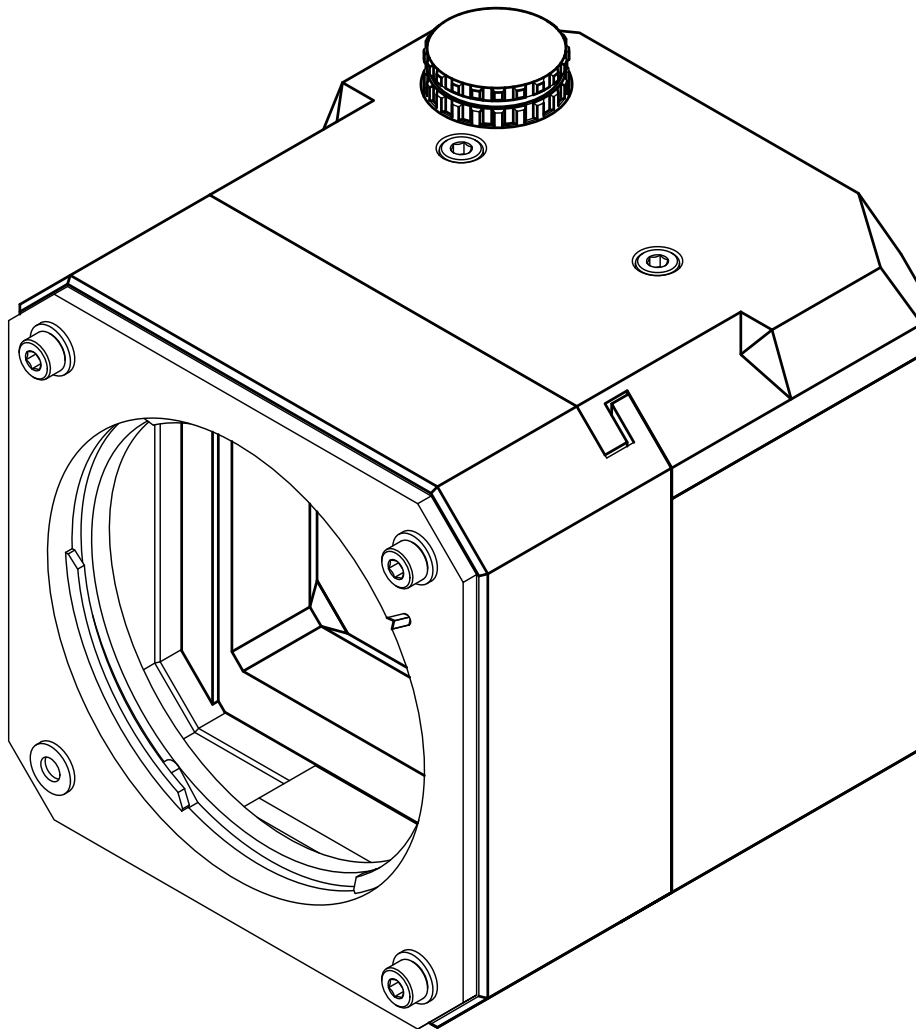


MEDIUM FORMAT CAMERA

MAMIYA PRESS BAYONET



JAVIER FERNANDEZ

AUG 2020

INDEX

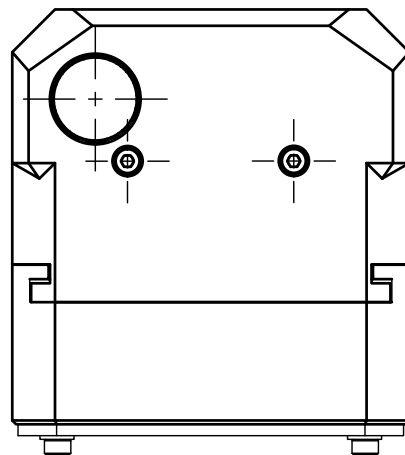
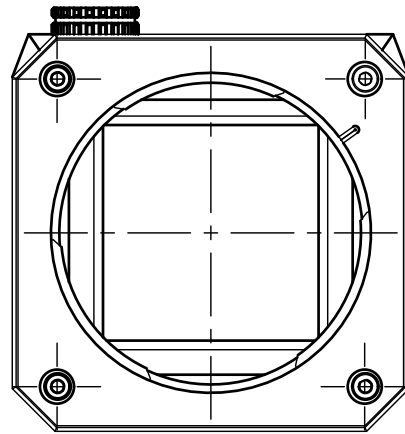
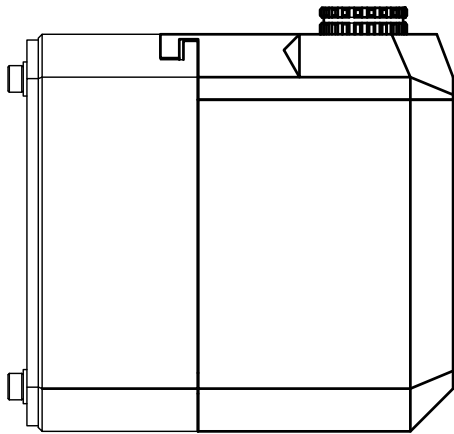
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The camera here described is a 3D printable medium format film camera. It is designed to be used with 120 or 220 film rolls.

It is a modular camera, so errors can be fixed independently. Furthermore, 3D printing allows to easily modify any part of it in order to increase its functionality. One advantage of the modularity mentioned before is being able to easily modify the size of the resulting image. 6x7 is the maximum size possible due to geometrical constraints. Later it is shown with a 6x6 plate. Other advantages are, e.g., adding a grip, modifying the angle between the optical axis and the focal plane or adding a viewfinder.

