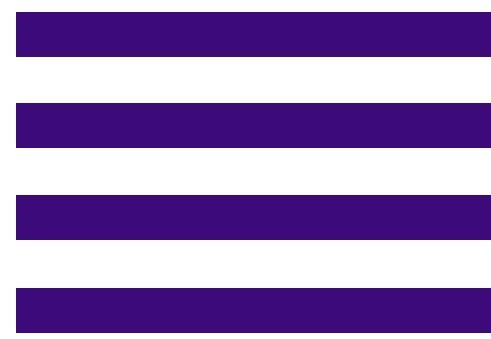
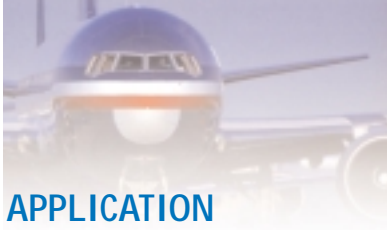


# AIRCRAFT/AEROSPACE ELECTROMECHANICAL ACTUATOR TEST EQUIPMENT



FOR LINEAR AND  
ROTARY ACTUATORS,  
CONTROLS AND  
ACCESSORIES





## APPLICATION

Testek designs and manufactures standard and custom electromechanical actuator test equipment to suit the function of your production needs and the aircraft fleet to be supported. In most cases, universal test stands are the best solution to testing requirements, with test stand resources selected to cover the fleet of units to be tested. Test programs and adapters provide the interface between the universal test stand and each model/part number to be tested. In many cases, the test stand can be built to accommodate your existing and future requirements. Adapter/Test Programs can be individually supplied with the test stand or later, as shop expansion plans are implemented.

Testek electromechanical actuator test stands are applicable to:

- Airline shops for overhaul and return to service tests
- OEM production test equipment for high productivity through automation
- OEM overhaul and repair stations
- Military depot, intermediate and organizational level testing
- OEM and airframe manufacturer developmental test and system integration/simulation
- Third party repair and overhaul

## MAJOR FEATURES

Testek electromechanical actuator component test stands are designed to maximize flexibility in adaptation. A wide variety of both linear and rotary actuators can be tested per the OEM (or your shop's) test procedure.

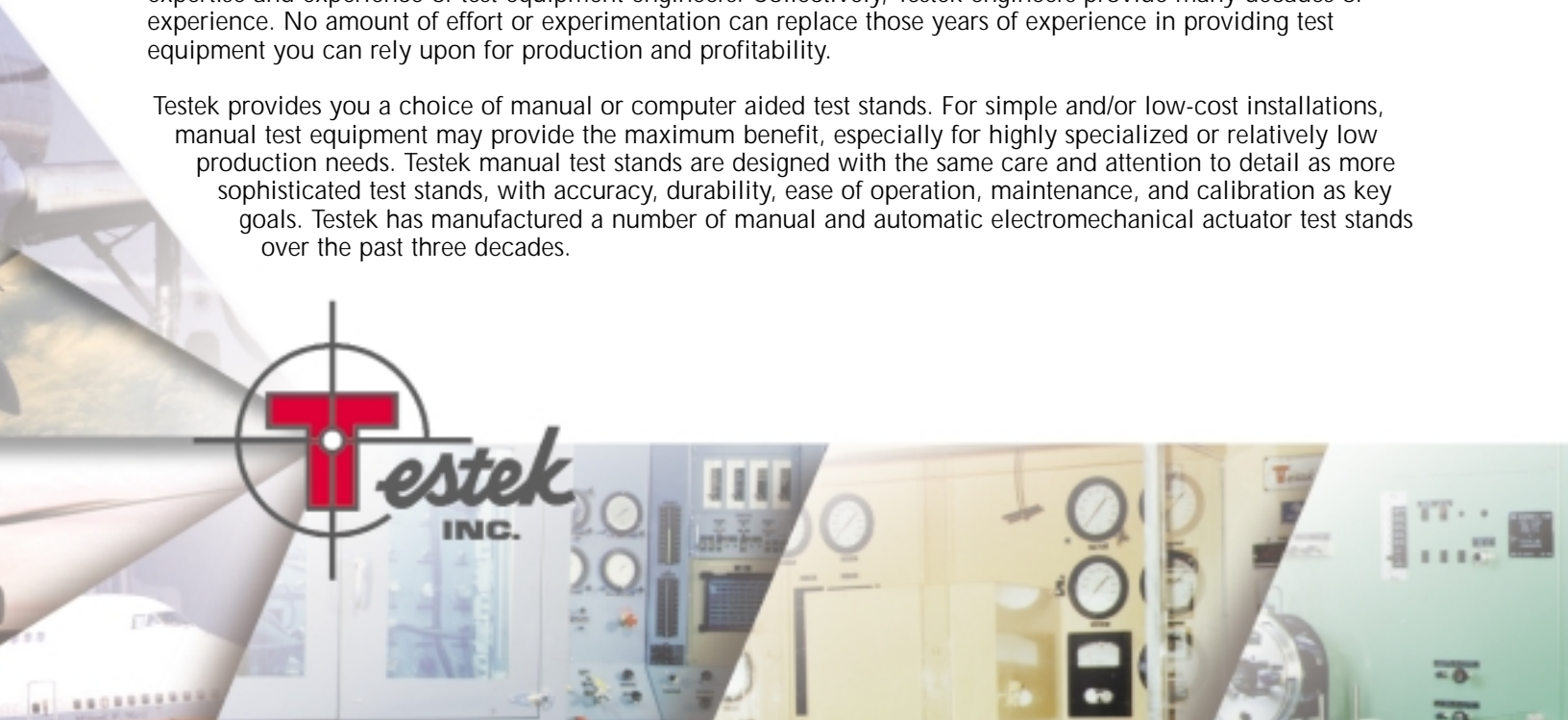
For some applications, one test stand may be designed to test an entire fleet's actuator types. Larger shops may dedicate a specialized test stand for one type of actuator, or a small group of units. In some instances, the user may prefer to use one type of test stand for linear, and another for rotary actuators. Another common solution provides one control/instrumentation console for two or more benches. Each bench may be specialized for a range of linear or rotary actuators. Testek designs and builds the equipment to fit your shop's productivity and scale of operation.

