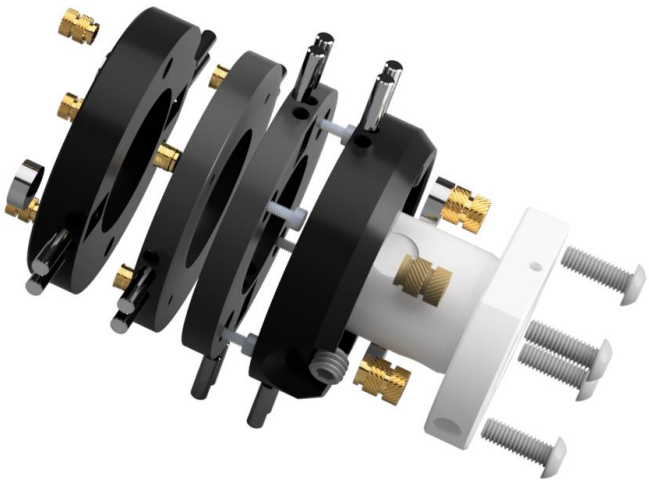
Manual for Oldham



Evolution

Indice	Date	Description de l'évolution	Auteur
0.0	09/05/2022	Création	FBR

Rédacteur	Responsable X	Qualité
FBR	FBR	FBR

What is needed :

-A Vcore with the BRS-Engineering Z-Upgrade

- The Oldham kit (made by yourself, or bought at BRS-Engineering shop)

-30-45min of your time

1-The kit:

1 Oldham coupler is made from a 4 printed parts assembly

1x Lower ring

2x middle rings

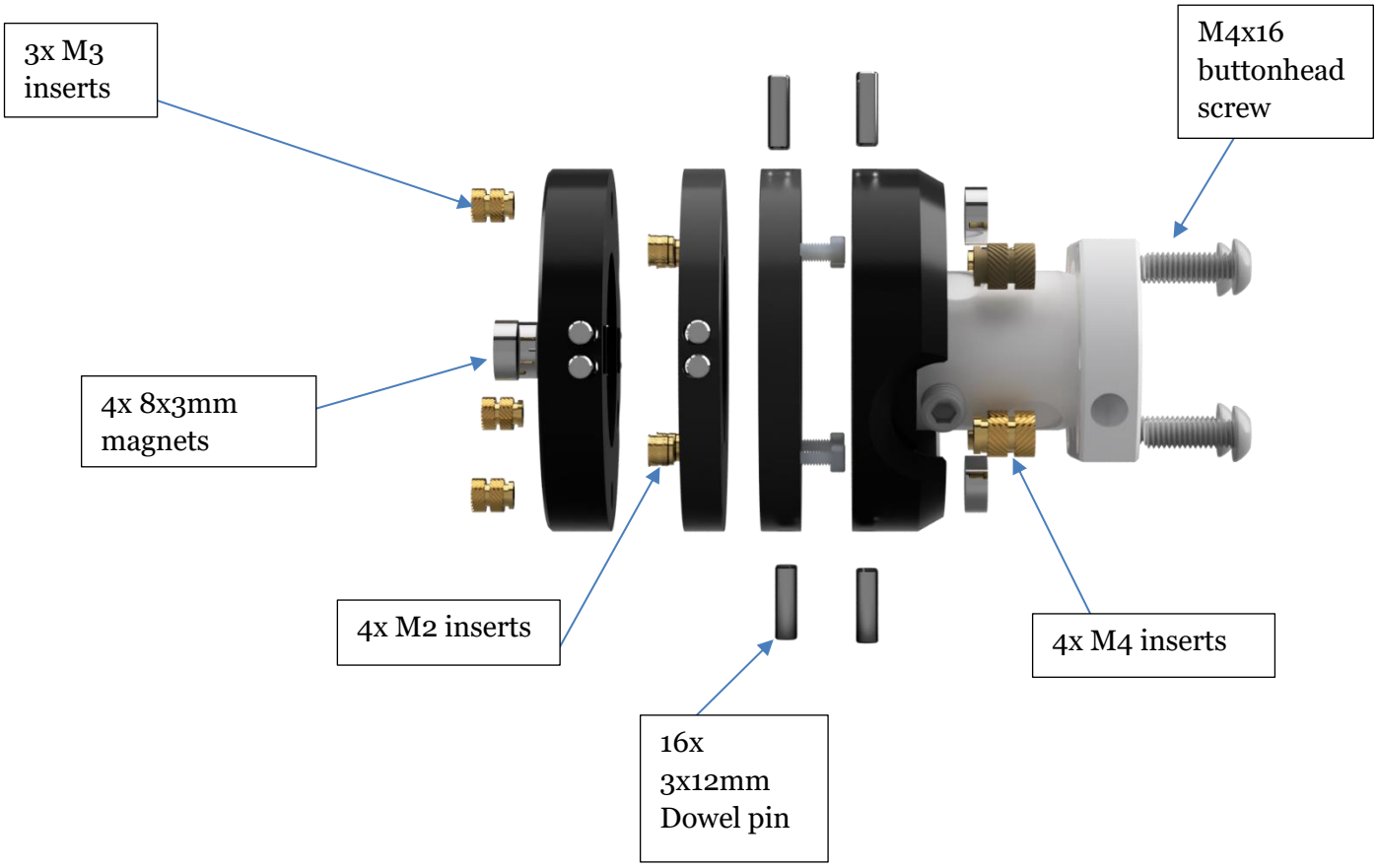
1x upper ring

NOTES:

The Left Front and Right front top rings are mirrored, the 3x m3 mounting points should align 3 holes in the Arm, asymetric design can't allow you to made a mistake here

The rear top rings only needs 2 m3 mounting points which are the 2 laterals ones of the rear arm

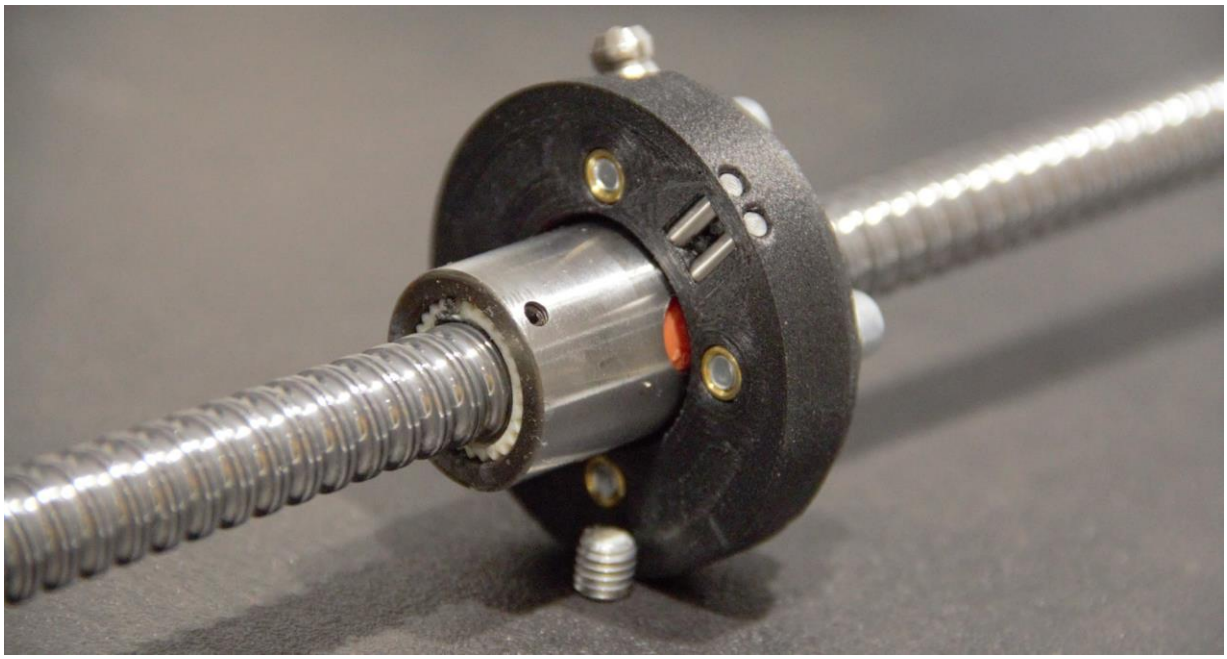
Each Oldham need to be equipped with M4-M3-M2 inserts, magnets and 3x12mm Pins



