

FS40+FS80 Pivot Bracket

Unified pivot bracket for FS10, FS40 and FS80

Version 1.0



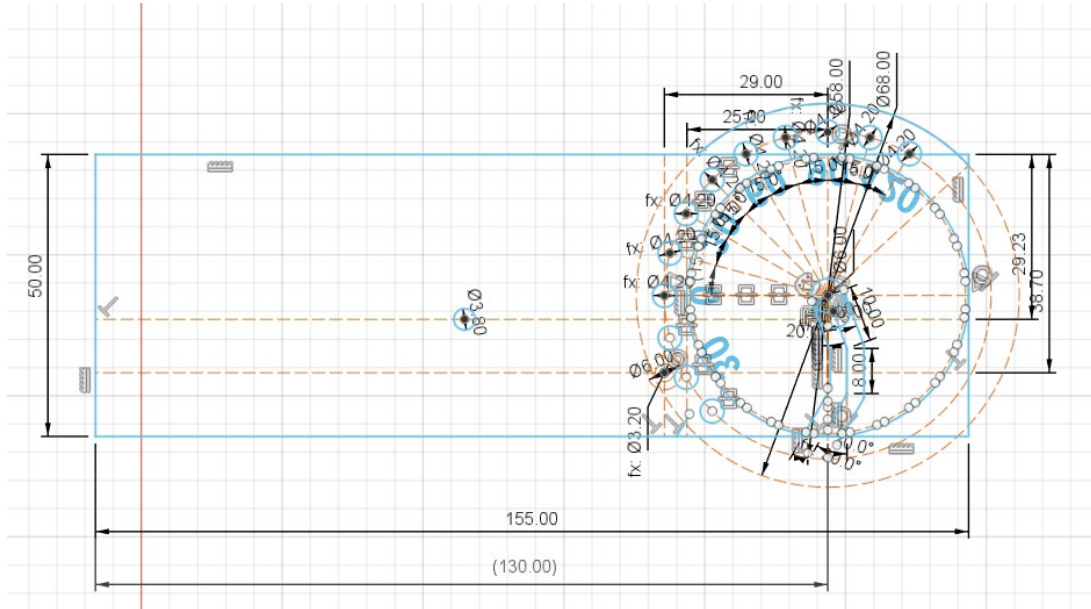
Project Goals

- Merge the FS40 and FS80 Pivot bracket into 1 single project to simplify the usage.
- Add also a pivot bracket for FS10
- The pivot slot should allow a quick replacement of the camera and his adapter.
 - Add a slot to help the disassembly of the pin from the pivot.
- Threaded knobs can be used to fix the camera angle.

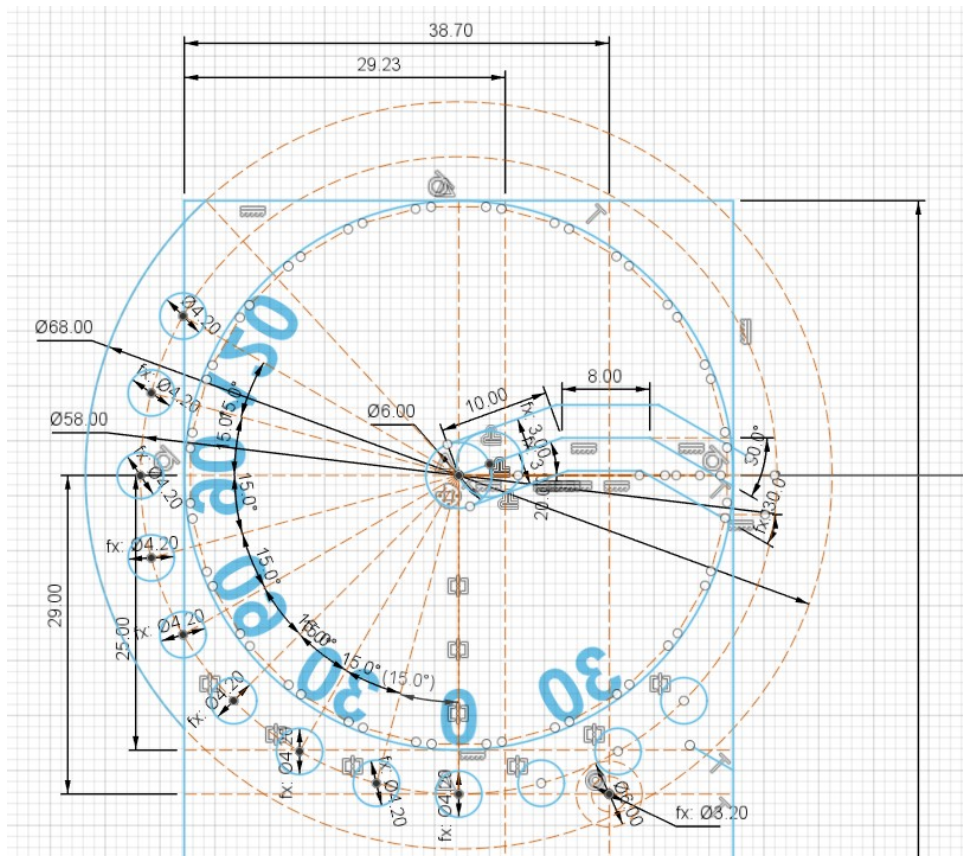
Design

Unified Pivot Shoulder Sketch

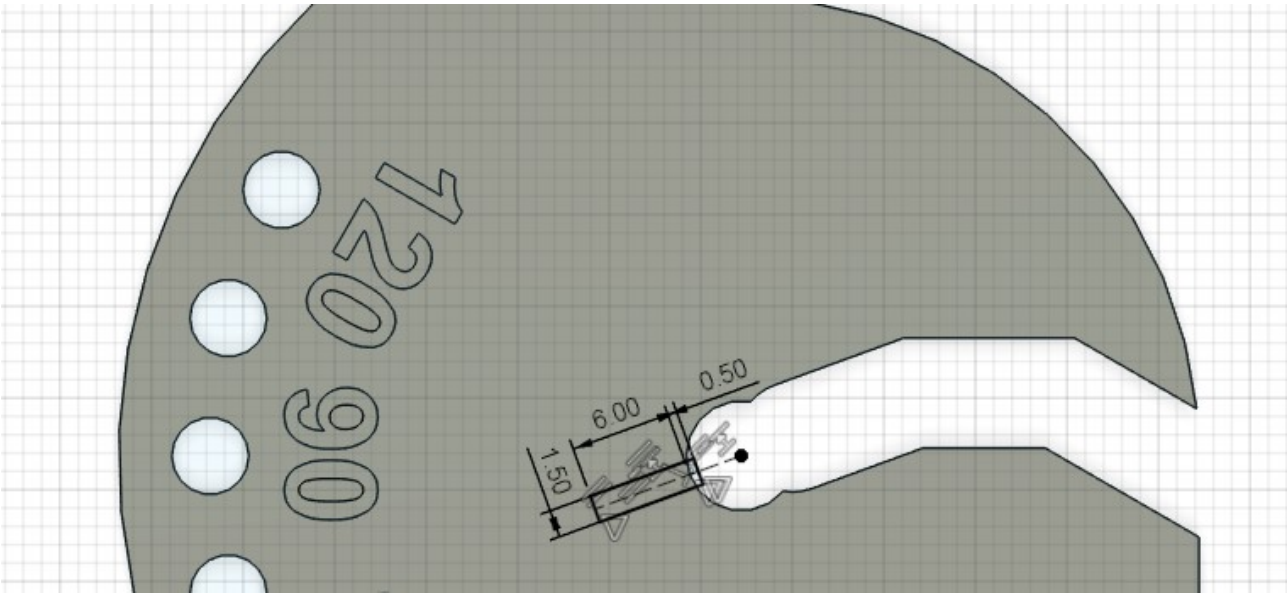
Base shoulder size is 155 x 50 mm



The shoulder has a slot and a rotation center. All around there are some 15 degree placeholder for a locking pin.

