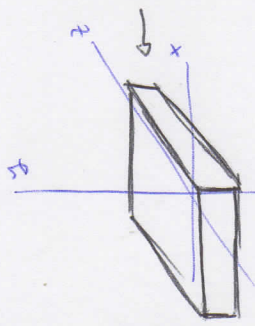


Cubo

(Cubo unidad)

Scale (7, 2, 7)

Translate (0, 1, 0)



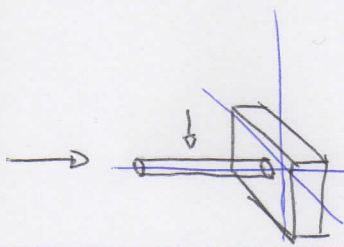
Pie del Watt Regulator

Cilindro

Cilindro unidad

Scale (0.8, 10, 0.8)

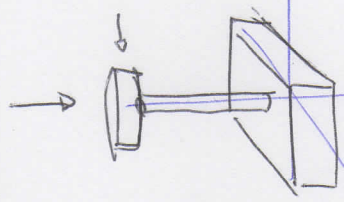
Translate (0, 7, 0)



Soporte central

Scale (3.5, 0.8, 3.5)

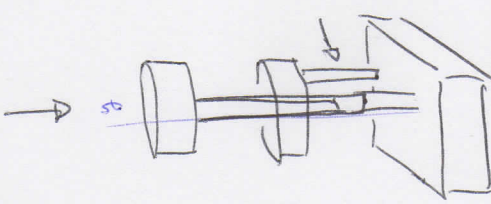
Translate (0, 12, 0)



Disco Superior

Scale (0.2, 4, 0.2)

Translate (1, h-2, 0)

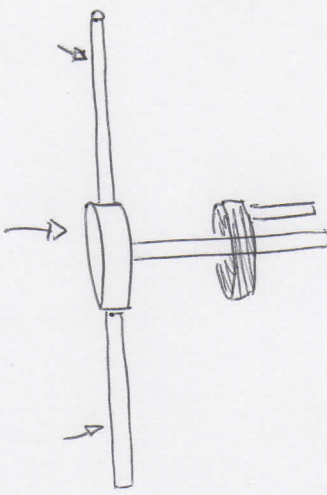


Disco central

Scale (0.35, 8, 0.35) (D)

Translate (5.5, 12, 0) (D)

Rotate (270, 0, 0, 1) (D)



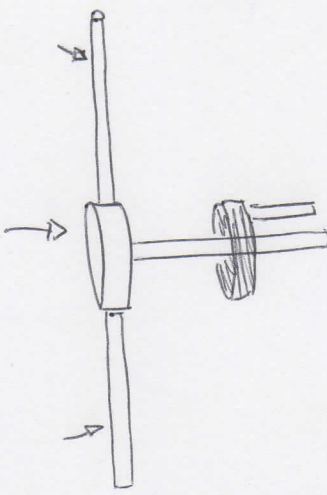
Brazos superiores

Cilindro unidad

Scale (0.35, 8, 0.35) (D)

Translate (5.5, 12, 0) (D)

Rotate (270, 0, 0, 1) (D)



Brazos superiores

Brazo principal del Watt Regulator

h = altura del Disco central

## Esfera

### Creación:

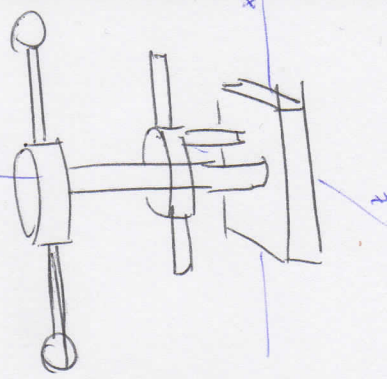
glTranslate (10, 13, 0) (D); (-10, 13, 0) (I)  
glScale (0.009, 0.009, 0.009)

### Movimiento:

glTranslate (1.5, 12, 0) } der  
glRotate (360 -  $\alpha$ , 0, 0, 1)  
glTranslate (-1.5, 12, 0)  
glTranslate (-1.5, 12, 0) } izq  
glRotate ( $\alpha$ , 0, 0, 1)  
glTranslate (1.5, 12, 0)

### Elementos usados:

2 cilindros  
1 esfera  
1 cubo



Transformaciones para el movimiento  
de los brazos (sup + inf)  
que se desliza

### Brazos sup.

glTranslate (-1.5, 12, 0) } izq  
glRotate ( $\alpha$ , 0, 0, 1)  
glTranslate (1.5, 12, 0)  
glTranslate (1.5, 12, 0) } der  
glRotate (360 -  $\alpha$ , 0, 0, 1)  
glTranslate (-1.5, 12, 0)

### Brazos inf.

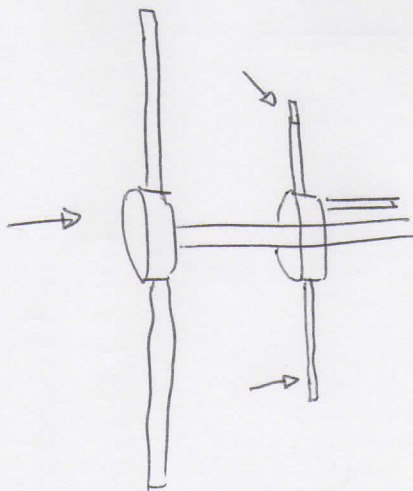
glTranslate (-1.5, h, 0) } izq  
glRotate (360 -  $\beta$ , 0, 0, 1)  
glTranslate (1.5, h, 0)  
glTranslate (1.5, h, 0) } der  
glRotate ( $\beta$ , 0, 0, 1)  
glTranslate (-1.5, h, 0)

$\alpha$  = ángulo superior

$\beta$  = ángulo inferior

h = altura - disco - central.

Scale (0.2, 5, 0.2) (D); (0.2, 5, 0.2) (I)  
Translate (4, h, 0) (D); (-4, h, 0) (I)  
Rotate (270, 0, 0, 1) (D); (90, 0, 0, 1) (I)



Brazos inferiores