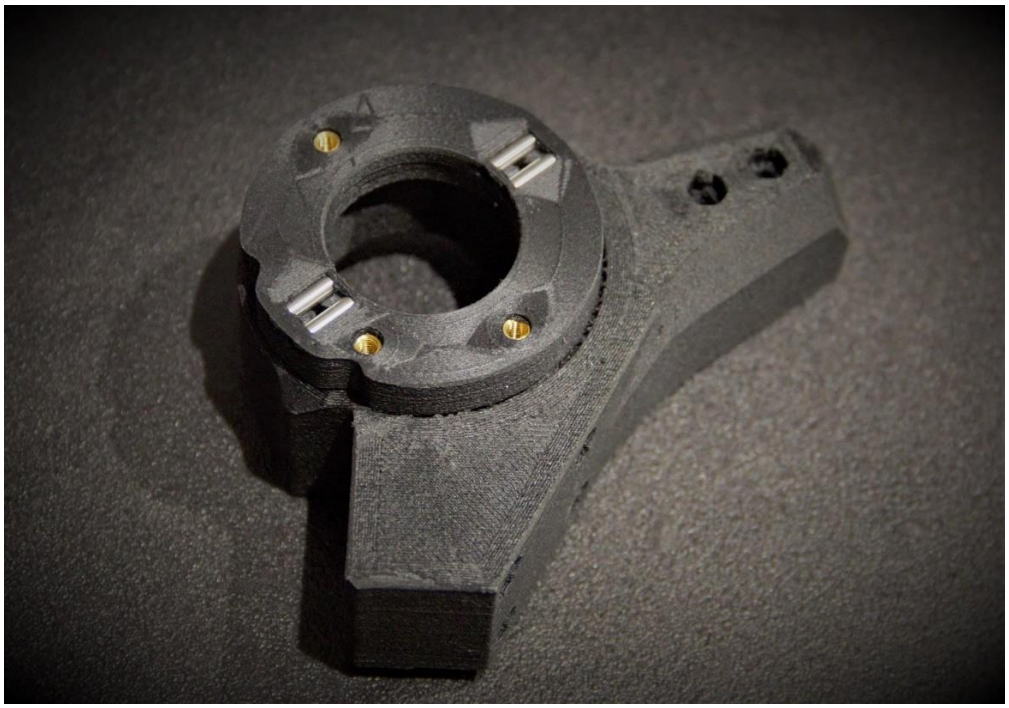
Another view

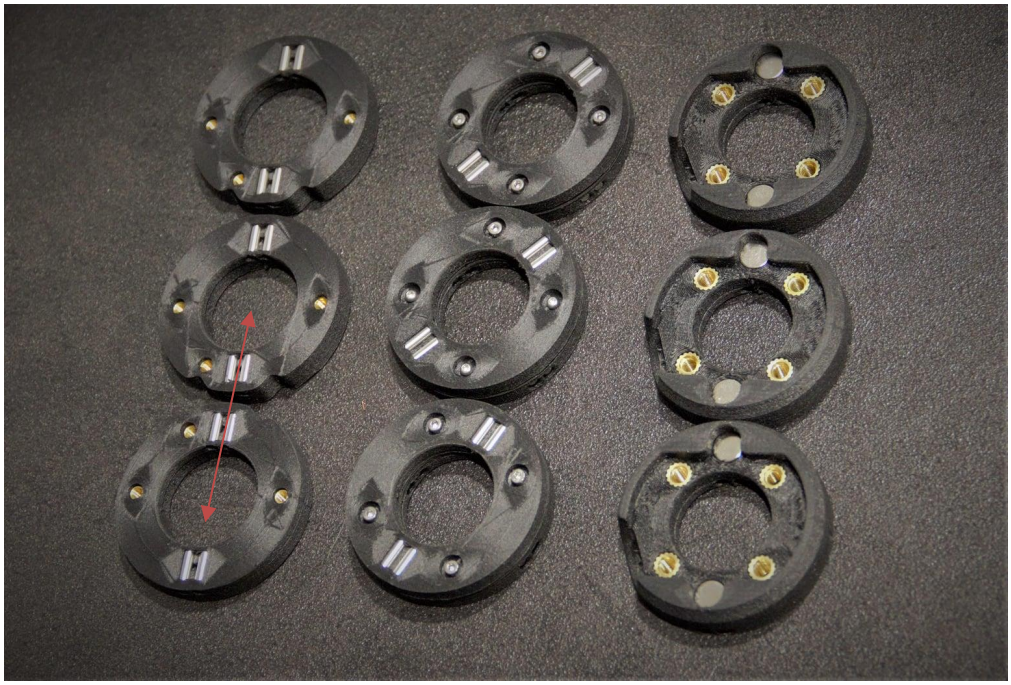
2-Assembly

One the pins, inserts, and magnet installed (Or bought preassembled at BRS) we can proceed further



