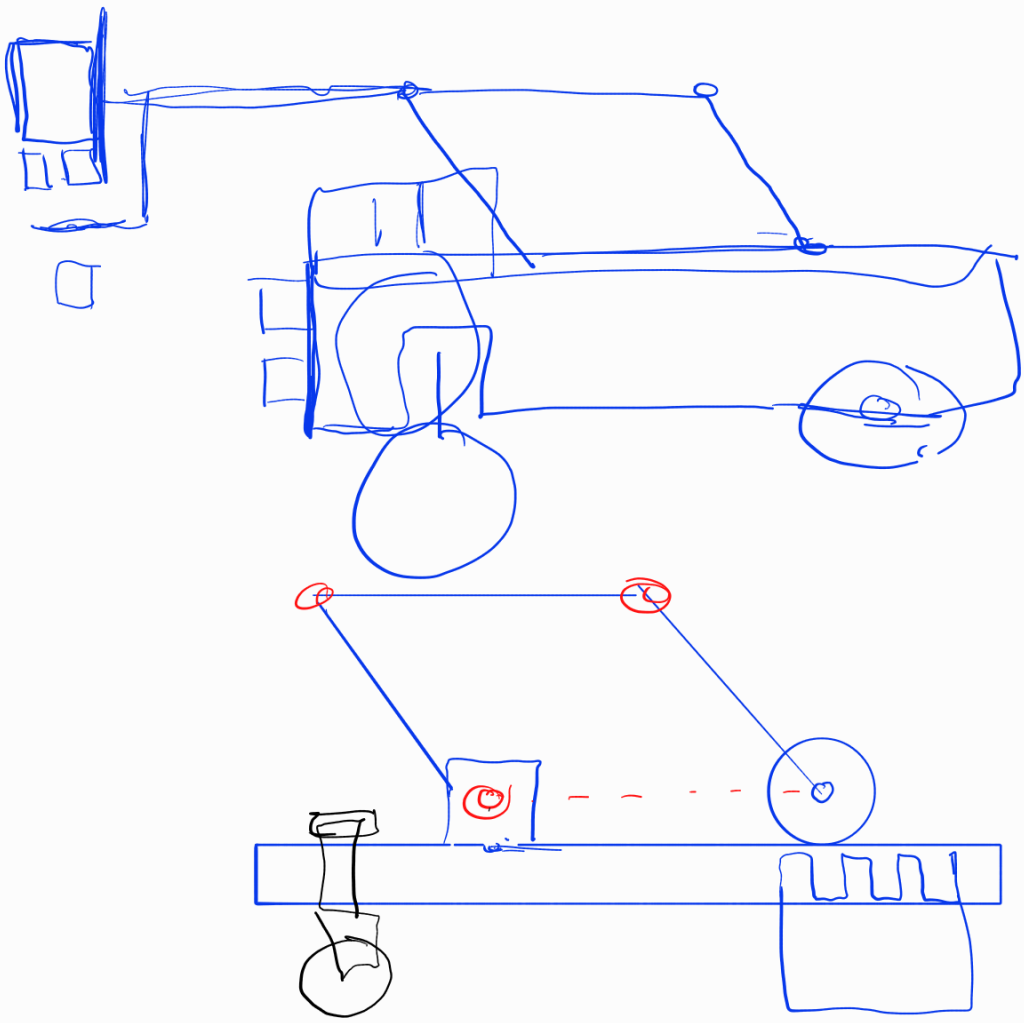
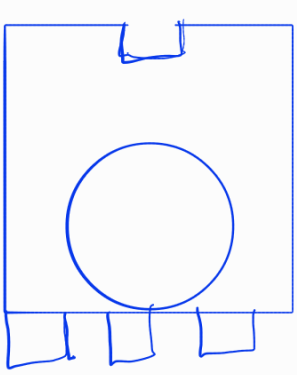
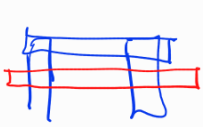
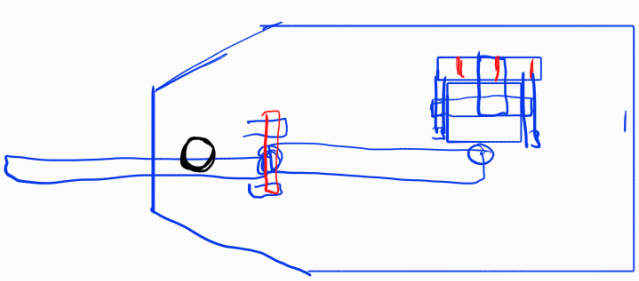
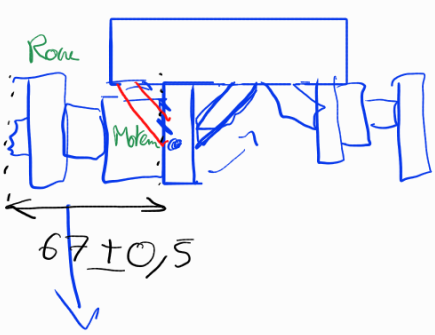


