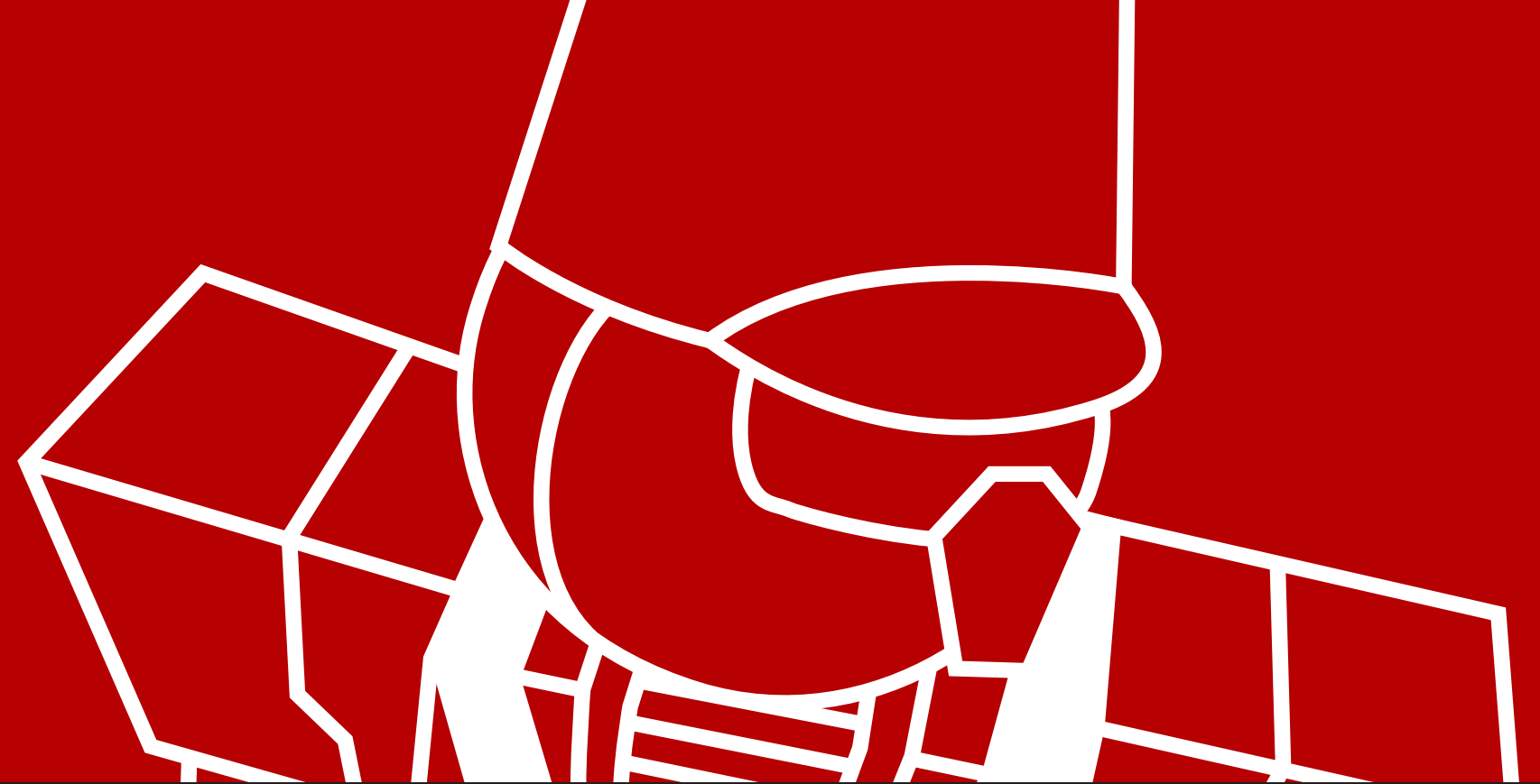


TEAM 1114 PRESENTS B.A. BARACUS



HANGING ARM

- Two stage linear bearing telescoping arm capable of level 3 climbing
- Extends via constant force springs, retracts using ratchet strap winch
- Winch is powered by two CIM motors and two mini CIM motors in a custom gearbox
- Raises and lowers over knuckle with pistons

