

Team 08: HyPER

Hydraulic Propulsion Experimentation Rig

Problem

The Maha Fluid Power Research Institute is in need of a test rig to measure different facets of new drone technology. Some things that will make this project challenging are adaptability of design for both future stand and drone modifications, assembly constraints, construction of a large-scale stand, and safety requirements. The resources we consult are limited by confidentiality contracts with Purdue University.



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Solution

To solve this problem, our team will rely on previously learned engineering knowledge and guidance from experts in the field, while partnering with Dr. Lizhi Shang, a forerunner in the field of hydraulic propulsion. The solution will need to consist of a technically adaptable test rig utilizing easily sourceable and affordable components that remain within the confines of a Calvin-provided budget. Measures will be taken to ensure the rig is structurally sound and meets safety requirements supplied by Purdue.

References

- **Dr. Lizhi Shang**

Our technical resource is Dr. Shang, a PhD graduate from Purdue University who has done some research on hydraulic powered drone systems similar to what we are hoping to accomplish. He has filed a patent for his system, and we are working with him to develop this technology.