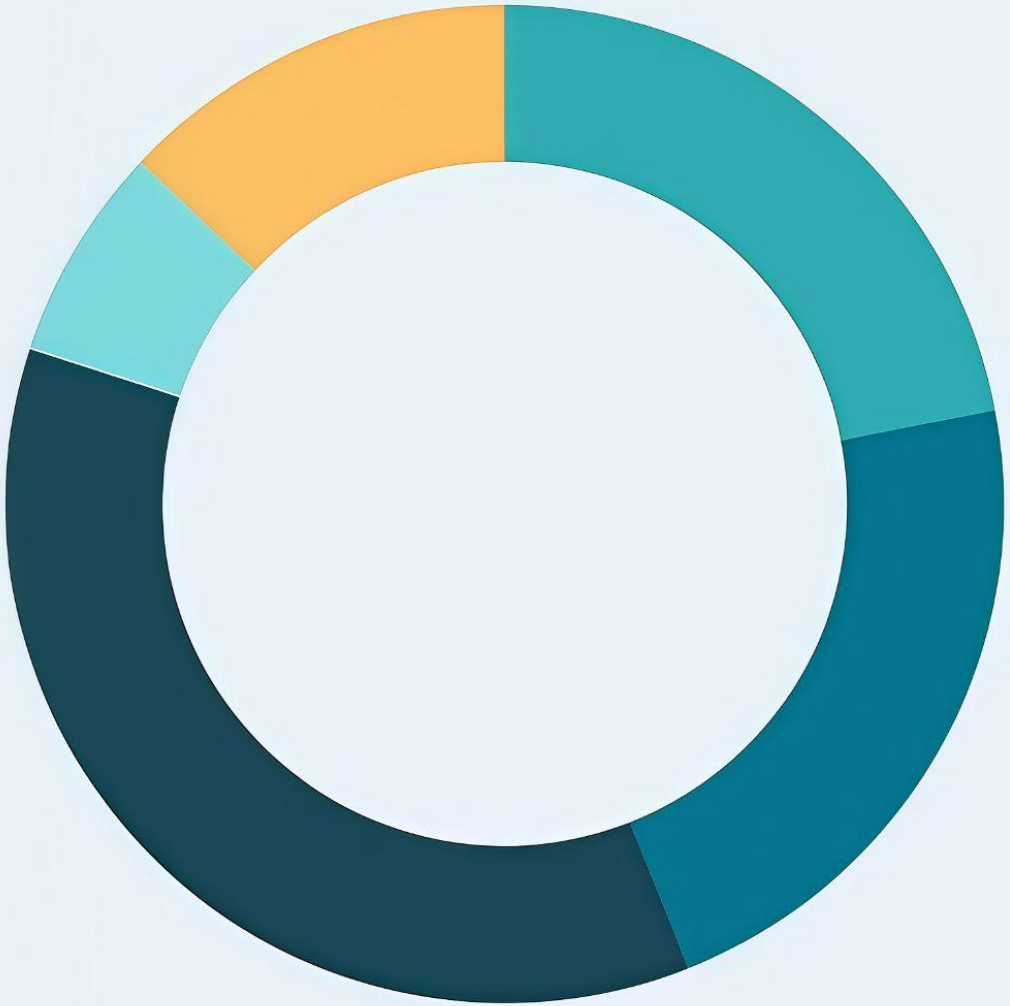
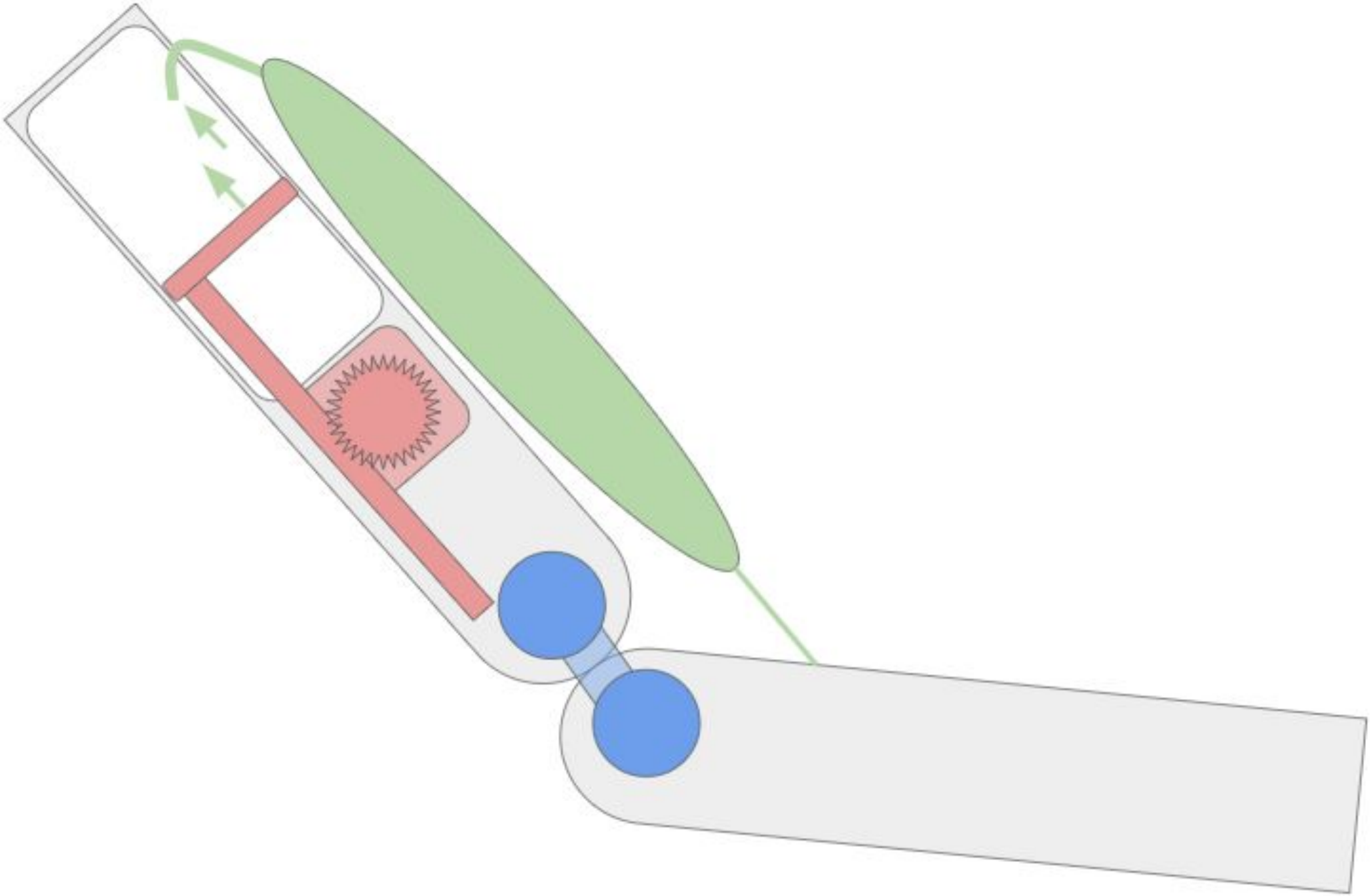
Average age of unpaid caregivers

