

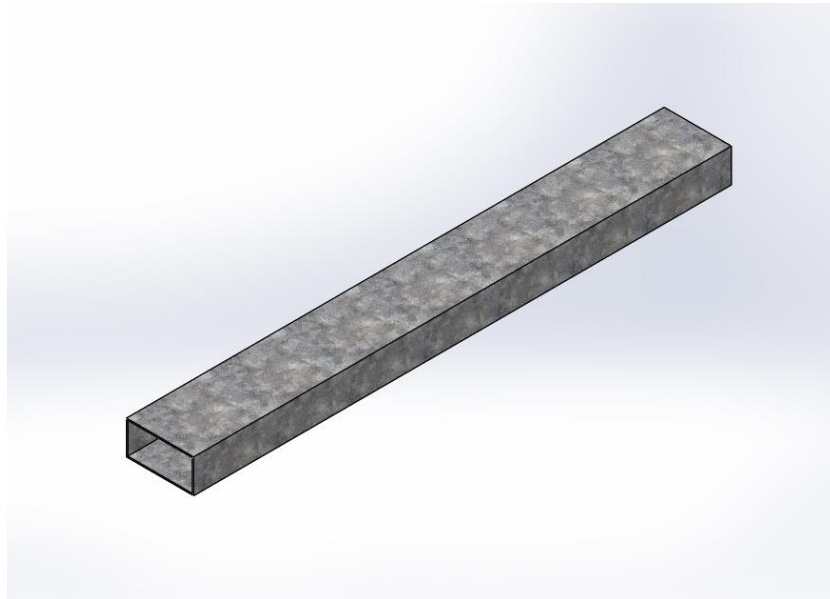
Pre - Manufacturing Prototype Design

Summary:

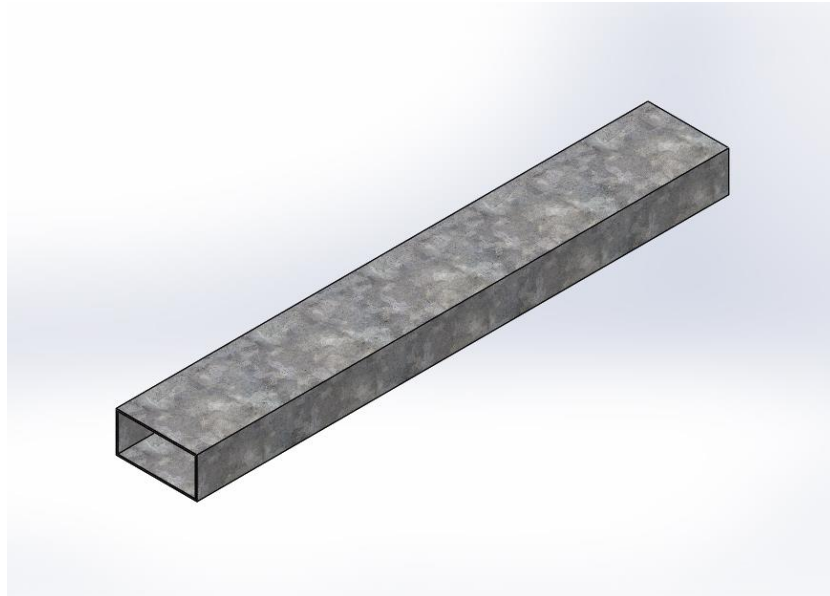
The following section will include a part-by-part breakdown of the design in the pre-manufactured state. Drawing specifications for each part/assembly can be found in Appendix D.