FIXED HOOKS

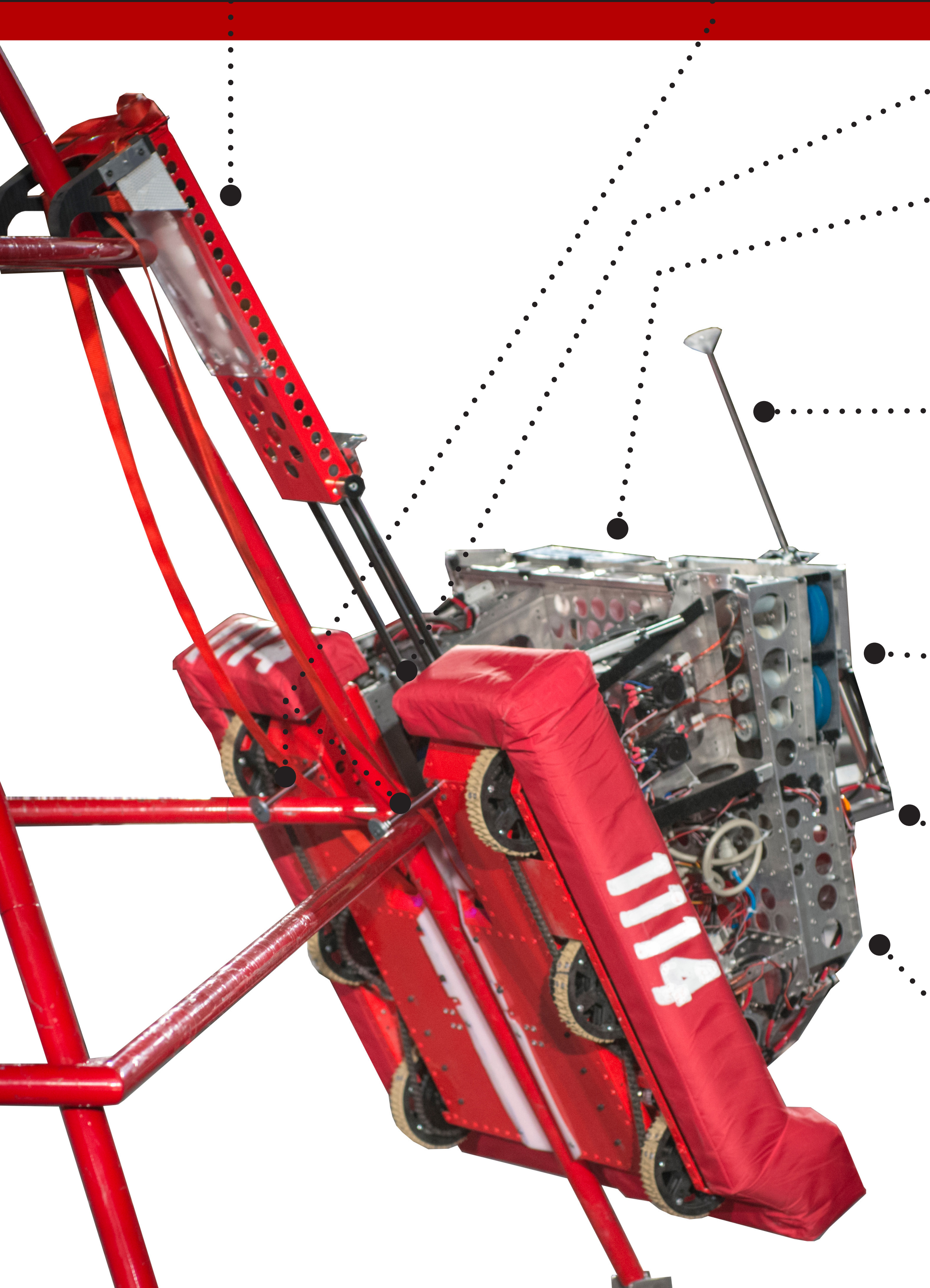
- Two steel shafts extend out of the base of the robot to act as fixed hooks while the arm extends to the next level
- Driven by pneumatics
- Supported through linear bearings