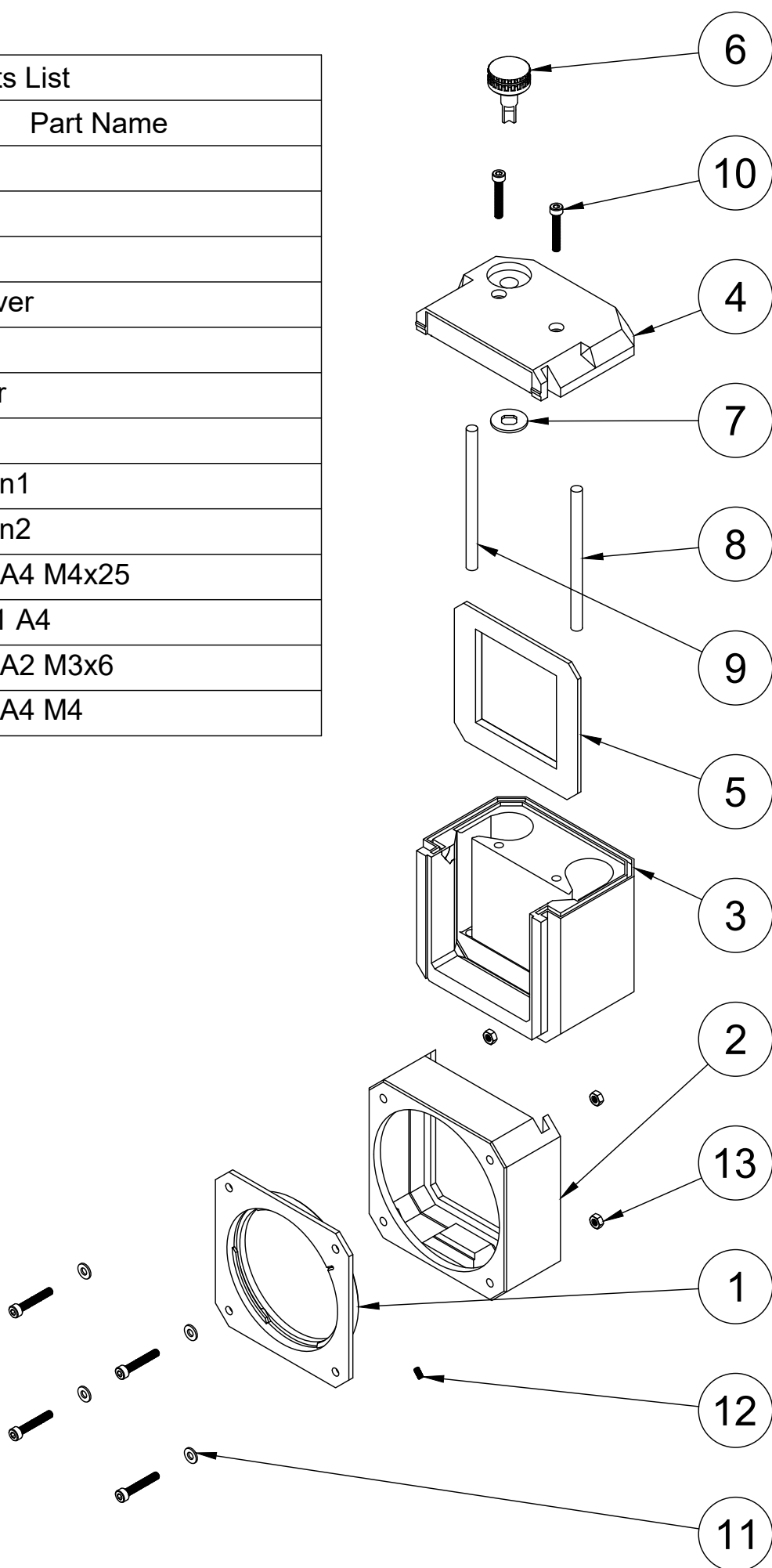
The camera is using Mamiya Press bayonet lenses. Those lenses provide, among other things, a built-in shutter. This enables to simplify the camera design.

ORTHOGRAPHIC VIEW

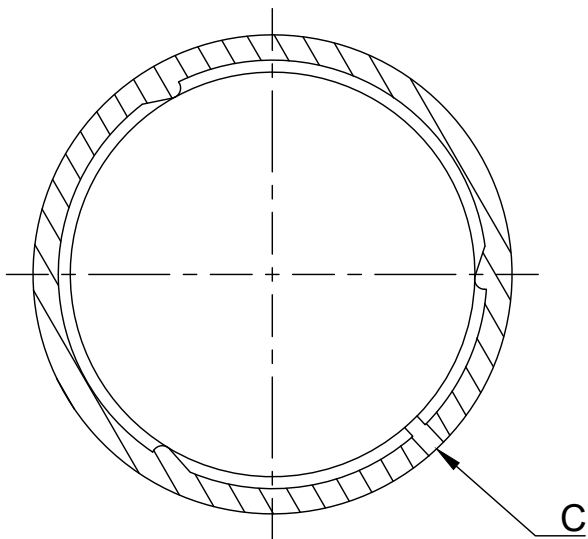
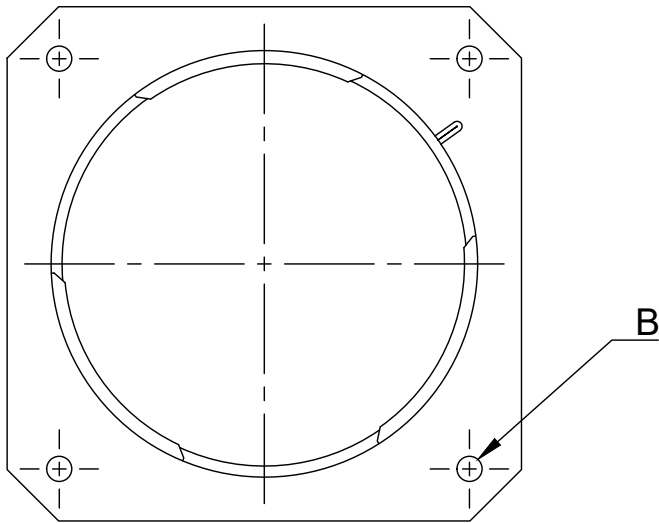
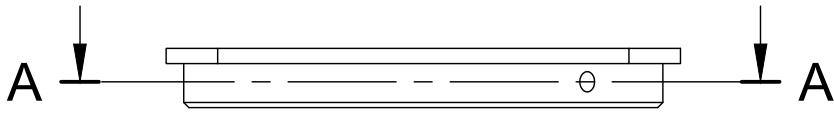


SCALE 1:2

Parts List		
Item	Qty	Part Name
1	1	Bayonet
2	1	Body
3	1	Back
4	1	Back Cover
5	1	6x6
6	1	Rewinder
7	1	Stopper
8	1	Cylinder n1
9	1	Cylinder n2
10	6	DIN-912 A4 M4x25
11	4	DIN-9021 A4
12	1	DIN-916 A2 M3x6
13	4	DIN-934 A4 M4



