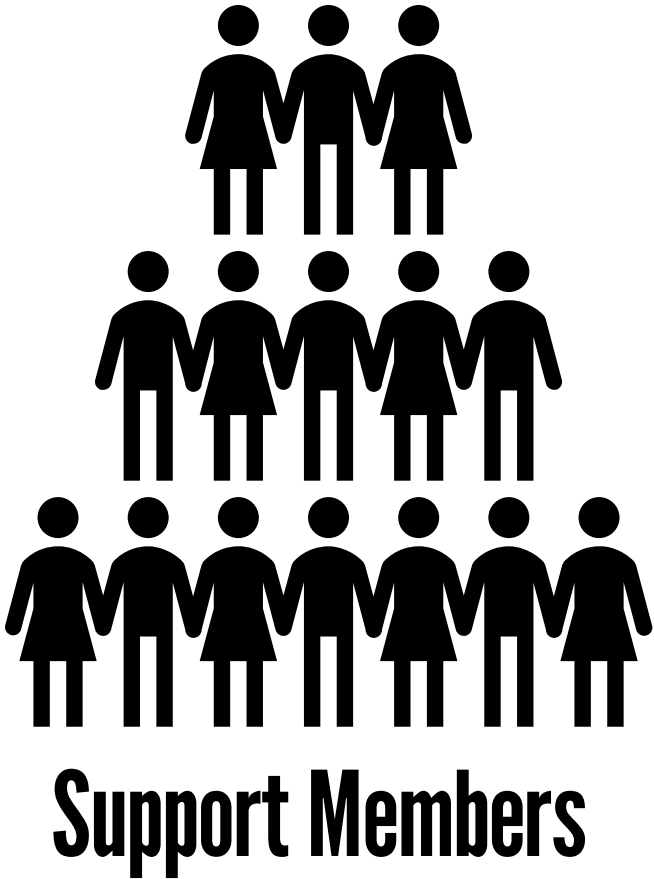


Robotic Arm Project

Open Meeting – 10/2/25



Team Selection



Supporting Members

- **A way for anyone who wasn't selected for Core to contribute**
- **Engage in design reviews and provide feedback to the core team**
- **Participate in open “design calls” where you contribute designs to a current project goal**
- **Attend weekly meetings to learn about the current arm design process**
- **Have an opportunity to move up to a core member if an opening presents itself**

Core Team

- **Be the direct contributors to the arm's design and construction**
- **Have primary responsibility for design decisions on the arm**
- **Maintain design documentation for the project; present at weekly recaps**
- **Responsible for the construction and verification of the physical robot arm**

Project Credit

- **Design credit will be archived with the project**
- **All core team members receive credit by default**
- **Support Members whose contributions affect arm design will also be credited**
- **All credits will be publicly displayed with project information**



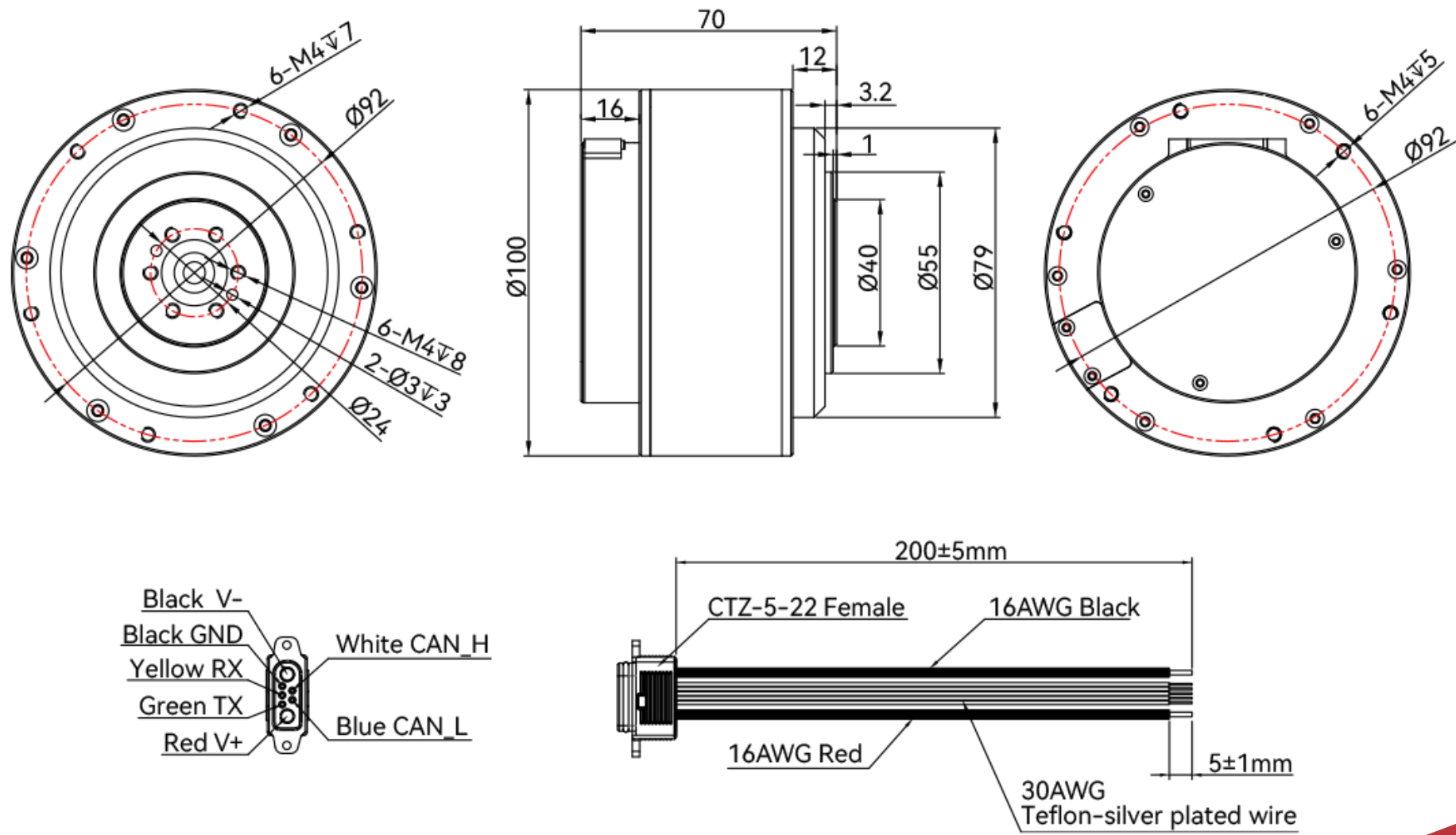
Design Restraint - Motors

- For the arm, we've decided we will be using CubeMars robotic actuators
- Joints 0, 1, & 2 will be AK10-9 3.0 models (pictured)
- Joints 3, 4, & 5 will likely be AK45-36 Models*
- These determine our starting design considerations



*Joints 3-5 are the wrist portion, likely the most complex section design-wise so things aren't set in stone here

Design Restraint – Motors Cont.



Design Restraint – Electronic Systems

- Large motors: 48-volt supply
- Smaller motors: 24-volt supply
- Control electronics: Not selected, but assume 5-volt supply for now
- **BE WEARY OF CURRENT DRAW!** These motors together have the potential to draw up to 120 amps of current. This must be avoided and accounted for in design.
- Digital control via CAN Bus via motor controller and Nvidia Jetson