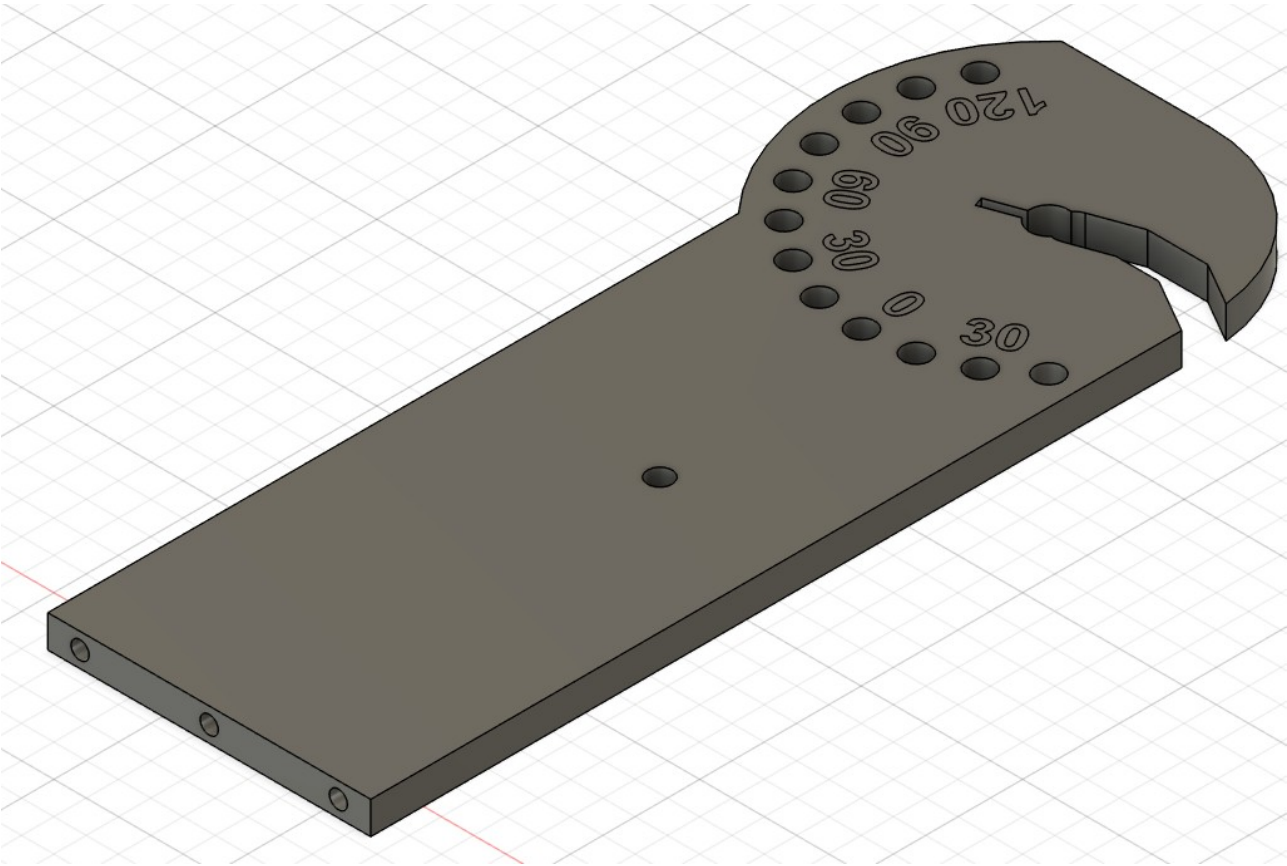


Screw Driver Assist slot: this is a 6x1.5 mm slot created in the pivot center that can be used to force the release of the pin.