CLIMB BAR

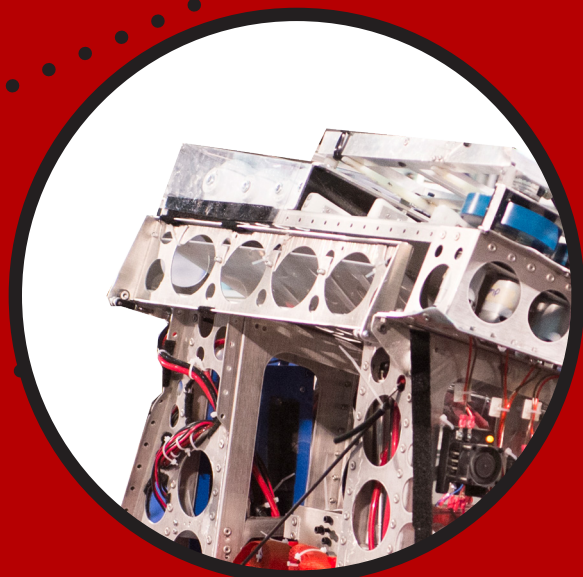
- Steel bar in opening at the front of the robot used to drive up the corner pyramid pole to start the hang sequence
- Held in place using landing gear style mechanism which is driven by a servo

CLIMB



HOPPER DOOR

- In open position, extends hopper to human load slot for smooth transition
- In closed position, retains frisbees while driving and when open aids gravity fed loading
- Pneumatic actuation



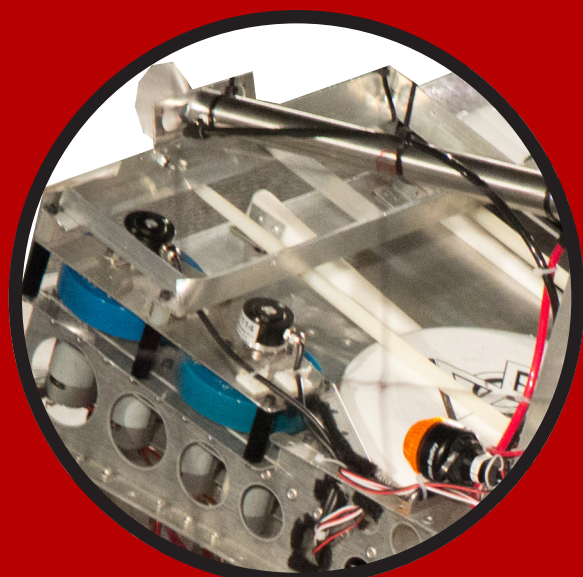
DEFLECTOR

- Deflects frisbees from shooter into the pyramid goal using a pneumatic piston
- Double acting piston with a 12" stroke
- Cone on the end of the piston used to angle frisbees



