

TVC Actuator Test Benches: Control Command Test Bays

Ensure the correct performance of reactor actuators for Thrust Vectoring Control (TVC) systems with state-of-the-art Electronic Ground Support Equipment (EGSE).



Manufacturers of rocket engines and fighter aircraft need failsafe actuators to meet the strict quality requirements of the aerospace industry. Electromechanic and hydraulic systems can only perform as they should if reactor actuators receive and respond to commands correctly, but ensuring such correct functionality requires rigorous testing - from the RandD stage right through to production and assembly.

THE CONTROL COMMAND TEST BAY: A SYSTEM YOU CAN RELY ON

Mirroring the control and supply units that regulate and power the onboard Thrust Vector Actuation System, our Control Command Test Bay (CCTB) allows you to test that communication with the actuator is correct and that responses are appropriate. The communication protocols employed are directly in line with those used in real-world application, and the system guarantees a deterministic process with utmost precision.

While operating primarily on the electronic level, the CCTB can also be used with hydraulic or electromechanical actuators. What's more, it has its own software with which it can command and control other electronics, auxiliary devices and external test benches for testing mechanics and hydraulics too.

A veritable turnkey solution, the CCTB actuator test bench allows you to perform extensive and custom test campaigns in-house to ensure your systems comply with the strict quality requirements of the aerospace industry.

Key Features

- **Tests control systems commanding one to several linear actuators simultaneous**
Mirroring TVS control and supply units
- **TTE and 1553 Communication Protocols**
Developed by Applus+ experts to mimic those in real-life application
- **EtherCAT Protocol**
Reliable, real-time control system
- **Compatibility with external electronic, hydraulic and mechanic systems**
Control and command of other test benches and auxiliary equipment

AN ADAPTABLE, TURNKEY SOLUTION

We take pride in offering turnkey solutions and will be happy to adapt our CCTB actuator test bench to your needs.

From switching to hydraulic or electromechanical actuators, controlling auxiliary banks for power generation and even validating the deployment of landing equipment for aircraft, the CCTB can be configured in different ways by installing different subsets. This makes for new functionalities and allows different tests to be performed.