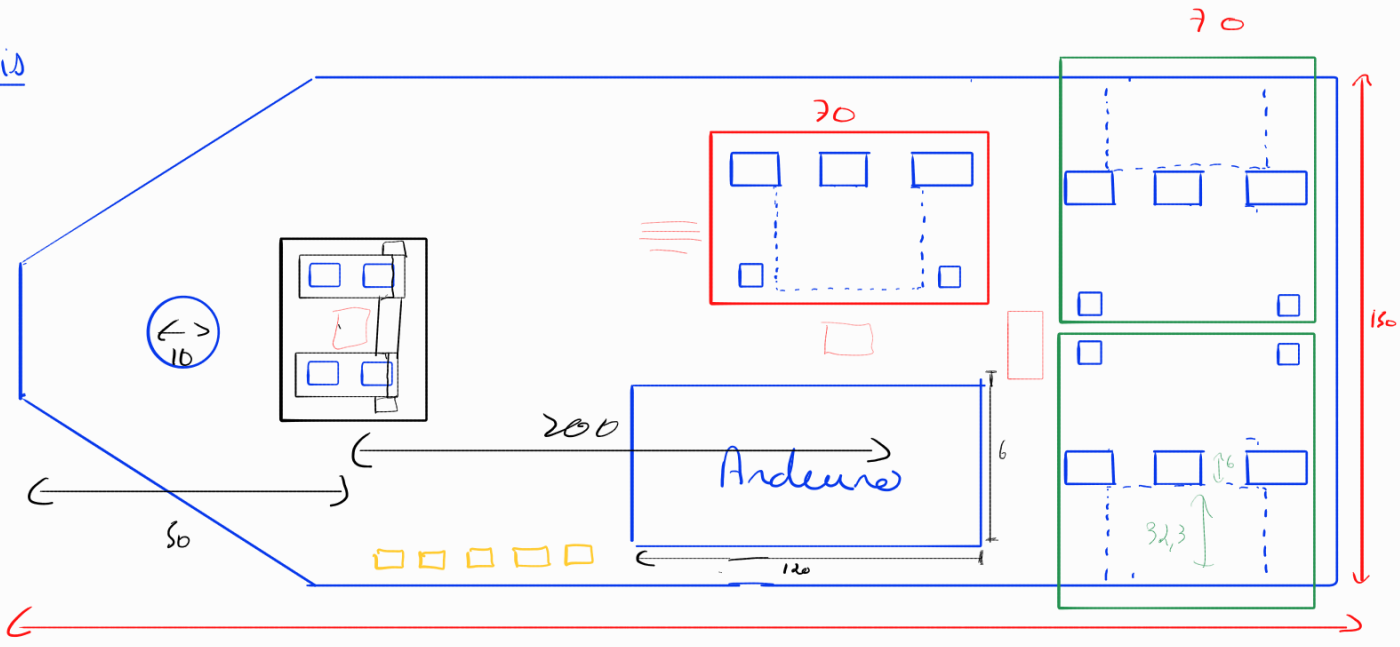




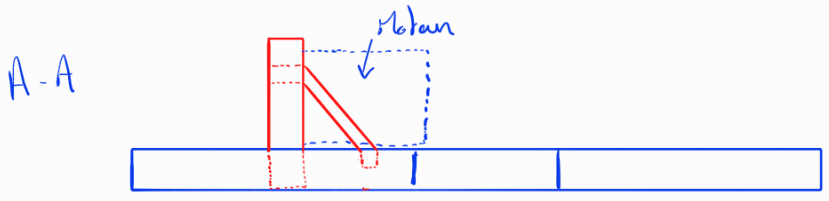


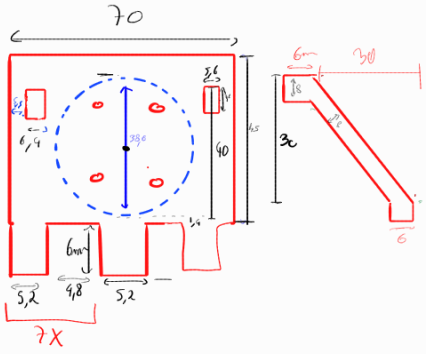

Row
67±0,5

Chassis

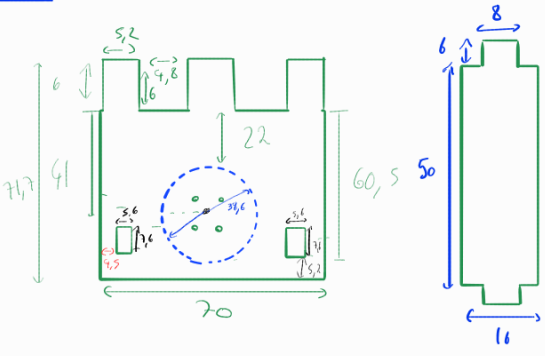


Support moteur supérieur + équerre moteur supérieur

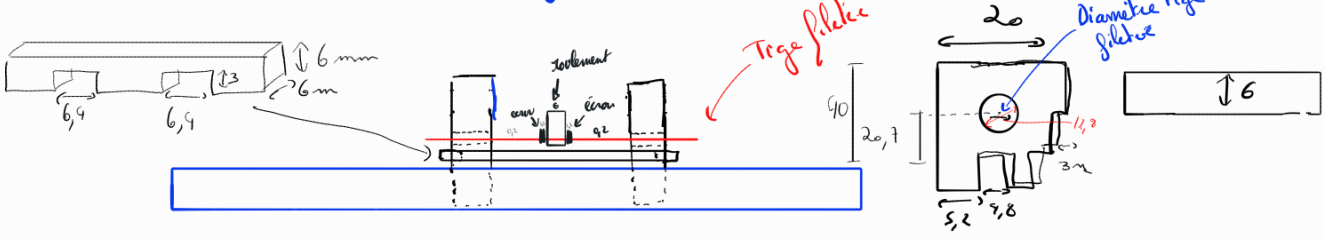




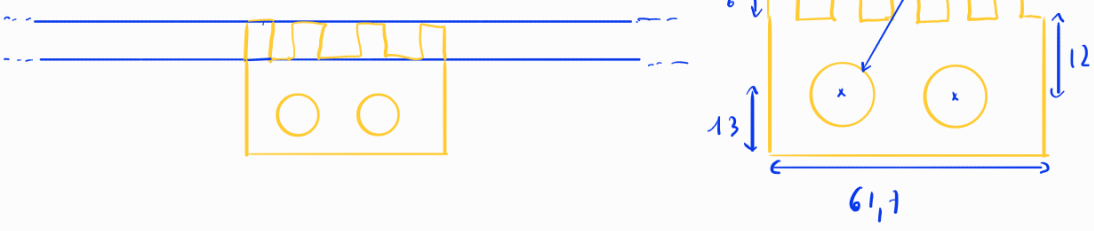
Support moteur inférieur + Entretoise support moteur inférieur

