

PP Shredder Basic

This tutorial documents the build process of Precious Plastic Basic Shredder, as supplied by Reco Solutions. This is a project of Arizona State University's Engineers Without Borders and Precious Plastic @ASU clubs, and is mean to be a learning exercise.

 Difficulté **Moyen**

 Durée **2 jour(s)**

 Catégories **Machines & Outils, Recyclage & Upcycling**

 Coût **2000 USD (\$)**

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Commentaires

Matériaux

Outils

Étape 1 - Required Tools

1/2" Socket wrench

11/16" Socket"

6mm Allen/Hex Wrench

Locking Pliers

Adjustable pliers

Metal File

Screwdriver

Étape 2 - Attach the Bearings to the side plates

Parts Needed:

2x 6mm 01.04.01 Side plate

2X bearings

4X Countersunk Hexagon Bolts (M10 x 30)

4X Nuts (M10)

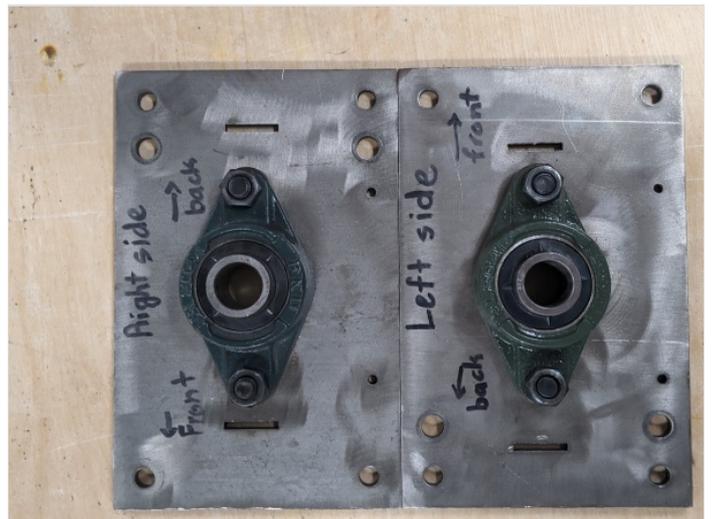
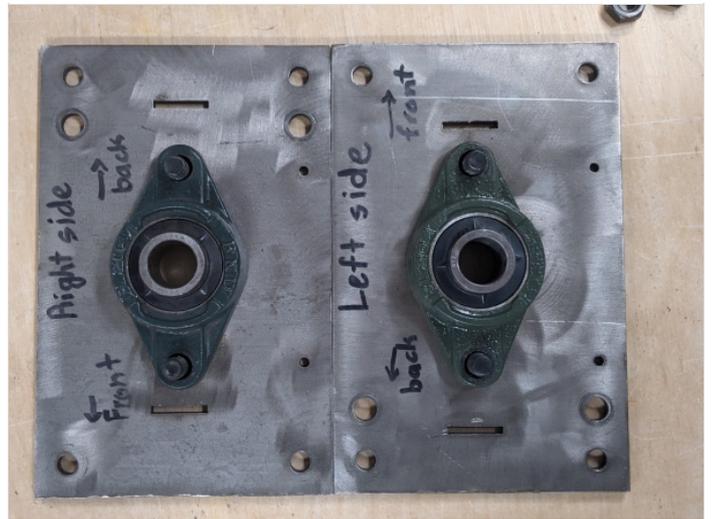
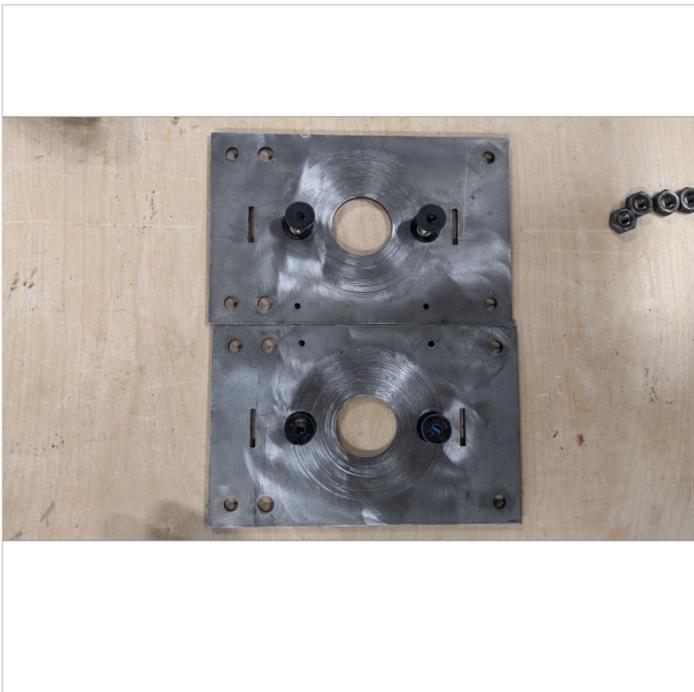
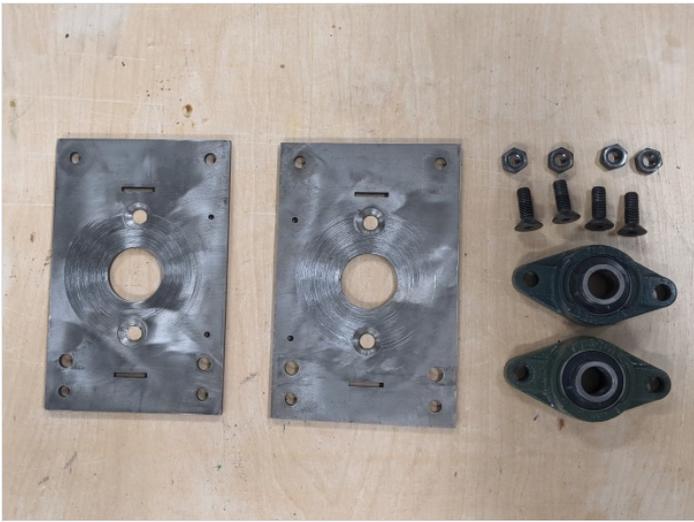
Tools Needed

