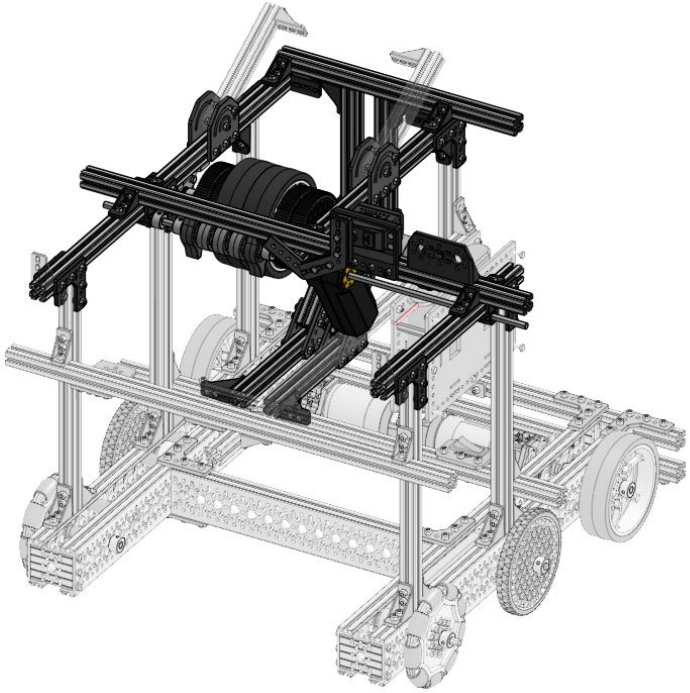
Launcher



1

Get:

- 1 - 15mm Plastic Servo Bracket
- 4 - M3 x 8mm Hex Cap Screw
- 4 - Nyloc Nut

Pre-load the Plastic Servo Bracket with Screws and Nuts.

2

Get:

- 1 - Smart Robot Servo
- 4 - M3 x 16mm Hex Cap Screw
- 4 - Nyloc Nut

Attach the Smart Robot Servo to the Servo Bracket using Screws and Nuts as shown.

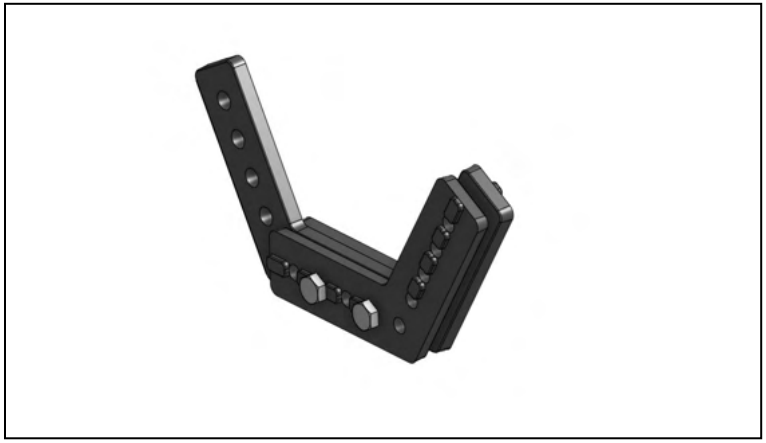
3

Get:

- 1 - Aluminum Double Servo Arm
- 1 - M3 x 8mm Hex Cap Screw

Mount the Aluminum Double Servo Arm to the Smart Robot Servo using a screw.