Unified Pivot Shoulder 3D Model

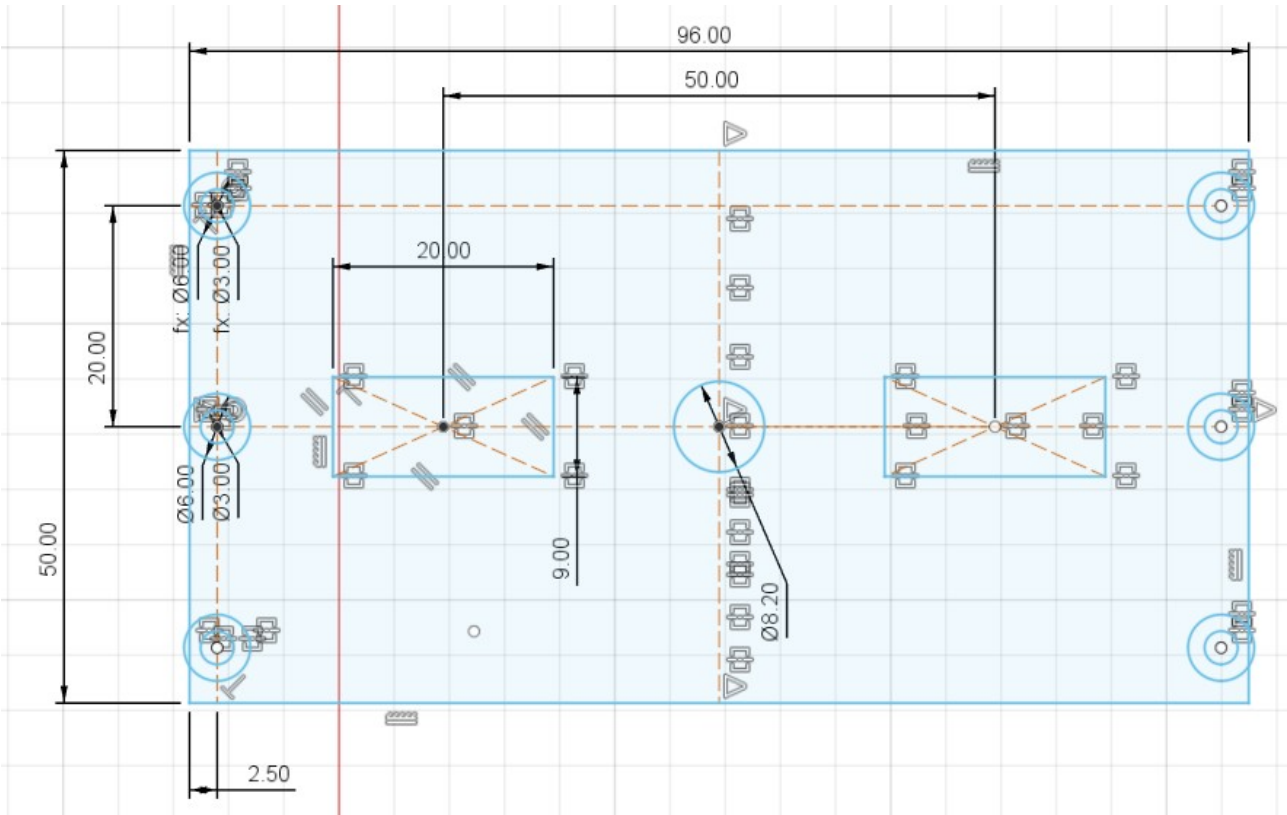
Extrusion thickness is 5 mm



Unified Pivot Base Sketch

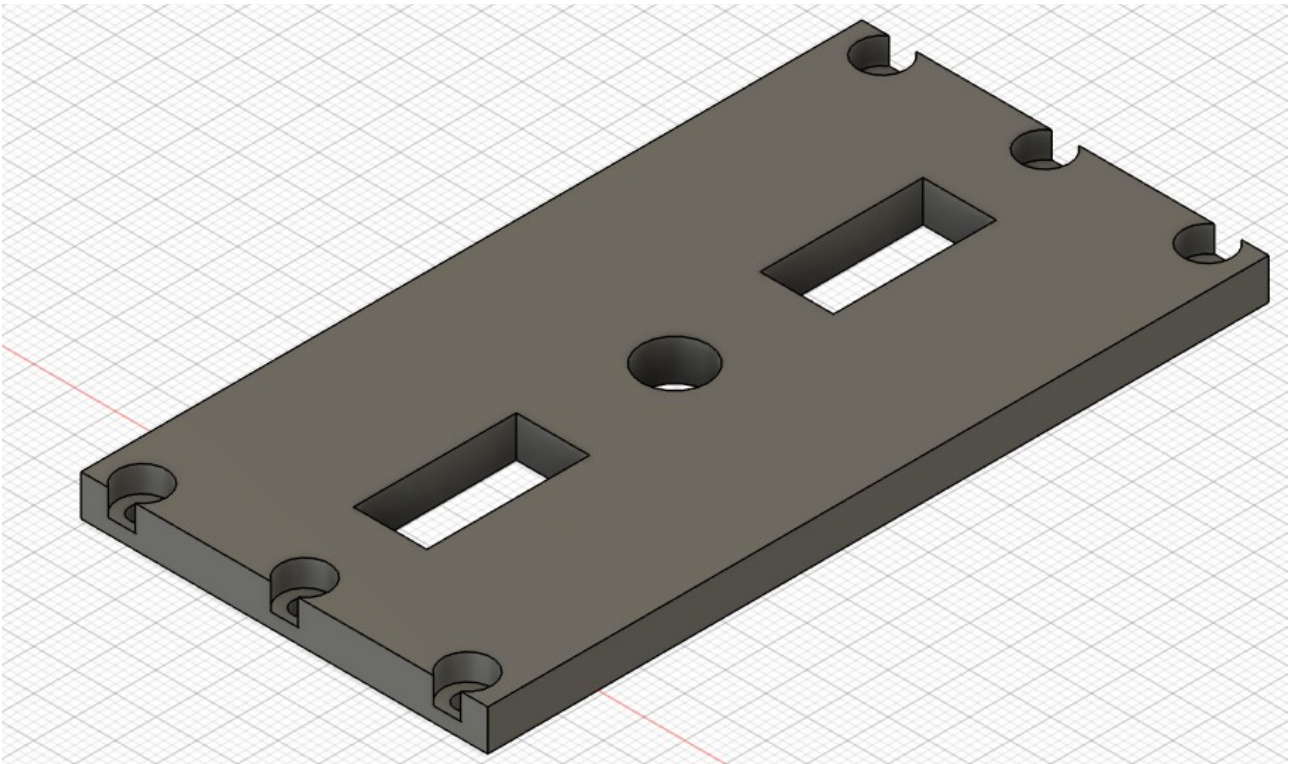
Base dimensions: 96 x 50 mm

Slot size: 20 x 9 to accommodate 8 mm T-Bolts



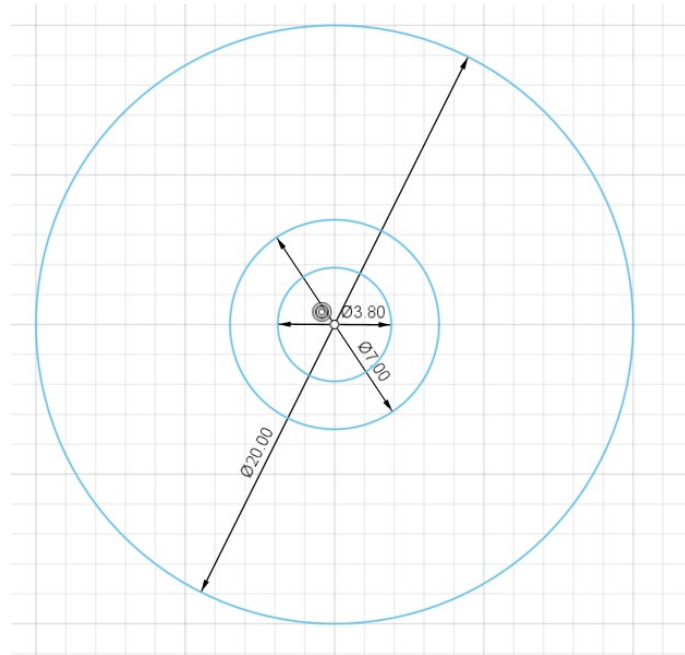
Unified Pivot Base 3D Model

Thickness: 5 mm

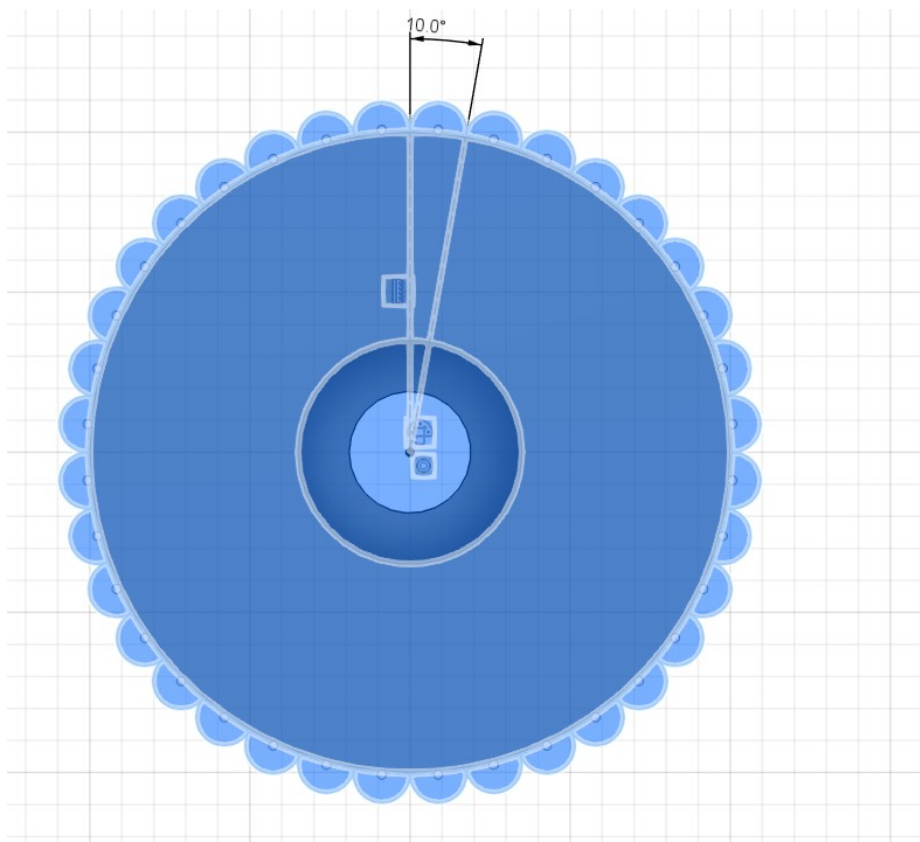


Screw Knob Sketch

The basic dimension is a 20 mm circle, with a 3.80 mm in the center to hold the screw.



The knurl is a circle replicated every 10 degrees

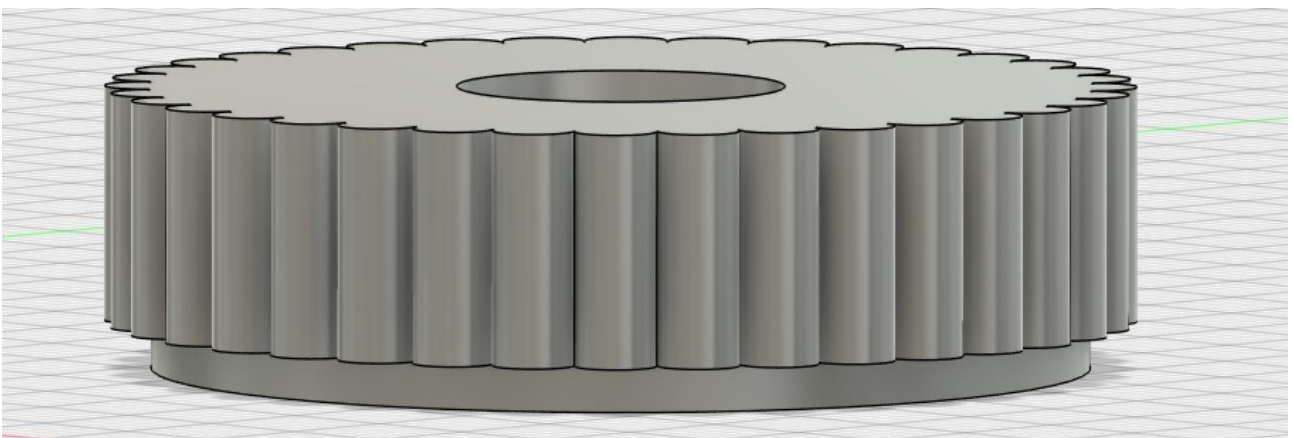
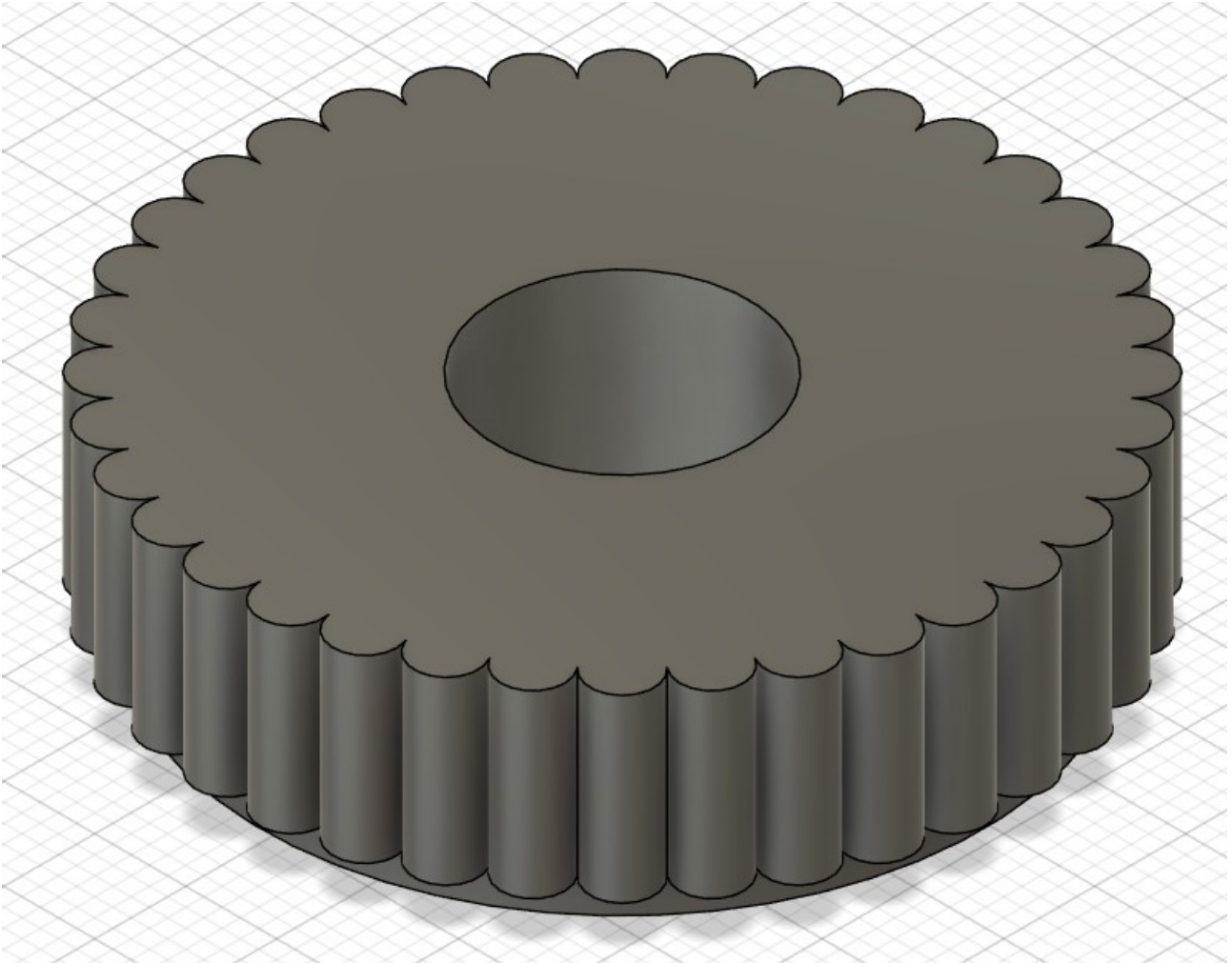


Screw Knob 3D Model

Model thickness: 6 mm

The 4 mm screw needs some superglue to be fixed in place in the center.

The knurl is 1 mm shorter than the total height.