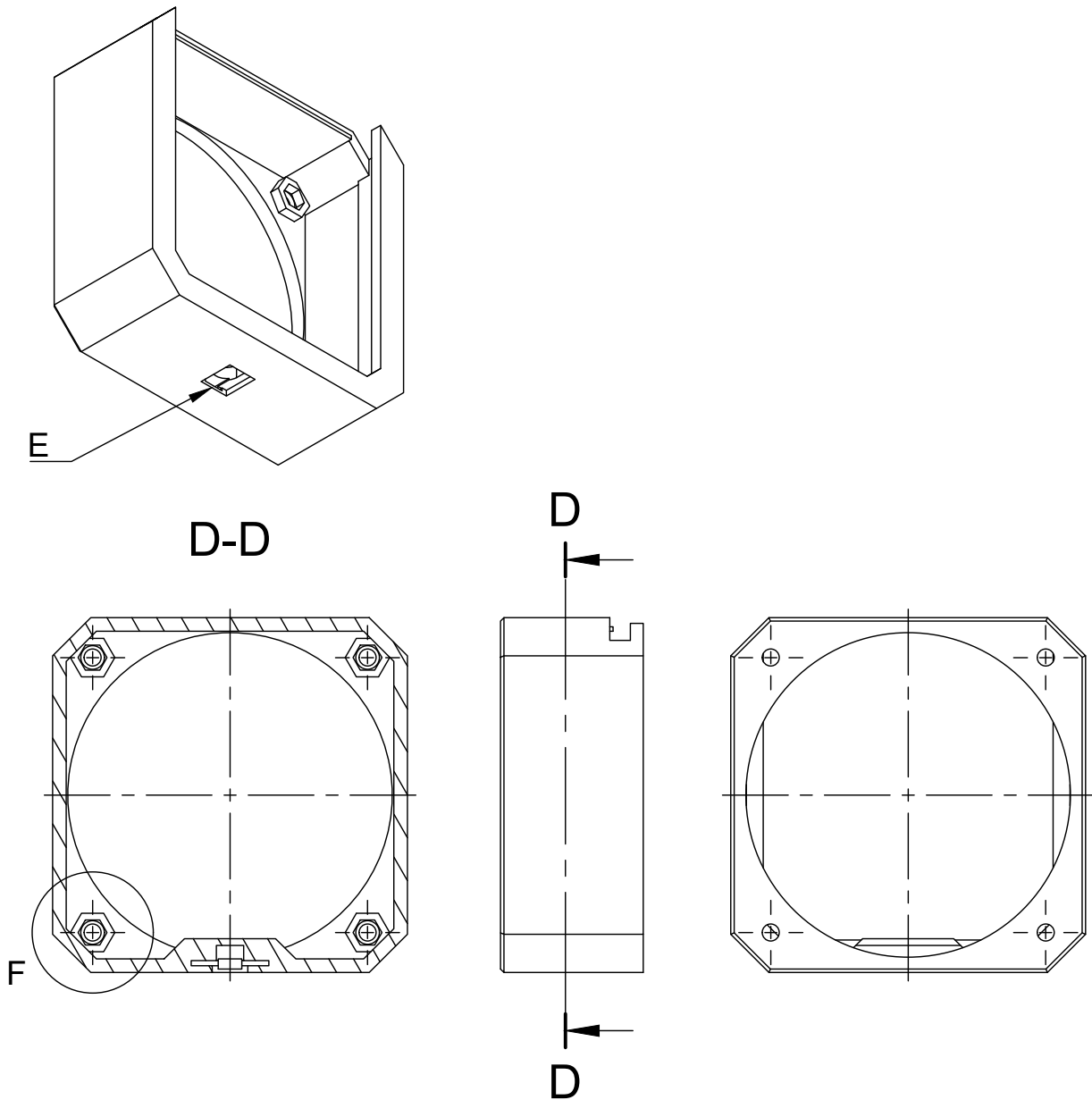
ITEM #1: BAYONET



B cylindrical holes are ment to be 5mm in diameter so M4 screws (#10) are able to pass freely.

C cylindircal hole is ment to fit an M3 screw (#12) that will firmly secure the lens.