Base Parts

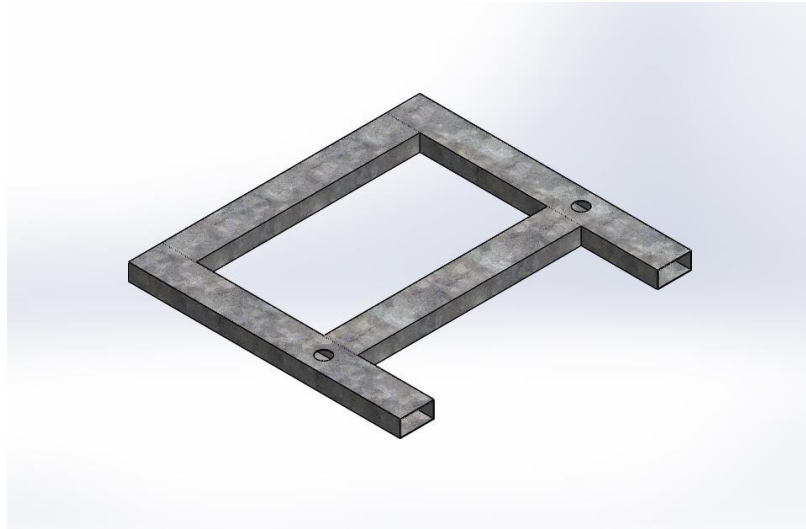
1. Base Long Leg (x2)



2. Base Short Leg (x2)



3. Base Assembly



Lever Bar

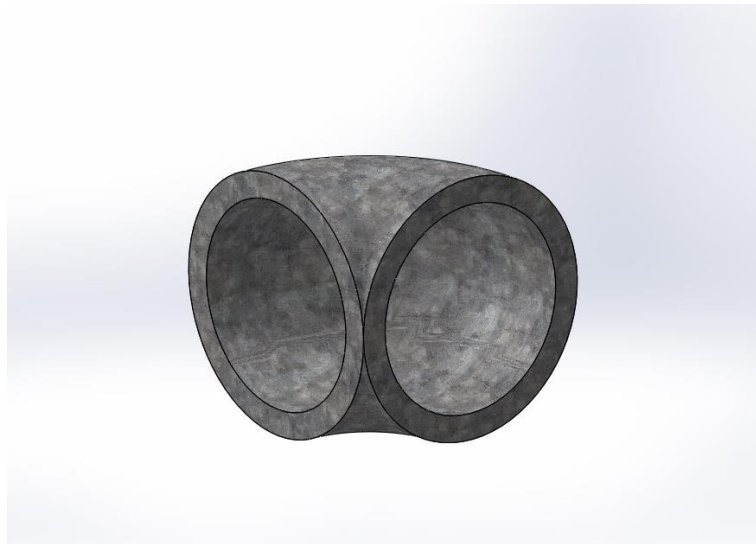
1. Bar Tubes Horizontal (x2)



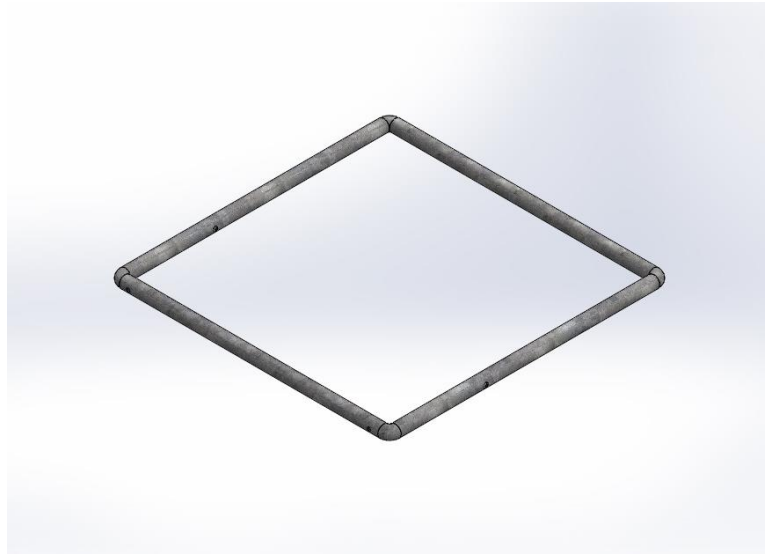
2. Bar Tubes Vertical (x2)