4



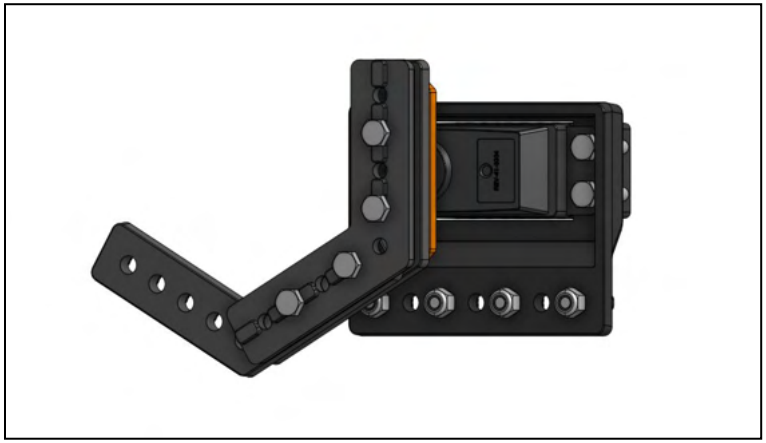
Get:

- 3 - 15mm Plastic 120 Degree Bracket
- 2 - M3 x 16mm Hex Cap Screw
- 2 - Nyloc Nut

Stack the 3 Plastic 120 Degree Brackets so that the outer two are facing the same direction and the inner one is opposite.

Secure them together with two Screws and Nuts

5



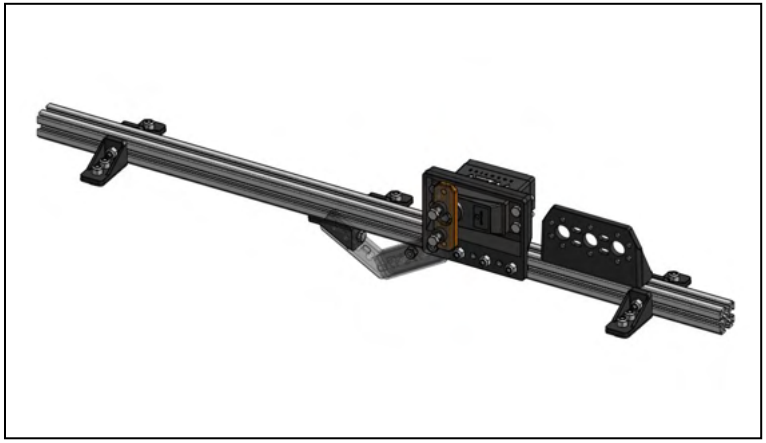
Get:

- 2 - M3 x 16mm Hex Cap Screw
- 2 - Hex Shaft Spacer - 3mm

Attach the 120 Degree Bracket stack to the Aluminum Double Servo Arm.

Use the 3mm Hex Shaft Spacers in between the outer brackets to support the assembly and prevent crushing.

6



Get:

- 1 - 15mm Extrusion - 420mm
- 6 - 15mm Plastic Lap Corner Bracket
- 1 - 15mm Gearbox Motion Bracket
- 22 - M3 x 8mm Hex Cap Screw
- 22 - Nyloc Nut

Pre-load 6 Lap Corner Brackets and One Gearbox Motion Bracket.

Then, slide the Servo Bracket Assembly and pre-loaded brackets onto the Extrusion as shown.

7

Get:

- 1 - 15mm Extrusion - 420mm
- 1 - 15mm Extrusion - Cut to 266
- 1 - 15mm Extrusion - 225mm

Attach 3 Extrusion pieces to the Servo/Agitator assembly using the Lap Corner Brackets.

8

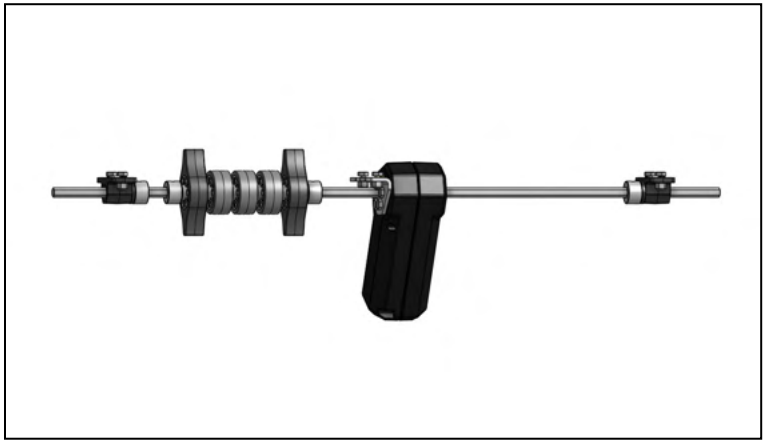
Get:

- 1 - Core Hex Motor
- 1 - 15mm Metal Bent Core Hex Motor Bracket
- 6 - M3 x 8mm Hex Cap Screw
- 2 - Nyloc Nut

Attach a Metal Bent Core Hex Motor Bracket to the side of a Core Hex Motor using 4 screws as shown.

Then, use the remaining two screws and nuts to pre-load the bracket.

9



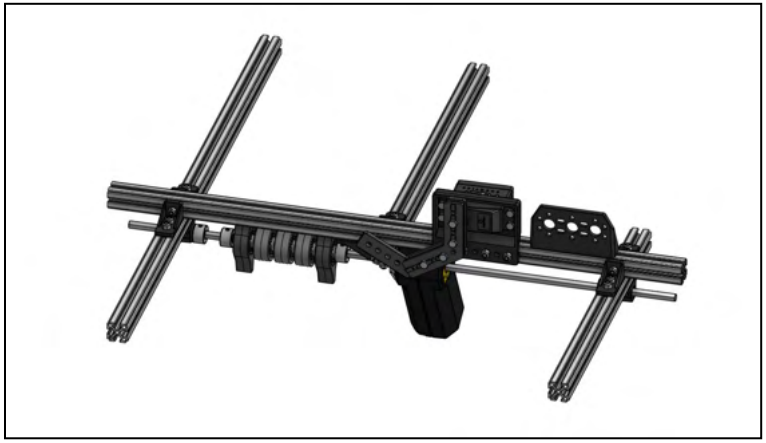
Get:

- 1 - 400mm Hex Shaft
- 2 - 15mm Bearing Pillow Block
- 2 - Medium - Flap Wheel Trimmed
- 3 - Soft - 1in Grip Wheel
- 4 - Shaft Collar
- 4 - M3 x 8mm Hex Cap Screw
- 4 - Nyloc Nut

Slide the following on to the Hex Shaft from left to right:

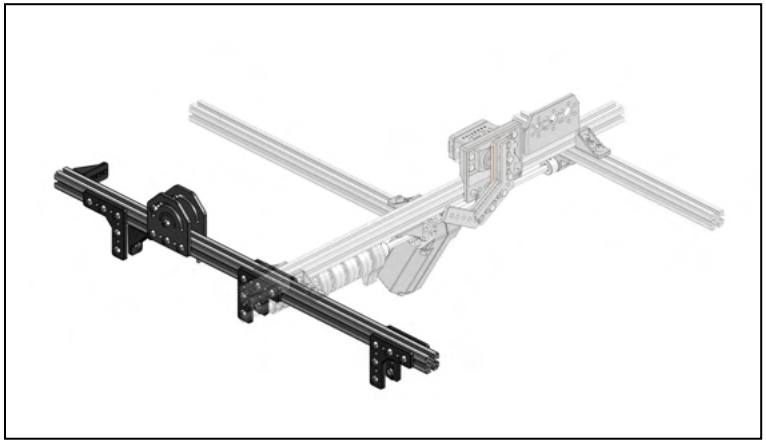
- 1- Pre-loaded Pillow Block, 2 - Shaft Collars, 1 - Flap Wheel, 3 - 1in Grip Wheels, 1 - Flap wheel, 1 - Shaft Collar, 1 - Core Hex Motor, Shaft Collar, 1 - Pre-loaded Pillow Block

10



Slide Core Hex assembly on to the Agitator Assembly using the two Pillow Blocks to connect to the Extrusion.