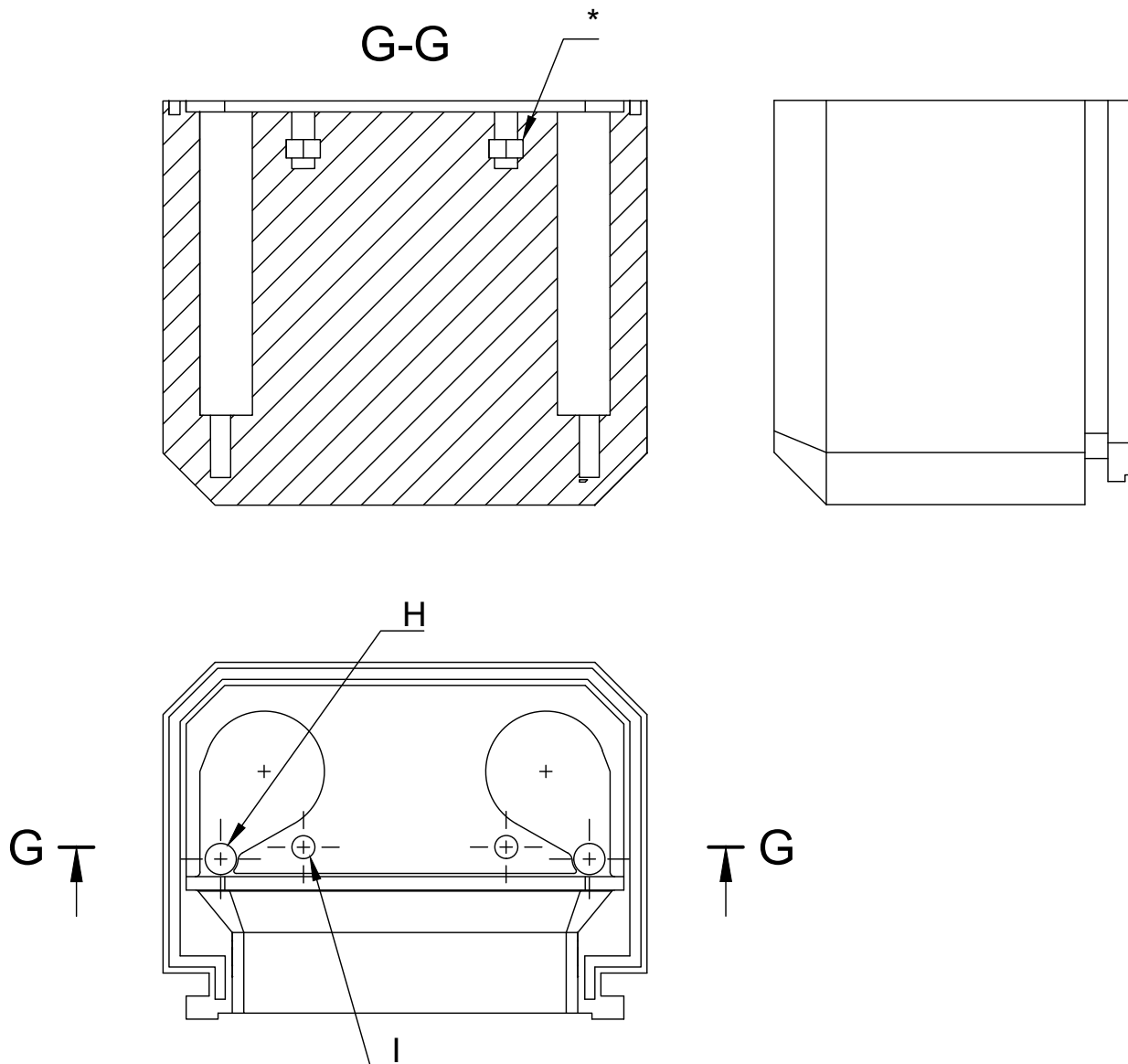
ITEM #2: BODY



E hole is designed to fit a specific piece which contains a thread of a tripod screw (1/4")

F shapes are ment to fit M4 nuts (#13).

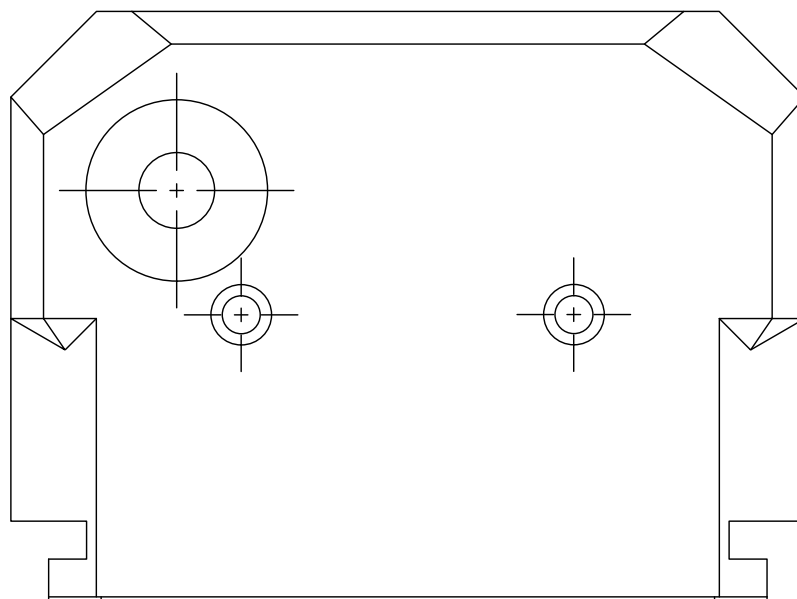
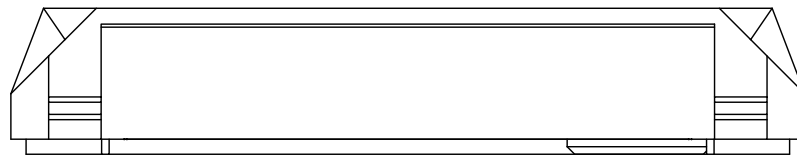
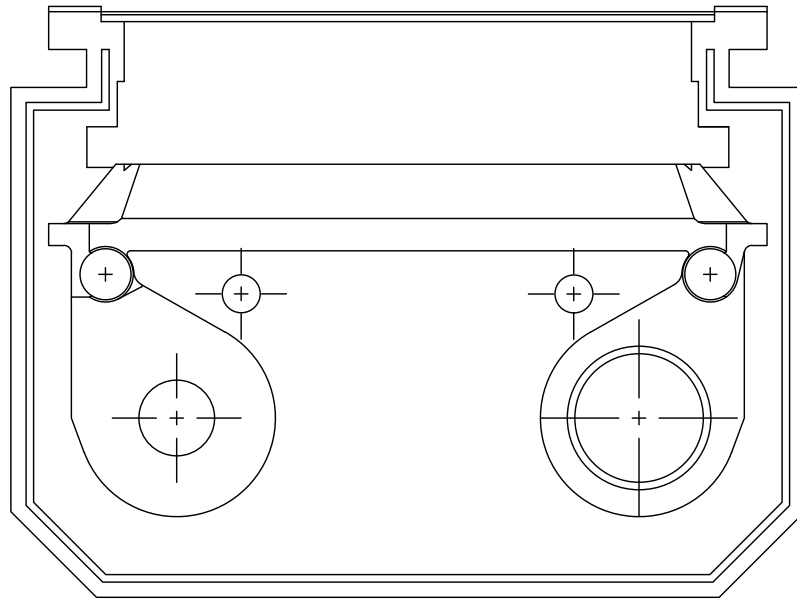
ITEM #3: BACK



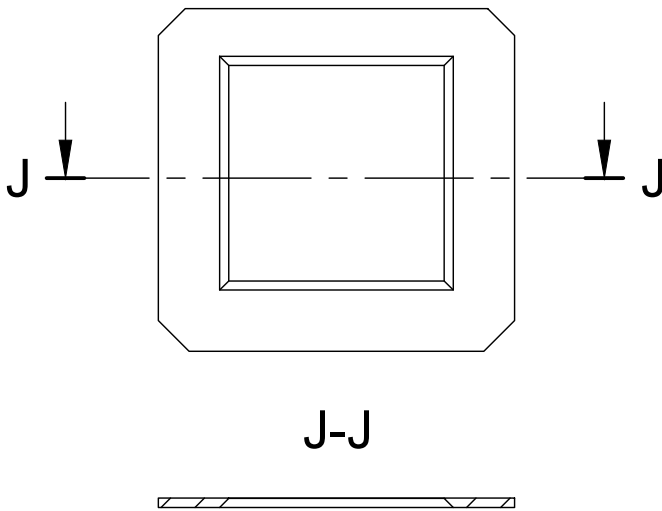
H holes are used to hold both cylinders (ITEMS #8 & #9) in place. This holes can be found in piece #4 as well.