Within this broad specialization, Testek utilizes expandable, modular designs wherever possible. This assures that our test stands make maximum use of proven successful components and subsystems. In most cases, each universal test stand is engineered to meet your shop's special needs. Much of the quality and reliability of your test equipment depends upon the expertise and experience of test equipment engineers. Collectively, Testek engineers provide many decades of experience. No amount of effort or experimentation can replace those years of experience in providing test equipment you can rely upon for production and profitability.

Testek provides you a choice of manual or computer aided test stands. For simple and/or low-cost installations, manual test equipment may provide the maximum benefit, especially for highly specialized or relatively low production needs. Testek manual test stands are designed with the same care and attention to detail as more sophisticated test stands, with accuracy, durability, ease of operation, maintenance, and calibration as key goals. Testek has manufactured a number of manual and automatic electromechanical actuator test stands over the past three decades.



*This linear actuator test bench is part of an automated test system. Benches can be built to accommodate a wide variety of actuator size and force. Shown here with a small linear actuator under test, this bench can burn-in and test many actuator types.*





## MANUAL AND COMPUTER AIDED ACTUATOR TEST STANDS

When desired, computer aided testing adds a level of operator friendliness, productivity and speed to complex test requirements. Computer aided test stands are also a good test tool for components requiring long run in periods. Testek computer aided test stands allow continuous monitoring of test unit and test stand parameters. If any parameter moves into a range where safe operation is at risk, the test stand will warn the operator or shut down, preserving all test parameters. Computer aided test is also a benefit to operators. New test stand operators require less training and experience to correctly and safely perform useful computer aided testing.

Testek has been producing computer aided electromechanical actuator test stands for over two decades. Using the highest rated **TESTEX™** self documenting test programs, Testek electromechanical actuator component test stands can run in four operational modes:

- **Fully Automatic** - test stand runs the entire component test automatically, printing and storing test results, monitoring safe test conditions, and stopping only on out of tolerance results or fault detection.
- **Semi Automatic** - same as fully automatic, except test stand runs operator selected test paragraphs, accumulating test results, and monitoring safe test conditions.
- **Manual** - test stand is under operator control for each test sequence and test parameter. Default setpoints can be OEM specified test circumstances, if desired.
- **Manual for Troubleshooting and Calibration** - test stand can be operated without the test computer system, indispensable for diagnosing computer/test stand faults and for troubleshooting.

## EQUIVALENCY AND TEST CORRELATION

The Testek electromechanical actuator component test stands - especially computer aided test stands can simplify test equipment equivalency and test data correlation with OEM overhaul test specifications.

**TESTEX** test programs are printable spreadsheets, with simple English language test process listings. All setpoints and test data are in the same units as the OEM recommended test procedure. The test programs, and therefore the test process, fully conform to the OEM test procedure, and can be read easily by shop personnel to verify equivalency and correlation to OEM manuals, Technical Orders, NAVAIRS, etc.

