Flight Stand 500

Commissioning & Consultancy Services

Get expert guidance on your propulsion testing set-up

Overview

The Tyto Robotics Flight Stand 500 (FS500) Commissioning Service was designed to help you achieve safe and effective operation of your Flight Stand 500 thrust stand. Our service goes beyond standard commissioning—it includes a comprehensive consultancy that provides your team with expert guidance in data analysis, system debugging, lab set up and more.

This document outlines:

- Key benefits of the services we offer
- Commissioning package options
- Summary of pre-service tasks

Key Benefits

Our commissioning and consultancy service delivers significant value. Depending on the selected package, you may benefit from the following key features:

Reliable Flight Stand Setup

- Seamless integration of the Flight Stand 500 into your lab environment.
- Clear step-by-step checklists for all stages of set-up and operation.
- Minimized downtime, allowing you to begin testing right away.

Tailored Training Sessions

- Maximum knowledge transfer to your team on the Flight Stand 500's capabilities.
- Guidance on software use, including the GUI, API, and CAN-bus features.
- Instructions for safe testing and troubleshooting.
- Direct access to our technical team for all your questions.

Customized Recommendations

- Guidance on custom test set-ups from a team with over a decade of experience.
- Improve your workflow with strategies tailored to your specific goals.

Support and Troubleshooting

- Hands-on support with the assembly, fine-tuning, and mounting of components.
- Advanced troubleshooting as required to diagnose and resolve complex issues.
- Highlight mitigation methods to common errors, bias and risk.

Service Packages

Service Type	Online	On-site
Duration	1 day	2-3 days
FS500 Capabilities Introduction Session	X	X
Detailed Testing & Maintenance Checklists	X	X
Software Training (including GUI and API)	X	X
Troubleshooting Training	X	X
In-Person Expert Guidance		X
Assembly & Installation Assistance		X
Support for Initial Thrust Tests		X
Custom Lab Setup Recommendations		X
Safety Verification & Risk Resolution		X
De-Bugging & Component Testing		X

*If Tyto's service team has to remain on-site beyond the scheduled period due to missing parts or incomplete pre-service steps, we may charge an additional daily service fee to cover our incurred costs. You may also opt to re-schedule your service, noting that extra service fees may be incurred.

Important Notice: Testing large motors and propellers is a significant undertaking. Our commissioning services are essential to ensure the proper operation of your Flight Stand 500. We highly recommend an in-person service so that our team can help you address and avoid challenges related to data validation, specialized test setups, and barriers to safe operation. When an in-person service is not possible, an online commissioning may suffice. Our technical team is composed of experts in managing the stand and they are well-equipped to address potential complexities, ensuring a safe setup and effective operation.

Summary of Pre-Service Tasks

Schedule your commissioning and training only after receiving the Flight Stand 500. Ensure the following is in place before the service team arrives:

Lab Preparation and Receiving the Flight Stand

- Secure a large enough lab space (indoor or outdoor) for your testing.
- Designate a space for unpacking the stand near the test area.
- Have at least 3 team members ready for installation and commissioning.
- Ensure team members review all provided documentation (e.g., User Manual, Product Offering, Pulling Forces documents).

Initial Installation

- Acquire and assemble lifting equipment (e.g., cranes, pulleys, hydraulic jacks).
- Install the Lower Stand by bolting it to a concrete floor with anchors, or use ground rails.
- Consult a civil engineer to verify concrete strength and resistance.
- Acquire and test a long-stroke linear actuator with an up-down switch and power supply.
- Have an electrician install the AC-DC power supply or batteries, and wire it to your ESC.
- Set up a charging station if using batteries and a safety switch for emergency shutdown.

Preliminary Testing of Motor and ESC

- Prepare a powertrain set (motor, ESC, propeller) for testing.
- Use the protocol of the selected ESC control and conduct a preliminary test without the propeller.

Remote Control and Surveillance Area

- Equip your test area with USB extensions, surveillance cameras, monitors, and an emergency stop switch.
- Establish a separate surveillance room or install mesh walls around the testing area.

Have these Tools and PPE Ready for Your Team

- Torque wrench (min 75 Nm).
- Metric sockets, hex bits, Allen keys, drill bits, and shims.
- Multimeter, duct tape, tie-wraps, insulated tape.
- PPE: Helmets, insulated gloves (rated for 1000V), safety goggles, safety shoes.
  Note: the Tyto Robotics team will bring their own PPE and basic tools.

For more information on the Flight Stand 500 visit our:
YouTube Channel Website

Tyto Robotics
B1 - 80 rue Adrien Robert • Gatineau, QC, Canada J8Y 3S2

sales@tytorobotics.com
tytorobotics.com • 1-844-722-8378