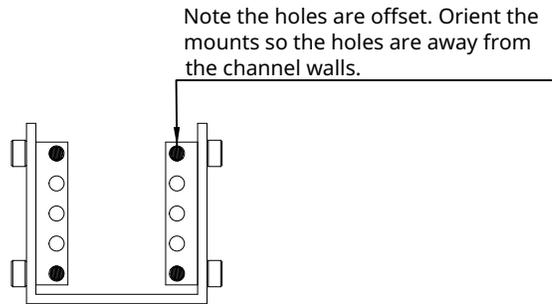
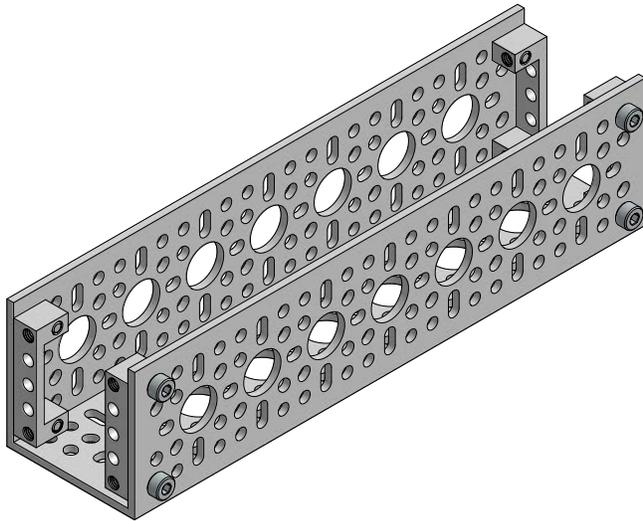
5202 Series Yellow Jacket Planetary Gear Motor, 435 RPM  
SKU: 5202-0002-0014  
**QTY: 4**



## STEP 1

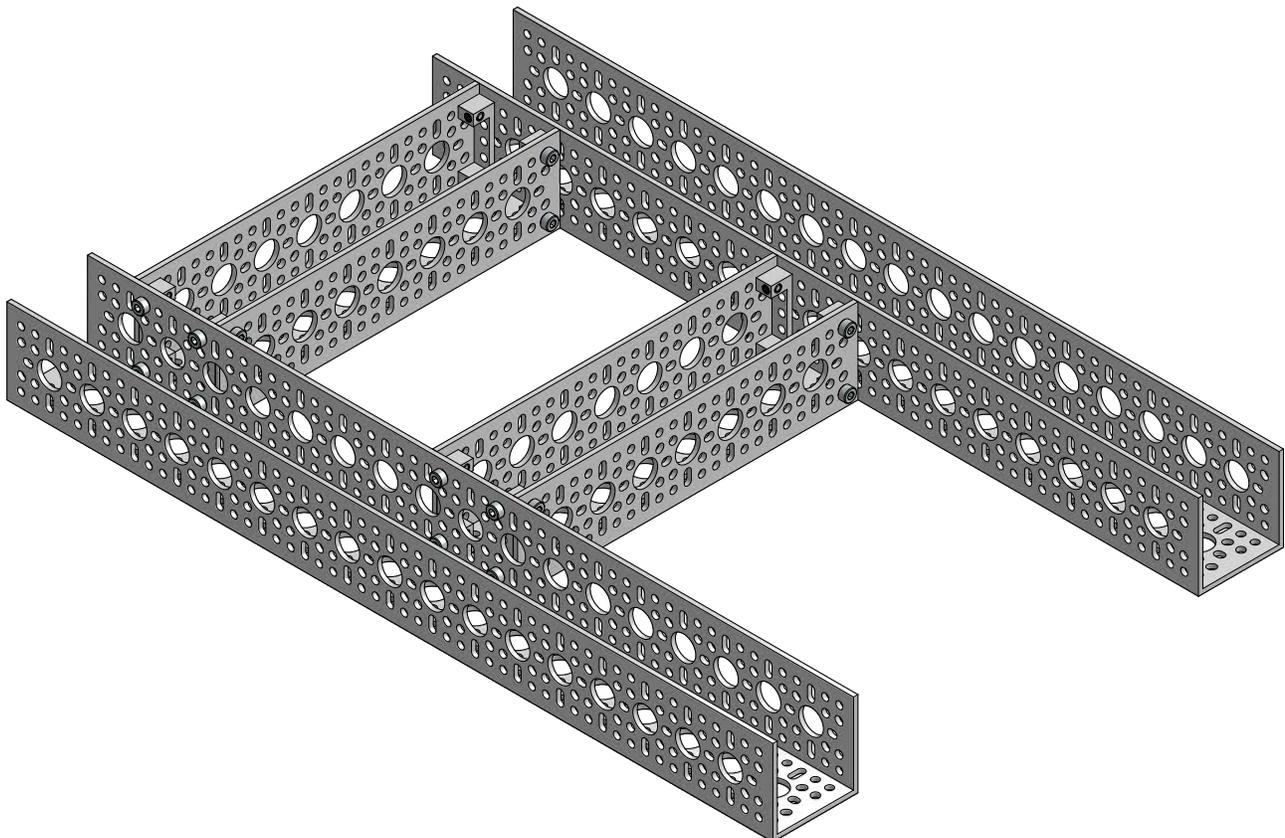
Using eight of the 11mm long screws, fasten two Dual Block Mounts per end of a seven hole U-Channel as shown.

