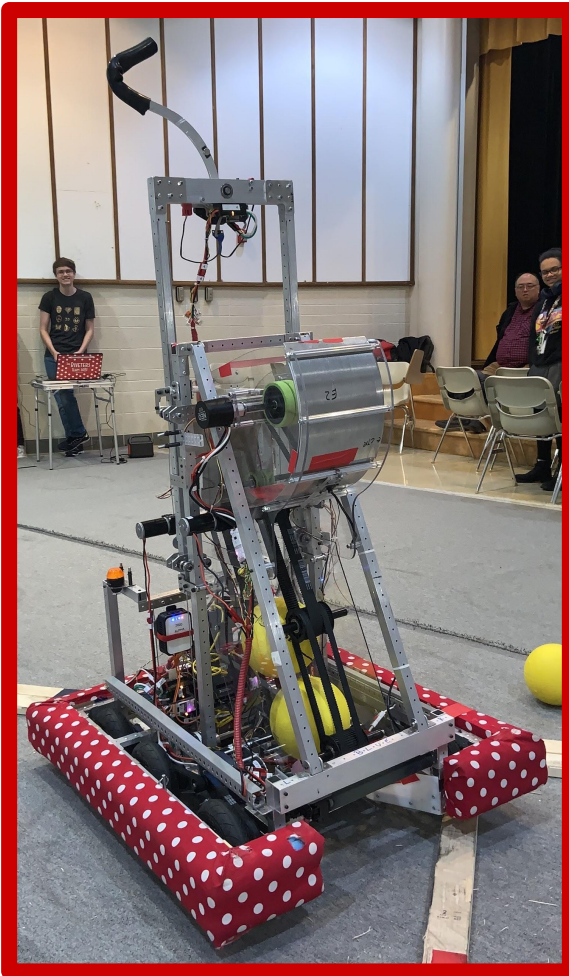


Team 1481: The Riveters

Mercy High School, Farmington Hills

Robot Name: R-81



CHASSIS

- bolted VersaTube frame with riveted aluminum belly pan
- 6 pneumatic wheels with 7.7" diameter in rocker configuration (front wheels raised)
- single-stage gearbox belt drive with 4 NEO brushless motors
- gearbox ratio 56:12, belt drive ratio 42:18

POWER CELLS

INTAKE

- VersaRoller with rubber sleeve
- 775pro motor with 4:1 reduction

STORAGE

- top and bottom ball contact with HTD belts
- 2 BAG motors with 7:1 reduction

SHOOTER

- direct drive hood with 4" wheels powered by a NEO brushless motor
- 2" kicker wheels powered by a 775pro with a 7:1 reduction

CLIMB

- single-stage elevator driven by steel cable winch and 2 775pro motors
- VEX gearbox ratio 20:1, custom winch gearbox ratio 56:14
- curved ¼" aluminum hook allows for an approach parallel to bar
- torsion spring on hook drive maintains contact with bar
- custom mechanical stop on cable drive axle to hold with no power

CONTROL PANEL

- 4" wheel driven by a BAG motor with a 100:1 reduction
- wheel and motor assembly mounted on shock absorber springs