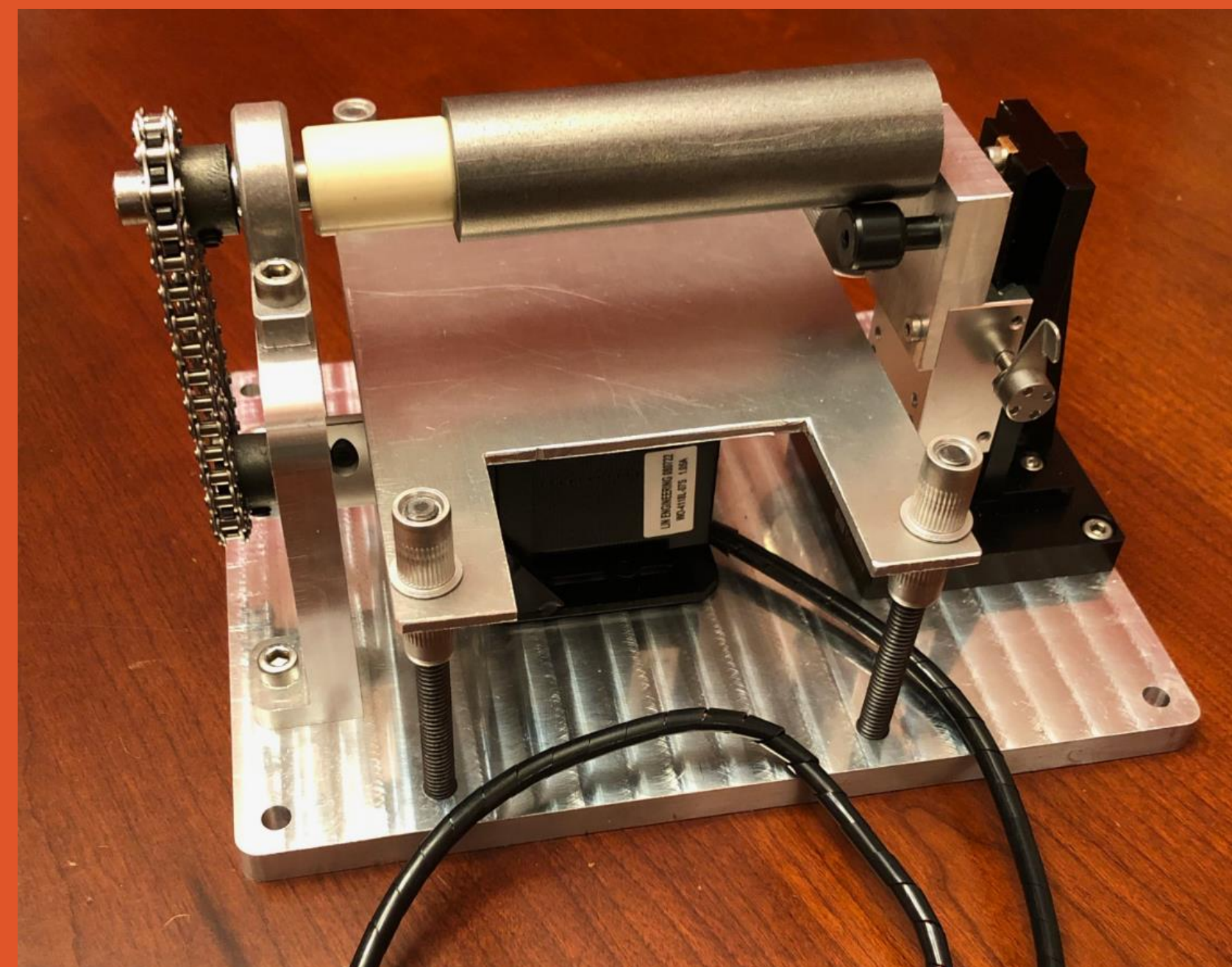


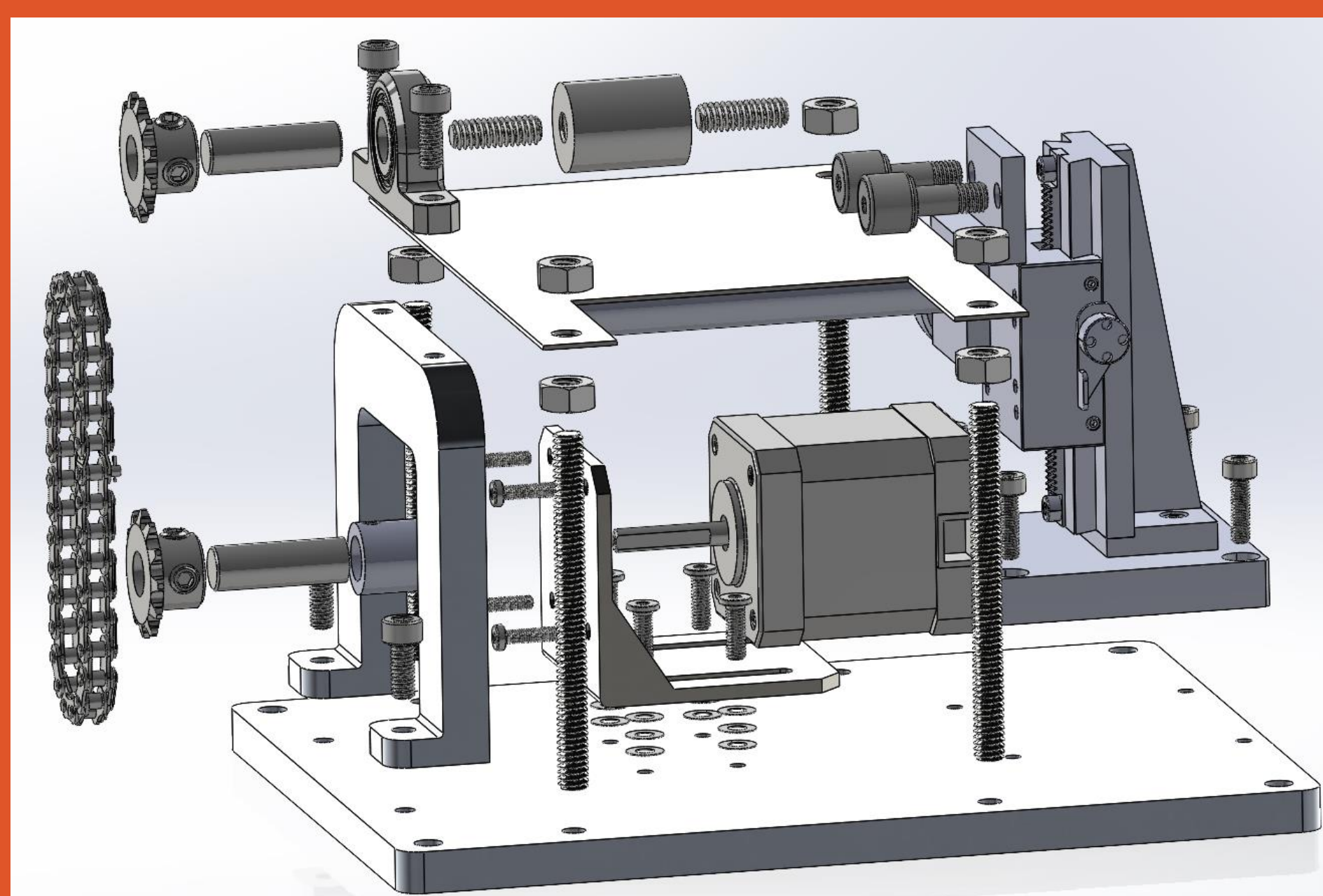
Core Features

- Cylindrical thermal break to isolate heat from the laser
- Bluetooth wireless control with lateral to cylindrical conversions
- 0.1mm accurate height adjustment
- Smooth chain drive from NEMA17 stepper motor
- Microstepping driverboard
- Replaceable slag protector
- Easy to install design