11



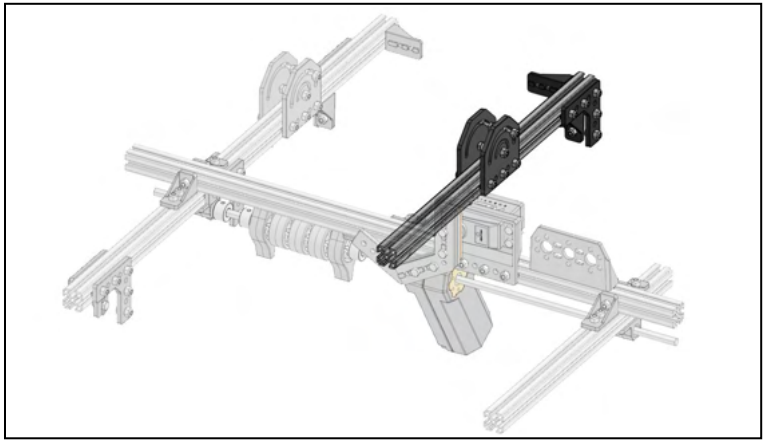
Get:

- 5 - 15mm Plastic 90 Degree Bracket
- 1 - 15mm Plastic Lap Corner Bracket
- 1 - 15mm Plastic Inside Corner Bracket
- 2 - 15mm Plastic Variable Angle Bracket
- 44 - M3 x 8mm Hex Cap Screw
- 42 - Nyloc Nut

Pre-load each bracket with screws and nuts. Then, attach them to the extrusion as shown.

Note: the two floating screws opposite from the Variable Angle Bracket can be left loose

12



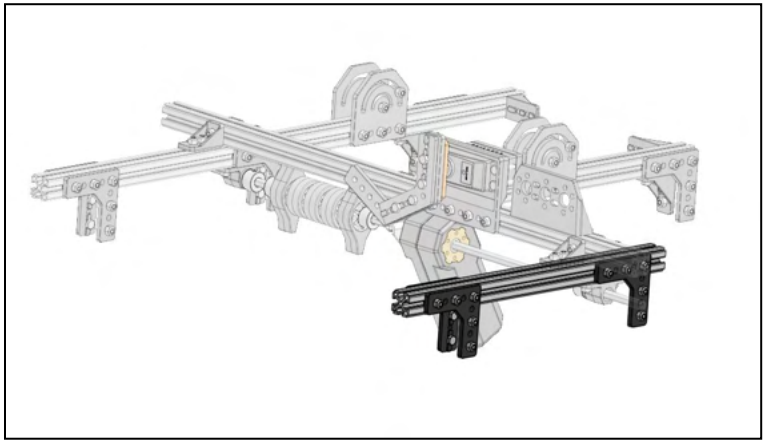
Get:

- 1 - 15mm Plastic 90 Degree Bracket
- 1 - 15mm Plastic Lap Corner Bracket
- 1 - 15mm Plastic Inside Corner Bracket
- 2 - 15mm Plastic Variable Angle Bracket
- 24 - M3 x 8mm Hex Cap Screw
- 22 - Nyloc Nut

Pre-load each bracket with screws and nuts. Then, attach them to the extrusion as shown.

Note: the two floating screws opposite from the Variable Angle Bracket can be left loose

13

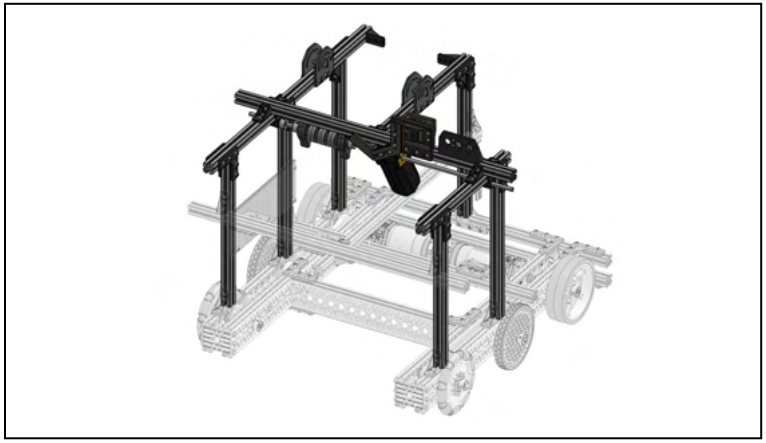


Get:

- 3 - 15mm Plastic 90 Degree Bracket
- 15 - M3 x 8mm Hex Cap Screw
- 15 - Nyloc Nut

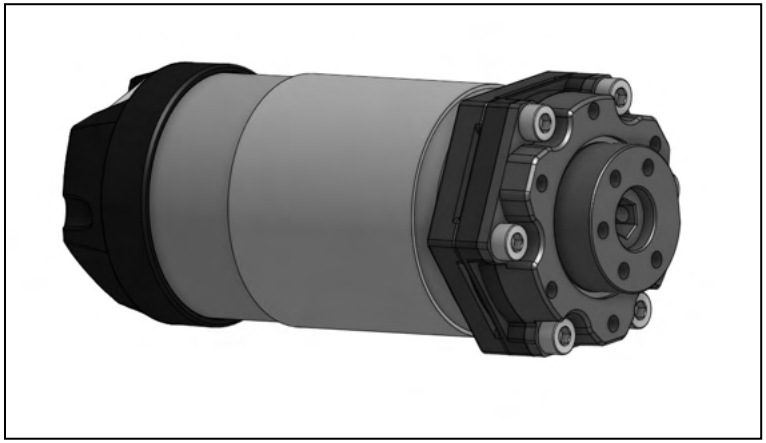
Pre-load each bracket with screws and nuts. Then, attach them to the extrusion as shown.

14



Slide Launcher Structure assembly on to the onto the Super Structure using the eight Plastic 90 Degree Brackets and two Inside Corner Brackets to connect to the Extrusion.

15



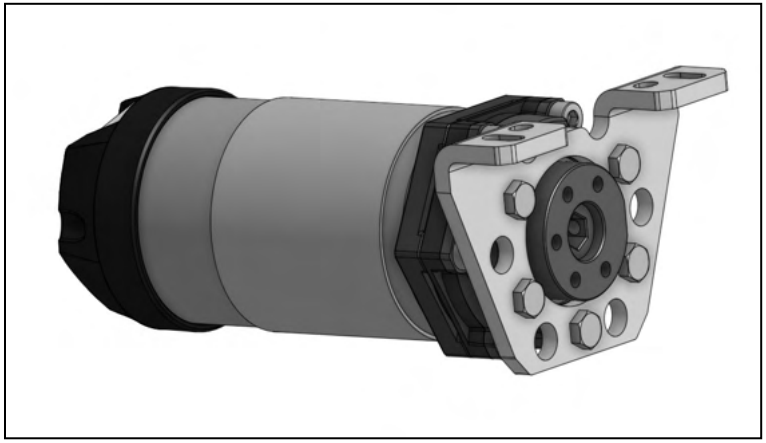
Get:

- 1 - UltraPlanetary Gearbox & HD Hex Motor Kit

Assemble 1 UltraPlanetary Gearbox with a 1:1 output using the instructions found at:

- docs.revrobotics.com/build-up-gearbox

16

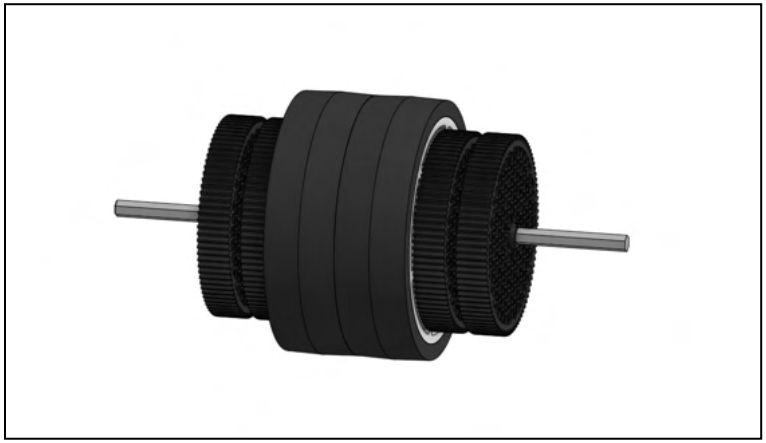


Get:

- 1 - UltraPlanetary Bent Mounting Bracket
- 5 - M3 x 8mm Hex Cap Screw

Attach an UltraPlanetary Bent Mounting Bracket to the HD Hex Motor and UltraPlanetary Gearbox using 5 screws.

17

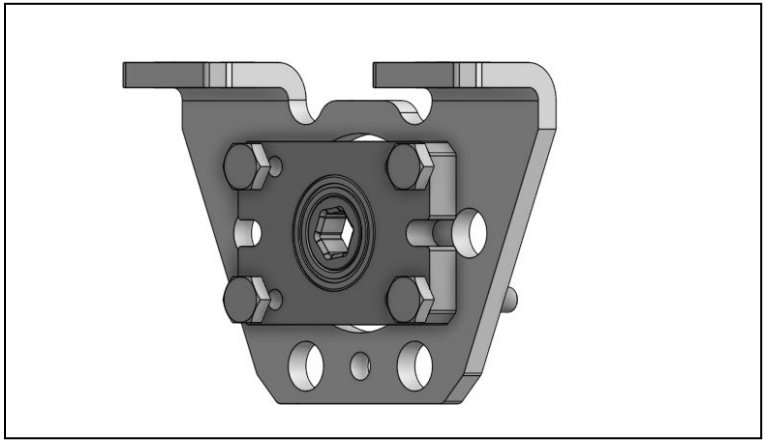


Get:

- 1 - Hex Shaft Cut to 180mm
- 4 - 90 Tooth Plastic Gear
- 2 - 90 Grip Wheels

Slide two Grip Wheels onto the center of the Hex Shaft. Then slide on two 90 Tooth Gears on both sides of the Grip Wheels.

18

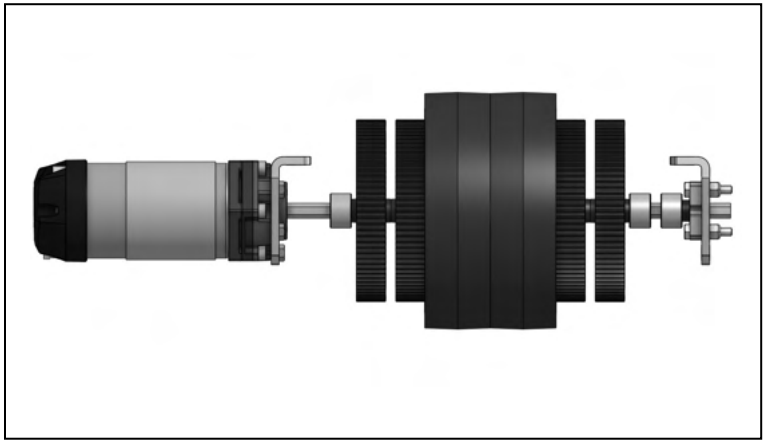


Get:

- 1 - UltraPlanetary Bent Motor Bracket
- 1 - 5mm Hex Bearing Block
- 4 - M3 x 16mm Hex Cap Screw
- 4 - Nyloc Nuts

Connect the 5mm Hex Bearing Block to the UltraPlanetary Bent Bracket with screws and nuts in the orientation shown. The nuts should be opposit of the bent part of the bracket.