*Repeat this process on the other seven hole U-Channel.*



## STEP 2

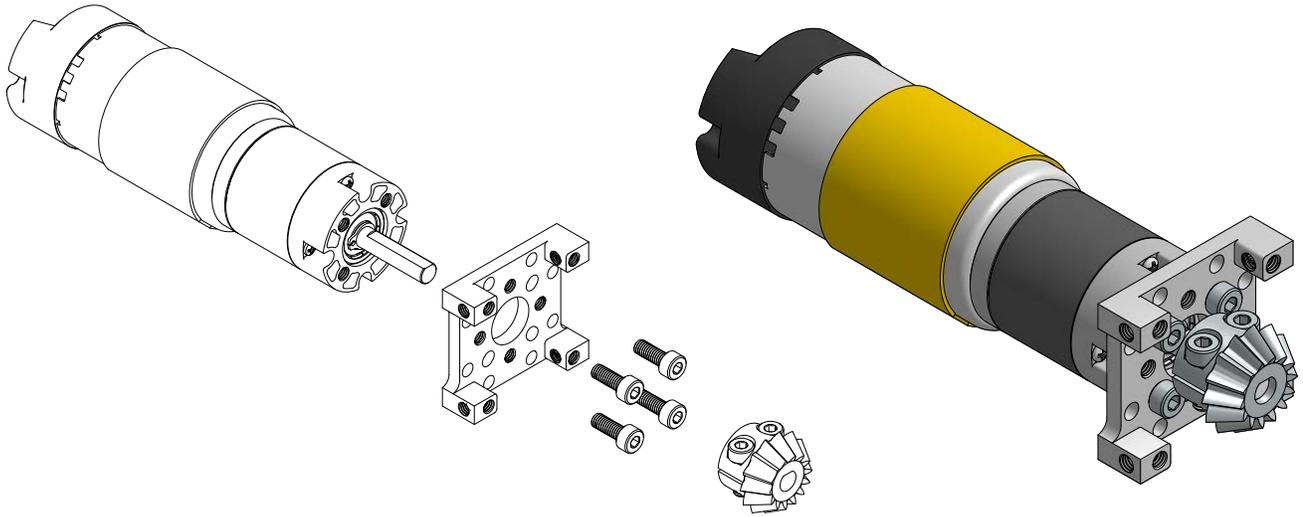
Using sixteen of the 8mm long screws, fasten the seven hole U-Channels to the seventeen hole U-Channels as shown. A recommended location is shown but the location you choose could be different based on your needs.