I holes are the ones which guide the bolts towards the nuts located in *

ITEM #4: BACK COVER

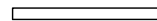
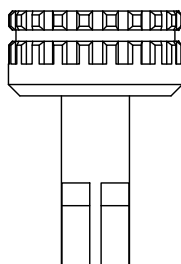
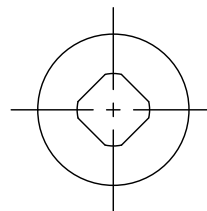
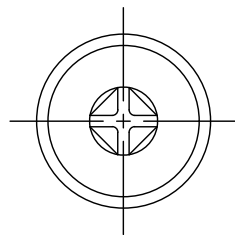


ITEM #5: 6x6

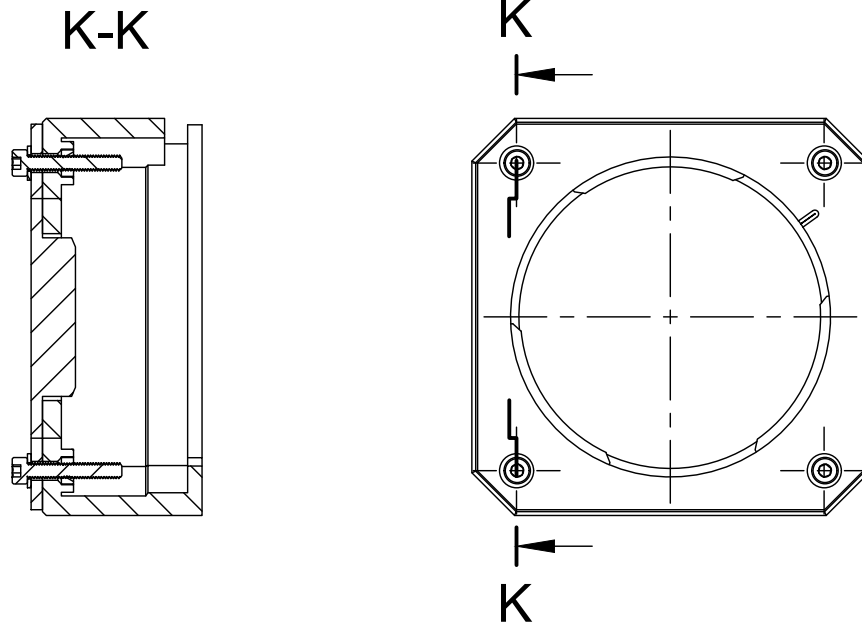


Item #5 can be redesigned to achieve different image ratios. Maximum ratio achievable due to geometrical constraints is 6x7.