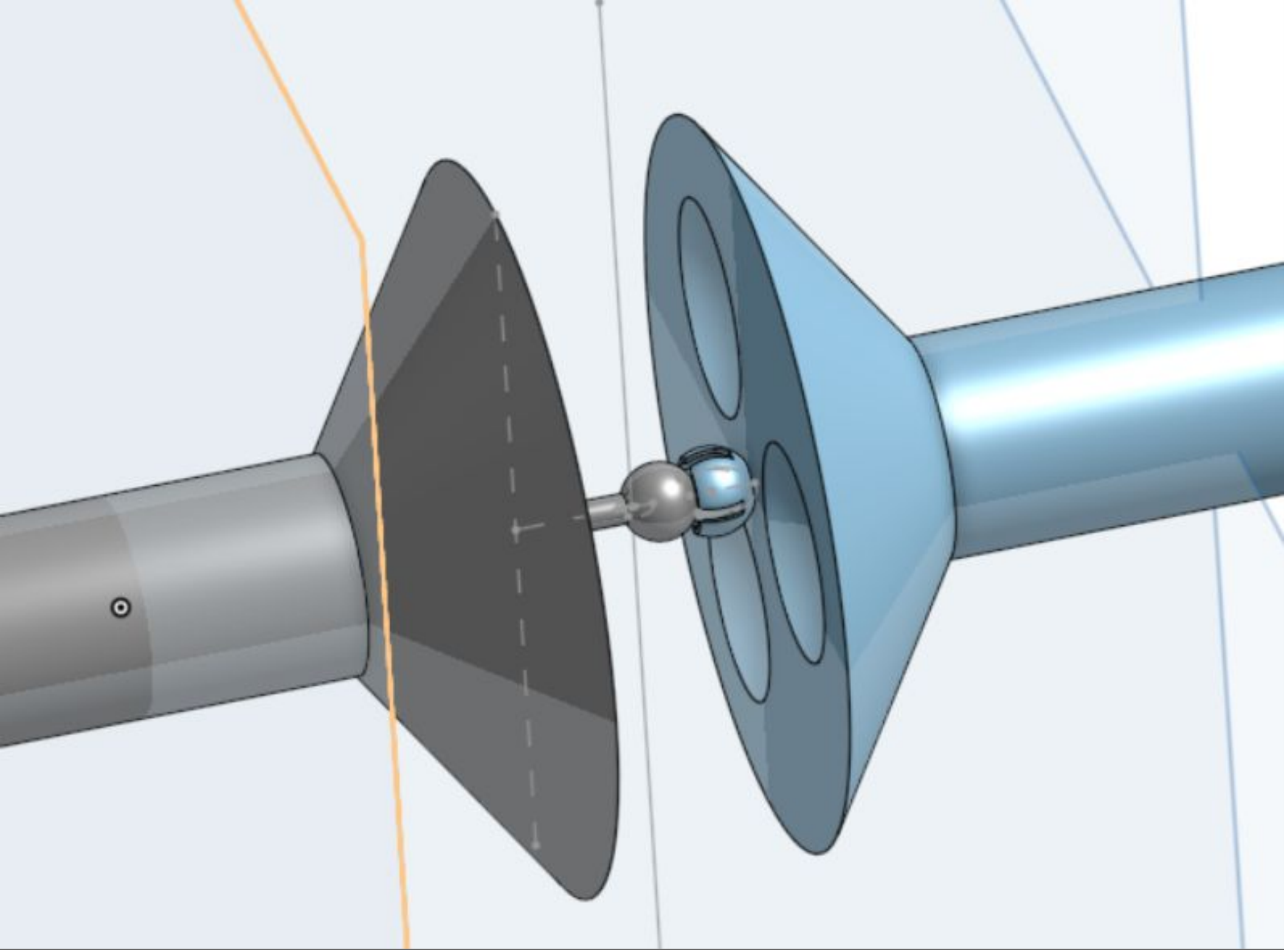
The median age of family caregivers is 50.1. This is because many people care for spouses, partners, or aging parents.

