



MEET THE TEAM



Jerrick Claridad
Project Manager



Tanner Makar
ME Design & Procurement



Larry Arango
ME Design Engineer



Dominic Bartlewski
ME Test Engineer



Taiyo Gurule
ME Lead Engineer



Tyler-Benjamin Puspos
ECE Lead Engineer



Briareus Castillo
ECE Software Engineer



Justin Cao
ECE Design Engineer



Thomas Marshall
ECE Control Engineer



Shakiba Abdul Sattar
ECE Test Engineer

MEET THE SPONSOR

Quality of Life Plus (QL+): A people-driven company based out of Virginia that supports programs aimed to bring students together in the creation of life-transforming, assistive technology for America's wounded heroes, specifically for quadriplegics and paraplegics.

PROJECT OVERVIEW

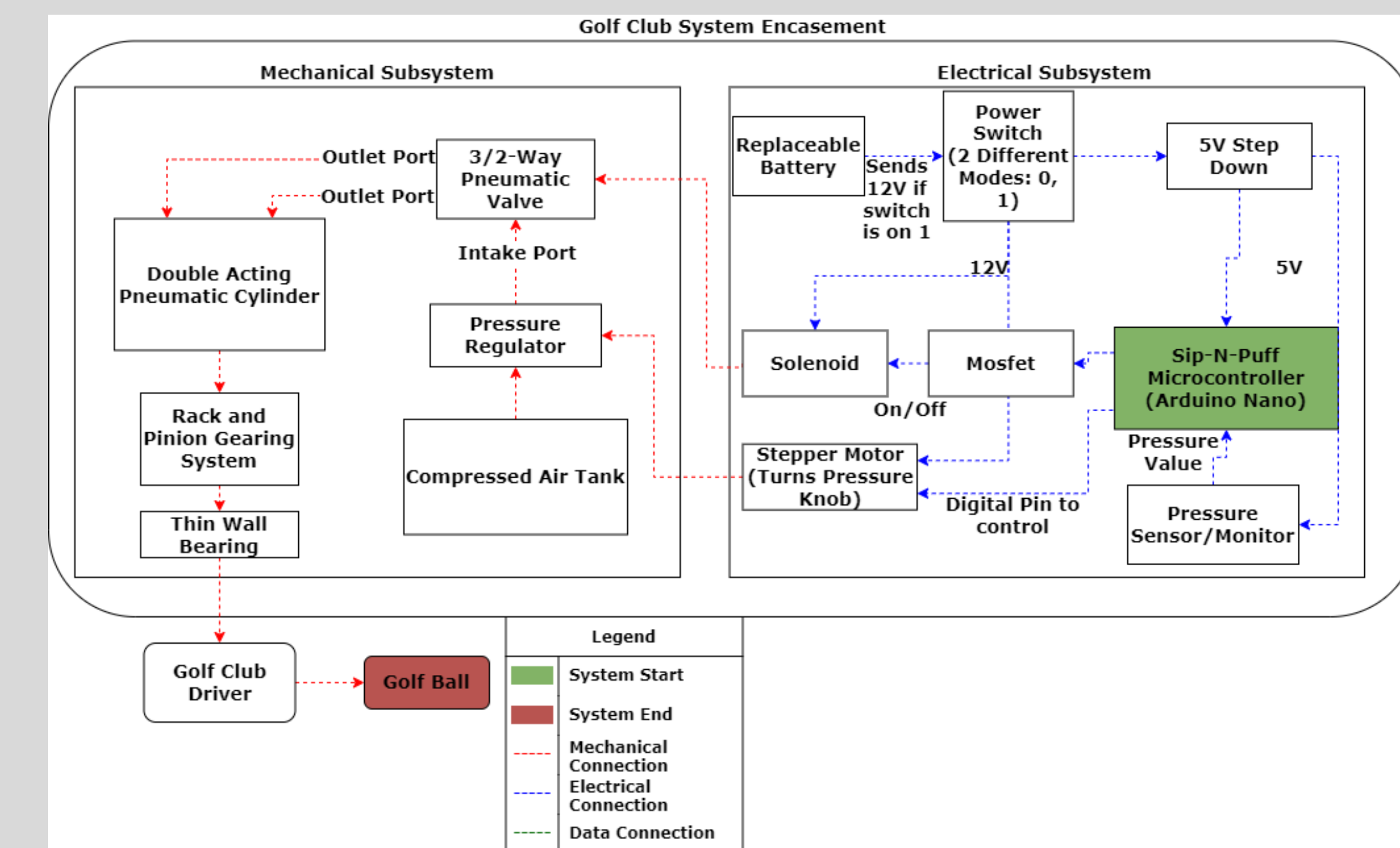
Problem: People who are paraplegic/quadruplegic still have a desire to take up new hobbies or continue old hobbies such as golfing. Due to the lack of mobility and motor functions, swinging a golf club is not a possible for these individuals. Most of their day-to-day tasks are done through a Sip-N-Puff device. The capabilities of each user varies by case therefore, our device must be as universal as possible.

