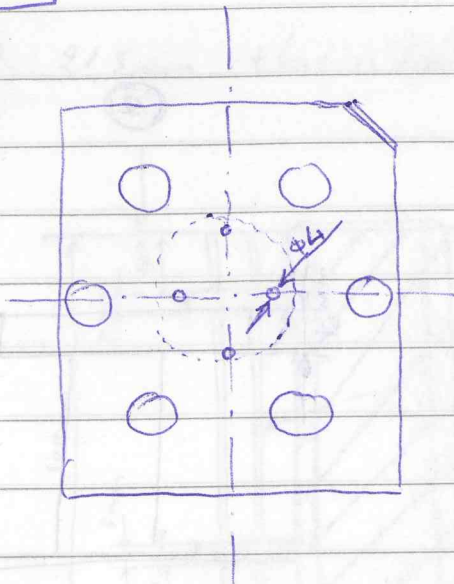


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Ti-plate

(UP)

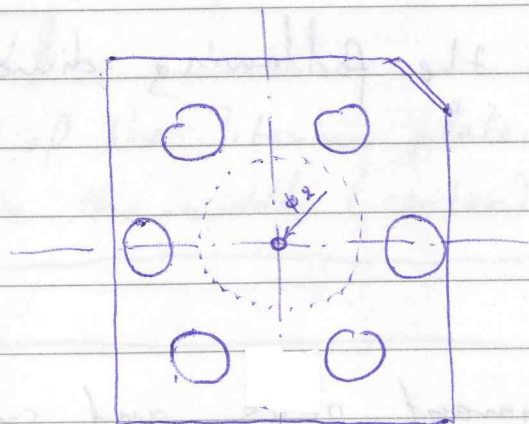


Make 4 holes on the upper ti-plate close to the perimeter of the center circle (but \neq so close).

The diameter of the hole should be 4mm per each.

Ti-plate

(Bottom)



On the bottom there is only one hole which is located ~~at~~^{GP} at the center of the plate.

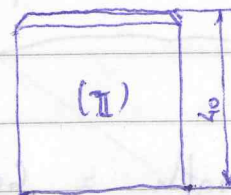
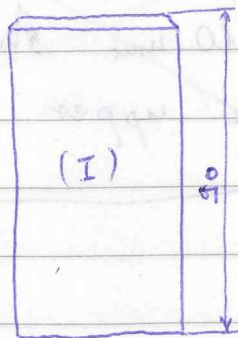
TUBE CHAMBER

There should be constructed 3 tubes on the following dimensions (Height):

I TUBE: 90 mm

II TUBE: 40 mm

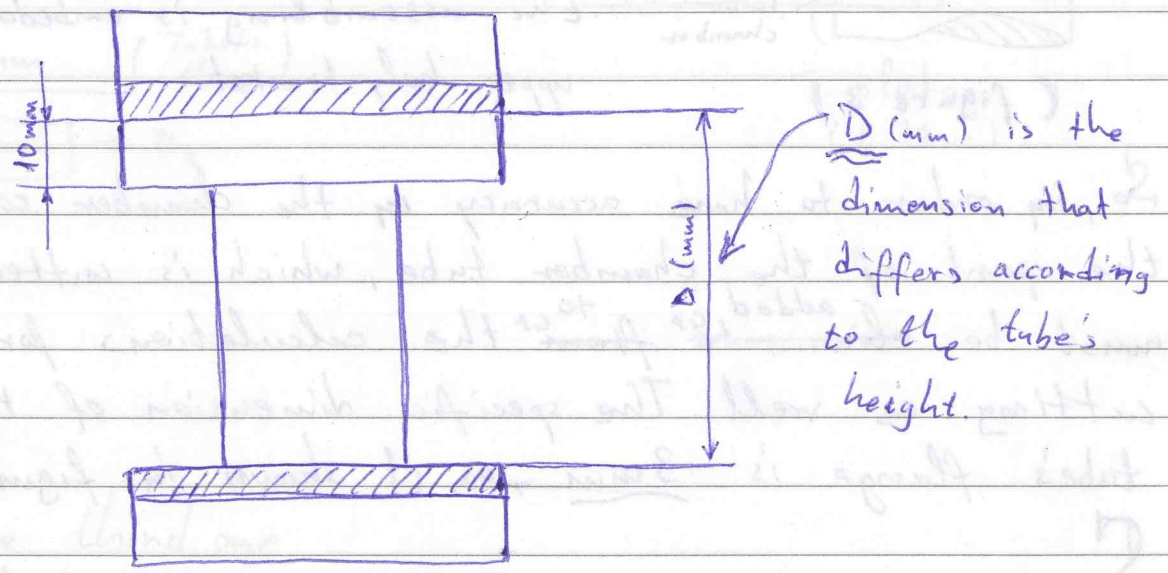
III TUBE: 10 mm



[1] [check page 30, 31]

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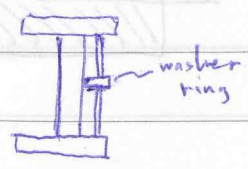
NOTE: The dimension between the 2 titanium plates must be different for every test on the chamber. This is why ^{G.P} because of the different height of the chamber tubes. This dimension is been defined in the ~~shop~~ ^{G.P} design below:



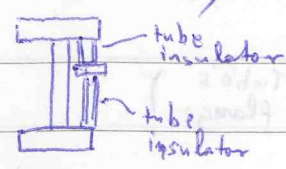
TUBE INSULATORS

The tube insulators' dimension will be also change respectively to the change of the chambers tube, in order to fit to the dimension that is needed.

NOTE: For the last chamber, because the dimension of ^{G.P} between the plate of Ti is very small it is better to use only 3 washers and some small tube insulators in order to keep the alignment and the stability of the chamber tube.