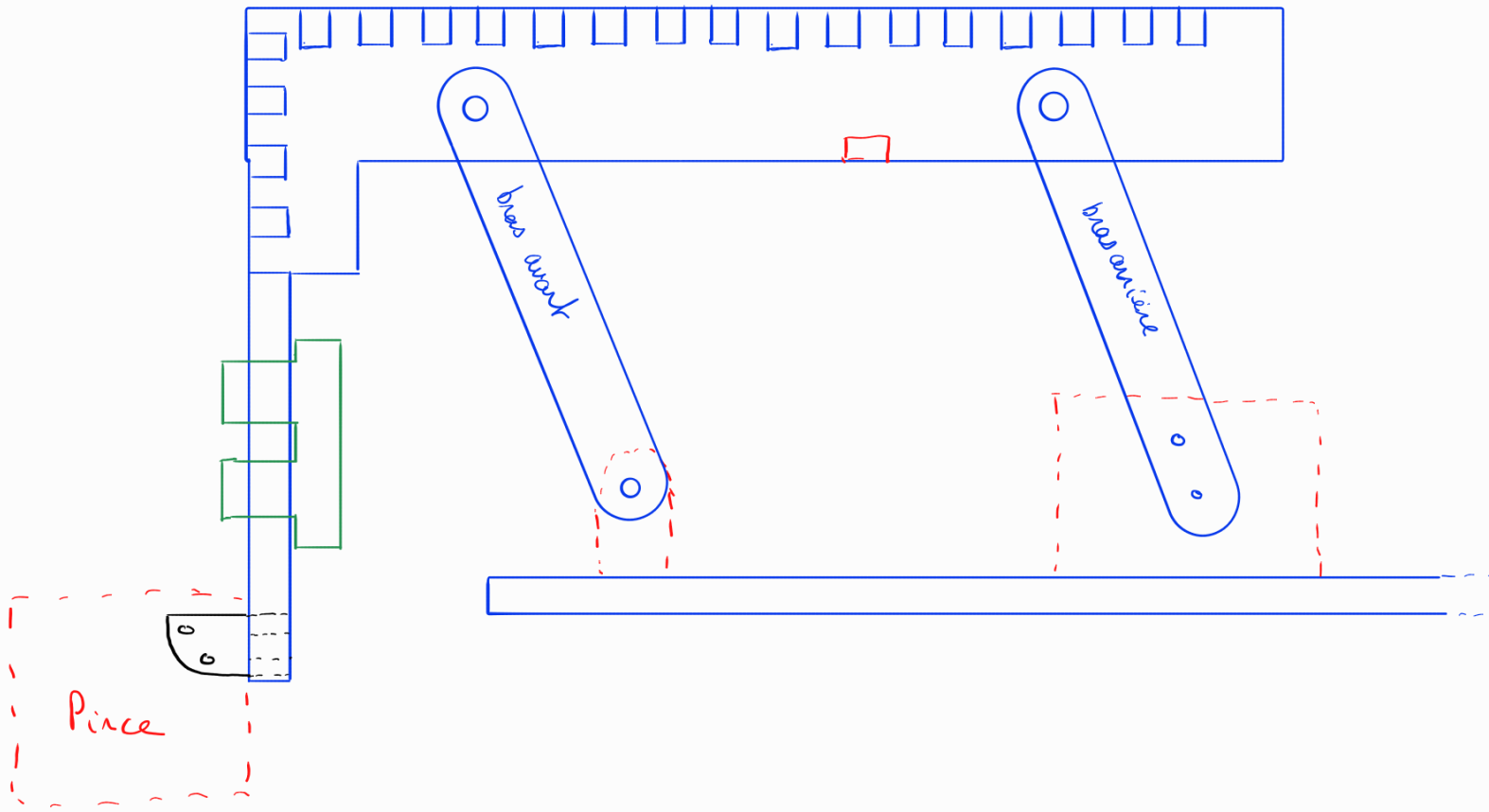


Support fourche avant + entretoise support fourche avant

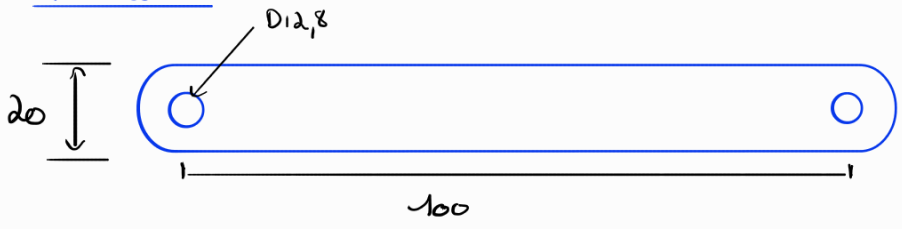


Support US côté droit