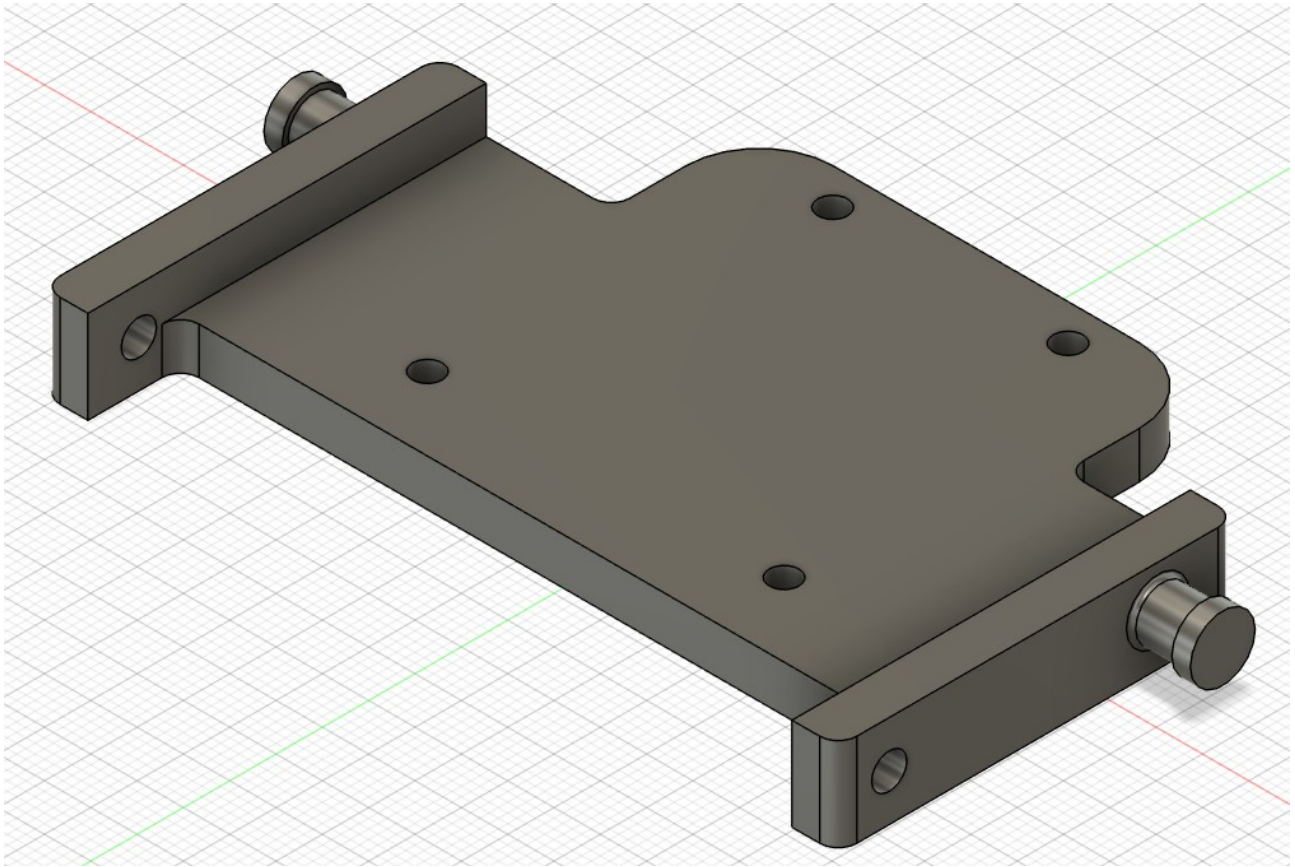
But there is an extension of 10 mm on both side to accommodate the locking pin.



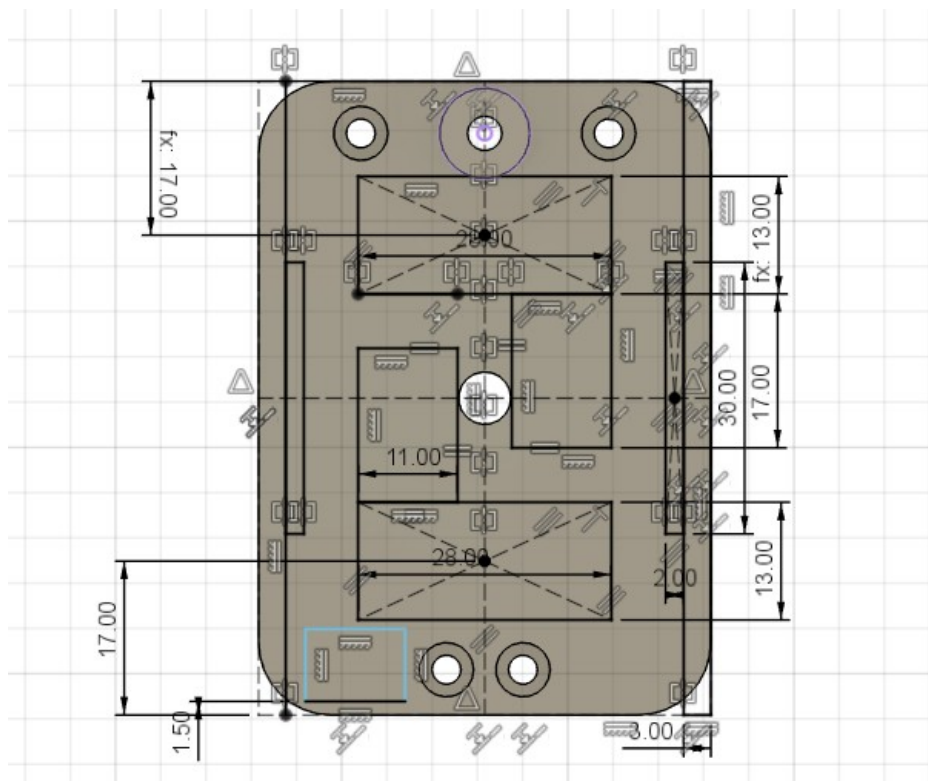
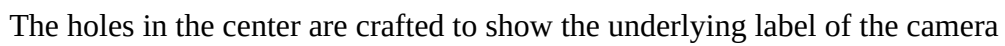
FS10 Unified Adapter 3D Model

Center thickness: 5 mm

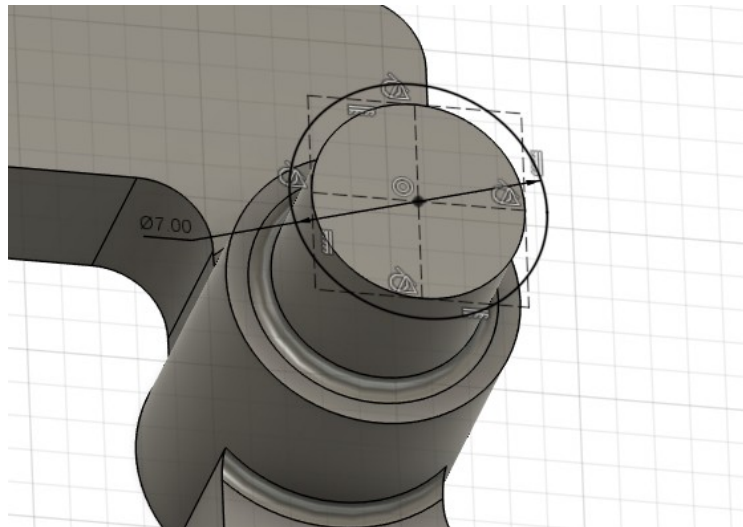
Side height: 10 mm



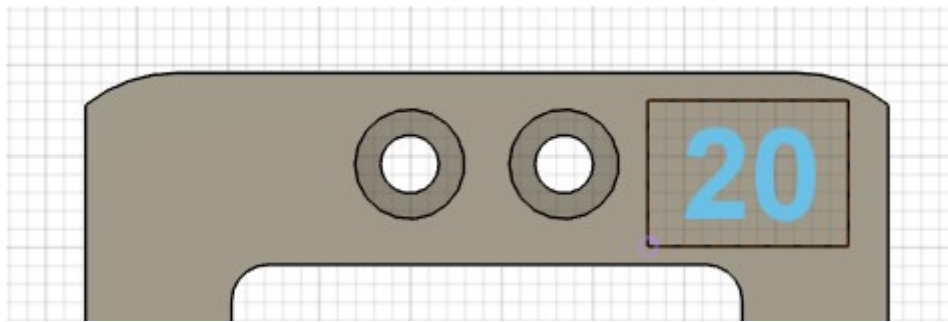
The sketch is symmetric so I can use it for Left or Right Side



The central pin has an internal diameter of 6 mm and an external diameter of 7 mm.