### STEP 3

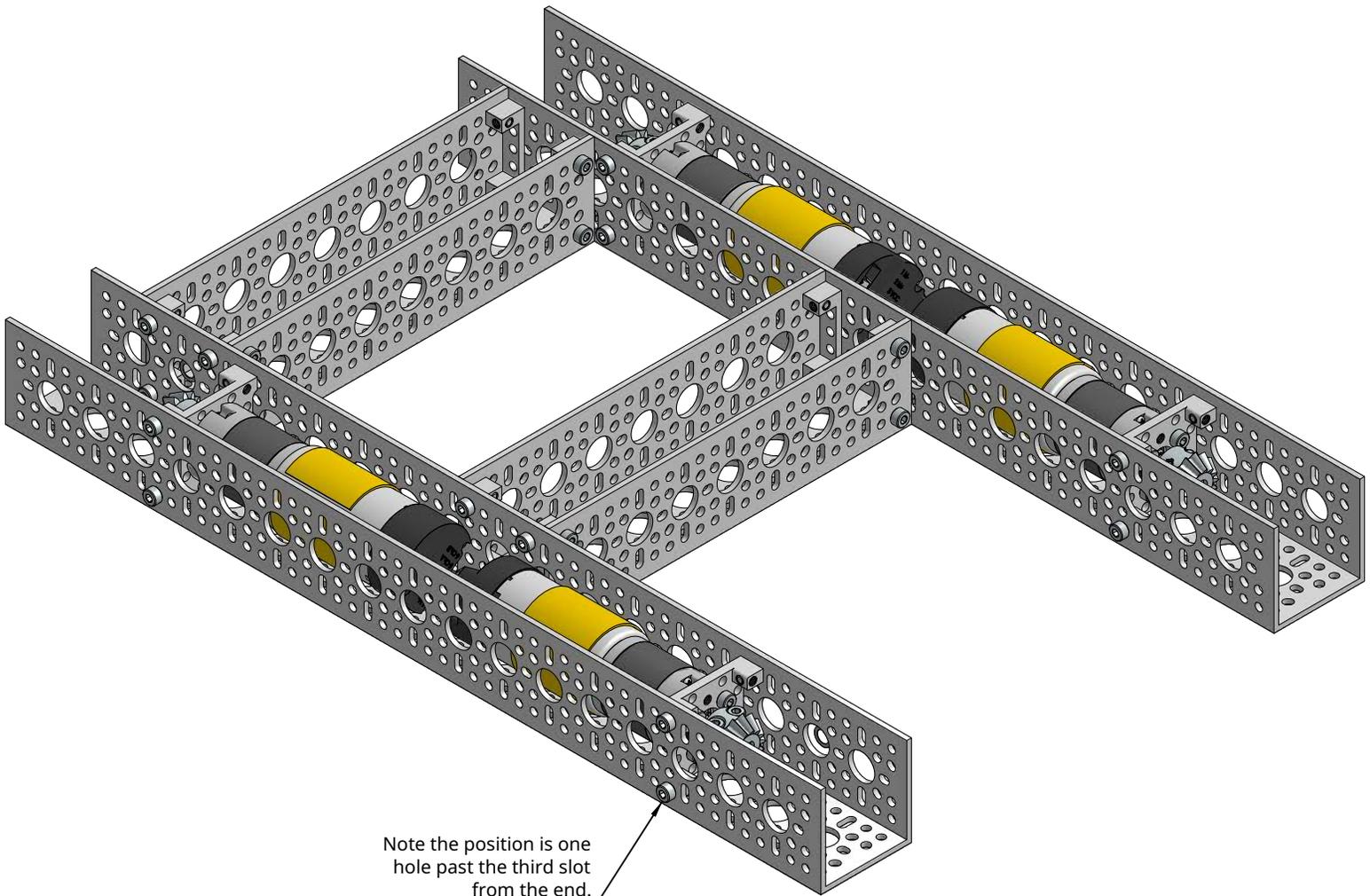
Using four 11mm long screws, fasten a Quad Block Pattern Mount to the face of a motor. Then slide a pinion bevel gear onto the shaft as shown. Tighten the pinch bolts for the gear gently as you will adjust the final spacing later on.

*Repeat this step for each remaining motor.*



### STEP 4

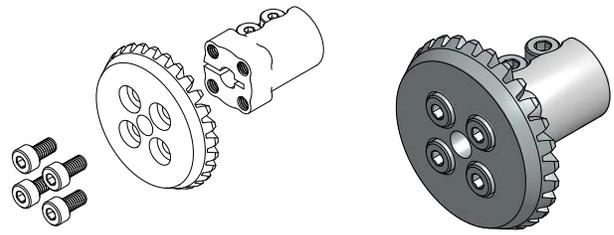
Using sixteen 11mm long screws, mount the motor assemblies from Step 3 into the chassis frame as shown.



## STEP 5

Fasten a bevel gear hub (using the four 8mm long screws that came with it) to one of the larger bevel gears.