6mm allen

11/16" wrench

Put the bolts through indented side of the side plate and into the bearing holes.

Secure with nuts



Étape 3 - Build the blade shaft

Parts Needed:

5x 01.04.03 Knife 1

5x 01.04.04 Knife 2

4x 01.04.05 Knife 3

1x Shaft

2x 01.04.02 6mm Bearing Spacer

2x 01.04.09 3mm Bearing Spacer

13x Knife Spacer

Tools Needed:

(optional) vice grip/locking pliers

Orient the shaft so the longer blank section is facing up.

Number the faces 1-6(it doesnt matter where you start, as long as it reads left to right).

Slide Knife 1(knife with only 1 notch) onto the shaft so the notch is on the edge between faces 1 and 2. Ensure that the blade point, points towards face 2.

Add a Spacer

Slide Knife 2(knife with 2 notches) onto the shaft so that the first notch is between faces 1 and 2 , and the 2nd notch is between faces 2 and 3.

Add a Spacer

Slide Knife 3(knife with 3 notches) onto the shaft so that the first notch is between faces 1 and 2, and the 2nd notch is between faces 2 and 3. and the 3rd notch is between faces 3 and 4.

Add a spacer

*This completes 1 SET of knives.

Repeat for the next set, but begin by placing the notch of Knife 1 between faces 6 and 1.

*This completes 2 SET of knives.

Repeat for the next set, but begin by placing the notch of Knife 1 between faces 5 and 6.

*This completes 3 SETs of knives.

Repeat for the next set, but begin by placing the notch of Knife 1 between faces 4 and 5.

*This completes 4 SET of knives.

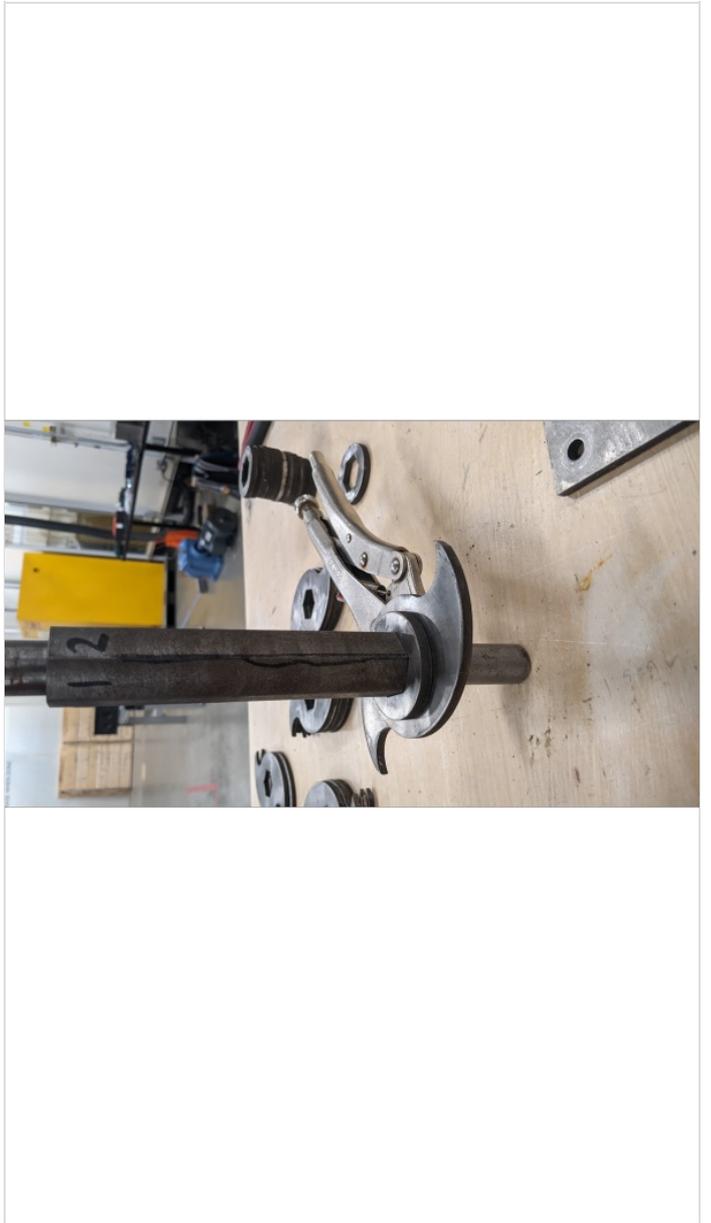
Repeat for the next set, but begin by placing the notch of Knife 1 between faces 3 and 4. This Set will only use 2 blades.

