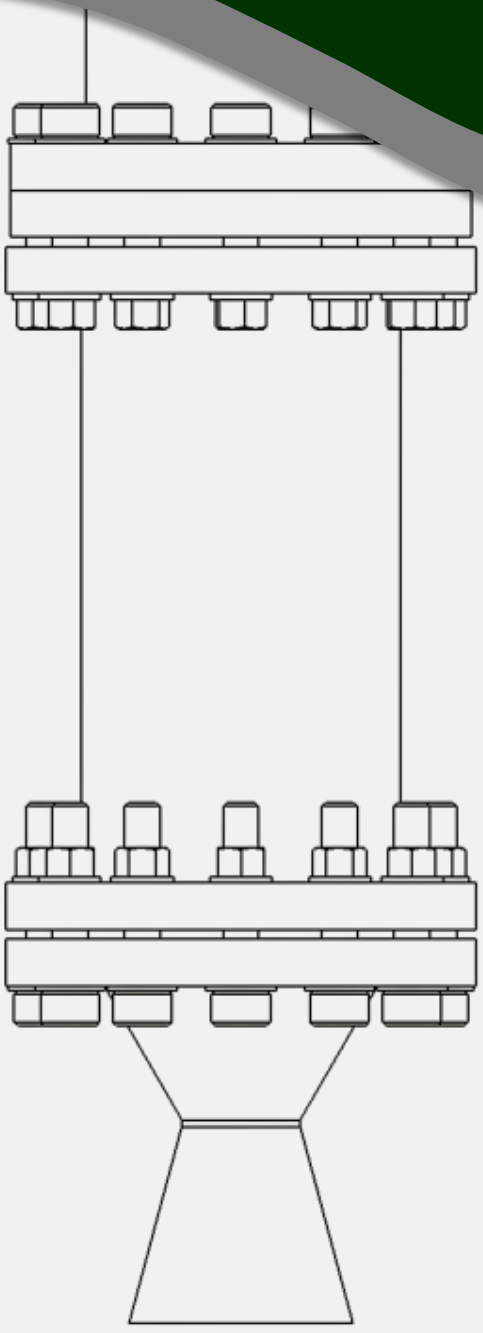
CAL POLY SAN LUIS OBISPO
PROPULSION TECHNOLOGIES



Sponsor Packet

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SPT's First Year in Pictures

Who We Are

Cal Poly SLO Propulsion Technologies is an organization committed to educating students about liquid propulsion systems through rapid iterability, hands-on education, and a strong simulation of industry. By focusing on smaller-scale test articles, we can rapidly develop complex technologies in a short amount of time.

Mission

Our mission is to build an opportunity for students to experience the process of designing, building, and testing liquid propulsion systems in a manner that balances safety with a hands-on engineering education.

Vision

Our vision for this organization is to develop student talent in propulsion technologies by fostering a “learn-by-doing” culture and a high standard for safety, quality, and professionalism. We wanted to bring the opportunity to build liquid propellant propulsion systems to Cal Poly, and we’re proud to say we’ve done just that.

Values

Our identity is crucial to our future as a team, founded in our three core values:

Safety	Due to the difficulty and danger associated with building liquid rocket engines, ensuring the safety of everyone involved is our team's top priority. Members must have a “Speak Up” mindset, know the limits of their experience, and take action to request review and input from industry or faculty.
Education	While we may like to call ourselves a lot of things, we are students first and foremost. This is an educational venture and education is central to our mission. While our tangible deliverable may be propulsion systems, our primary product is education and development.
Ownership	We believe that the best way to embrace the “Learn By Doing” mentality is to trust students with ownership and authority of their designs. To truly learn, a student must own a system “Cradle To Grave,” with an uncompromising attitude towards safety or quality.

Our Plan

In our first year of operation, we designed, manufactured, and tested Cal Poly's first club-built liquid-bipropellant rocket engine. This system, our "Demonstrator" engine, allowed our team to develop their understanding while practicing and executing on well-documented design, integration, and operational safety standards. After proving out the basics, our team is looking forward to developing new propulsion systems that better reflect the products developed and used by the modern-day aerospace industry.

The MK1 – Demonstrator

The Demonstrator represented our minimum viable product. We proved we could keep it simple by developing a liquid bi-propellent rocket engine in less than one year of development time and for under $3000, while enhancing 20+ students' learning in the aerospace propulsion field. With the help of our industry advisors and the donations of our generous family and friends, we were able to bring liquid rocket technology to Cal Poly.

Our Next Projects

Our team has already started development on our next projects. We plan on getting a lot done in the next year, and we hope you can help us achieve our many goals- most of all, providing hands-on education to the next generation of engineers.

Project:	Synopsis:
MK2	Our MK2 team is already manufacturing test nozzles to swap on the MK1 platform to test regeneratively cooling technologies, as well as designing a larger thrust, cryogenic engine for the MK2 project.
Cold Gas Thruster	After a recent design review, our CGT team is moving to manufacture cheap and fast-actuating control valves while designing a multi-axis thruster block for the Cold Gas Thruster project.
More Soon...	We're still ironing out the details, but our team is planning on joining a recently announced competition.

What We Need

As a student organization with ambitious goals, we have a strong need for financial and material support—but that's not the only way you can help. We are open to support by any means necessary. If you have industry connections, texts, interest in attending a design review, or any other way you would be able to contribute, send us an email. Please contact our team for more information on funding tiers.

Financial Support	Financial support allows us to acquire necessary materials and equipment for our projects. This support can come through direct funding or through the donation of hardware/software.
Advisor Support	Industry professionals can serve as advisors to our organization, providing valuable expertise and mentorship to our members. This support can help us to improve the quality and reliability of our systems.
Mentorship	Industry participation in design reviews and work sessions allows our student members to learn from experienced professionals and receive valuable feedback on their work.
Other Support	While we have a strong need for financial and material support, that is not the only way you can help. Any intangible industry support in the form of company tours, testing sites, documentation/literature, and connections (just to list a few) are appreciated.

What We Can Do for You

We believe that any money donated should be viewed as an investment, and not just in our members. After developing the infrastructure, we are looking forward to taking on sponsored projects and research. Feel free to reach out to any member of our team and we can talk about sponsorship benefits, resume books, sponsored projects, and more.

Brand Partnership	We can add your logo to our team merch and hardware, place it on testing/manufacturing videos, and otherwise communicate your support to our members and the world.
Resume Book	We take pride in our members' outstanding professional achievement, interning at places like SpaceX, Blue Origin, Stoke, Stratolaunch, and more. Our resume book has all current members' resumes listed and will be available to anyone who donates the requisite amount.

Sponsored Projects	After developing “Demonstrator,” your money in a sponsored project would be a direct investment into your unique, tangible propulsion project. Our team believes in low-barrier-to-entry propulsion technologies and would work together with you to build a project integrated with your company’s mission.
Other	We are open to out-of-left-field opportunities! Reach out to us if you have an idea for collaboration!

Contact Us

We are proud of and passionate about our initiative and would love to talk about our current design. Moreover, we are actively looking for resources to help get this development program off the ground. While we take pride in our documentation, it cannot substitute for talking face-to-face. We would love to show off the work we have already done, so make sure to reach out to any of our team members below.

Contact Our Leadership Team

Name:	Position:	Email:
Adam Boegel	President	aboegel@calpoly.edu
Kyle Schumacher	Technical Direction	kschum01@calpoly.edu
Wendy Dong	Program Manager	wedong@calpoly.edu

Follow Us on Our Socials

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