*Repeat this step for each remaining large bevel gear.*

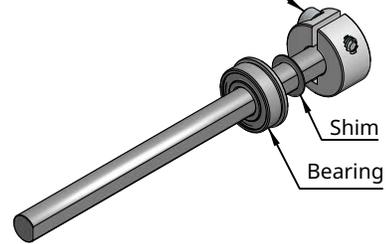


## STEP 6

Attach a clamping collar flush on the end of a shaft. Slide a shim and then a bearing onto the shaft as shown.

*Repeat this step for each remaining shaft.*

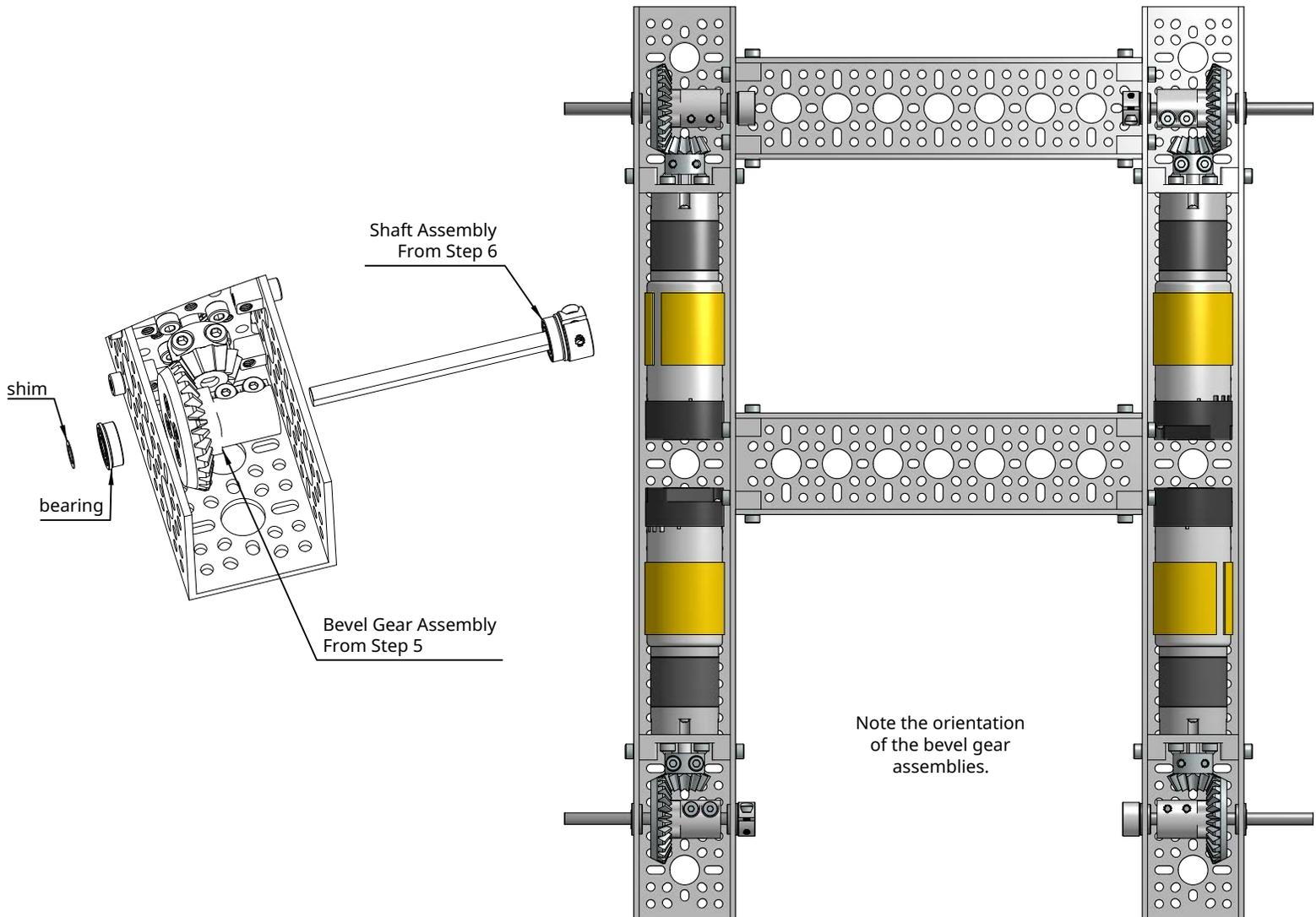
Note: the clamping collars require a 2.5mm hex key whereas everything else in this kit requires a 3mm hex key.