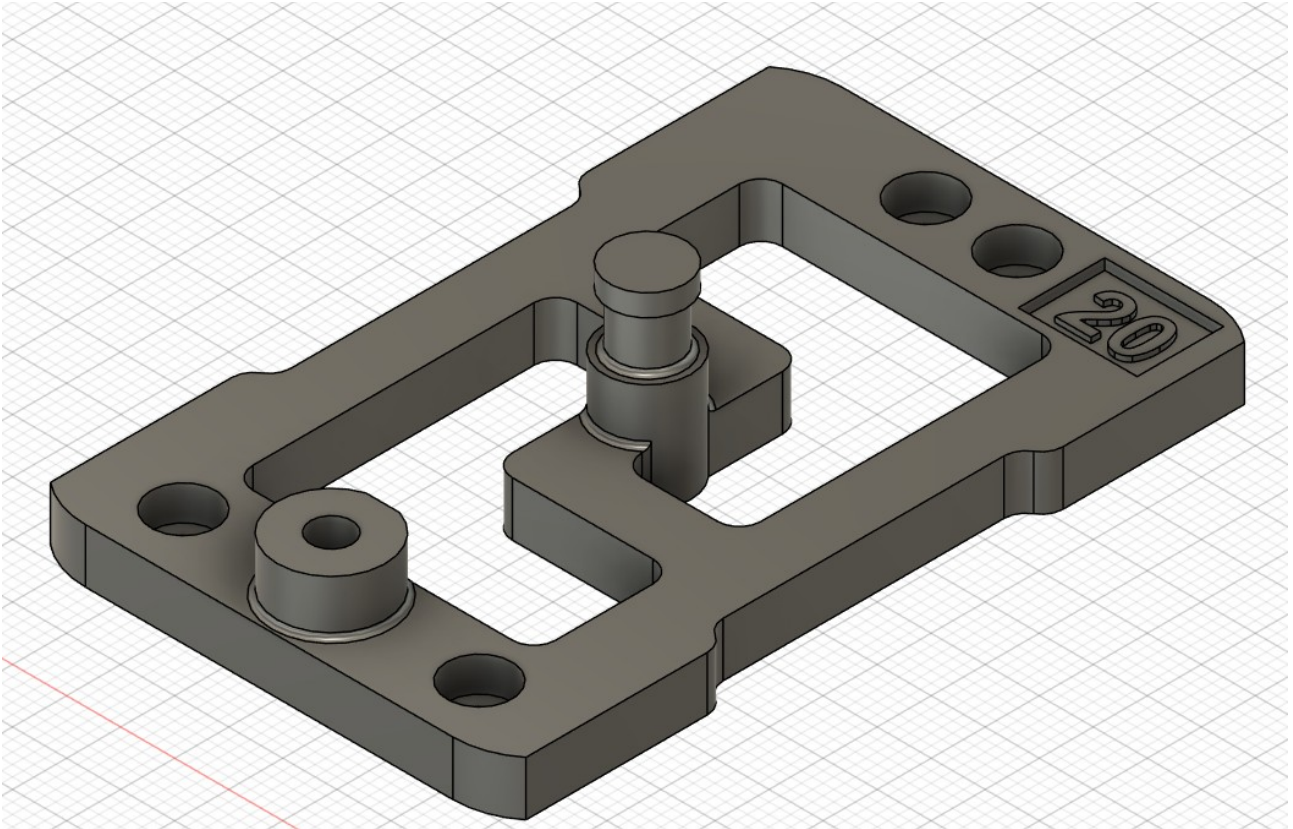
In this case the text sketch contains 20 (2.0 MPix)



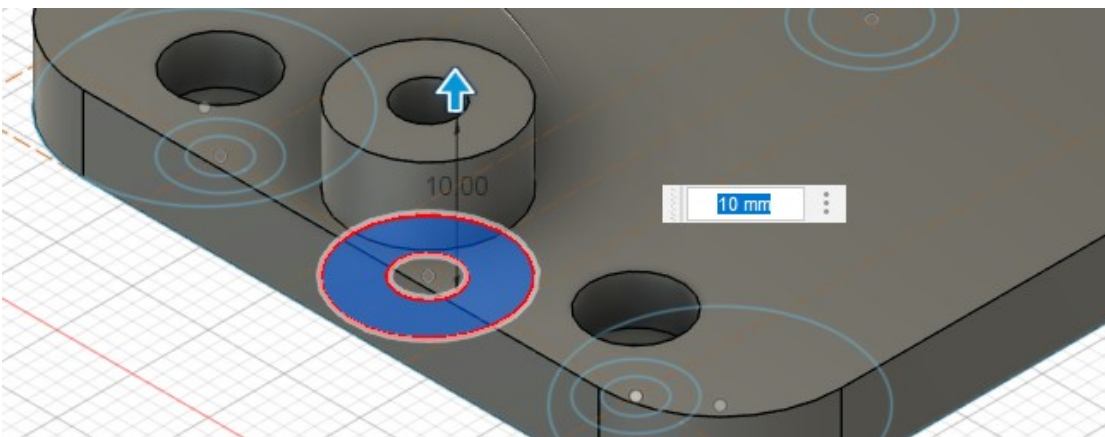
FS40 Unified Adapter 2Mpix 3D Model

Base extrusion height: 5 mm

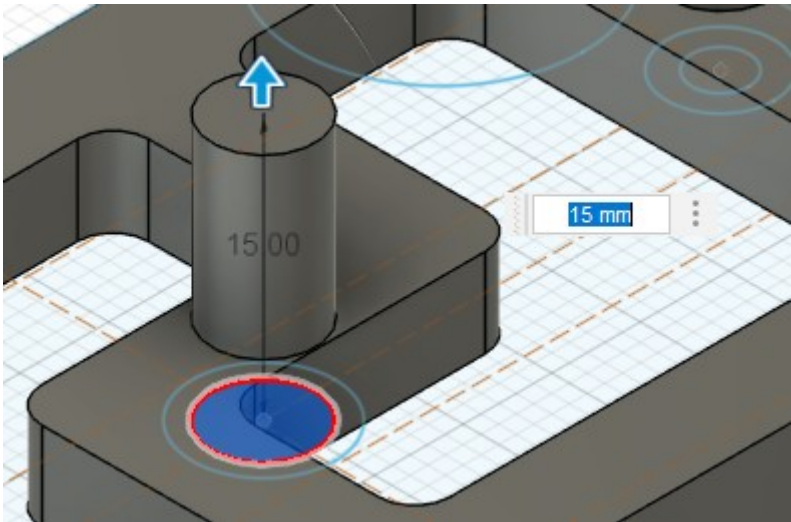
Central Pin extrusion height:



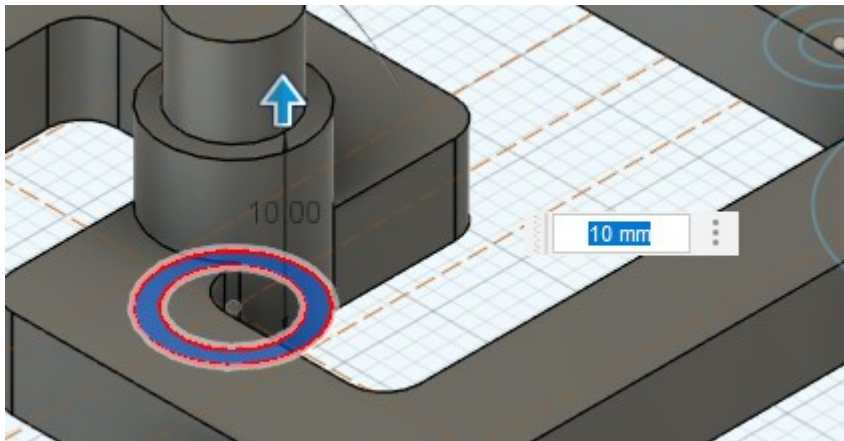
Locking pin thread: 10 mm extrusion



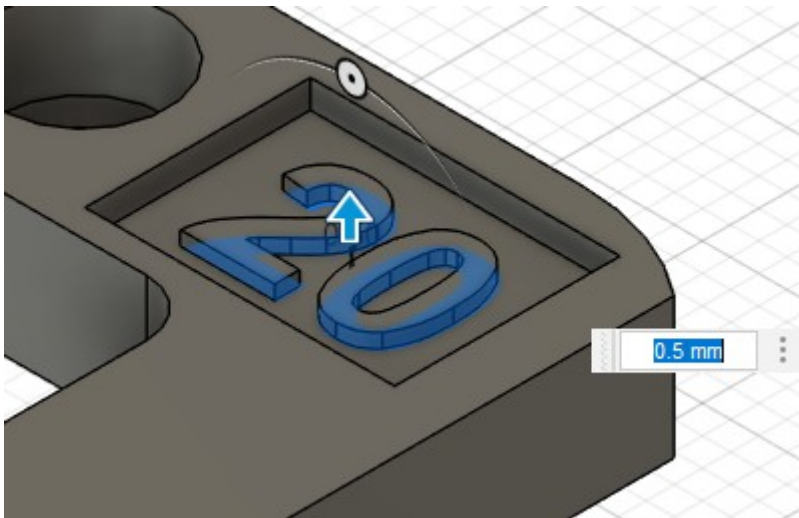
Central rotating pin extrusion: 15 mm



Pin Reinforcement: 10 mm

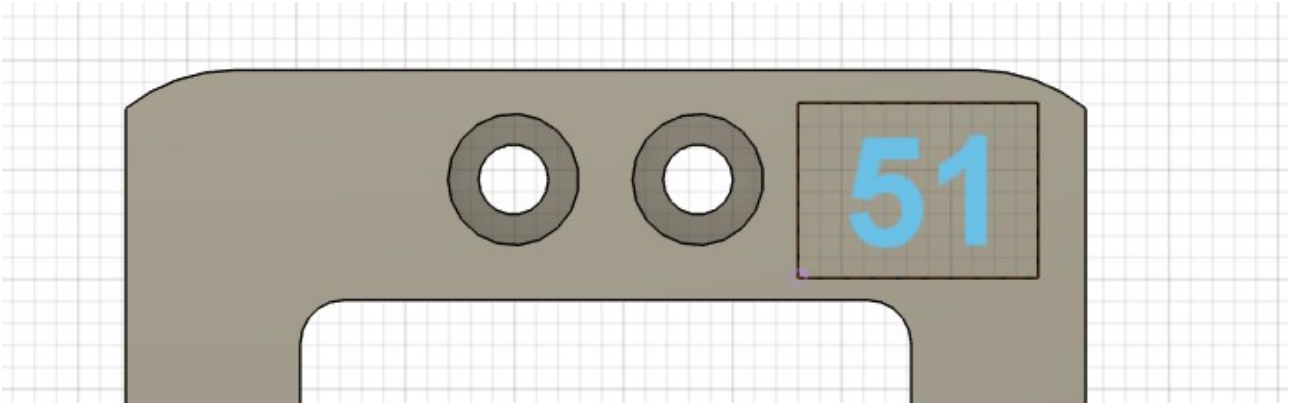


Text Extrusion: 0.5 mm

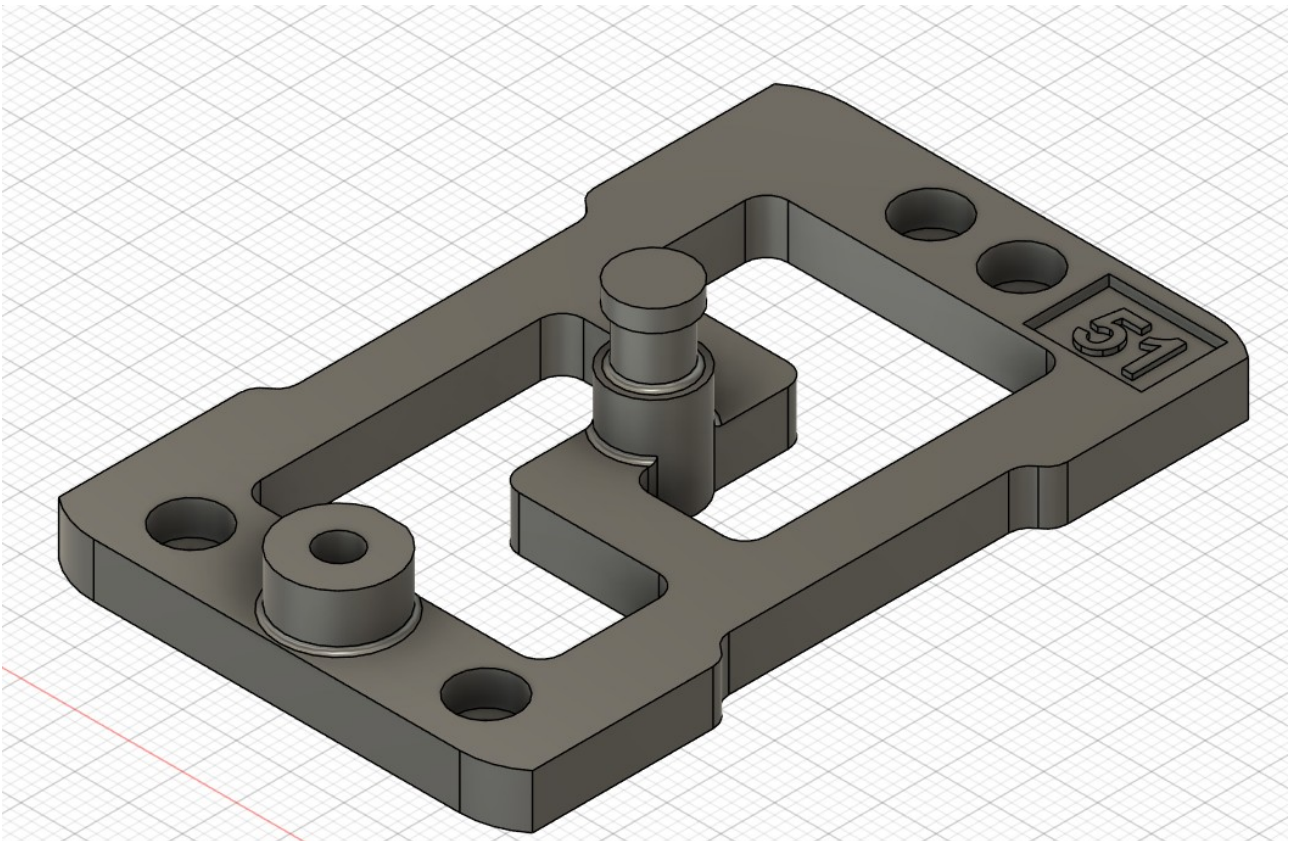


FS40 Unified Adapter 5Mpix Sketch

This is exactly the same as the 2MPix, the only difference is the text



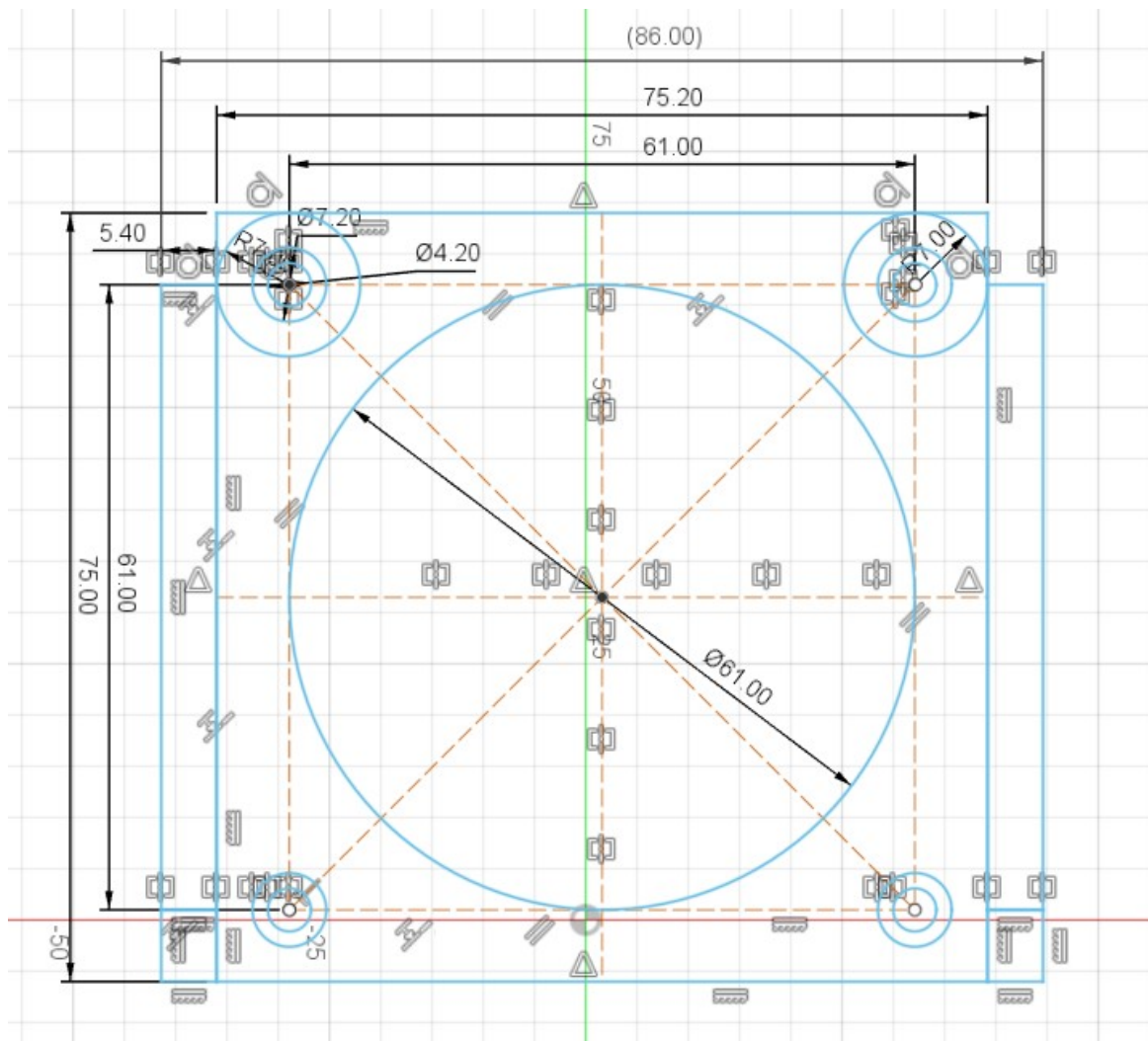
FS40 Unified Adapter 5MPix 3D Model



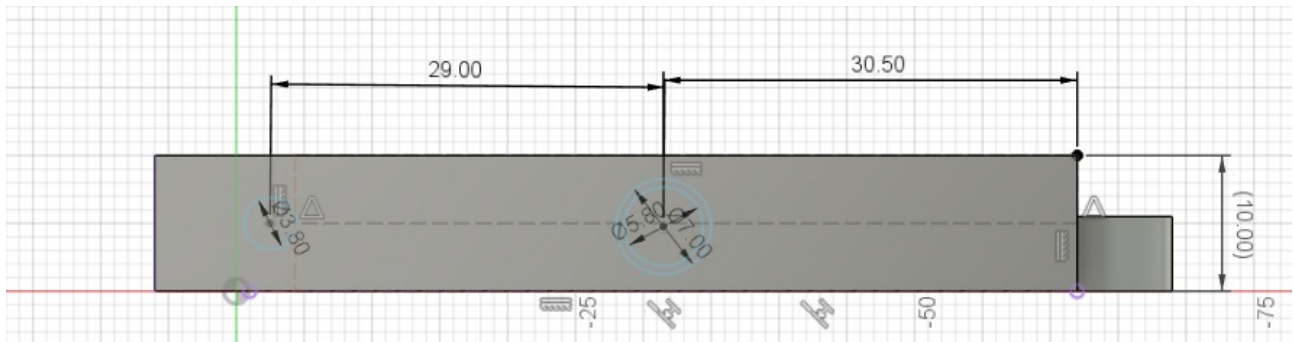
FS80 Unified Adapter Sketch

The basic size is 86x 75 mm

In the center there is a 61 mm hole.