Goal: The goal is to create a device that allows paraplegic/quadruplegic people to be able to hit a golf ball down a driving range. Our design will include a plug-and-play system to increase adaptability across a wide variety of users. The device shall be mounted onto the user's wheelchairs in order to allow the device and the wheelchair to move as one.

ACKNOWLEDGMENTS

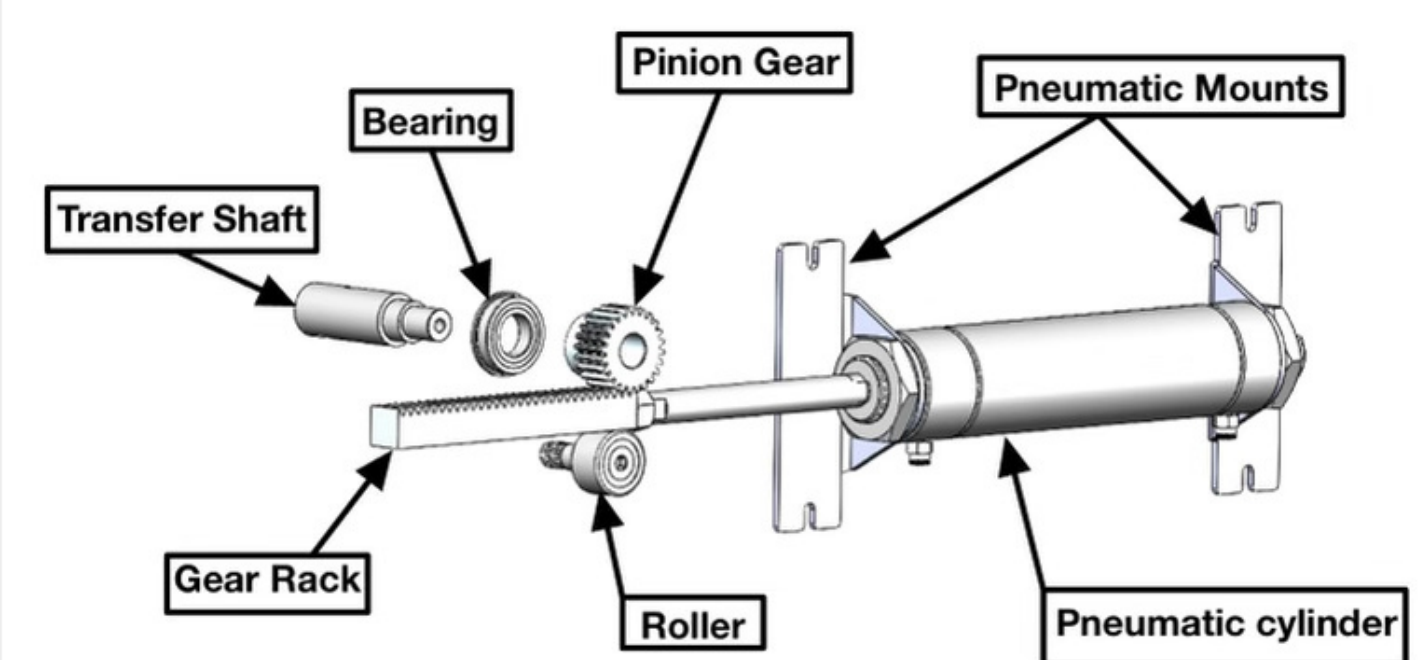
The team thanks Dr. Shaffar and Professor Dorr for advising our team on this project. We would also like to thank our team's point of contact, Scott Huyvaert, with Quality of Life Plus (QL+) for supporting our project.