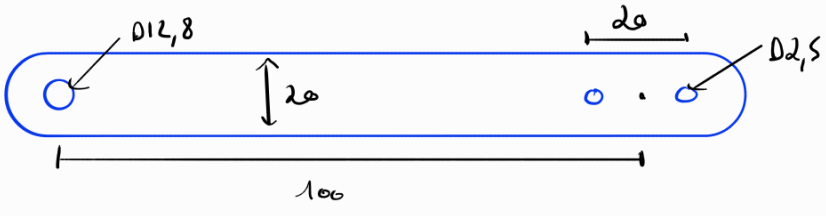




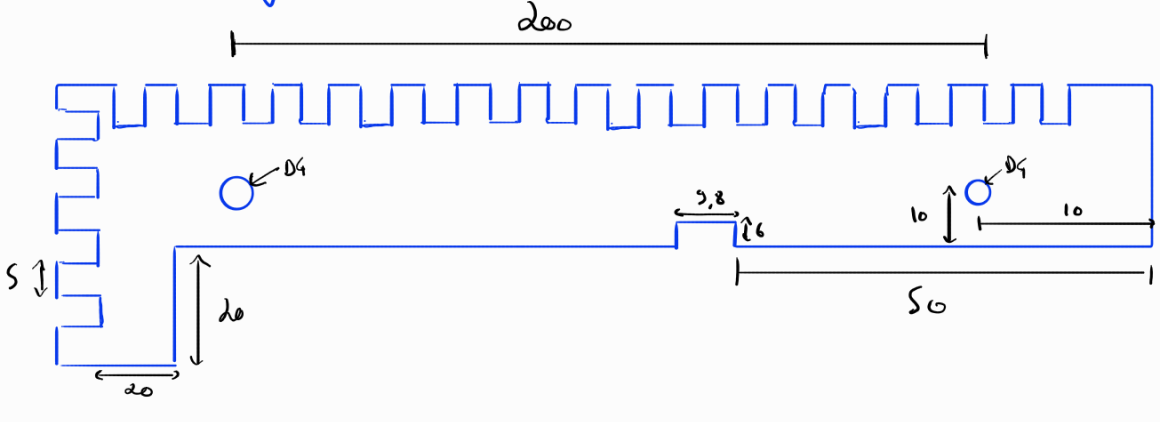
Bras avant



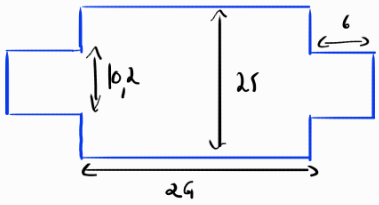
Bras arrière (Pièce 5)