Final Assembly



Exploded View

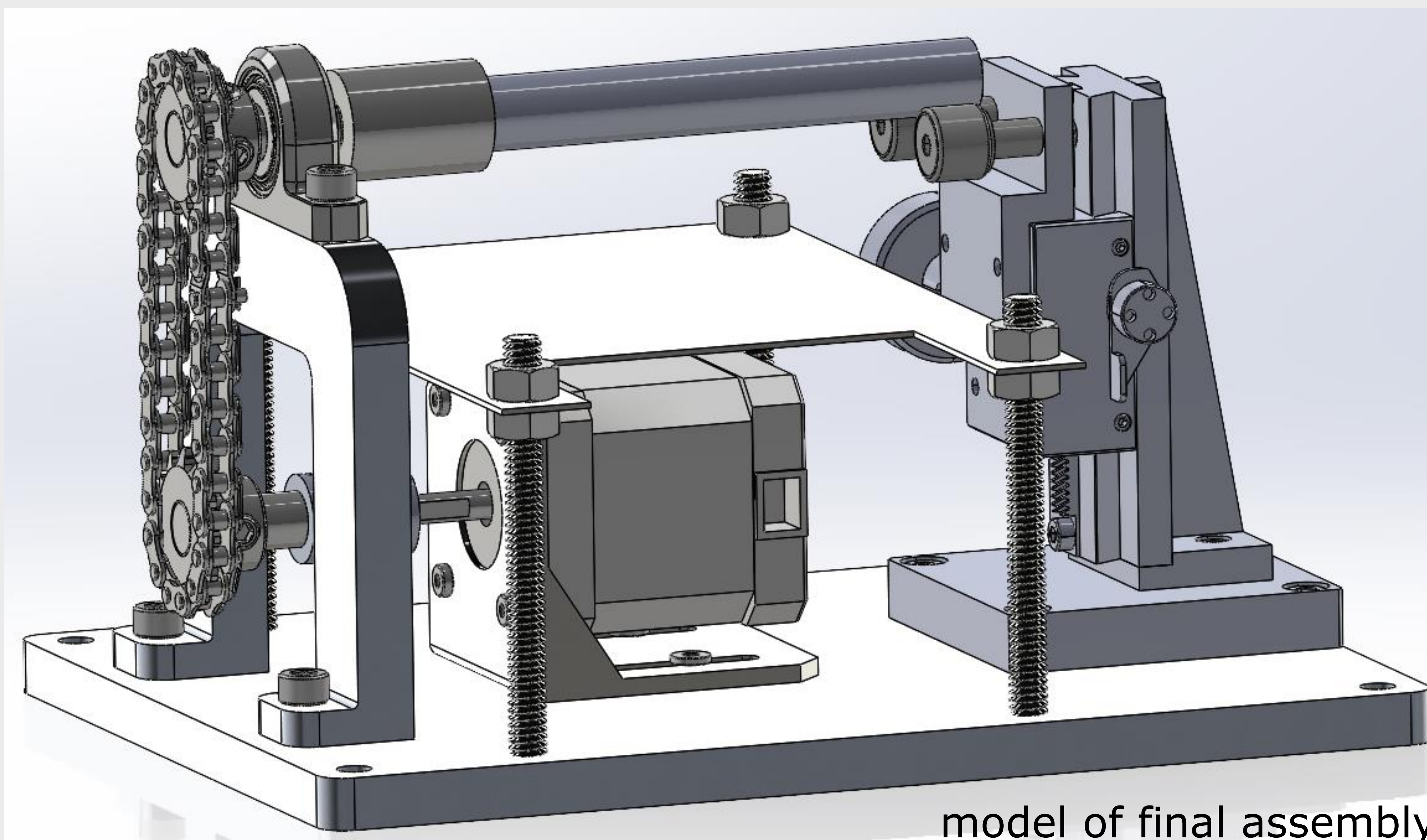


4TH AXIS FIXTURE

By: Will Newberry, Luke Jensen, Arseniy Beltyukov, Payton Ford