3. Bar connector Elbow (x4)

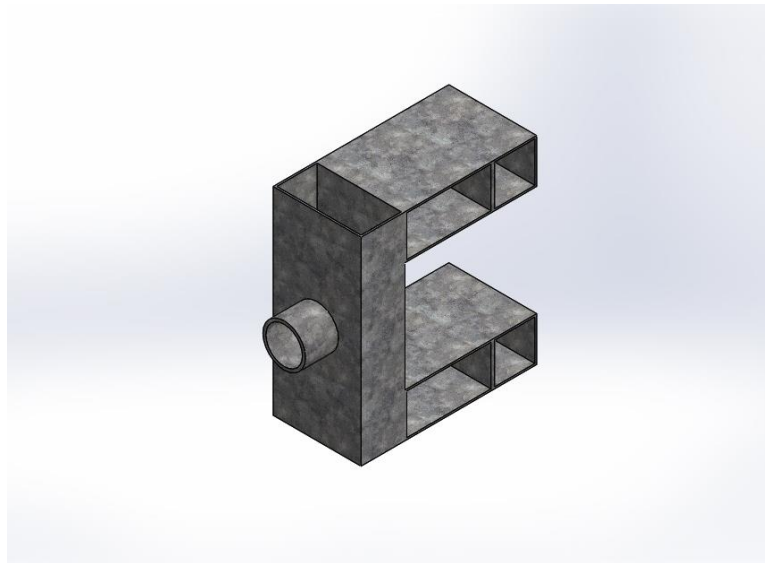


4. Lever Bar Assembly



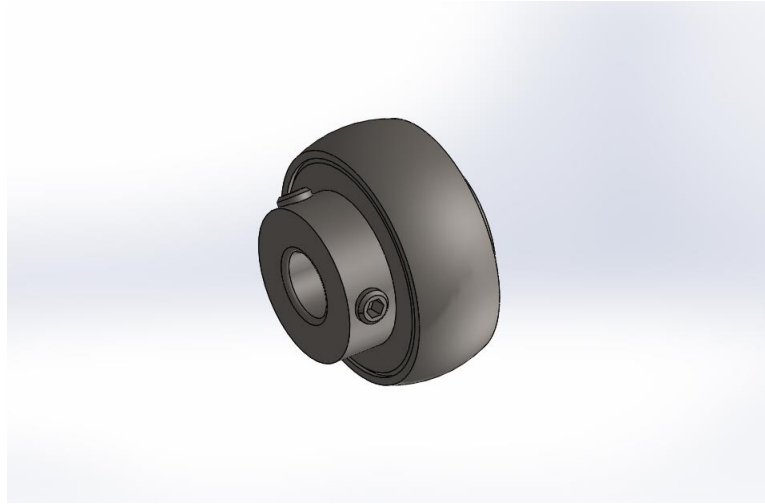
Fulcrum

1. Fulcrum (x2)