SYSTEM LEVEL DIAGRAM

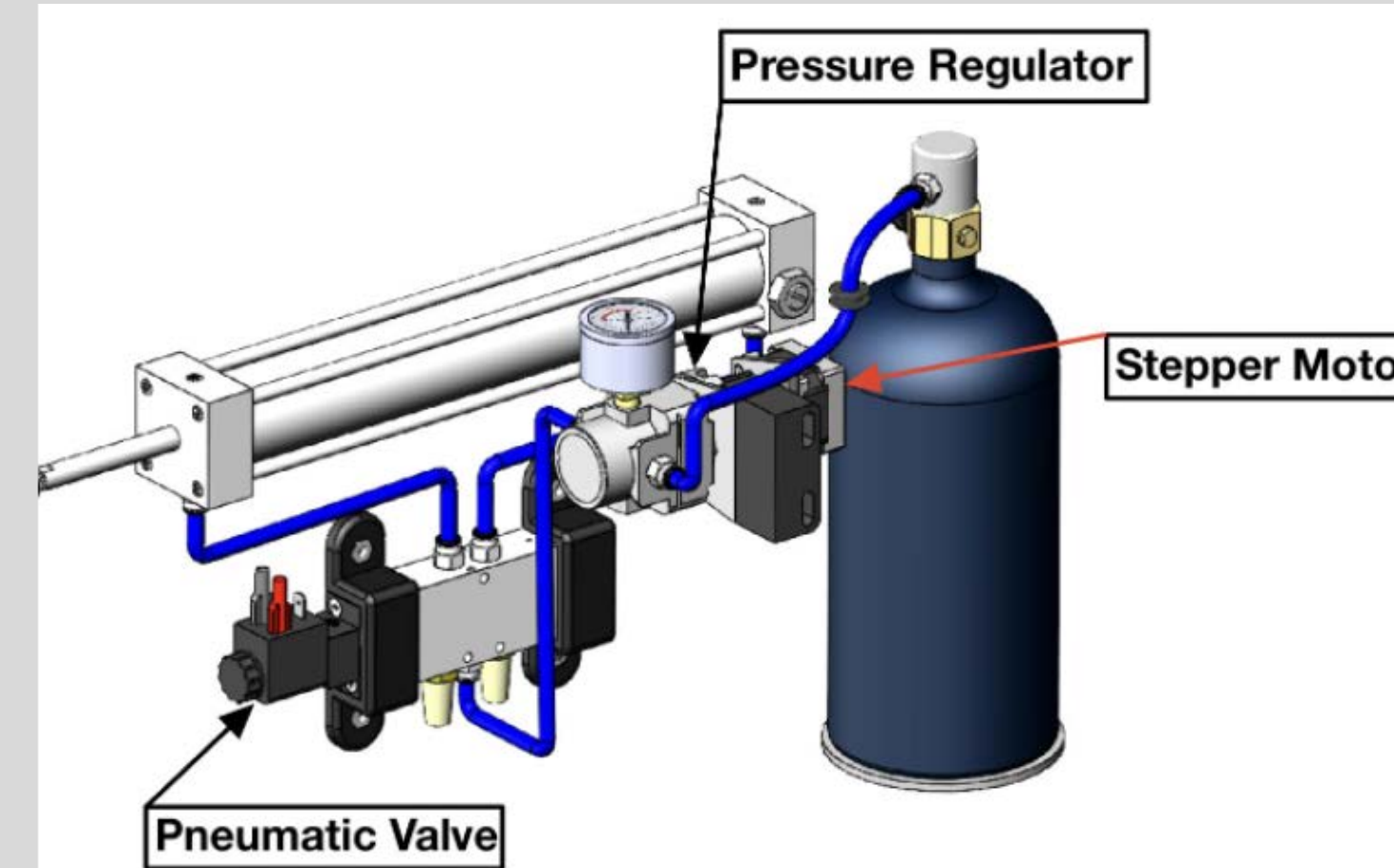


SUBSYSTEMS