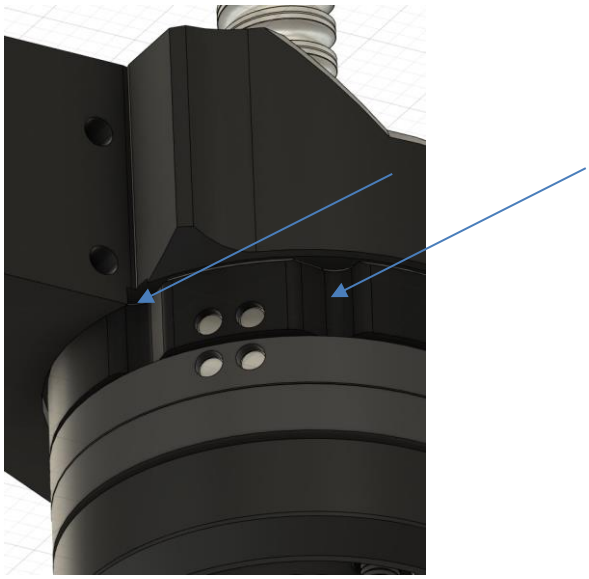
The lower rings should fit the SFU1204 Nut, insert the 4 M4x16 screws and secure it. There is a nothe for the installation of a grease nipple, or a m6 headless screw to close the greasing opening





The top ring for the Front (Left and right are mirrored)

The rear only need 2 M3 screw even if a third insert is present. Technically you can't assemble it the wrong way, the design doesn't allow it anyway.

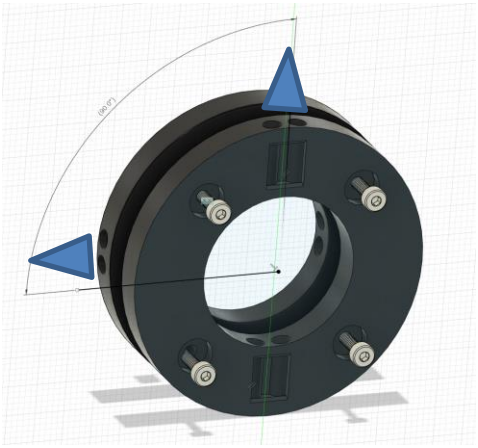


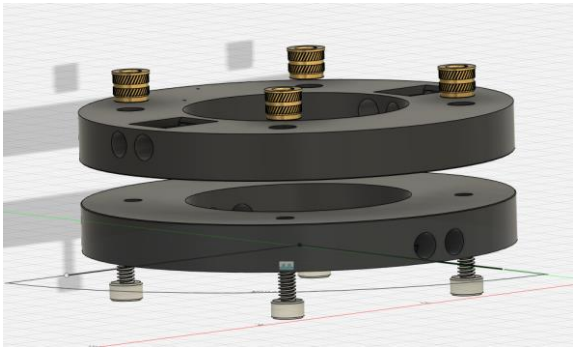
You will see notches here, They are present to allow the passage of the Z MGN12C carriage

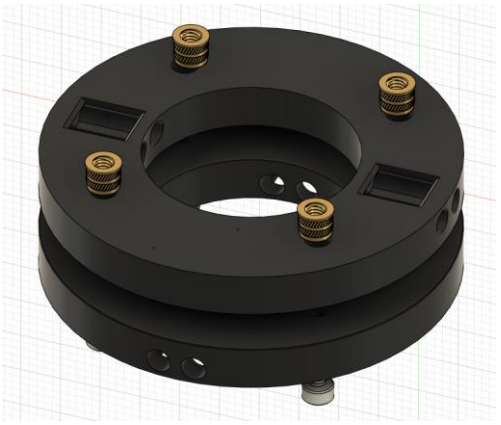
Once all Top and lower rings attached, you can place the Central ring

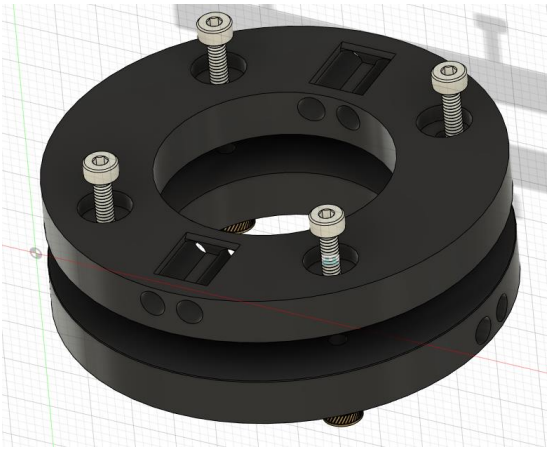
It is 2 parts, designed this way to sustain high loads, I tested one under 20Kg for two months without deformations (PA12CF/PA6CF) For BRS Order those parts are ready then you can go to the "2-FINAL ASSEMBLY"