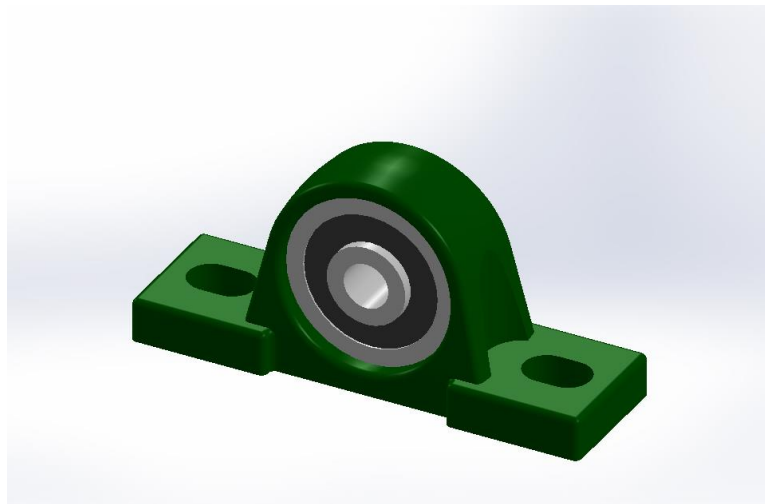


Bearing

1. Bearing (x4)



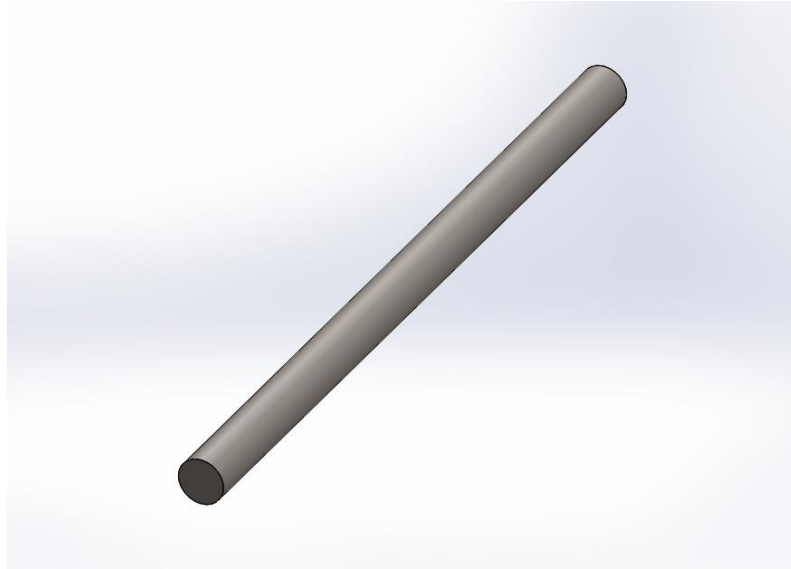
2. Housed Bearing (x4)



Note: Actual bearing housing varies from the actual product.