Sponsors: Julie Tucker, Igor Burkan, Scott Bozeman

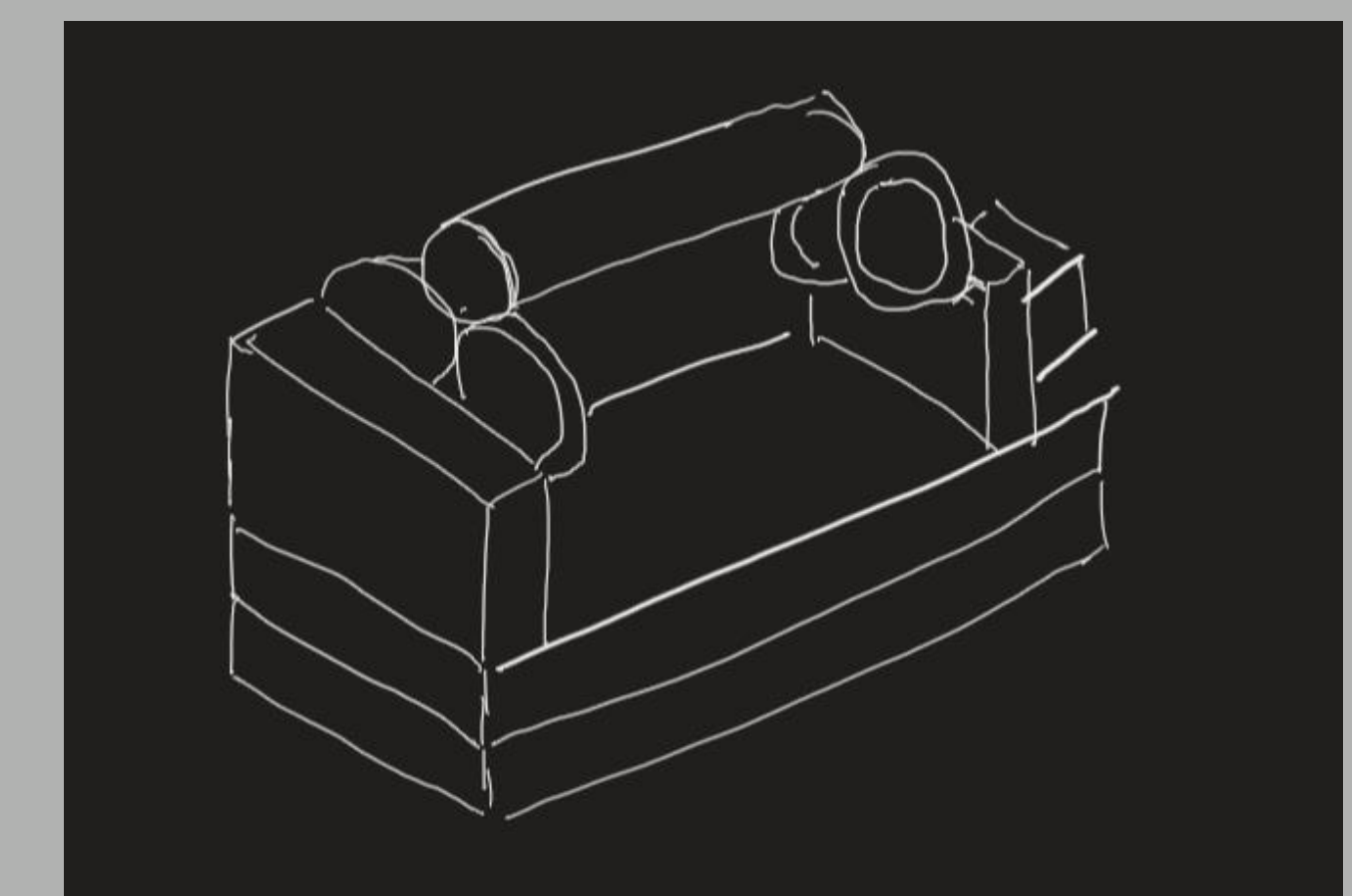
A 4th axis fixture for the Meltio M450 direct energy deposition metal additive manufacturing device.