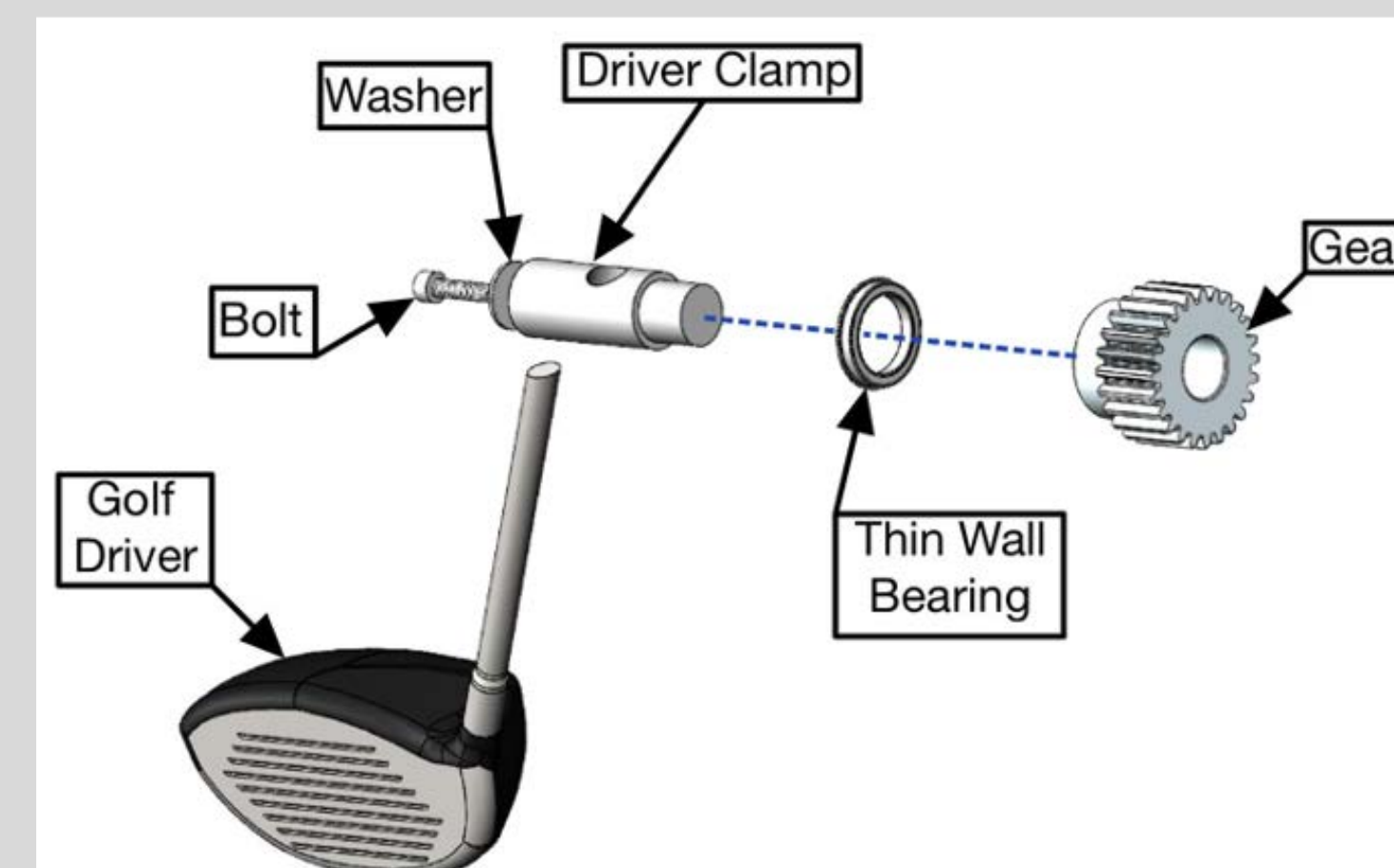
Pneumatic Cylinder Drive Setup



Air Line System