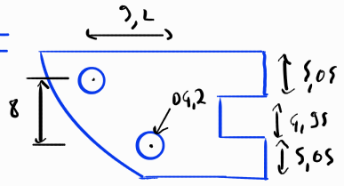
Equerre support fourche



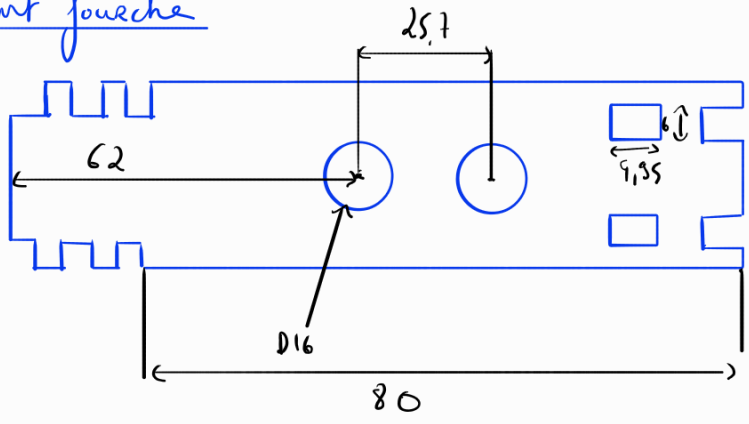
Entretoise



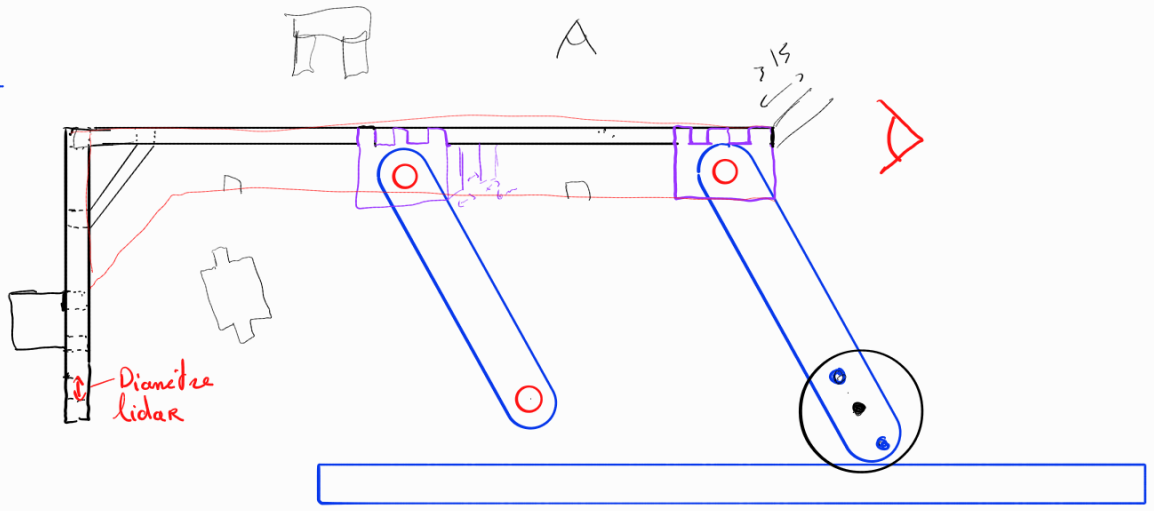
Support pince



Avant fourche

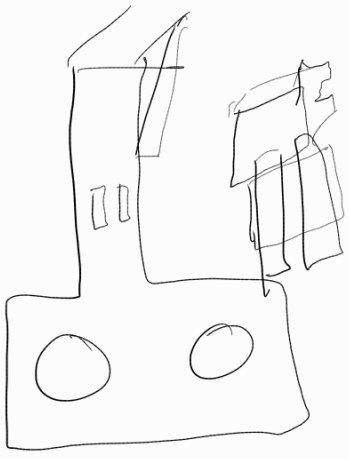


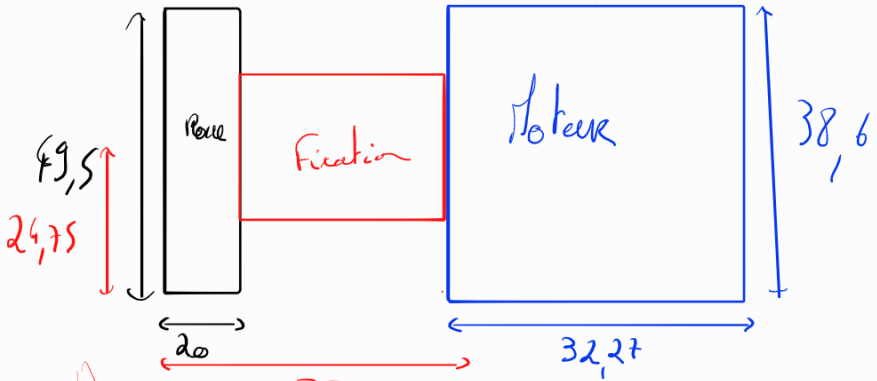
Fourche

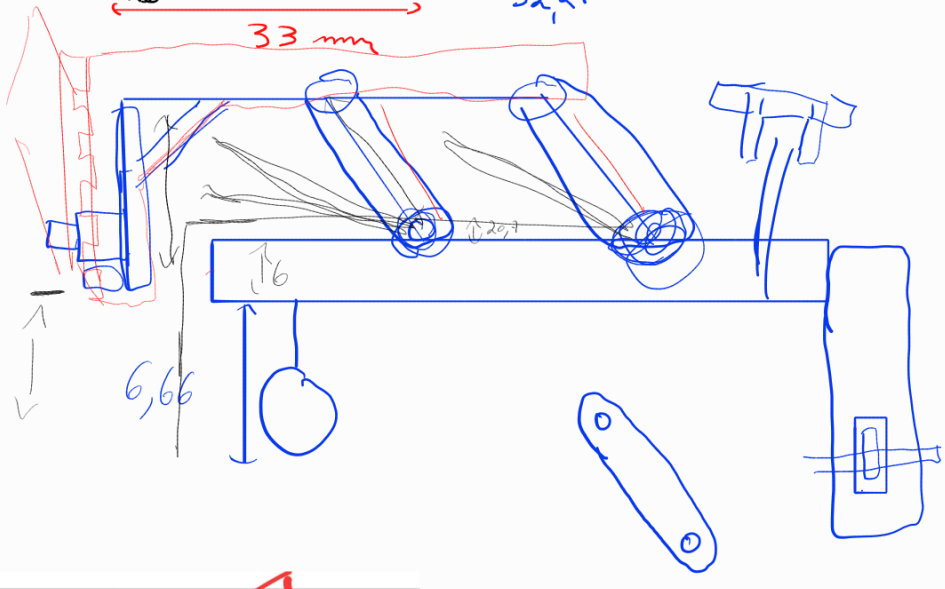


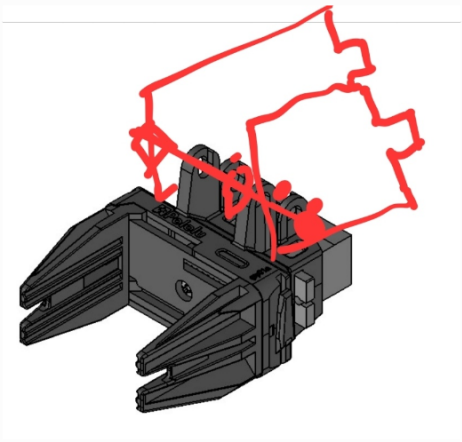
Moteur

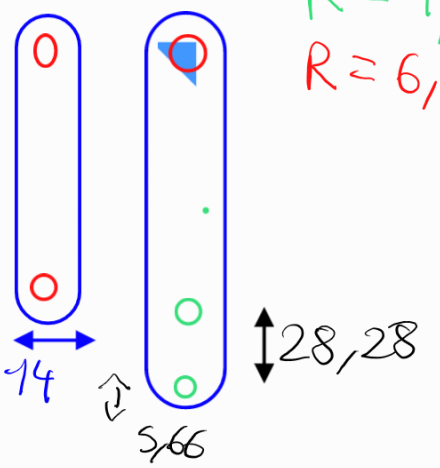
18,79



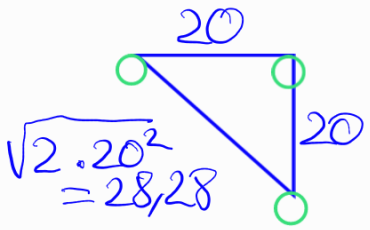


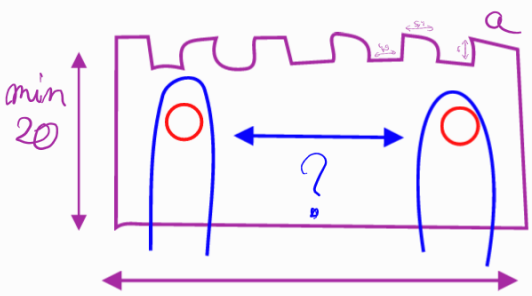






R = 1,03
R = 6,4