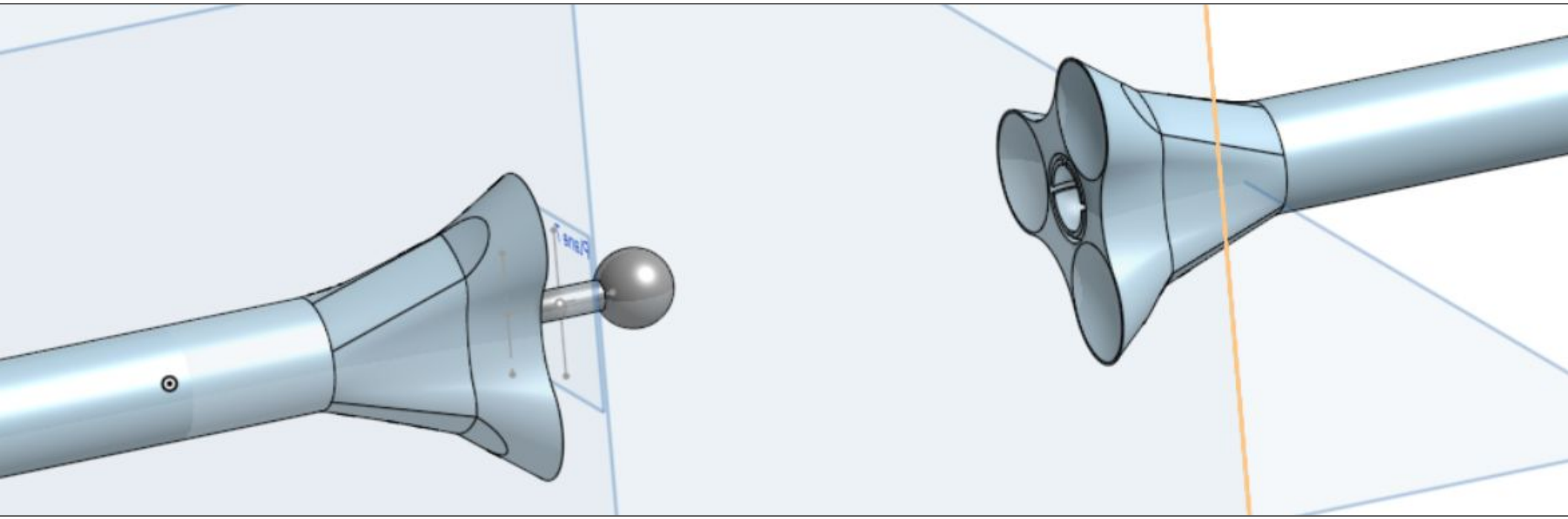
- 36% of caregivers are between 50 and 64
- 22% of family caregivers are between 18 and 24
- 22% of caregivers are 25-49
- 13% of caregivers are 65-74
- 7% of caregivers are over the age of 75