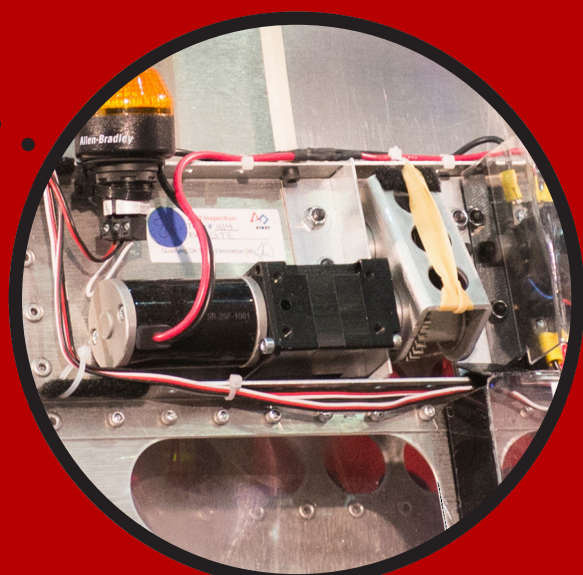
SHOOTER

- -Dual 4" urethane wheel shooter, each powered by two RS-550 motors through a custom gearbox using Fischer-Price/SDP-SI gears
- -Adhesive backed urethane used on the opposite wall to provide friction and generate spin



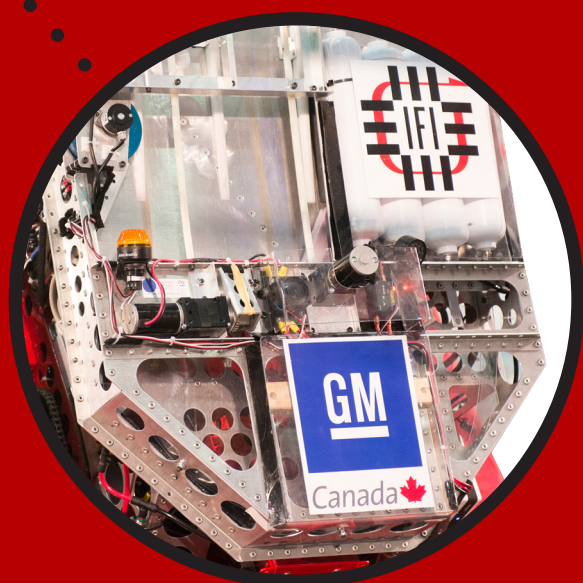
FEEDER WHEEL

- 2" urethane wheel used to feed frisbees from the Horseshoe Hopper to the shooter
- Powered by a BAG motor through a 30:1 VEXpro VersaPlanetary Gearbox



HORSESHOE HOPPER

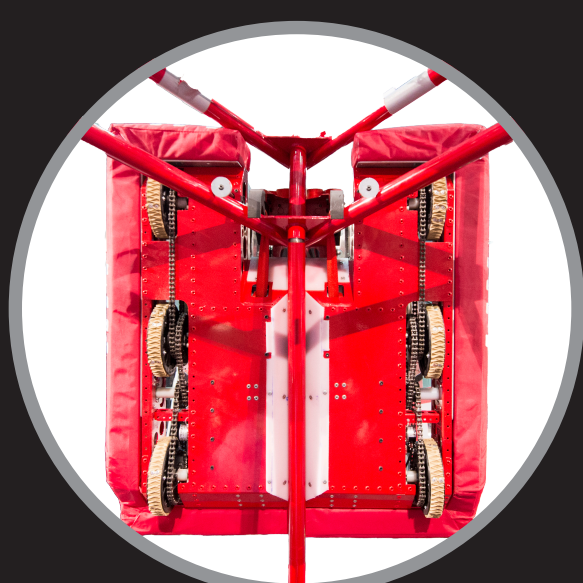
- U-shaped sheet metal hopper to minimize human loading and shooting time
- Holds and feeds 4 frisbees to the shooter using a lexan half turn helix
- Pool noodle "brush" powered by a BAG motor through a 10:1 VEXpro VersaPlanetary Gearbox



SHOOT

DRIVETRAIN

- Riveted aluminum sheet metal chassis
- Six wheeled drive utilizing 6" x 1" VEXpro traction wheels
- Powered by four CIM motors via custom two speed transmission utilizing VEXpro ball shifter components and roller chain drive
- Top speeds: 6.7 fps (low gear), 15 fps (high gear)



DRIVE

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