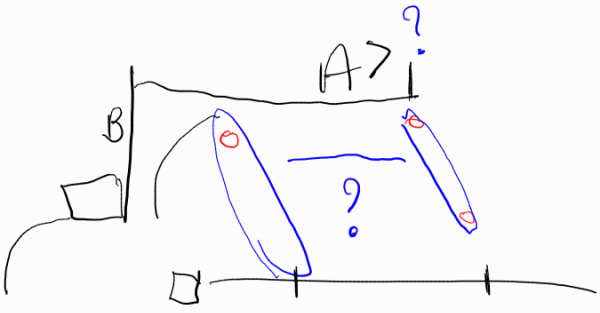


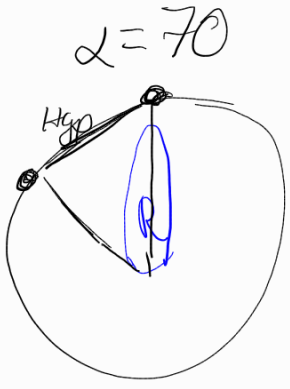


10a + (5,1?) ≃ ?

R longueur patte

Hyp = R / cos20
x = R cos20
y = R sin20





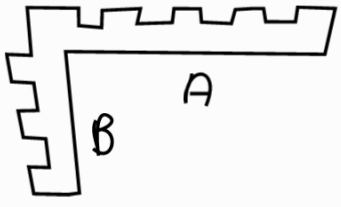
$x^2 + y^2 = R^2$

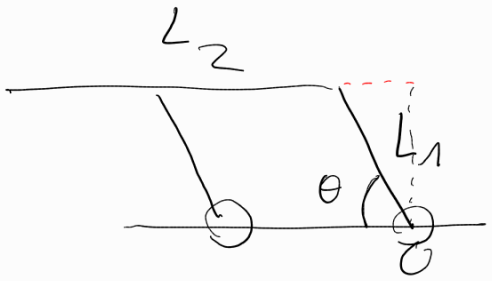
y ↑ → x

x + A

y + B < R

B < R(1 − sin20)

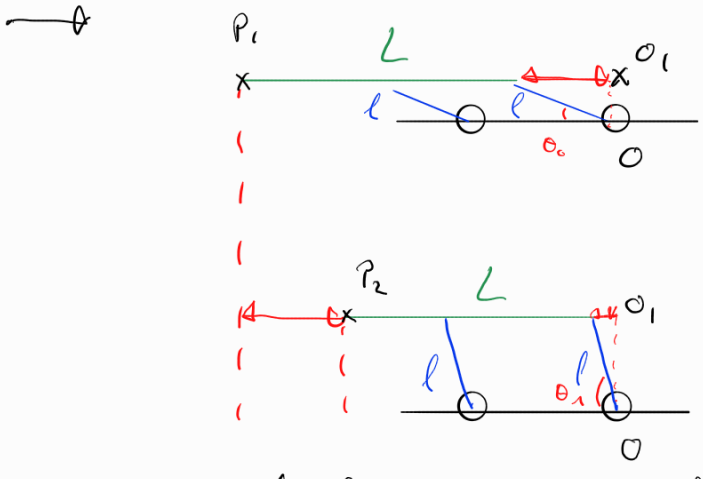




Objectif : On veut que la pince translate de manière rectiligne de haut en bas.

Pour l'instant mvt circulaire

Solut° / le robot recule ou avance pour compenser le recul créé.