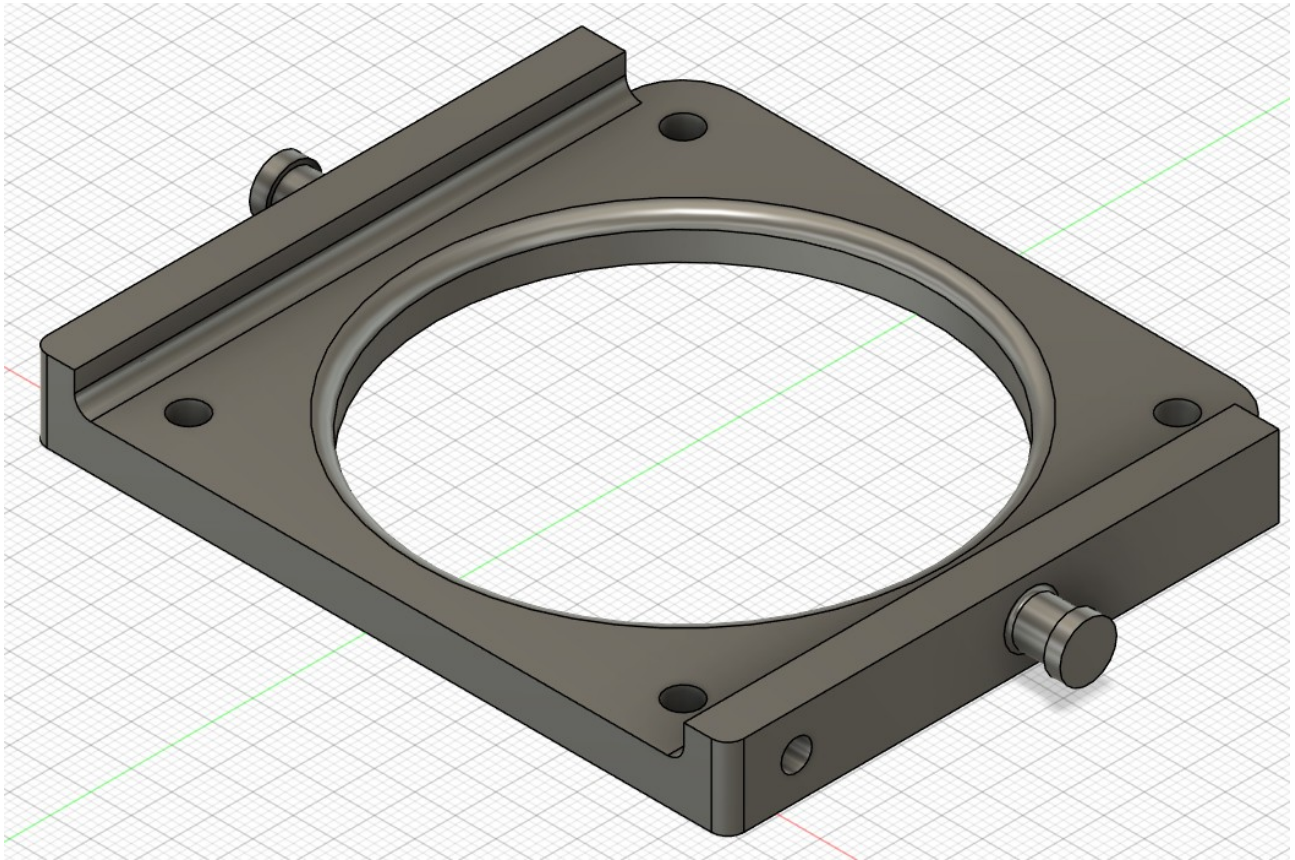
The pin on the side is in the center of a 10 mm structure, and this is enough to keep the camera balanced.



FS80 Unified Adapter 3D Model

Central thickness: 5.5 mm

Using 5.5 we can use 10 mm M4 Screws



Final result

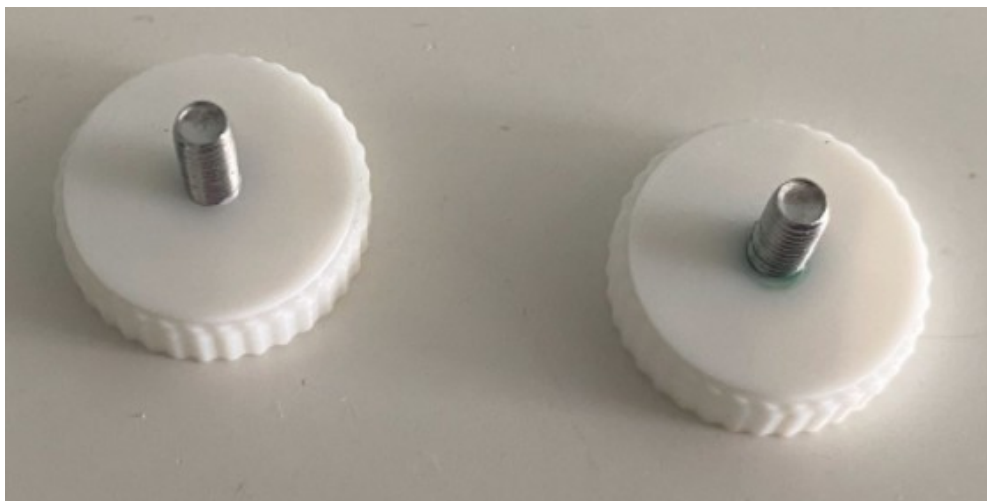
Bracket Assembly

It requires 6 x M3x16 mm Cylindrical screws



Knob

For each knob, in the center there is an M4x10 mm cylindrical screw.



FS10

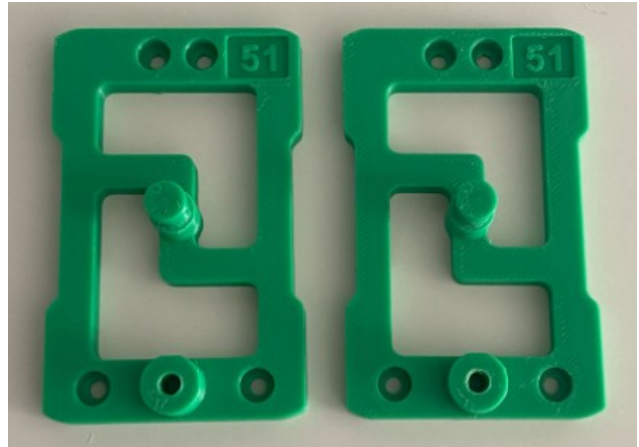
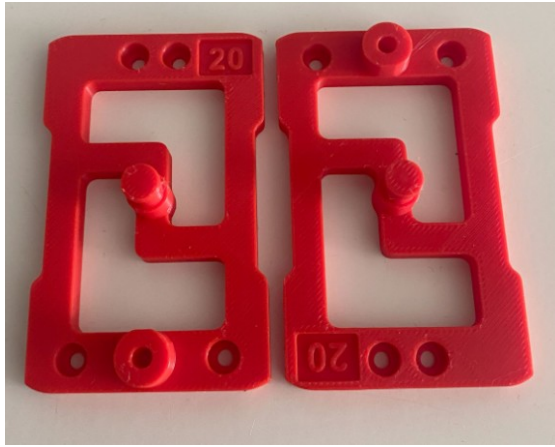
We need 4x M3x10 Cylindrical screws to mount the camera



FS40

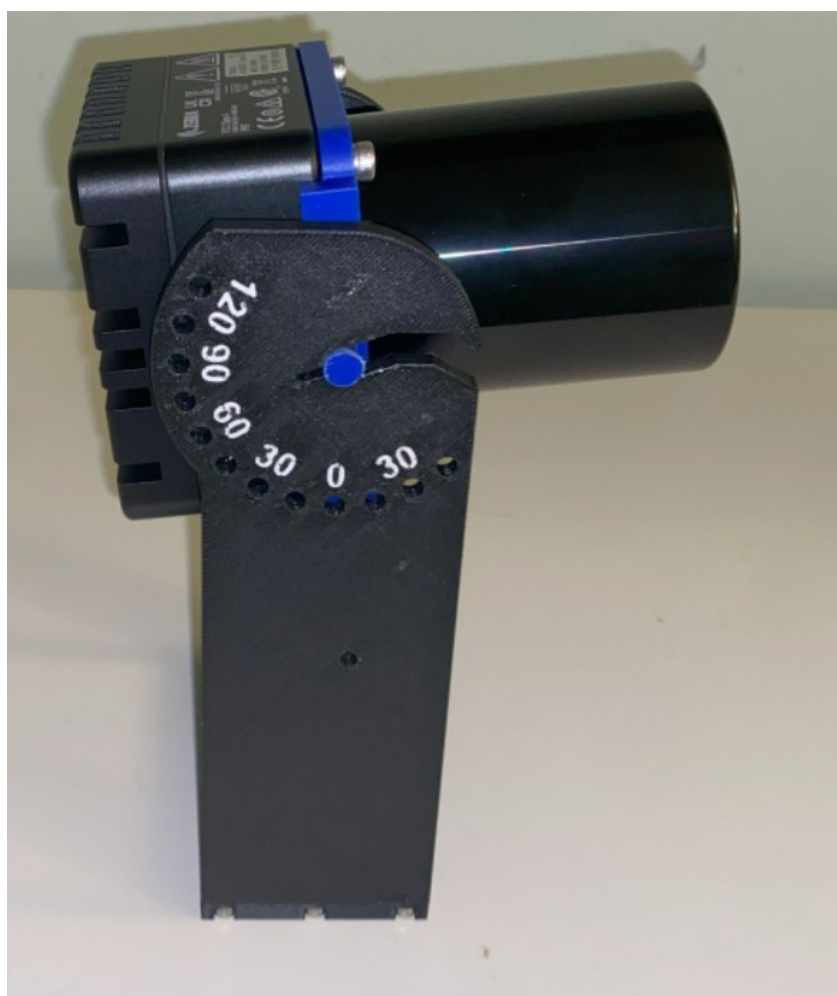
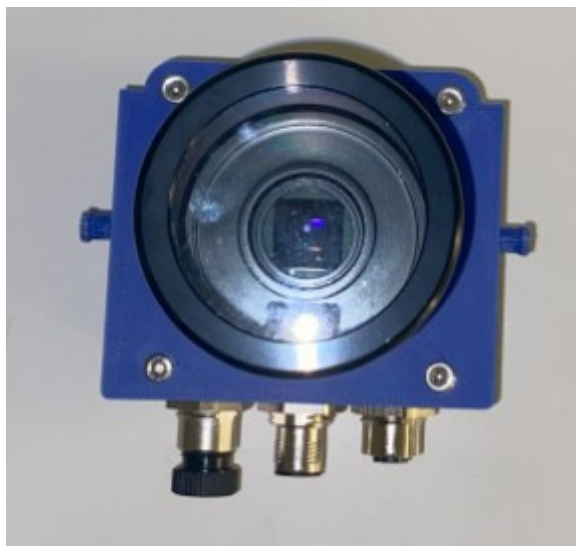
I use RED for the 2MPix camera and Green for the 5.1 Mpix camera