Many, if not most electromechanical actuator components have previously been tested on Testek test stands. Testek has provided many electromechanical actuator component test stands and we have performed the test data correlation with many components. Existing Testek equipment is in use in several locations, possibly already successfully testing the desired components in approved service.



*A Testek rotary actuator test bench and automatic test control console are shown. The test bench provides mountings for several rotary actuator test part types. The computer aided test console is simple for operators to learn, and helps assure correct test process and safe operating conditions.*





## LET TESTEK PROPOSE THE EXACT SOLUTION FOR YOUR NEEDS

To allow us to propose a solution for your specific needs, please provide the following information:

1. Aircraft models to be supported, and all component part numbers
2. Available space limitations and entrance size limits
3. Method of operation manual, computer-aided fully automatic, semi automatic, etc.
4. Special preferences for test cell, self-contained test stand, etc.
5. Existing test equipment, including adapter types, you may wish to retain
6. Estimated date of service of the new test equipment
7. Other pertinent details and requirements.

Our engineers can provide on-site inspections and meet with your planners to determine the best solution for your circumstances. Testek will respond with a proposal and, if desired, a presentation of the proposal at your site. We can provide various options and estimated costs to allow you to make your engineering and purchasing decision.

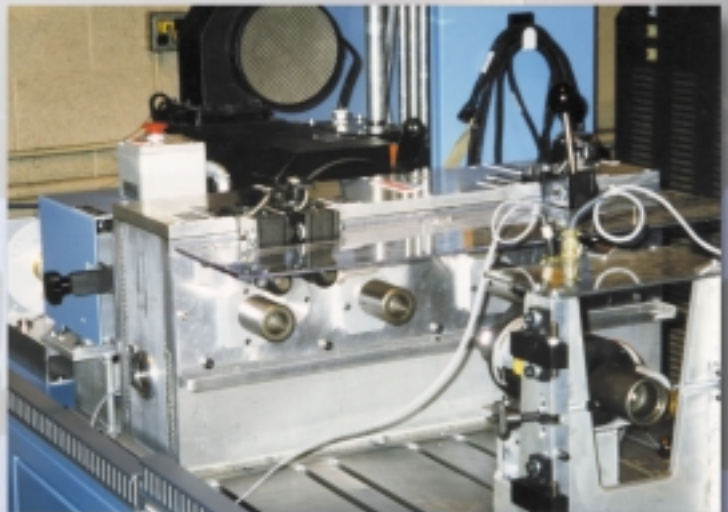
## APPROVALS AND RECOMMENDATIONS

Testek electromechanical actuator component test stands and test cells are in regular, daily service at approved repair stations and military repair/overhaul facilities in installations, worldwide. As a result, we have successfully tested components by many of the OEMs in the world. Testek will provide user references related to your particular needs upon request. These references will include, wherever possible, names and contact information for existing users of similar equipment.

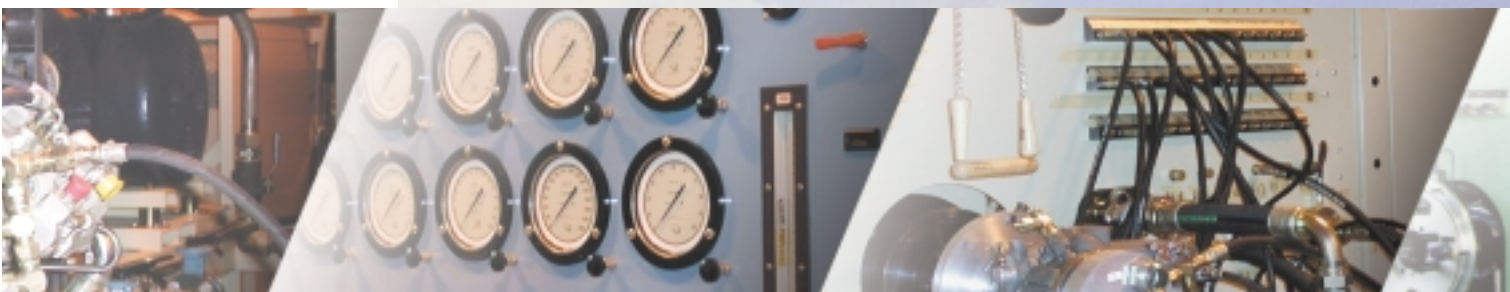
Testek will work with your shop personnel to achieve the correct correlation of test data with manufacturer test specifications, assuring you of useful, correct test results that correlate with the OEM specifications.