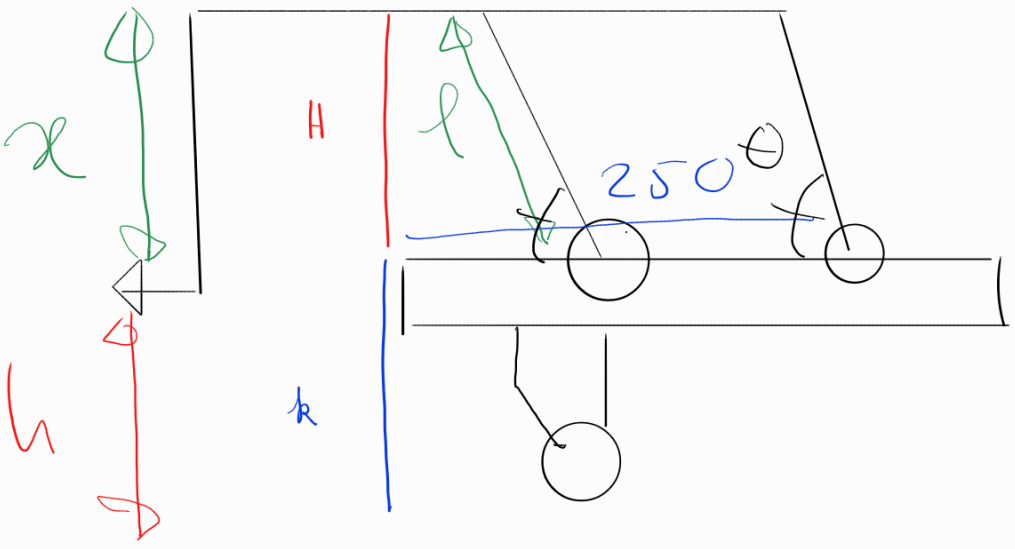


$$O_1P_1 - O_2P_2 = \cancel{K} + l\cos(\theta_0) - \cancel{K} - l\cos(\theta_1)$$

$$-l\left(\cos(\theta_0) - \cos(\theta_1)\right)$$

→ Quand la pince bouge elle crée une distance $l(\cos(\theta_0) - \cos\theta)$, avec θ notre variable, à compenser. Dans ce calcul, il faut que le robot avance de cette distance.

On suppose qu'à un instant t la pince est alignée à l'axe. À l'instant $t+1$ il faut ajouter la distance (déplacement du robot) $l(\cos(\theta_t) - \cos(\theta_{t+1}))$



h la distance entre le sol et la pince pour attraper l'obj dans le cas min.

k: taille du mat jusqu'en bas.

Dans le cas min, on a $\theta = 20°$, $x = H + k - h$

or $H = l \sin(20°)$ d'où $x \approx 0{,}34\,l + 37$

On veut l kq pour 20° on ait le cas min et pour disons 50° on ait le cas max, où $H_{max} = H_{min} + 30$ mm

d'où $\sin(20) = \frac{H}{l}$ $\sin(50) = \frac{H+30}{l}$ $\rightarrow \sin(50) - \sin(20) = \frac{30}{l}$

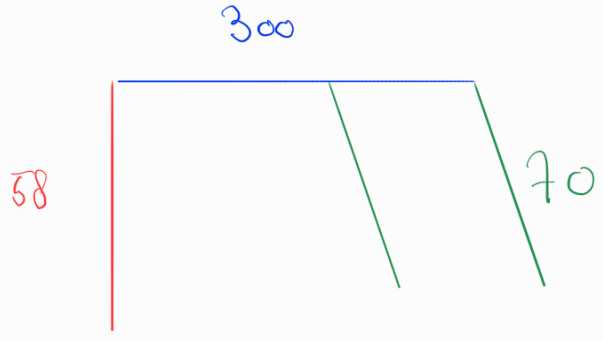
$\rightarrow l = \frac{30}{\sin(50) - \sin(20)}$