Add 3mm spacer to shaft. Add 6mm Spacer to shaft.

Repeat on other end.



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Étape 4 - Fixed Blade Assembly

Parts:

Preconstructed box (narrower)

Preconstructed rotating blade.

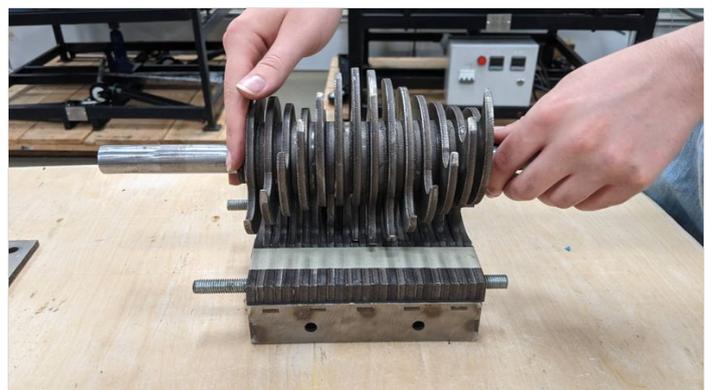
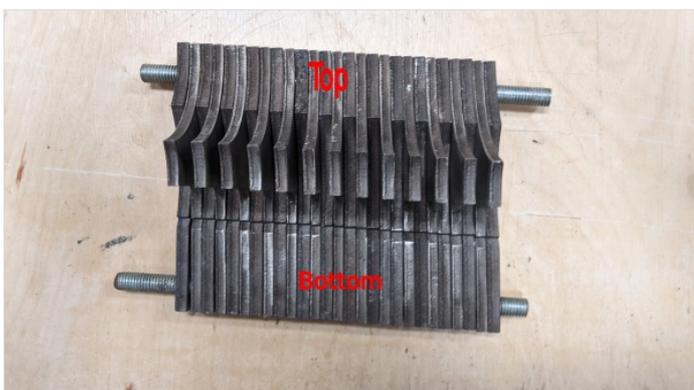
13 Fixed blades

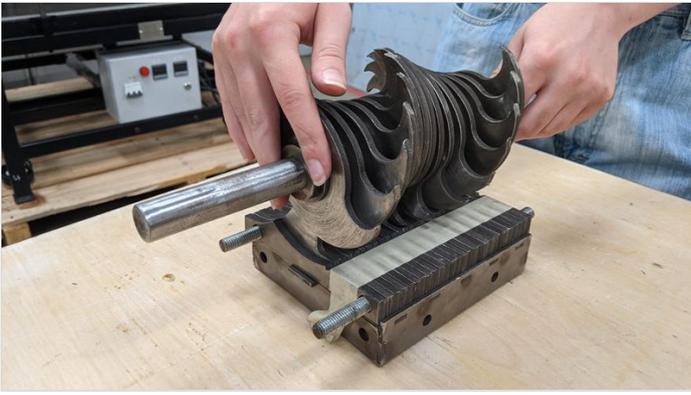
14 Spacers

2 Threaded Rods

4 Nuts

Instructions: Starting with the a spacer, thread the spacer and fixed blades onto the rods in alternating order. Place the assembled blades onto the narrow box with the bottom lip aligned with the bottom of the fixed blade assembly . Line up the rotating blades so they rotate into the curved side of the fixed blades.





Étape 5 - Shredder Box Assembly

Parts:

Preconstructed box (thicker)

Side Plates

8 nuts and bolts (Size?)

Now slide the side plates on one at a time with the rods aligned to the inner of the two holes on the back side, make sure the box is aligned with the tabs cut into the side plate. Add the nuts to the rods, but don't tighten as the boxes won't fit if it's tight. Flip the assembly on it's side. Slide the thick box into place on the front. Use 8 bolts to attach the boxes to the side plates.