## STEP 7

Place one of the Bevel Gear Assemblies from Step 5 in the chassis frame as shown. Slide one of the Shaft Assemblies from Step 6 through the second large (14mm) hole from the end of the channel, and through your Step 5 assembly. Slide another bearing and shim onto the shaft. Make sure each bearing is properly seated in its corresponding 14mm hole. Be cautious since this shaft assembly is not axially constrained until the wheel hub assemblies get added. If you pick up the chassis sideways for example you may drop shims and bearings.

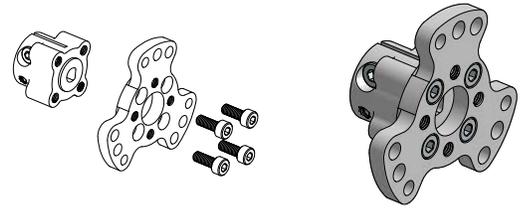
*Repeat this step for each remaining shaft assemblies.*



## STEP 8

Using four 11mm long screws, fasten a Hyper Hub to one of the wheel adaptors.

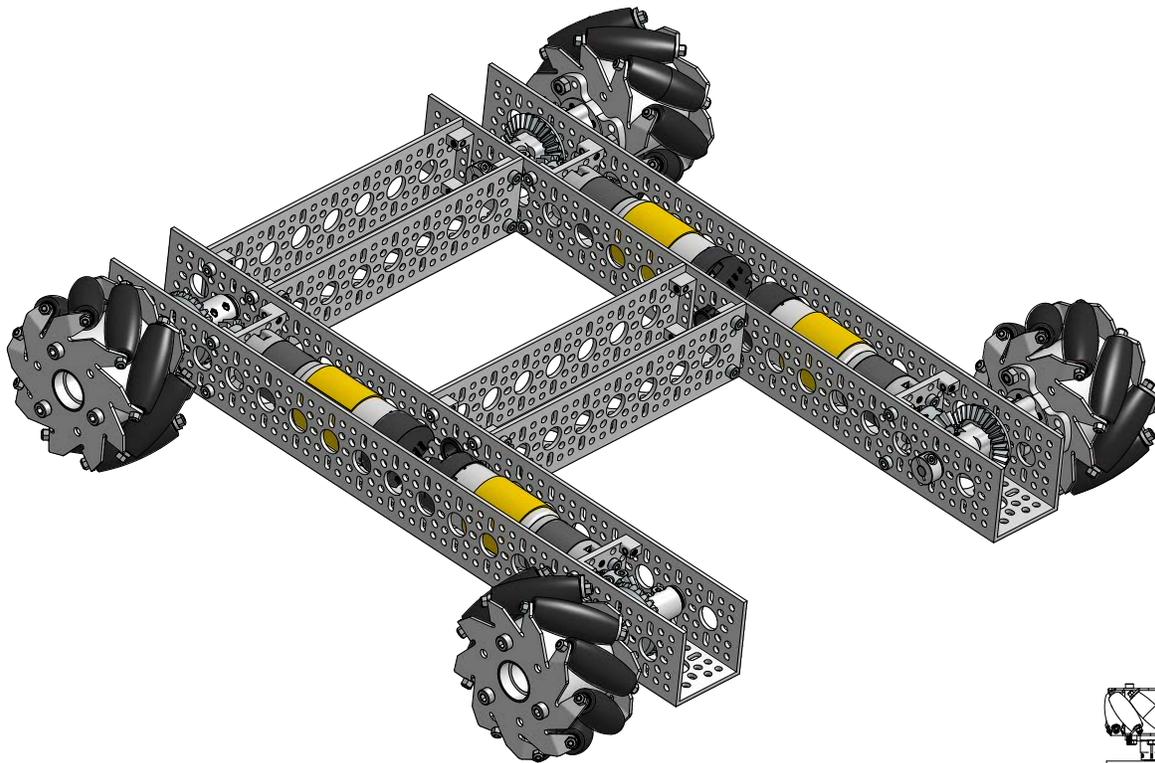
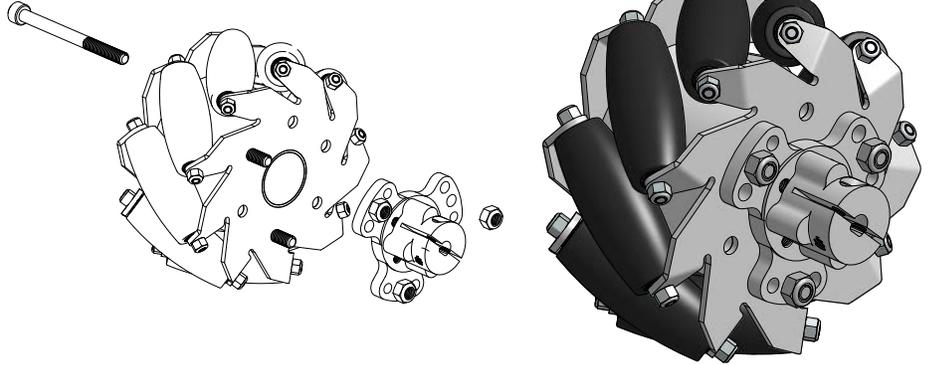
*Repeat this step for each remaining wheel adaptor.*