Connecting Rod

1. Connecting Rod (x2)

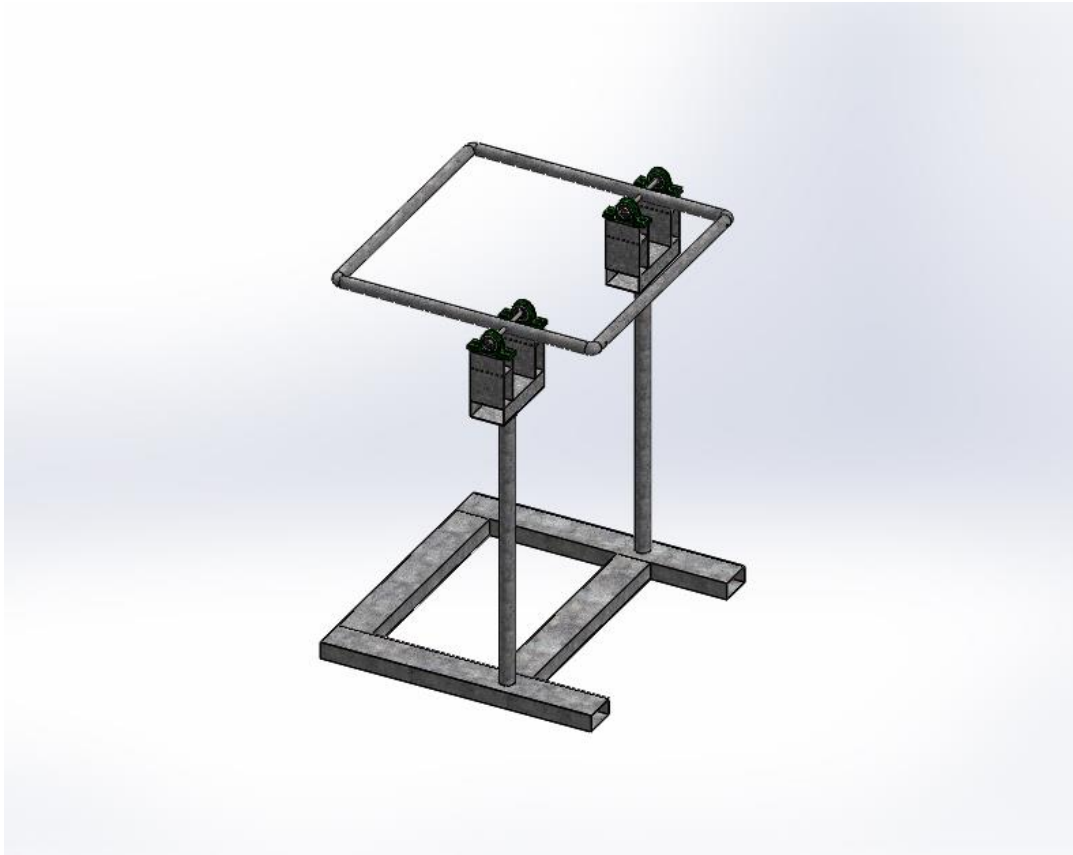


Support Column

1. Support Column (x2)



Full Product Assembly



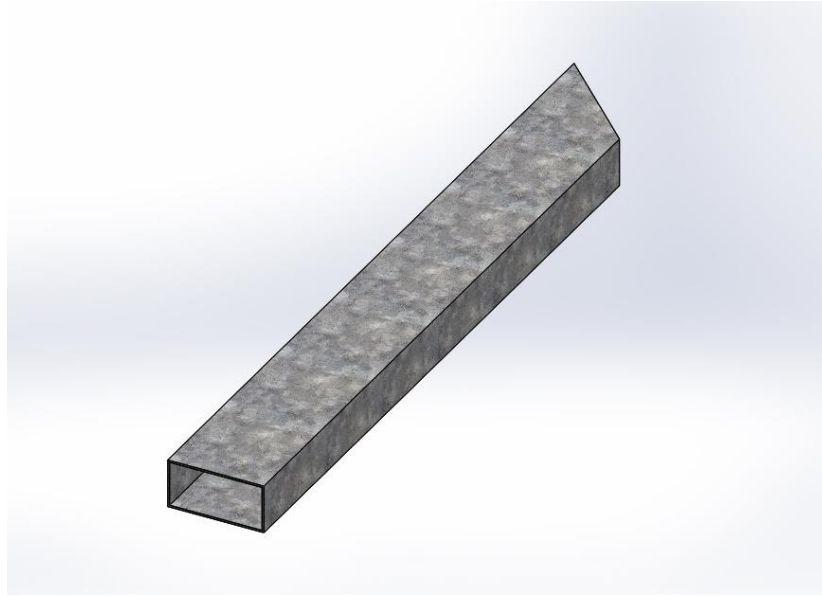
Post Manufacturing Drawings

Summary:

Several design considerations changed throughout the manufacturing process of our product. Therefore, changes were made to the previous parts to accommodate them. This section will display the finished parts as well as discuss the reason for each design change. Drawing specifications for each part/assembly can be found in Appendix E.