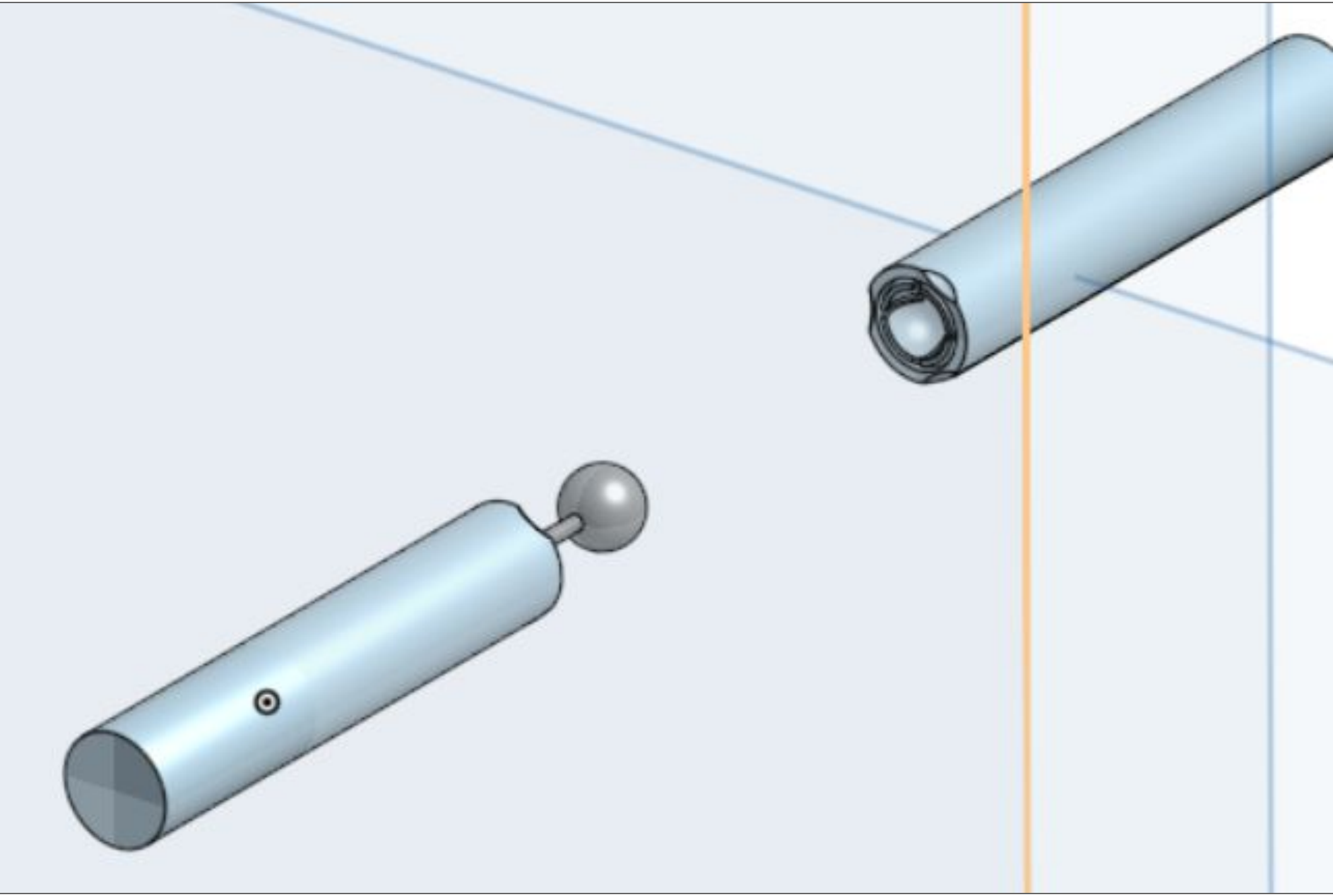


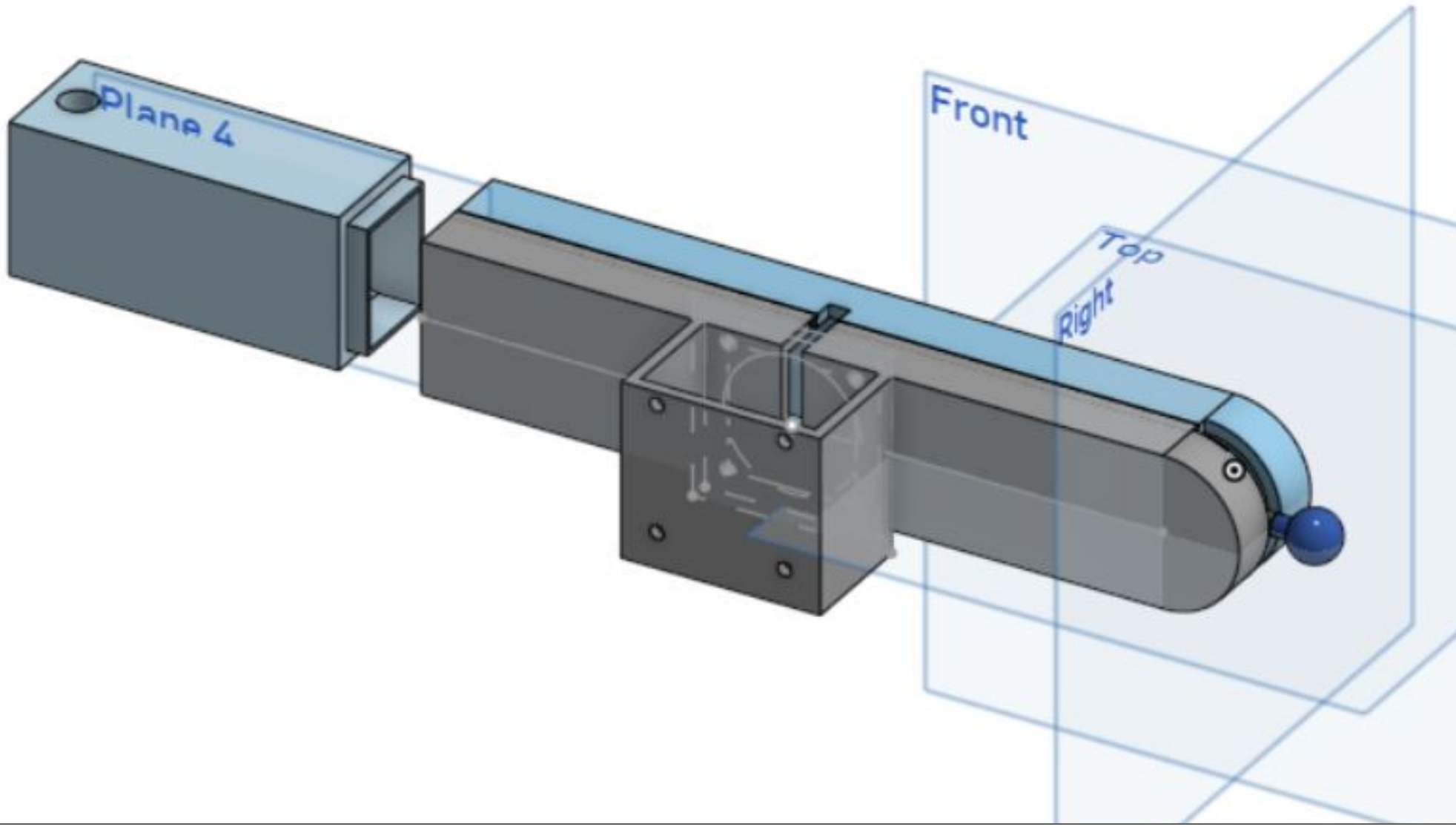

Unitree

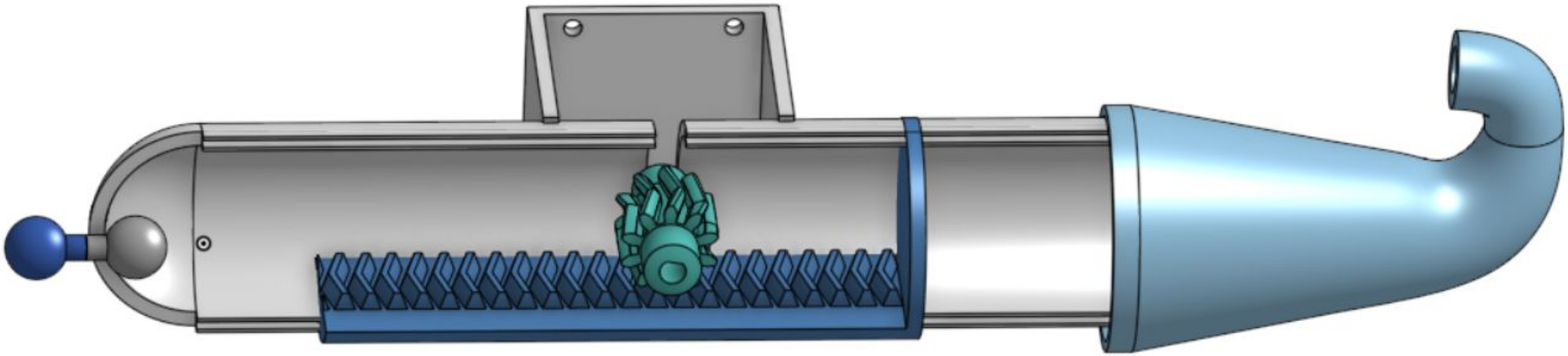


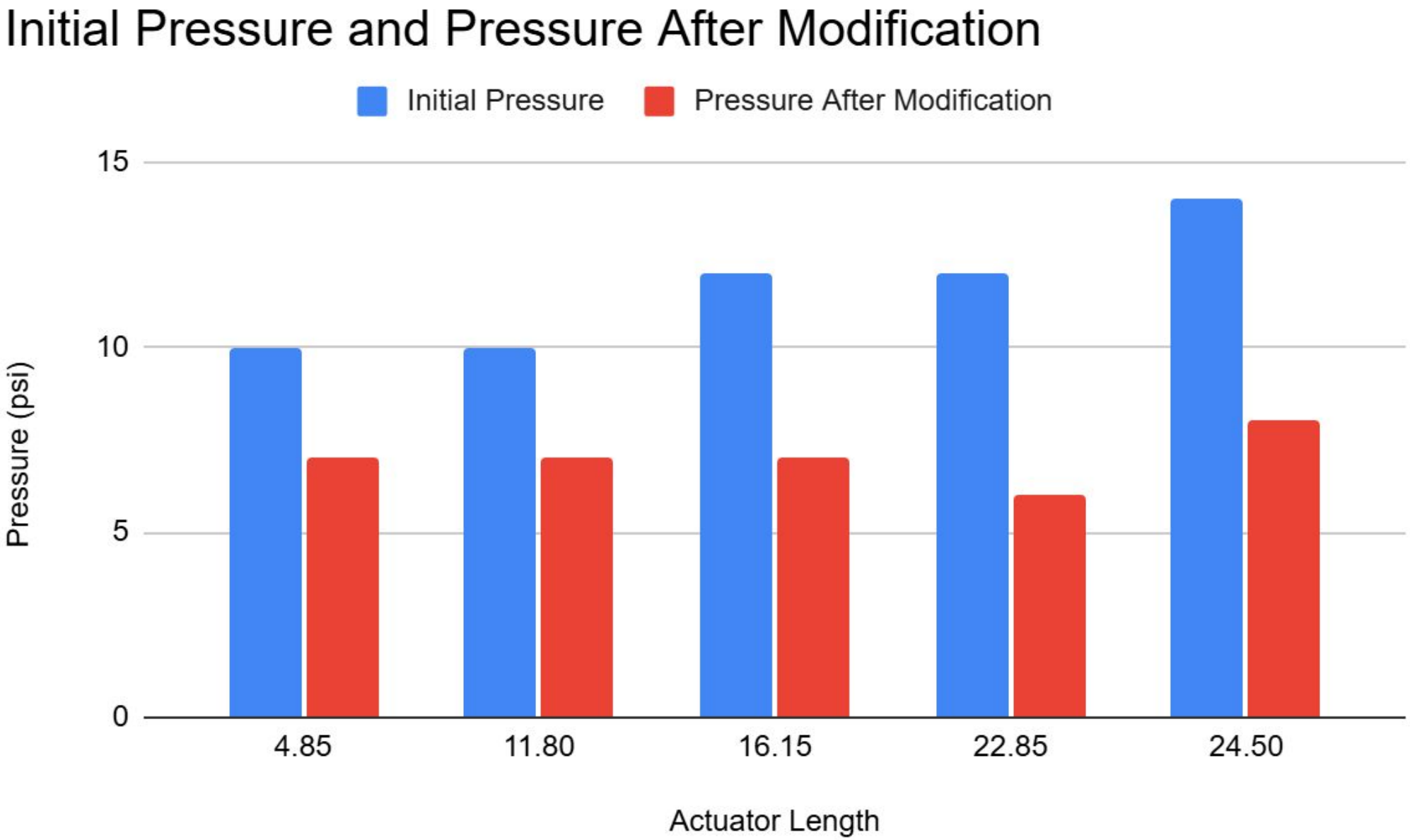


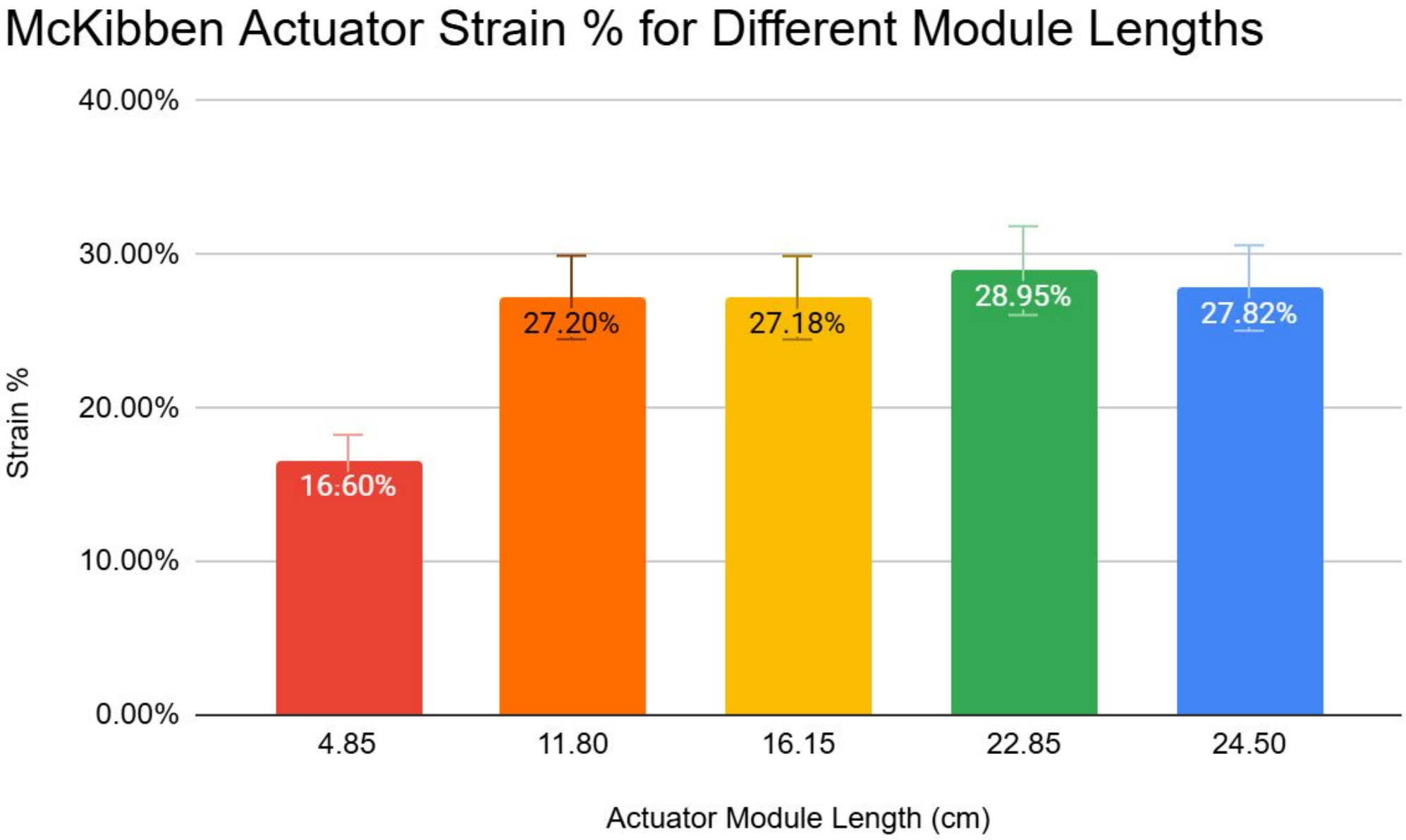


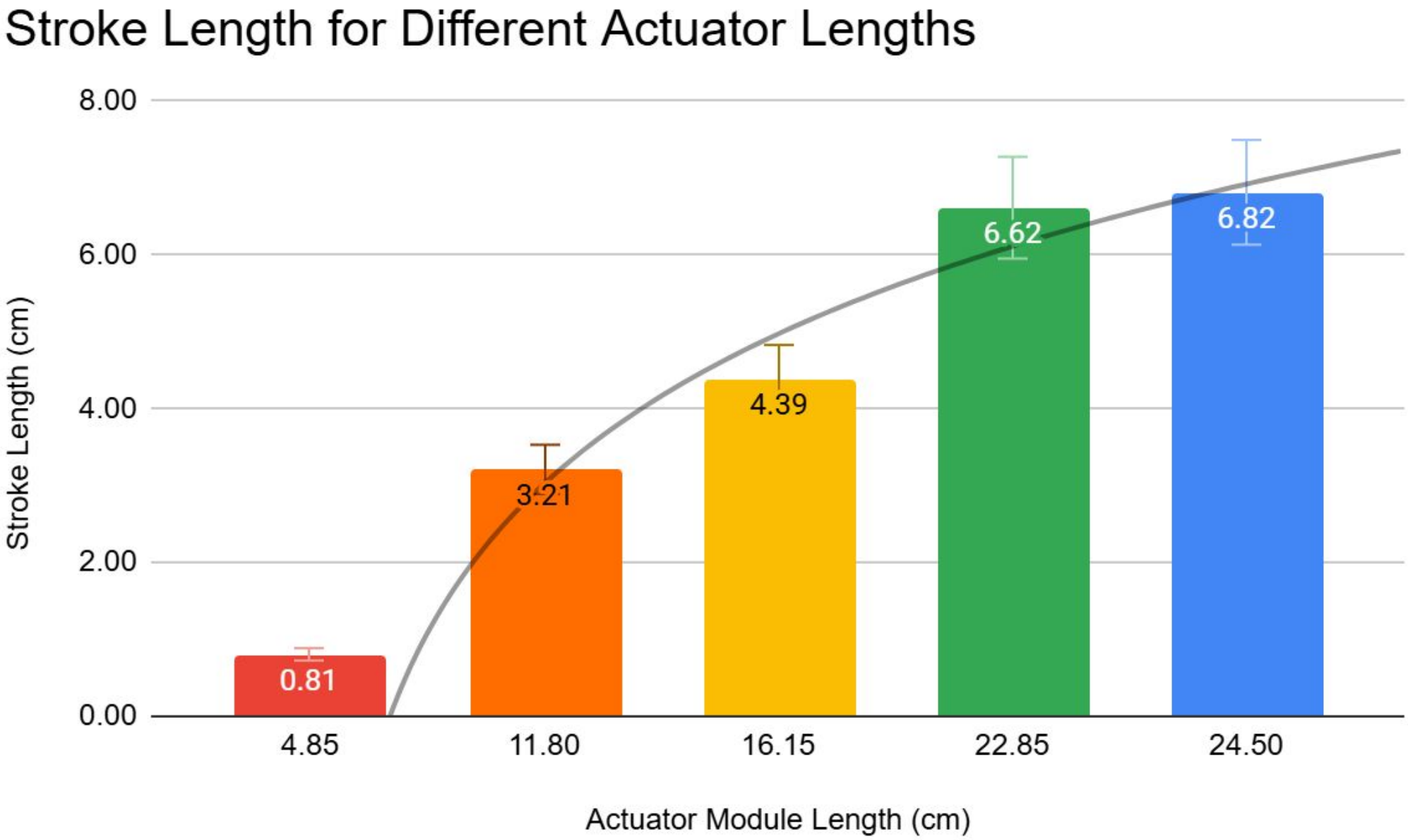



Plane 4
Front
Top
Right