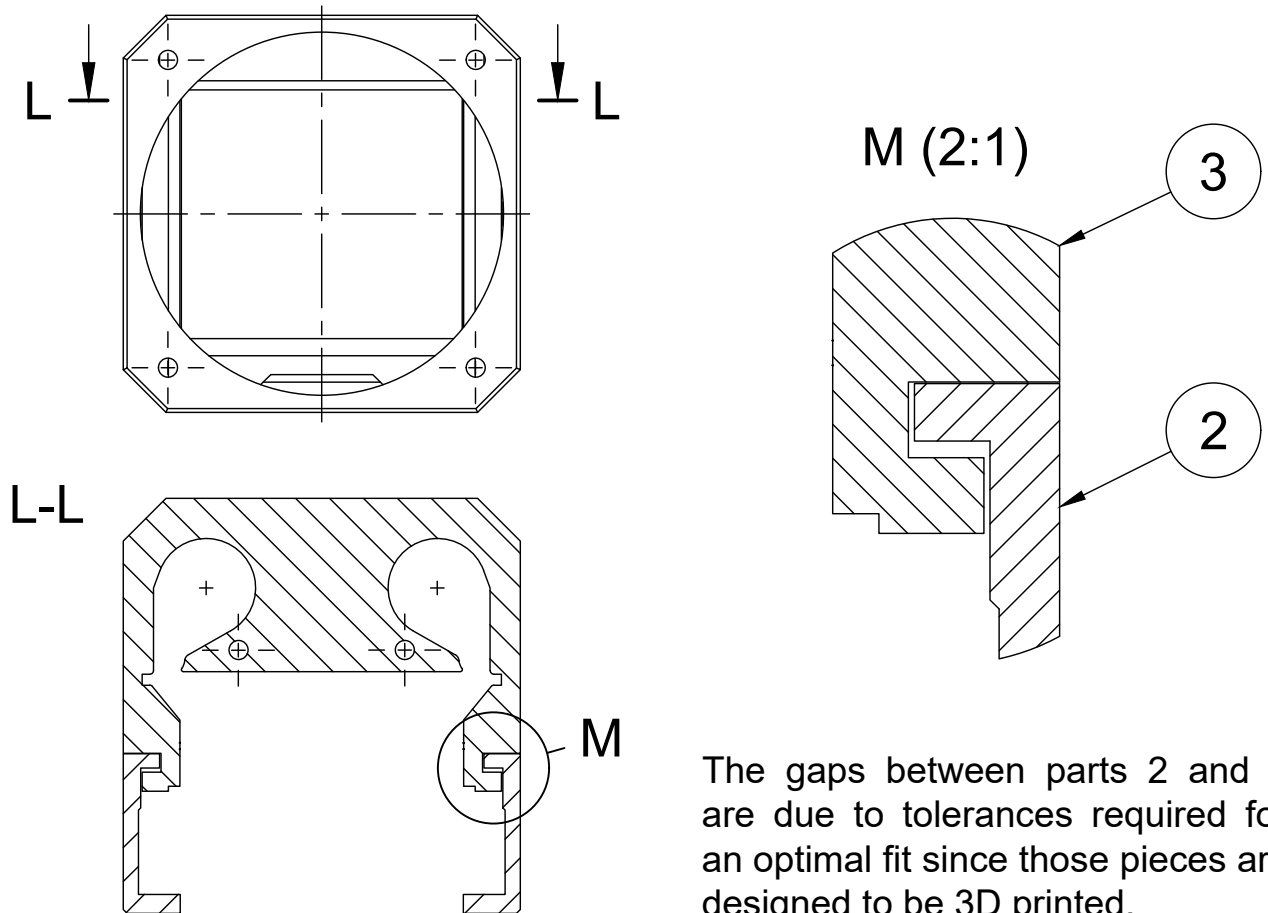
ITEMS #6 & #7: REWINDER AND STOPPER



ITEMS 1 & 2 JOINT

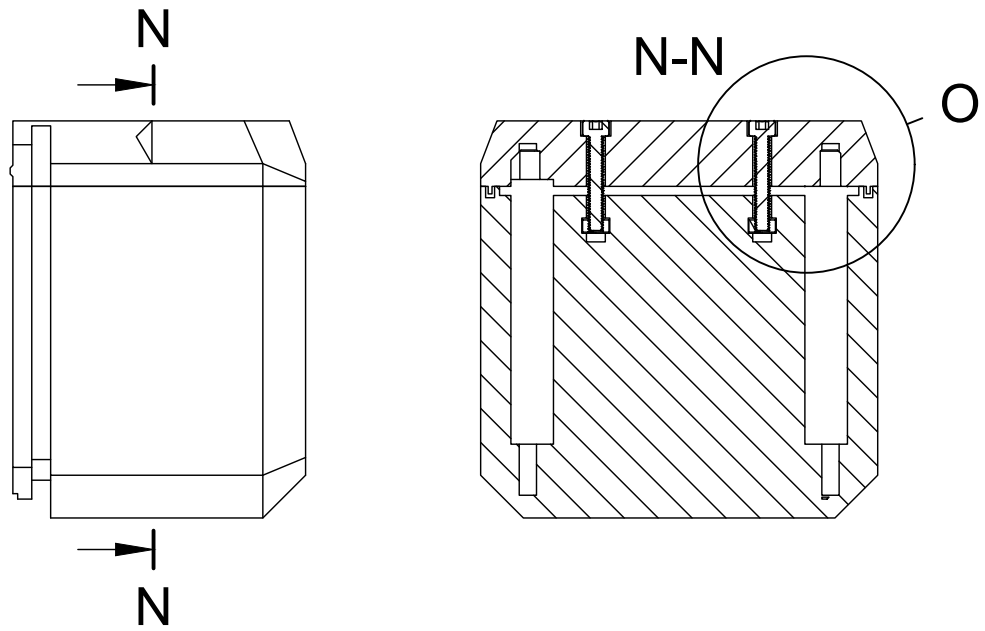


ITEMS 2 & 3 JOINT

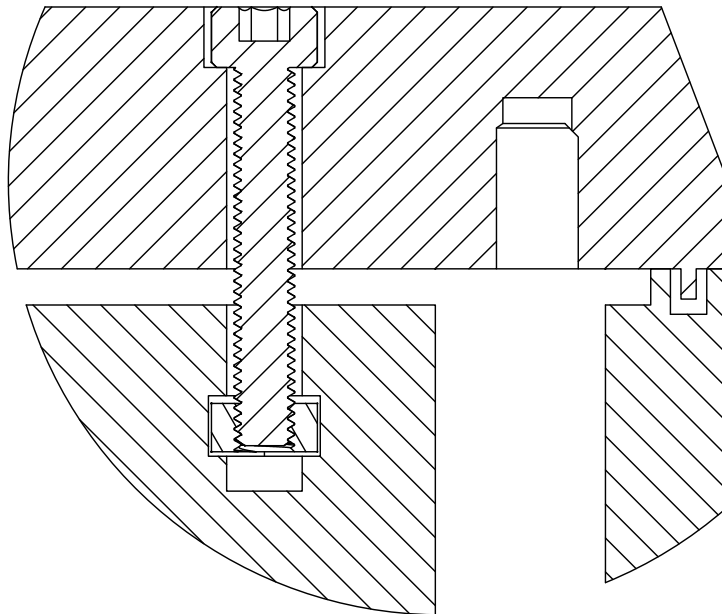


The gaps between parts 2 and 3 are due to tolerances required for an optimal fit since those pieces are designed to be 3D printed.

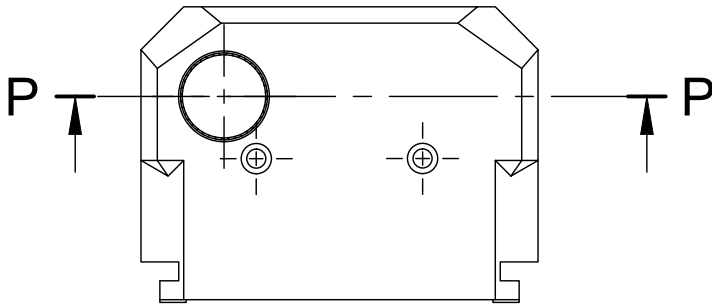
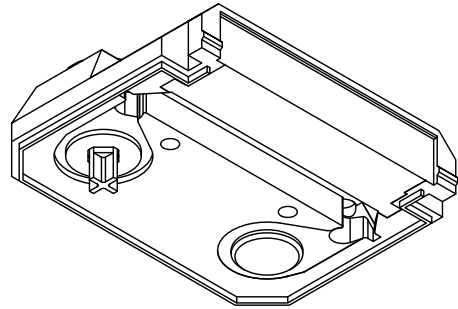
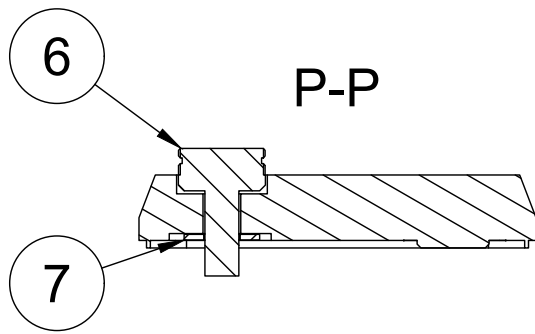
ITEMS 3 & 4 JOINT



O (2:1)



ITEM 6 & 7 JOINT



Items 6 & 7 need to be glued.