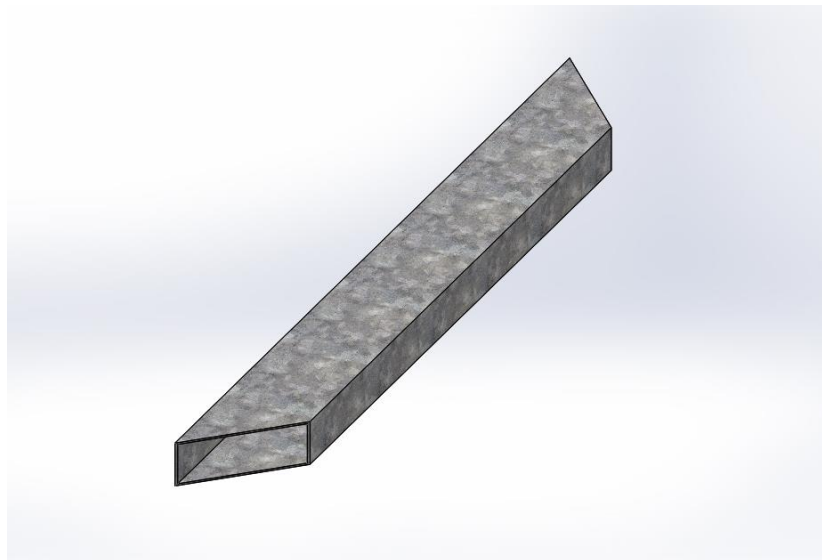
Base Parts

1. Base Long Leg (x2)



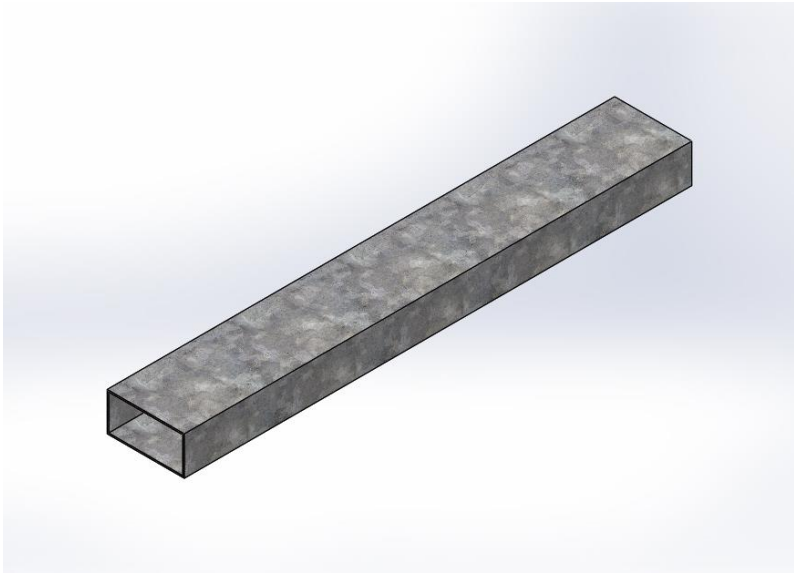
This part features a 45-degree cut at the end. This is to increase the aesthetics of the products by not having an opening at both ends. This feature also increases the device's security as a double opening could potentially harm a user.

2. Base Short Leg 45

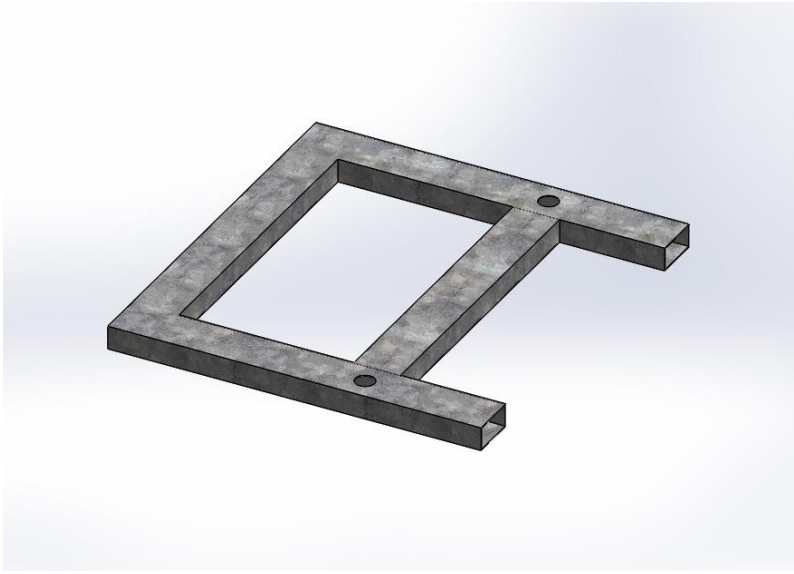


This new part also complies with the aesthetics and safety improvements mentioned previously.