Initial Pressure and Pressure After Modification
Initial Pressure
Pressure After Modification
15
10
5
0
Pressure (psi)
4.85
11.80
16.15
22.85
24.50
Actuator Length


McKibben Actuator Strain % for Different Module Lengths
40.00%
30.00%
20.00%
10.00%
0.00%
Strain %
16.60%
27.20%
27.18%
28.95%
27.82%
4.85
11.80
16.15
22.85
24.50
Actuator Module Length (cm)


Stroke Length for Different Actuator Lengths
8.00
6.00
4.00
2.00
0.00
Stroke Length (cm)
0.81
3.21
4.39
6.62
6.82
4.85
11.80
16.15
22.85
24.50
Actuator Module Length (cm)

$$F = P \cdot A$$

Where P is the required pressure (min. 6 psi) and A is the cross-sectional area of the cylinder ($\pi \cdot r^2$: r = 0.01m)

$$F = 41368.5_{(pascals)} \cdot \pi \cdot 0.0001 = 13.00\text{N}$$

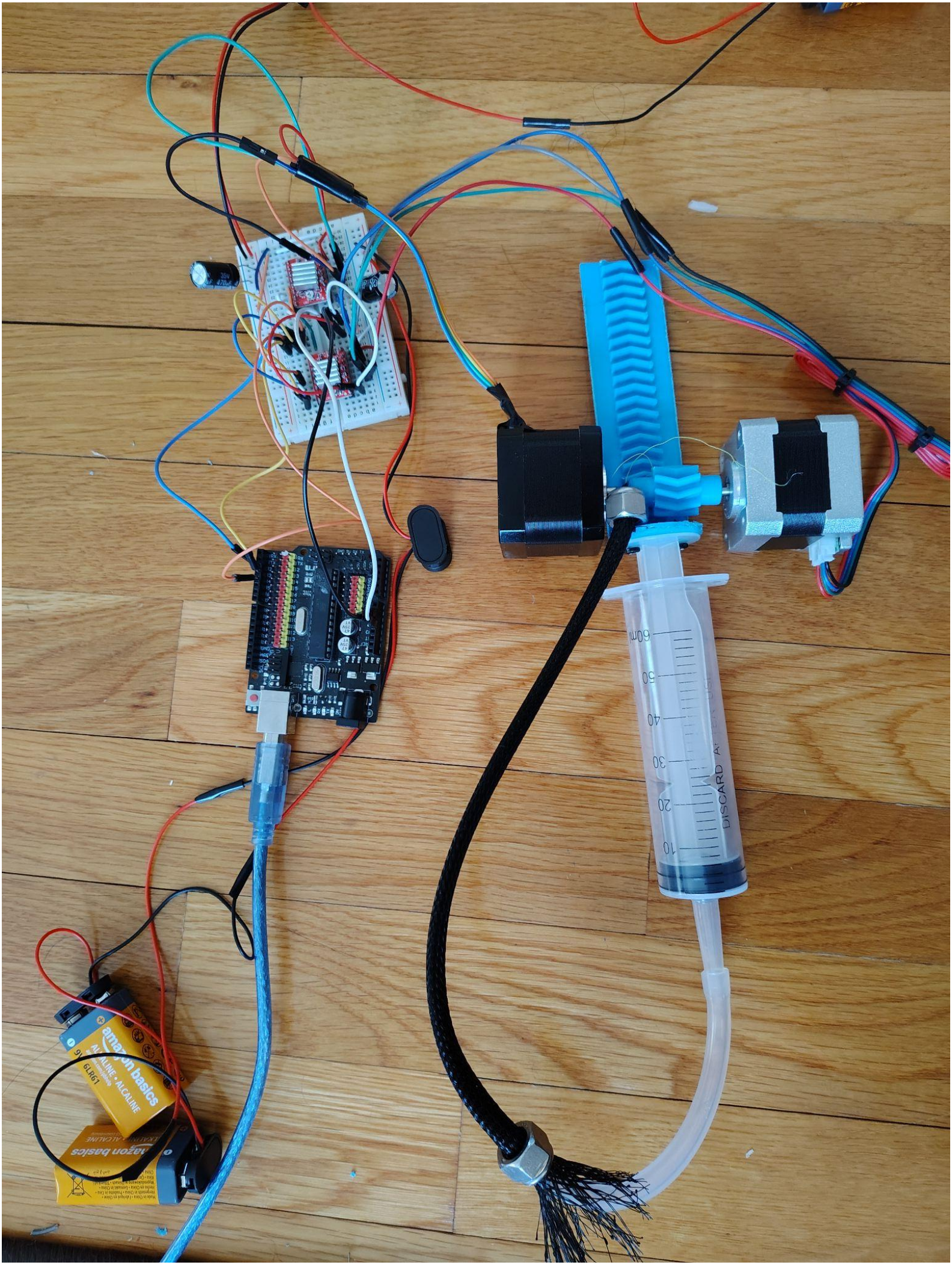
This indicates that 13 Newtons of linear force are required to inflate the actuator to maximum contraction