19

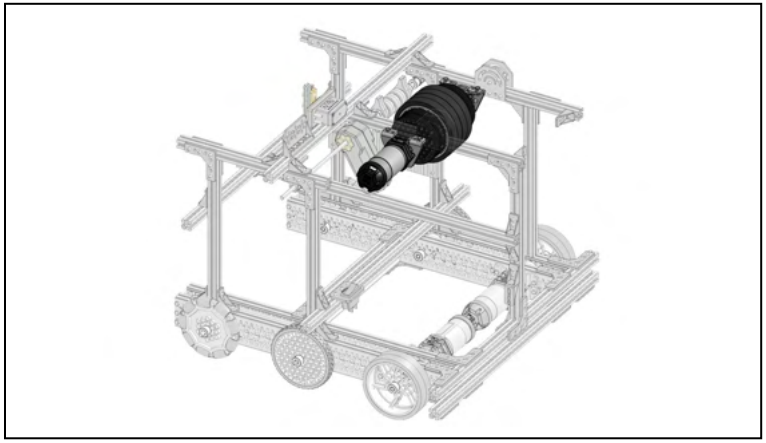


Get:

- 3 - Shaft Collars
- 1 - 3mm Hex Shaft Spacer

Connect all parts of the Flywheel Assembly as shown. Slide a 3mm Hex Shaft Spacer in between the Bearing Block opposite the HD Hex Motor and the Shaft Collar.

20

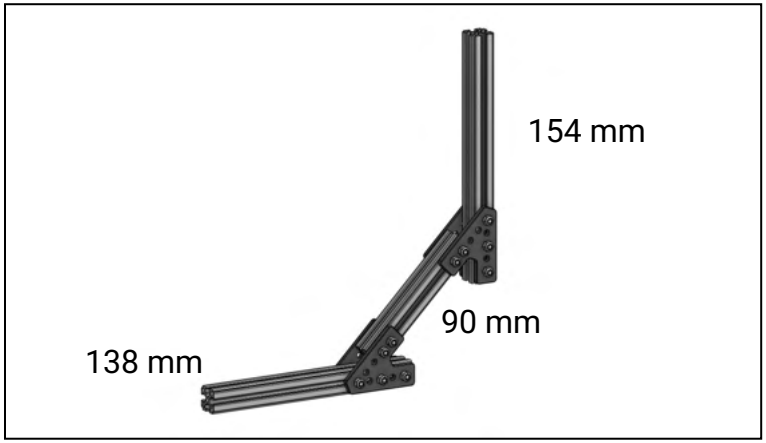


Get:

- 4 - Nyloc Nuts

Use the loose floating Screws to attach the Flywheel Assembly to the Superstructure using the two UltraPlanetary Bent Motor Brackets and 4 additional Nuts.

21



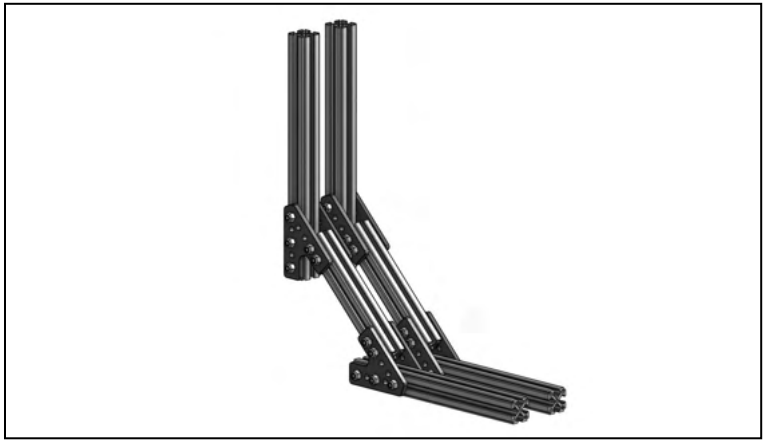
Get:

- 1 - 15mm Extrusion - Cut to 154mm
- 1 - 15mm Extrusion - Cut to 138mm
- 1 - 15mm Extrusion - Cut to 90mm
- 4 - 15mm Plastic 45 Degree Bracket
- 20 - M3 x 8mm Hex Cap Screw
- 20 - Nyloc Nut

Connect the three pieces of Extrusion using 45 Degree Brackets that have been pre-loaded.