3. Base Short Leg



4. Base Assembly



Lever Bar

1. Bar Tubes Horizontal (x2)



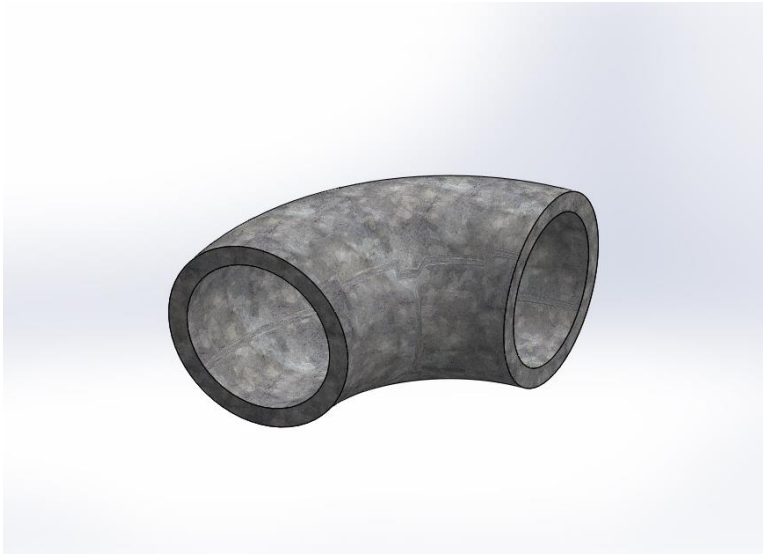
This part features a shorter length due to the elbow connectors being larger than anticipated.

2. Bar Tubes Vertical (x2)



This part features a shorter length due to the elbow connectors being larger than anticipated.

3. Bar connector Elbow (x4)

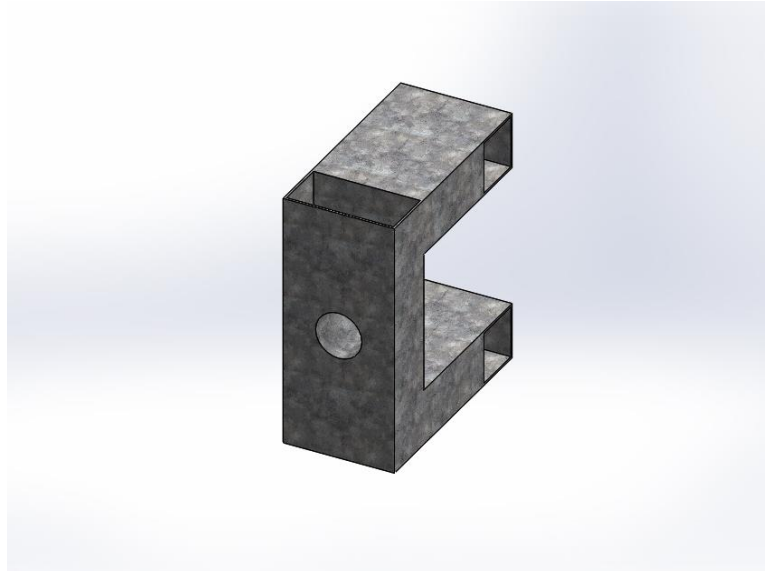


4. Lever Bar Assembly



Fulcrum

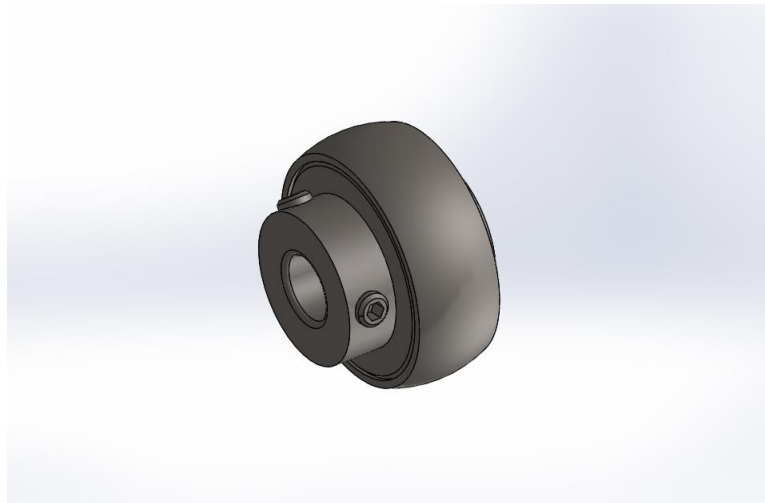
1. Fulcrum (x2)