**NOTE: This kit does NOT come with wheels.**

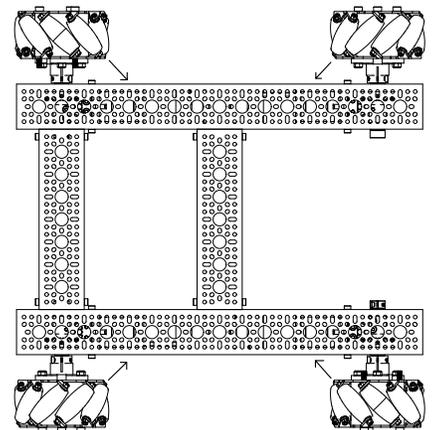
## STEP 9

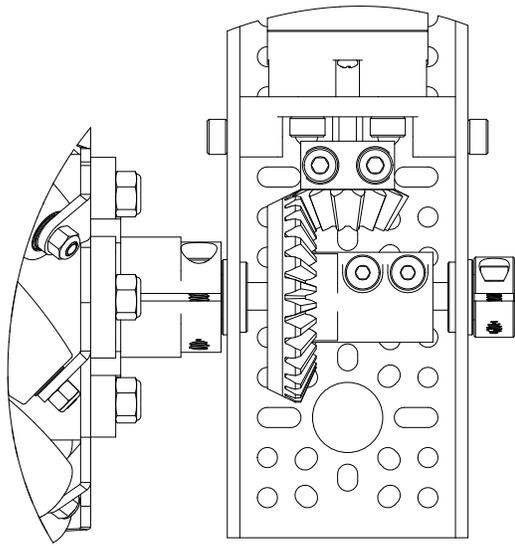
Attach your wheel adaptor assemblies from Step 7 to your wheels. This process changes depending on what wheels you have. See the Product Insights on the product page for the Wheel Adaptor (SKU: 1206-0016-0005) for specific examples based on wheel brand.



## STEP 10

Slide each wheel assembly onto the protruding shafts, then tighten down the pinch bolts on the Hyper Hubs. **NOTE** if you are using mecanum wheels: when seen from a top-down view (like the image to the right), the rollers on the wheels should appear to point towards the middle of the chassis.





## STEP 11

You are now ready to adjust the mesh between the bevel gears. When they are aligned properly, the edges of the gears will line up with one-another and you should feel a very small amount of movement between the two gears. The space between creates what is known as backlash and allows the gears to operate smoothly and without unnecessary friction. A trick to set the gear mesh is to insert a thin piece of material (gum wrapper, plastic bag, piece of paper) between the gears, slide them together, and tighten them in place. Once tight, rotate the assembly to remove the material.

*Repeat this step for each bevel gear set.*

## Pro Tip

We've included plastic grommets that easily snap into the 14mm holes of U-Channel. Use these anywhere you are routing wiring through the channel. This prevents the wire jackets from chaffing against the metal edge of the channel and adds a polished look to your chassis.



## CONGRATULATIONS!

Your Strafer Chassis Kit is now assembled and ready to be wired up!