Use the image as a guide for the location of each unique length of extrusion.

22



Get:

- 1 - 15mm Extrusion - Cut to 154mm
- 1 - 15mm Extrusion - Cut to 138mm
- 1 - 15mm Extrusion - Cut to 90mm
- 4 - 15mm Plastic 45 Degree Bracket
- 20 - M3 x 8mm Hex Cap Screw
- 20 - Nyloc Nut

Build the previous assembly for supporting the hood again. You should now have two of the same part.

23

Get:

- 1 - 15mm Extrusion - 225mm
- 2 - 15mm Plastic Inside Corner Bracket
- 8 - M3 x 8mm Hex Cap Screw
- 8 - Nyloc Nut

Pre-load two Inside Corner Brackets and slide the hood support assemblies onto the 225mm section of Extrusion.

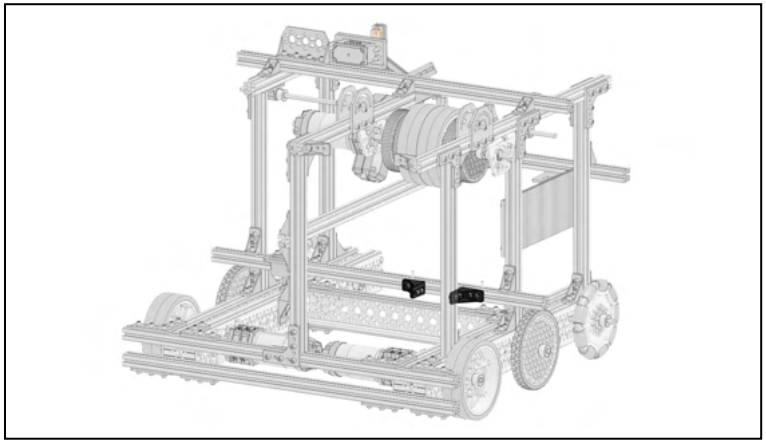
24

Get:

- 2 - 15mm Plastic Lap Corner Bracket
- 6 - M3 x 8mm Hex Cap Screw
- 6 - Nyloc Nut

Pre-load and mount two Lap Corner Brackets to the section of 225mm Extrusion facing the same direction as the hood supports.

25

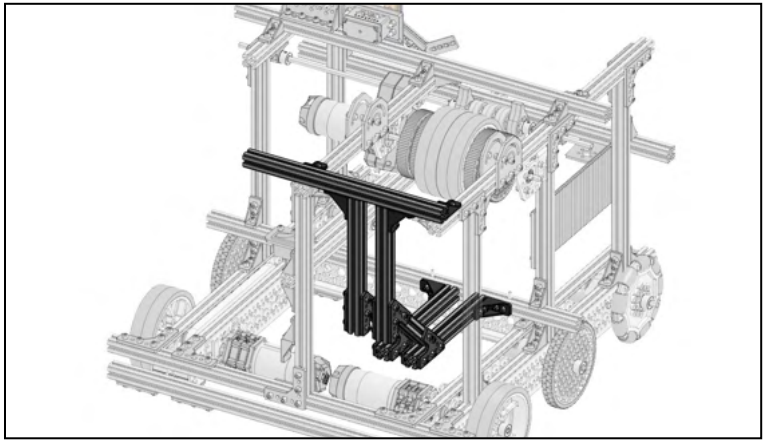


Get:

- 2 - 15mm Plastic Inside Corner Bracket
- 8 - M3 x 8mm Hex Cap Screw
- 8 - Nyloc Nut

Slide two pre-loaded Plastic Inside Corner Brackets onto the middle piece of Extrusion on the lower part of the superstructure.

26



Slide the Hood Support assembly on to the onto the Super Structure using the two Inside Corner Brackets and two Lap Corner Bracket mounted in the previous step.

Make sure that the Lap Corner Brackets on the upper portion of the Hood Support Assembly also slot into the upper part of the superstructure.