LIGHT LEAKING SOLUTIONS

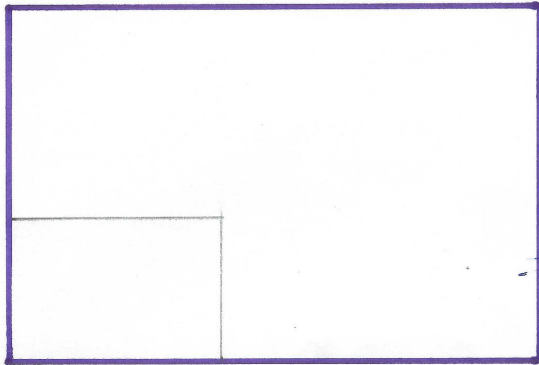
The union between items #2 and #3 shown in page 11, as well as the one between items #3 and #4 in page 12, have been designed to avoid any light leak. Nevertheless, since 3D printing surface finish is not perfect, it is recommended to manually seal the joints using adhesive tape.

Light leaking is not such a problem in the union between #6 and #7 shown above. Adhesive tape can not be used. Both pieces should be able to move freely.

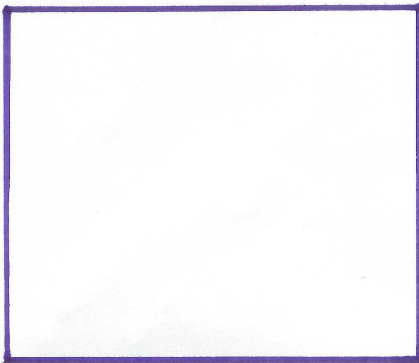
FRAMING

The modularity of the camera allow users to add items to it. A viewfinder could be easily added to the top part of the body (ITEM #2). A faster and simpler solution is to draw in the camera itself some lines pointing the maximum angle the camera is seeing (taking into account the image size and the lens involved) and use them as guides when framing.

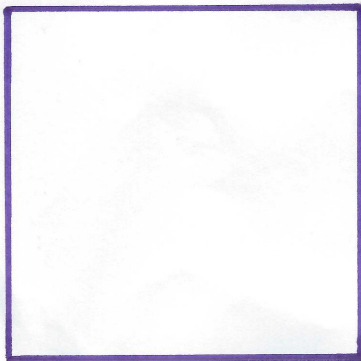
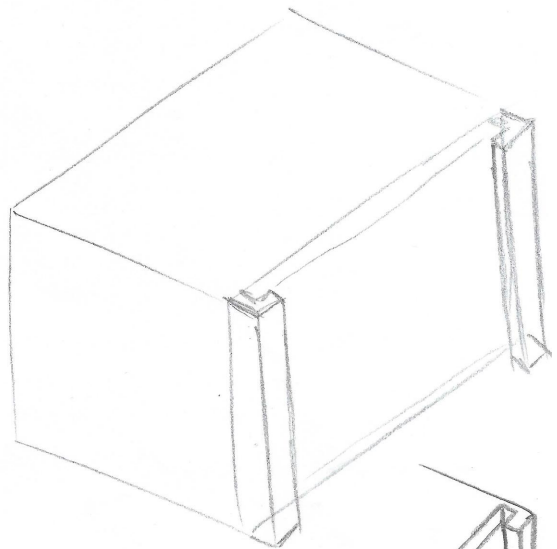
SKETCHES



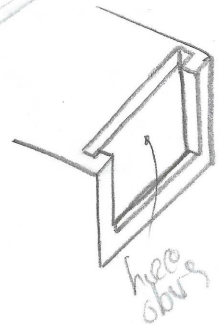
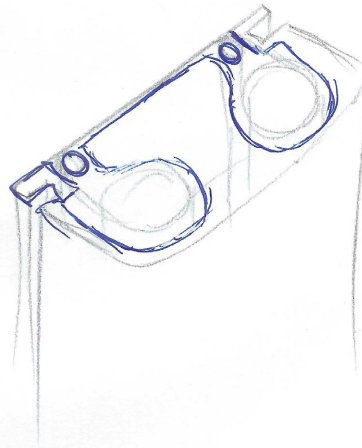
7-8 fotes



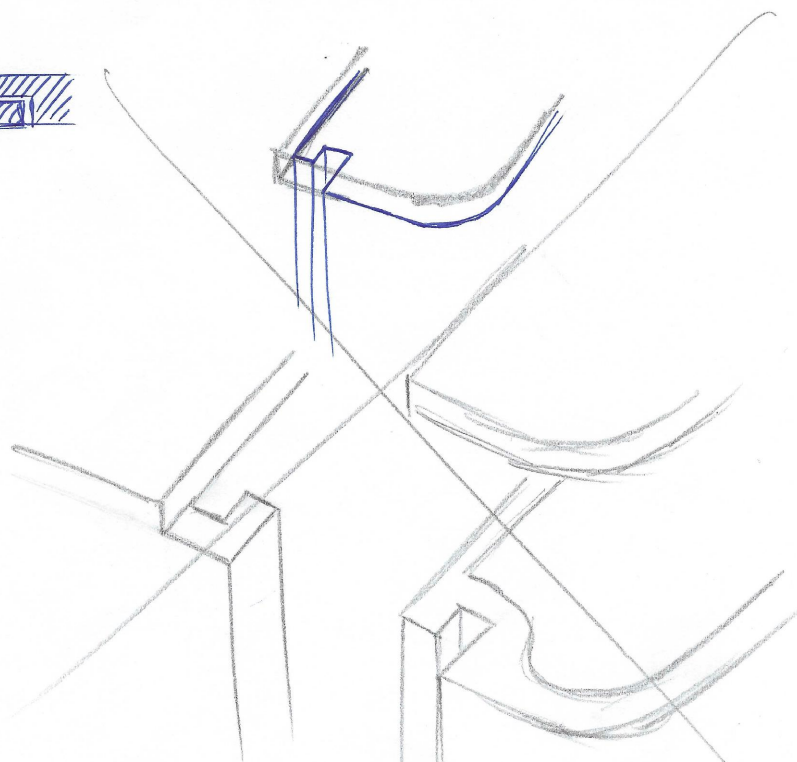
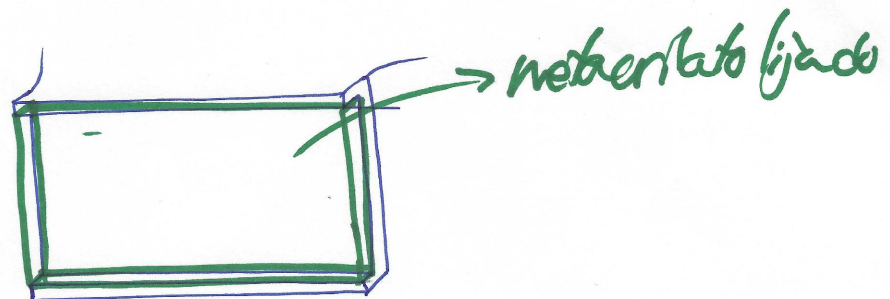
10 fotes