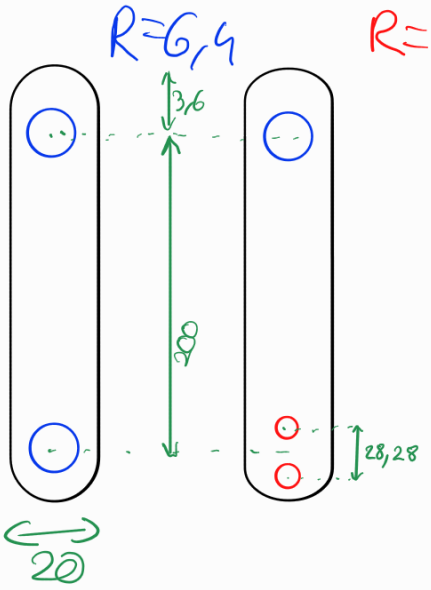
On a alors $l = 70$, $x = 60$

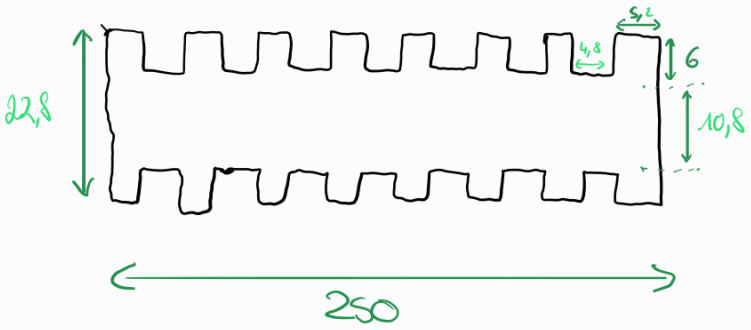
à x on enlève la pince ≈ 2 mm $x = 58$

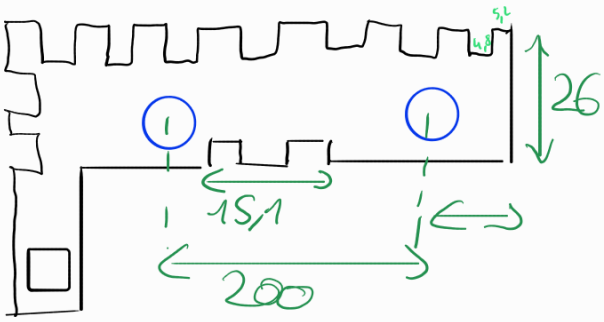
$l = 70$

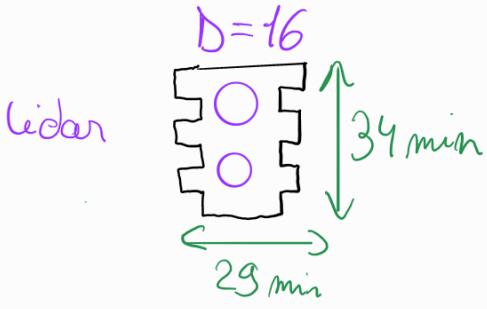
Récap:

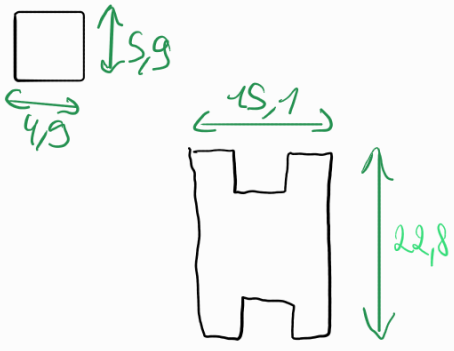



R=6,4
R=1,03
3,6
28
28,28
20

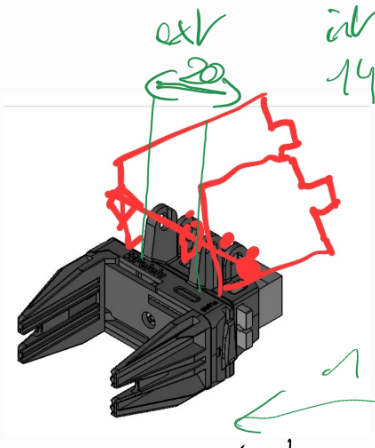

22,8
5,2
4,8
6
10,8
250

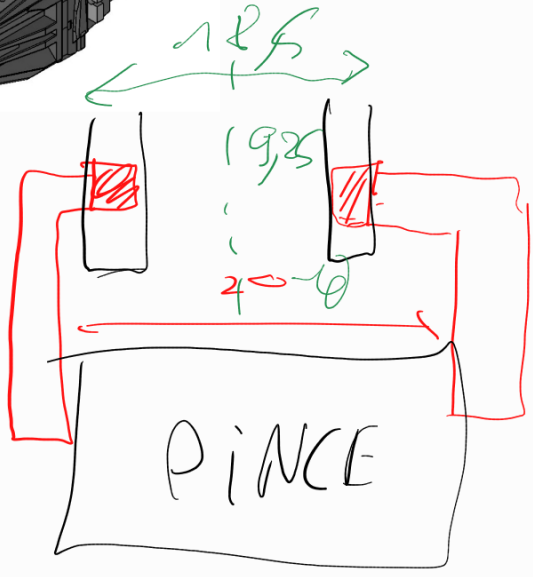

5,2
4,8
26
15,1
200

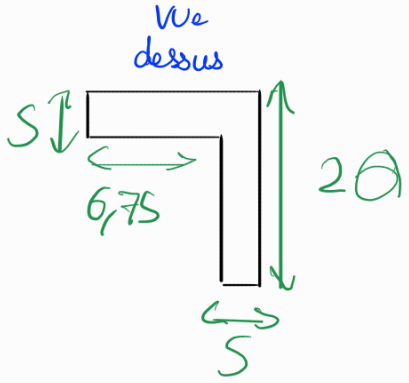

D=16
lidar
34 min
29 min

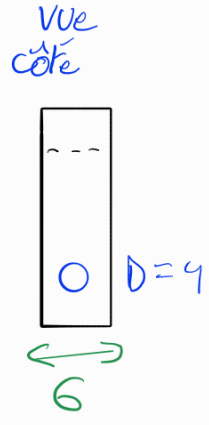

5,9
4,9
15,1
22,8

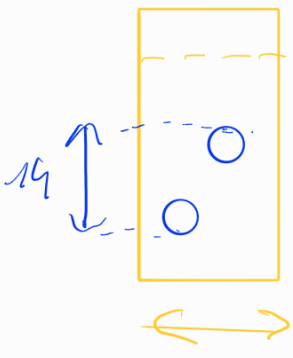
Pince

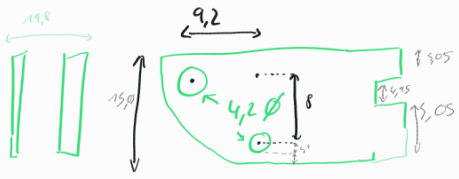

ext
20
int
14


19,25
PINCE


Vue dessus
5
6,75
20
5


Vue côté
D=4
6


14



15 - 11,2 = 2,8

1,4