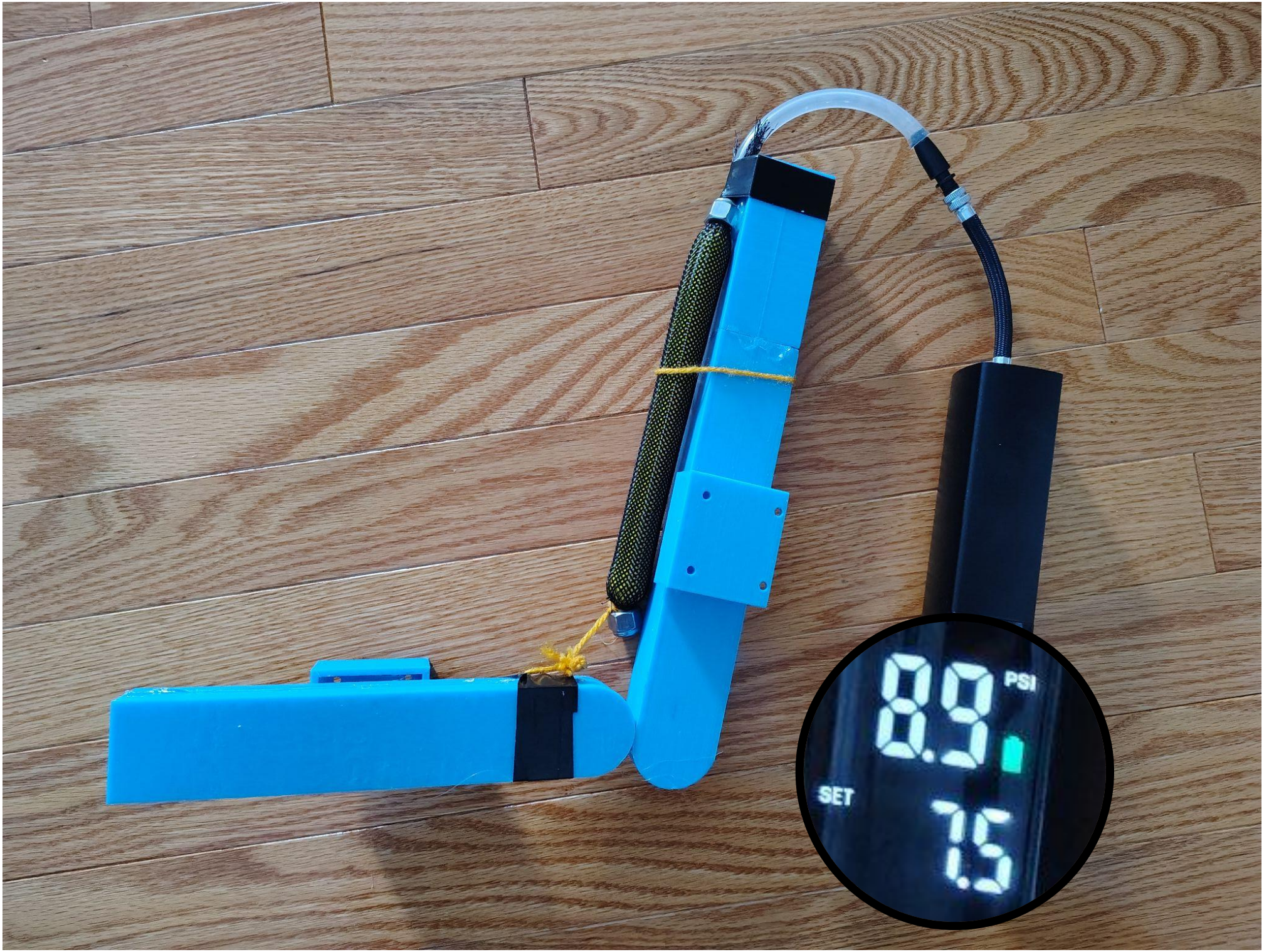
$$F = P\pi r_0^2(3cot^2(\theta_0)(1 - k(1 - \frac{h}{h_0})) - csc^2(\theta_0))$$

This equation describes the force exerted by a McKibben Actuator inflated with gauge pressure P, an initial outer braid angle of θ_0 (18.30°), radius of r_0 (1.35cm), initial and final length of h_0 and h (21.25cm and 16.00cm), respectively, and a fudge factor k (generally 1.30) to account for possible friction during contraction

$$F = 128.05\text{N}$$

Due to the friction-reducing measures implemented, k is assumed to be 1.00, and P is defined as the minimum observed pressure for maximum contraction (6 psi)


amazon basics
ALKALINE • ALCALINE
6LR61
60ml
50
40
30
20
10
DISCARD


8.9
PSI
SET
7.5