Assembly: we need 4x M3x6 mm Cylindrical screws



FS80

4x M4x10 Cylindrical screws



Reference

T-Bolts for Bosch Rexrooth 45x90 profile

<https://www.amazon.it/dp/B07TKHNDX3?th=1>



M8xL(16 20 25 30 35 40)



4545 M8X30 Bullone a T con testa a martello in acciaio al carbonio (20 Pezzi)

Marca: Flomore
4,3 ★★★★★ (21) | [Cerca in questa pagina](#)

12,99 €

prime Un giorno

Resi GRATUITI

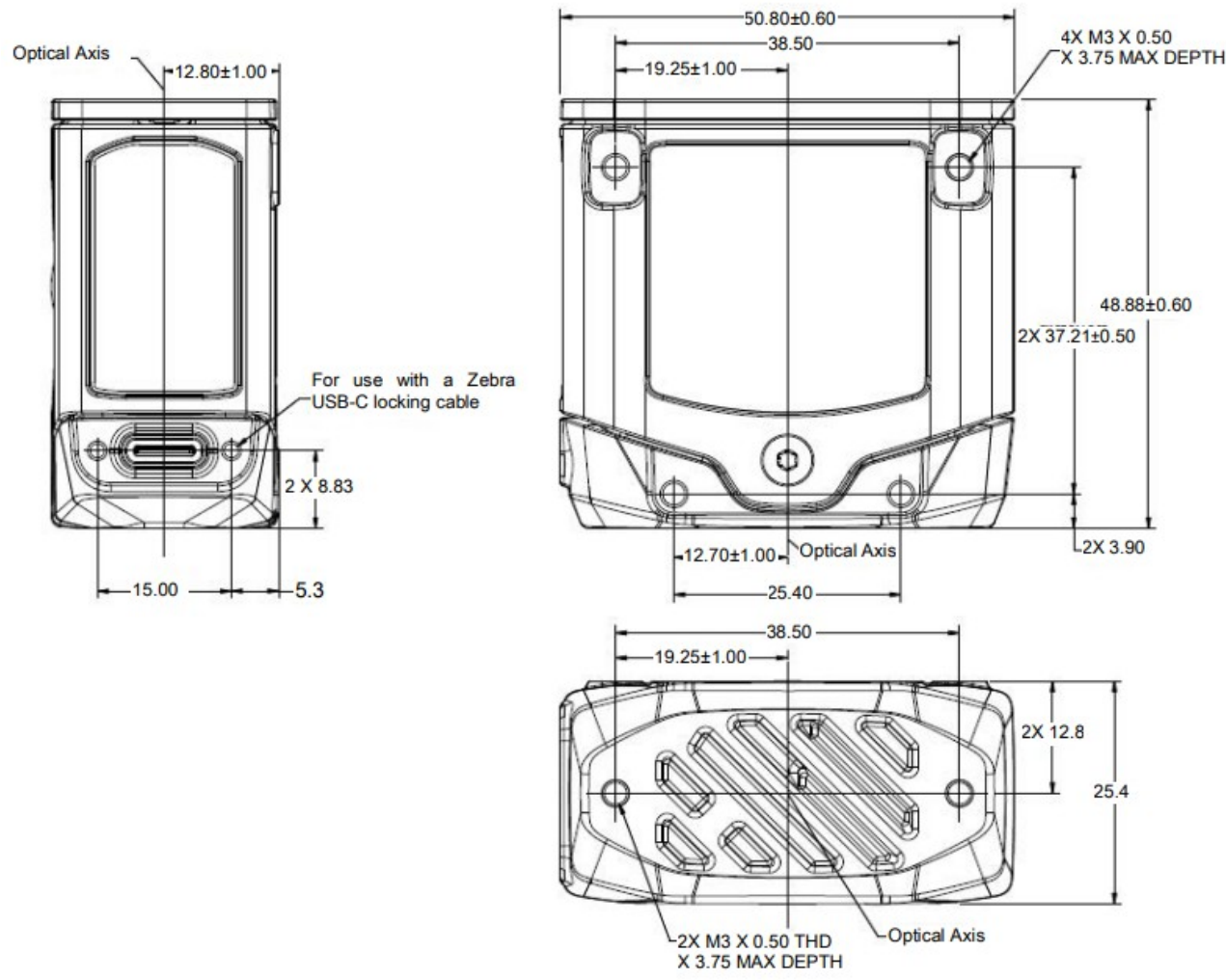
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Materiale	Acciaio al carbonio
Dimensioni filettatura	3/8 pollici 16
Finitura esterna	Acciaio inossidabile
Tipo di testa	martello, testa
Tipo di chiusura	Bullone a T

FS10 Camera Drawings



FS10 90 Deg USB C Cable

The bracket is usable only with this 90 Deg cable. Using the standard cable it is not possible.

<https://amzn.eu/d/4s2vGnw>



Scorri sopra l'immagine per ingrandirla



Anker Cavo USB angolo retto, USB C a USB C da 240 W, confezione da 2, cavo di ricarica intrecciato da 90 gradi per iPhone 15, Samsung Galaxy S23, MacBook Pro 2020, iPad Pro, iPad Air 4, Pixel

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Marchio

Anker

Tipo di cavo

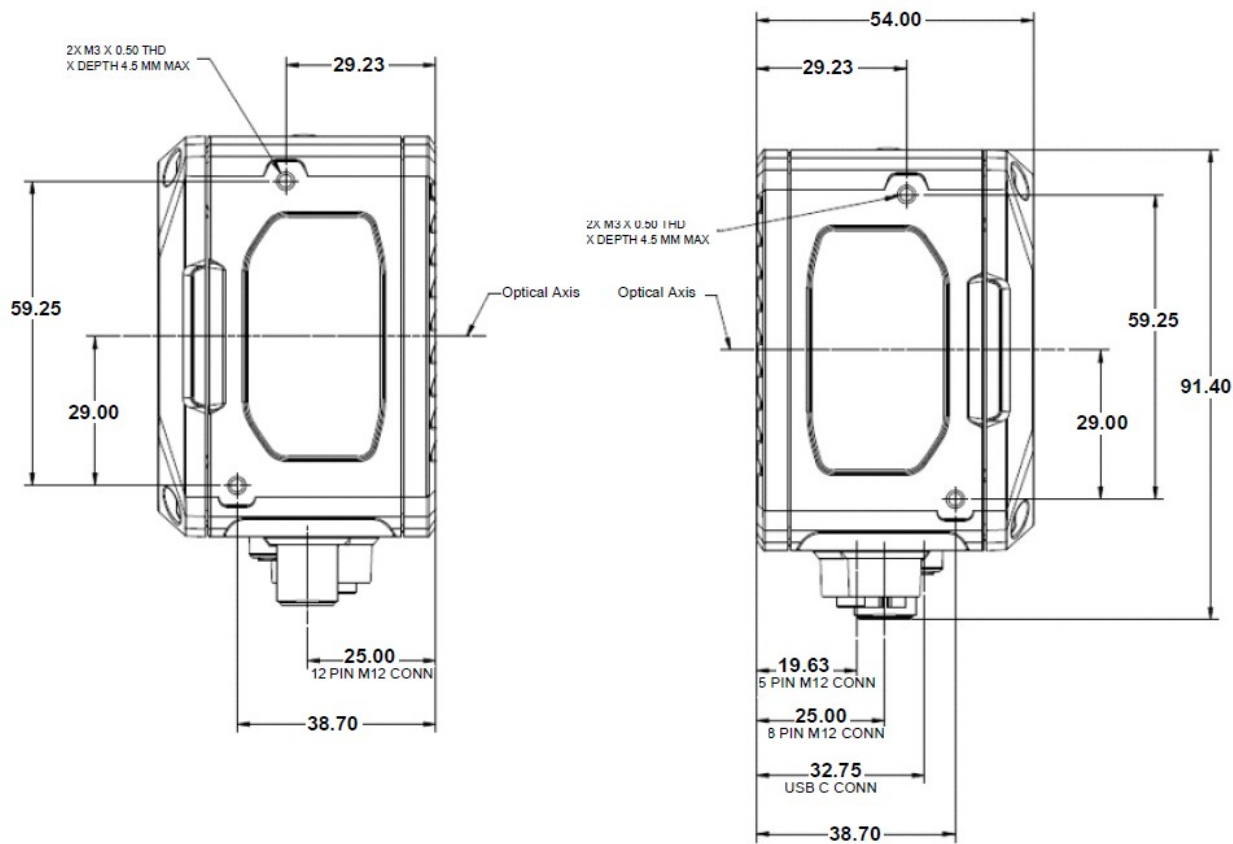
USB Tipo C

Dispositivi compatibili

iPhone 15, MacBook USB-C, iPad Pro, Galaxy S23, S22, S21, S20, ThinkPad X1, Spectre, Pixel 3/4/5/6/7

FS40 Camera drawings

Figure 1 xS40 Side Dimensions



FS80 Camera Drawings