The central rings needs to be attach 90° from each others



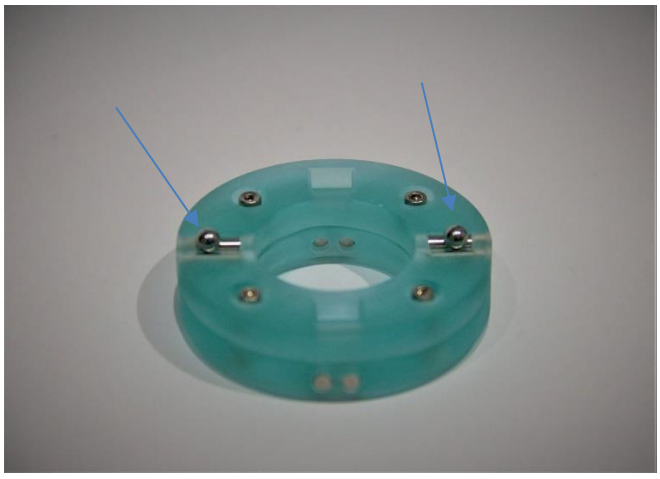




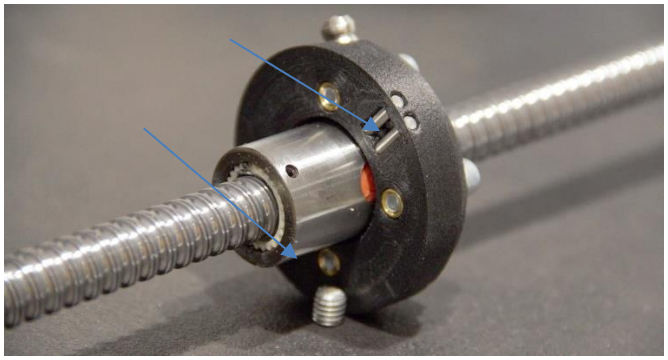


Then you can use m2x8 screws to fix them together, it can be threadlocked since we will never make a disassembly of it anyway

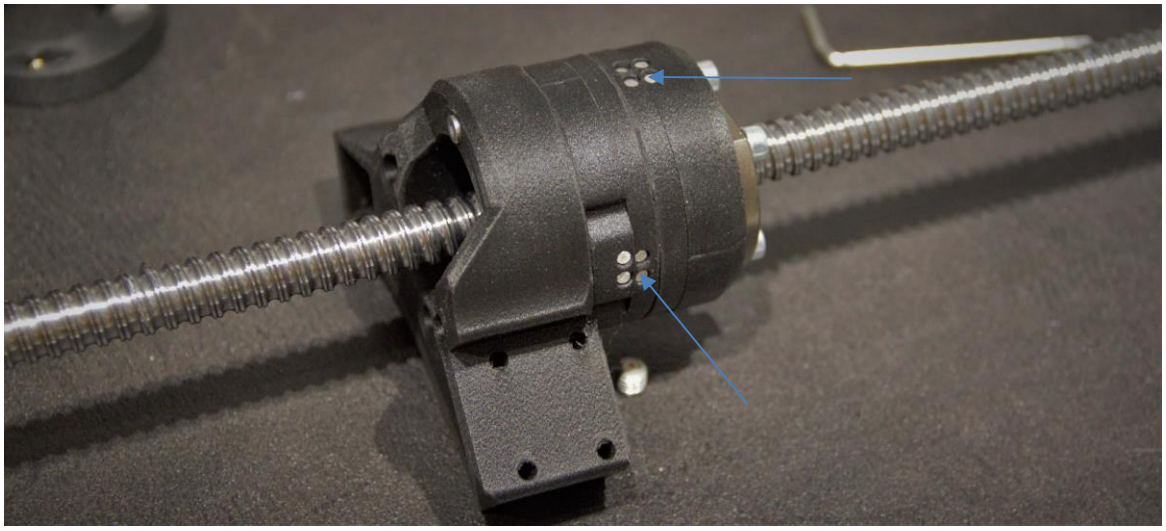
2-Final Assembly



The final center rings look like this fully assembled



Place the 4mm steel (magnetic) on the top of the lower ring and on the top of the central ring



It should look like this

Off course the assembly has to be made directly on the machine with the ballscrews basic system assembled (minus the retainer at the top to allow the arms and Oldham installation)

3-Last checks :

Don't forget to remake the Z maximum distance (+(+-)39mm)

Check every balls are inside their dowel pin channels.

Do a bed home, then a bed mesh.

And last, Have Fun 😉