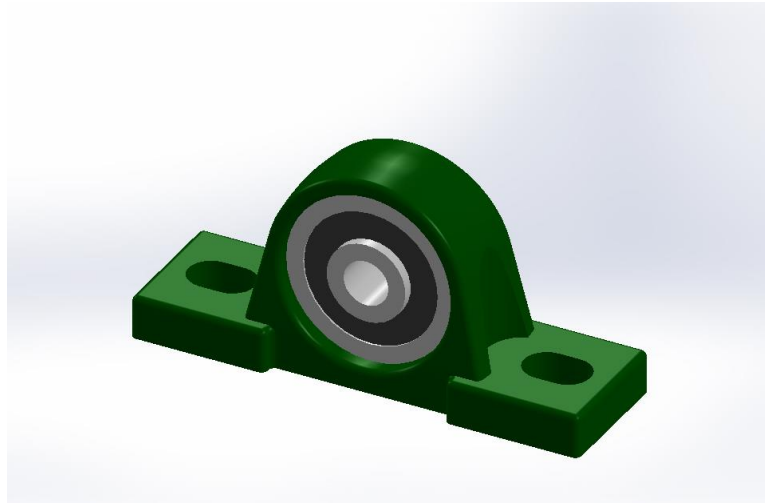
This part features a reorientation of a 2 by 4 galvanized steel pipe piece to add stability. Additionally, the collar was removed and the fulcrum inserts the supporting column part through the hole, until it reaches the end of the 2 by 4 steel pipe, where they are welded together.

Bearing

1. Bearing (x4)



2. Housed Bearing (x4)



Note: Actual bearing housing varies from the actual product.

Connecting Rod

1. Connecting Rod (x2)



This part features a greater length than in the pre-manufactured state to ease the bearing mounting.

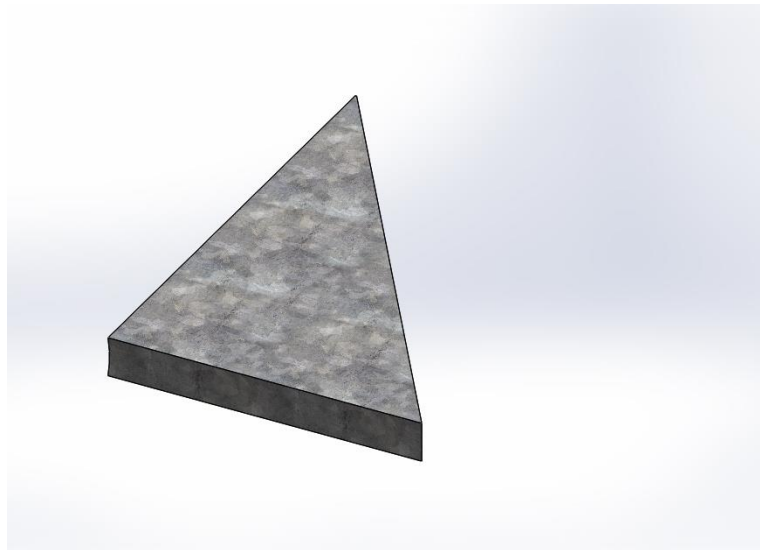
Support Column

2. Support Column (x2)



Since the Fulcrum collar is not present, this part is longer to account for the height difference of inserting this part into the Fulcrum itself.

3. Supports (x6)



This newly added part serves to reinforce the supporting columns.

Full Product Assembly