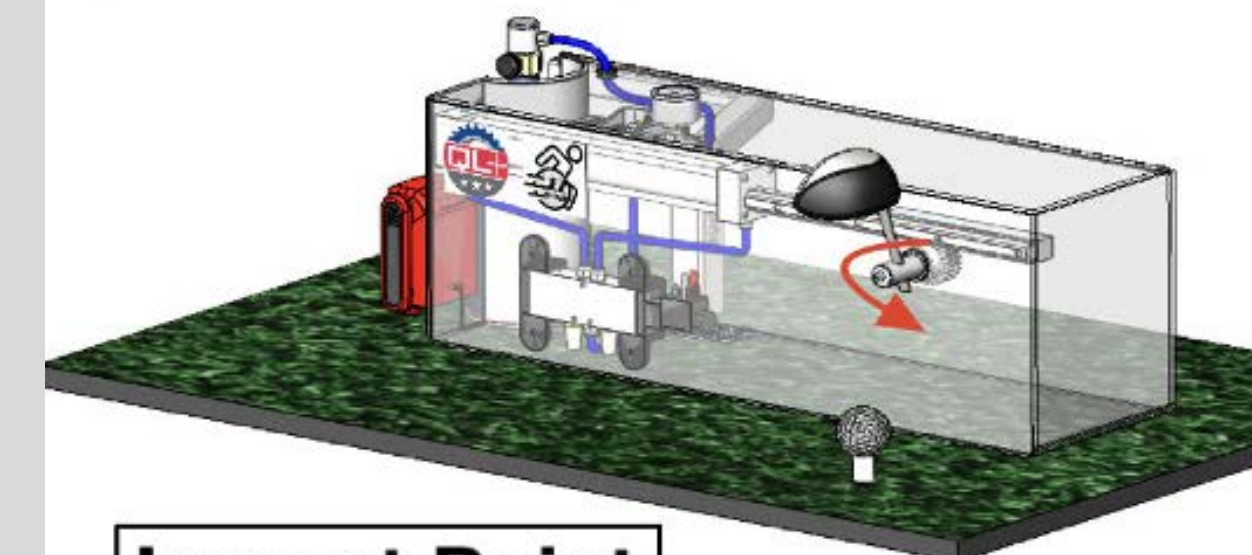


Golf Driver Mount Setup

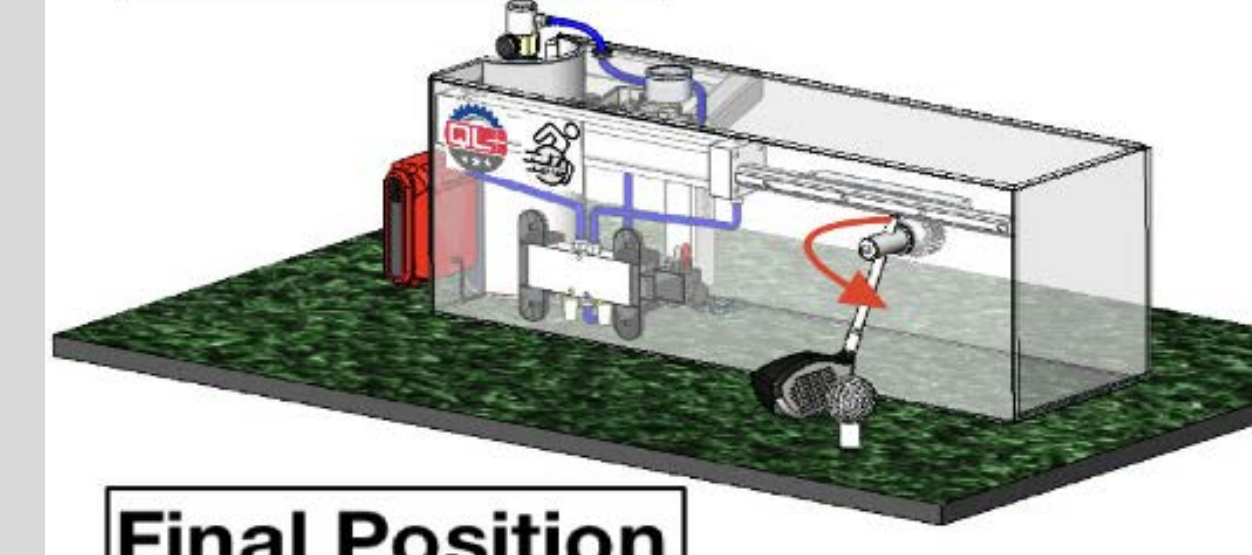