*This rotary actuator test bench allows flexible mounting of many sizes and types of actuators. Quick change mounting and coupling adapters can be provided by Testek for several test components, or for your entire fleet.*



*This rotary actuator test bench employs an exclusive Testek-designed and built multiple input gearbox to provide an even wider range of actuator speeds, torques, and sizes. This bench is used with a computer aided test console to speed and simplify the testing of many different actuators.*





## STATE OF THE ART

Whether manual or computer aided, Testek electromechanical actuator component test stands are state of the art in every way. We utilize only the most modern, tested transducing and metering equipment to measure velocity, actuation time, moving and blocked torque, time to travel, current, etc. In computer aided systems, using our acclaimed **TESTEX™** test executive software, we have systems in the field that can simultaneously measure all parameters while simultaneously maintaining test circumstance setup control loops. This provides more than sufficient capacity to test the most sophisticated actuator without difficulty. To simplify the solution, these channels reside in a single computer, not relying on multiple outboard controllers. The result is an excellent, manageable solution to electromechanical actuator component test needs.

Computer aided test stands also can incorporate chart recording and test report printing as a part of the **TESTEX** control program solution. The **TESTEX** computer can be networked to other Testek test stands and/or a central management computer, if desired, to manage software updates and monitor test data SPC (quality statistics) records.

Manual test stands are designed for ease of calibration, with facilities for inserting calibration equipment, dead weight, etc. without complex and time consuming effort. Computer aided test stands have built in computer aided calibration programs to step through the calibration process, and to simplify the work of the calibrating technician. Computer aided test stands also are provided with a built in self test, which checks most of the test stand resources to be certain they are functioning correctly.

## SIMPLE TO USE, DIFFICULT TO ABUSE

Manual test stands are designed with logical control and instrument layouts to simplify operation, and to allow intuitive operator control.

Computer aided test stands are simple and easy to understand. Most test parameters are continuously monitored by the **TESTEX** safety system to notify the operator of any out of limits condition. The **TESTEX** safety system will stop the test, or even shut down the test stand, as appropriate, if an unsafe condition develops. Additionally, operators can be guided in making any needed manual setups or adjustments, including the display of diagrams and photos where appropriate to show the correct operator actions.

## SAVES THOUSANDS ON INSTALLATION

Testek computer aided test stands with separate control consoles can save thousands of dollars in installation wiring. Most instrumentation and control equipment is located in safe control cabinets within the test area. Thus, only the data display, keyboard, mouse, and emergency stop equipment need to be connected at the operator console. All test parameters and controls are located adjacent to the test stand, and the interconnecting wiring is provided by Testek, ready to attach to the appropriate test system modules.

Also, Testek usually supplies the harnesses, cables, and connectors needed to connect the actuator according to the OEM test procedure.



*Linear actuator test benches can be built to accommodate multiple large and small components. This bench is part of a computer aided test installation for defense aircraft support.*



Testek is a recognized world leader in aerospace test equipment for the following components:

ELECTRICAL	FUEL	PNEUMATIC	HYDRAULIC	AVIONICS
IDG	Main Engine Fuel Controls	Air Cycle Machines	Flight Controls	GCU
AC & DC Generators	HMU	High/Low Temp. Valves	Servo Actuators	BPCU
CSD	Fuel Nozzles	High/Low Flow Valves	Servo Valves	ELCU
VSCF	Fuel Flow Transmitters	Fans	Pumps	APU-GCU
APU Generator	APU Fuel Controls	Waste, Dump Valves	Motors	ELMS
Electric Starter/Generator	Fuel Boost/Jettison Pumps	Engine Starters	Controls	ASCU
Variable Freq. Generators	Fuel Accessories	Air Motors, Actuators	Support & Supply Carts	PSEU
and Electro-Mechanical Rotary/Linear Actuators				

## TESTEK SERVICE AND SUPPORT

We service all of the equipment we have in the field, worldwide. Testek test equipment is in daily use on five continents. Our engineers and technicians are experienced in providing on site service, usually on 24-48 hour notice.

## REPLACEMENT PARTS AND SPARES

Throughout our over 34 year (since 1969) history, Testek has designed our test equipment for long term support. Quality, long life components and subsystems are employed to assure long term support. In most cases where parts have become obsolete, Testek engineers provide updated parts with assistance in making the substitution.

## CUSTOMER RECOMMENDATIONS

Testek relies on customer recommendations for its increasing equipment sales. Most of our equipment is sold by "word of mouth" from one satisfied customer to another. In most cases, we can provide prospective buyers with a listing of existing users of similar equipment, including telephone or e-mail contacts.



## CONTACT INFORMATION

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