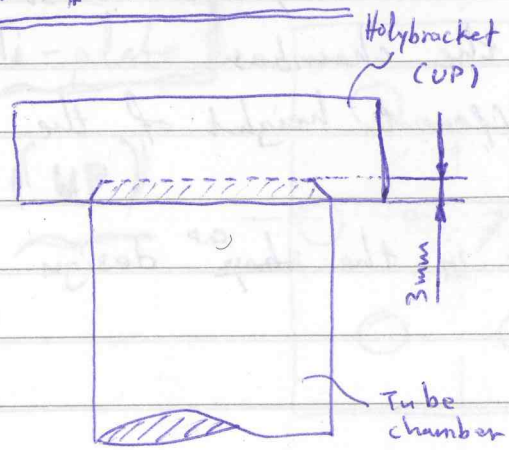
(figure 1)



(figure 2)

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VERY IMPORTANT!!!!!!



(figure 3)

It must be taken into consideration the dimension of the chamber tube's flange if we want to have the previous dimensions between the Ti-plates. This is because the flange during the assembling is embedded in the upper holy bracket.

So, in order to have accuracy in the chamber construction the part of the chamber tube, which is cutted in an angle, must be ~~eliminate~~ ^{added GP} ~~from~~ ^{to GP} the calculations for the tubes cutting as well. The specific dimension of the chamber tube's flange is 3mm, as it shown in figure 3.

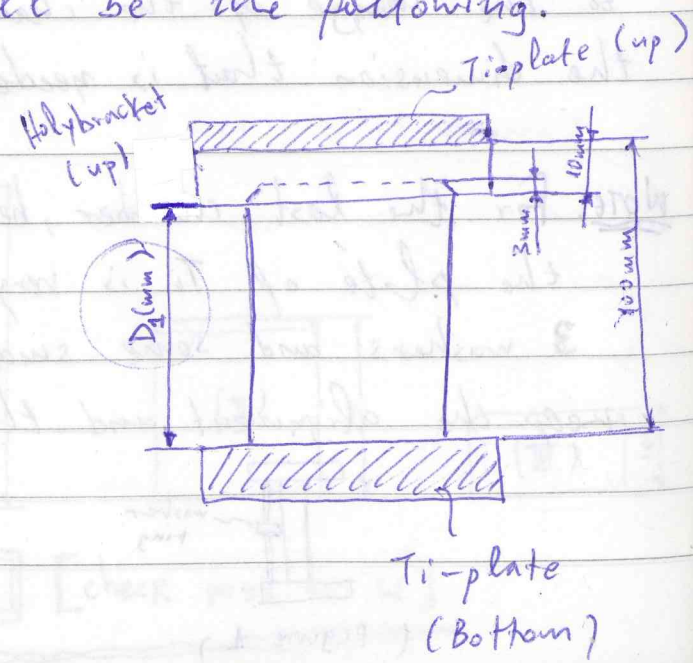
So,

the total dimension of the 3 tube chambers that were mentioned before will be the following.

[1] for the first tube it will be:

$$\begin{aligned}
 & 100\text{mm} \text{ (total dimension between Ti-plates)} \\
 & - 10\text{mm} \text{ (Holybracket UP)} \\
 \hline
 & 90\text{mm} \\
 & + 3\text{mm} \text{ (Tube's flange)}
 \end{aligned}$$

Total = 93 mm = D_1



For the second tube
it will be :

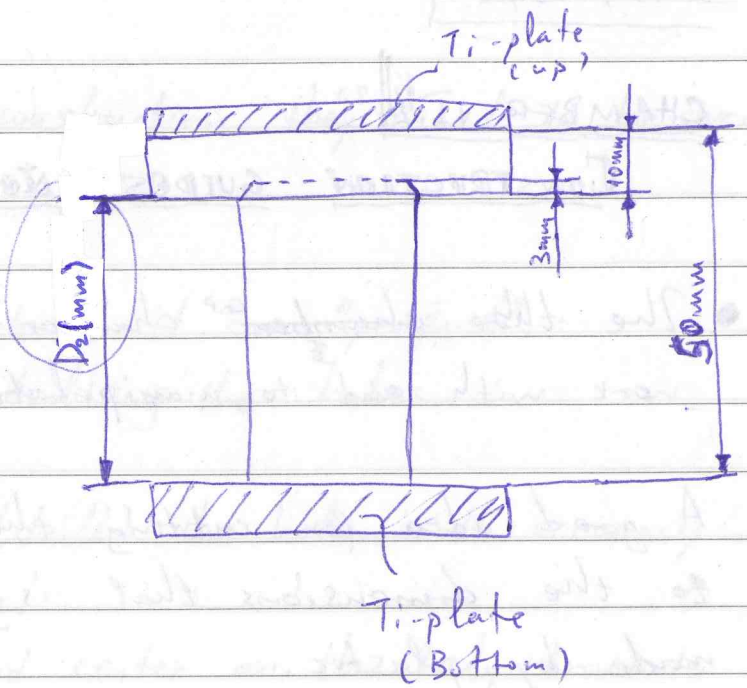
$$50 \text{ mm (total dimension between ti-plates)}$$

$$- 10 \text{ mm (Holy bracket up)}$$

$$40 \text{ mm}$$

$$+ 3 \text{ mm (Tube's flange)}$$

$$\text{Total} = \boxed{43 \text{ mm}} = D_2$$



And,

For the third one
it will be :

$$20 \text{ mm (total dimension between ti-plates)}$$

$$- 10 \text{ mm (Holy bracket up)}$$

$$10 \text{ mm}$$

$$+ 3 \text{ mm}$$

$$\text{Total} = \boxed{13 \text{ mm}} = D_3$$