USE CASE

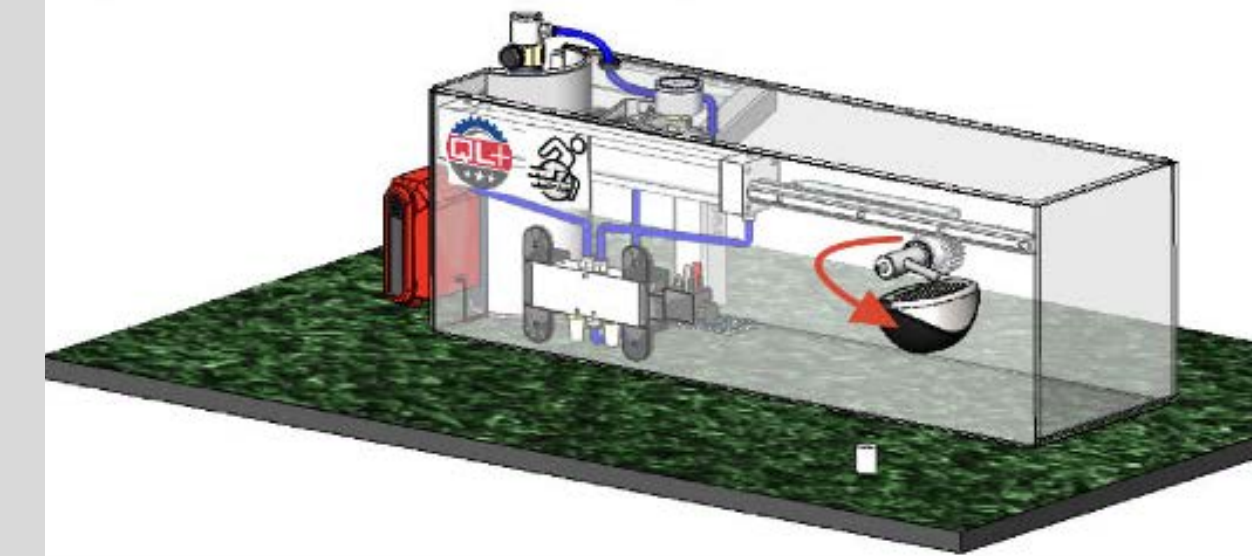
Start Position



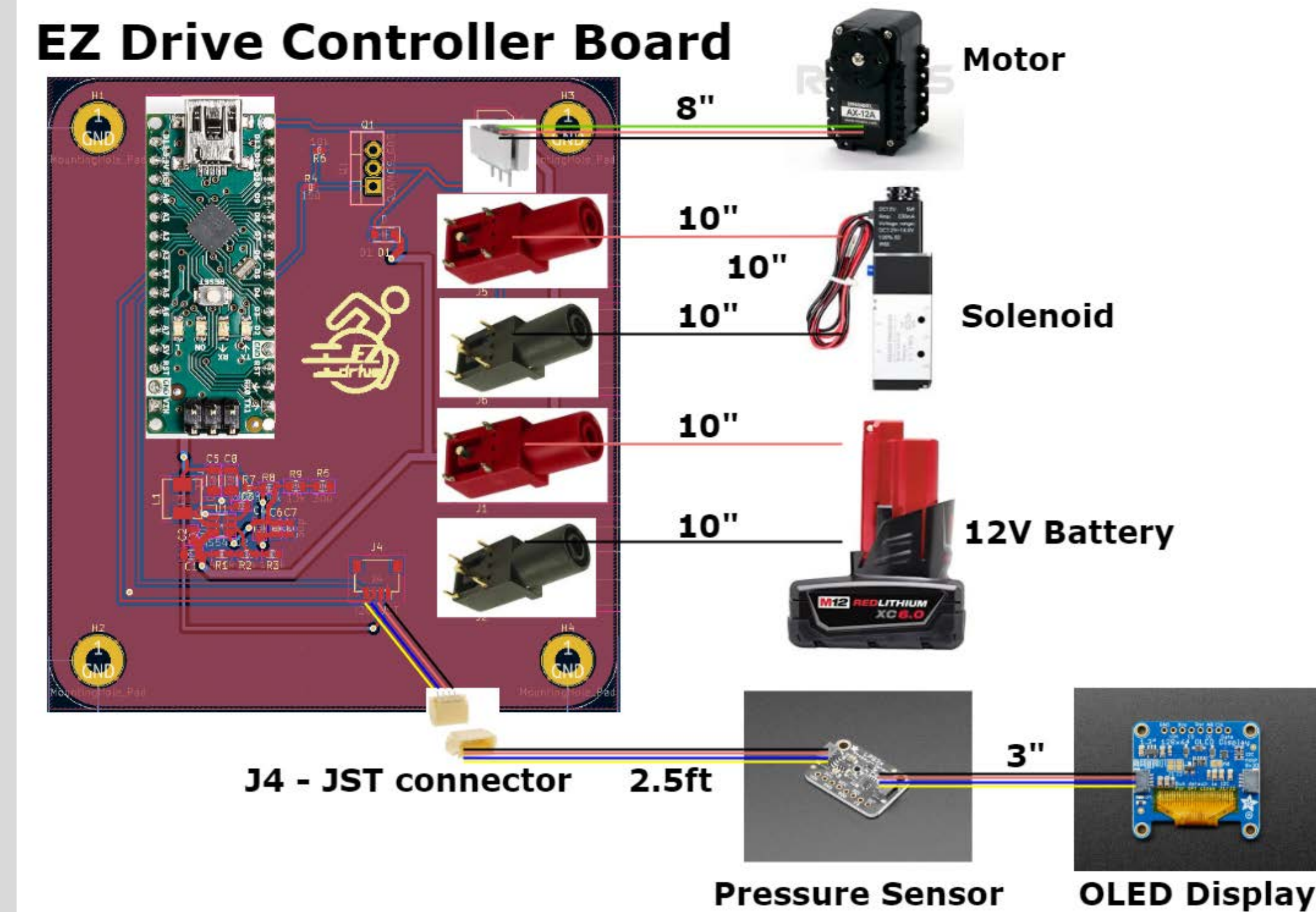
Impact Point



Final Position



EZ Drive Controller Board



TESTING

