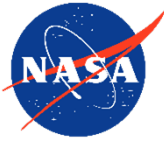
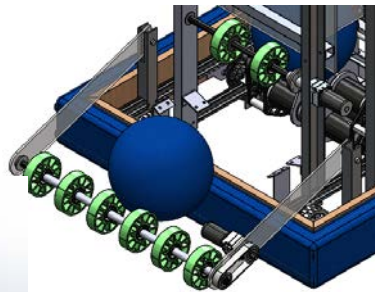
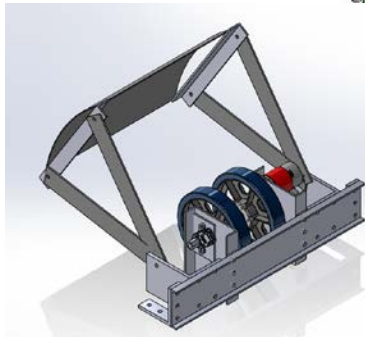


FRC TEAM 980 THUNDERBOTS RAPID REACT FACT SHEET



ROBOT AND GAME STRATEGY

Our robot is robust, maneuverable and efficient
Our robot moves effectively, acquires CARGO easily, scores in the upper HUB, and can challenge opponent's robots.
Our game strategy includes scoring rapidly, defend as required, and perform a fast climb on the mid-rung in our HANGAR.



PICKUP SYSTEM

- Lexan arms with compliant wheels
- Uses the top of the bumper for friction
- The arms and bumper together provide friction for CARGO to be picked up

SHOOTER

- Conveyor belts deliver CARGO to Mechanism: two flywheels with lexan hood
- Cargo shoots out at ~45 degrees as it's accelerated by the wheels in the hood

DRIVE SYSTEM AND CHASSIS

- West Coast style drive with six 4" rubber wheels
- Two-speed gearboxes with 3 CIMs each, and automatic shifting provides high speed or high torque for effective pushing
- Robot can easily cross the field in ~4 seconds
- Robot frame and bumper system are robust against impacts

SENSOR INTEGRATION AND AUTONOMY

- Navigation uses incremental encoders for speed control for teleop and odometry for autonomous
- Pixy Camera and Limelight used for vision-targeting of Cargo acquisition and HUB scoring respectively
- Inertial Measurement Unit monitors robot turns for autonomy