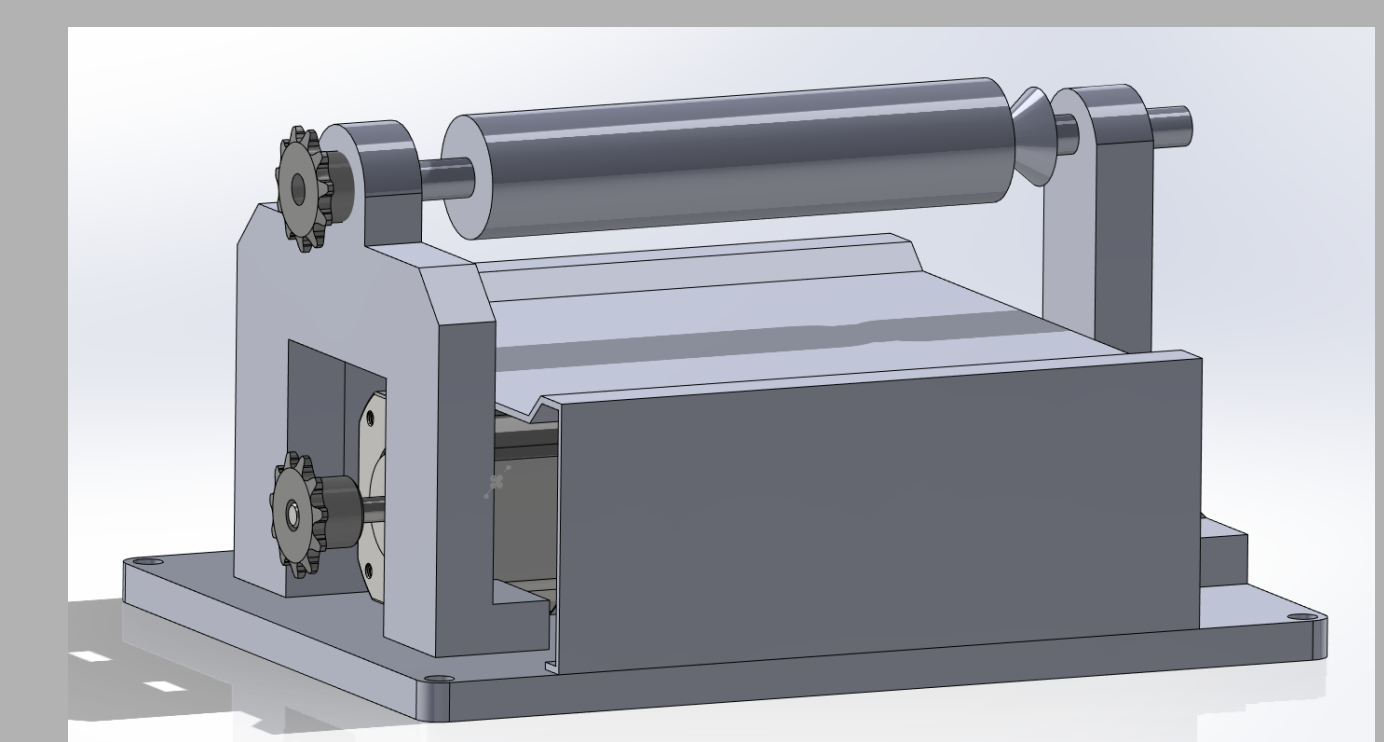
In memory of Payton Ford

Challenges

- How does one accurately level a cylinder?
- How does one insure accurate and smooth rotation?
- How does one isolate a 200C steel bar from the rest of the fixture?
- How does one insure reliable controls wirelessly?
- How does one make the rotating bar the highest point of the fixture?



Initial Concepts



Meltio M450