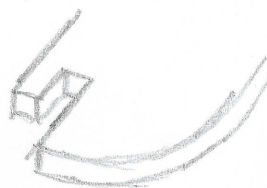
12 fotes



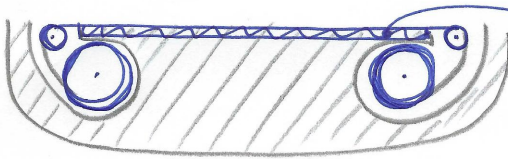
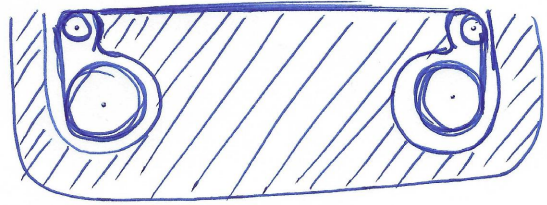
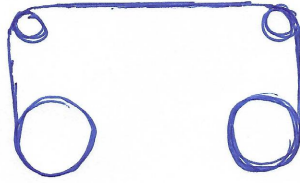
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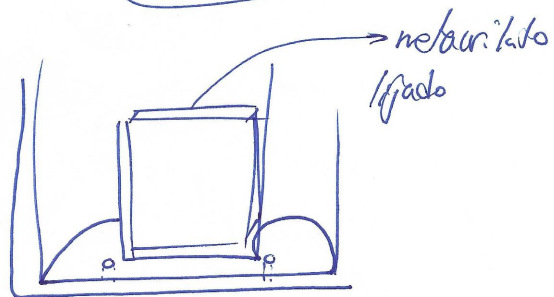
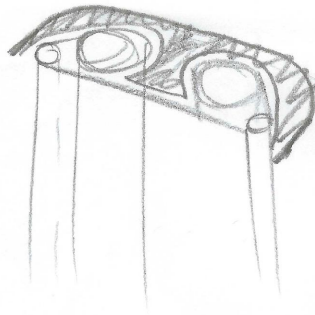


ver como sellar
unión cuerpo
principal +
cuerpo canchale
por la parte
superior

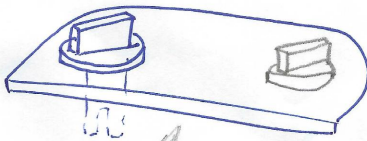


metacrilato

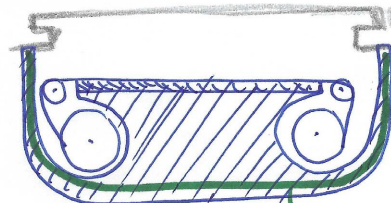
sellado con goma eva negra



metacrilato lijado

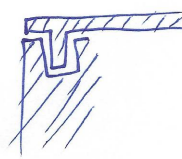


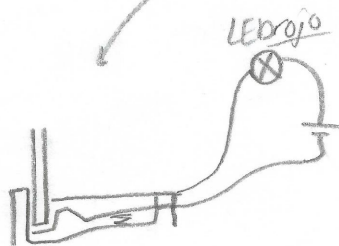
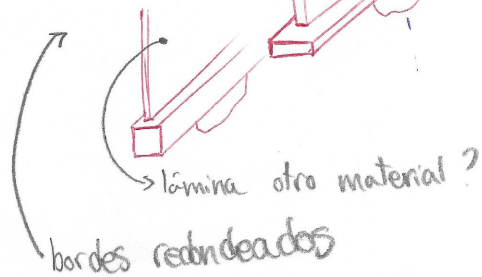
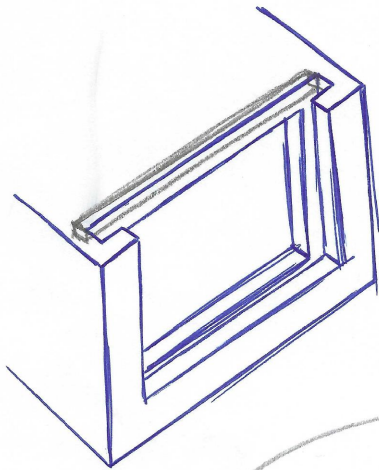
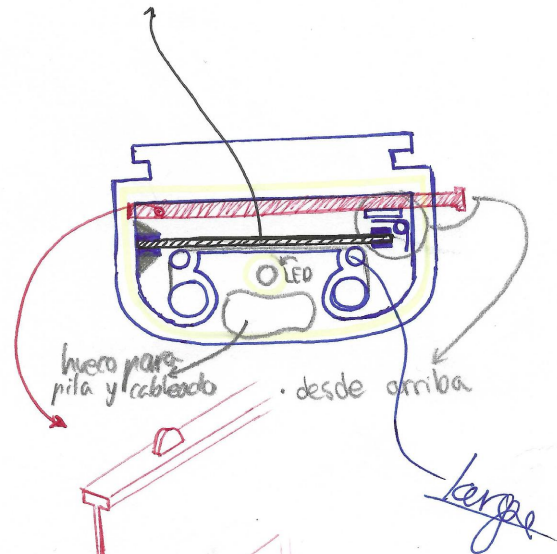
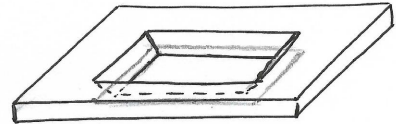
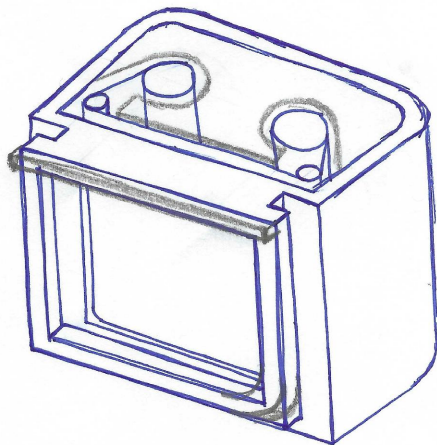
tornillos
(base y tornillos
de repuesto?)



goma eva negra

o hacer entidura





*M = endiciras
light ledary*

