Rotary Servo Actuators / Linear Actuators

Model 995
Our 995 Rotary Servo Actuator provides mechanical control of the aircraft’s rudder yaw dampening function during autopilot engagement.
- Size: 4.50 x 5.70 x 2.70 inches
- Power: 28 VDC
- Power point: 60 in-lb @ 60 deg/sec
- Weight: 3.96 lbs
- Peak torque: 70 in-lb
- Brushless motor with Hall sensor electronic commutation
- Brushless RVDT position transducer
- Derived tach signal
- BIT logic outputs
- Robust structural design
- Clutched output
- High efficiency spur gearing
- Pulse width modulated motor power
- Tach signal output
- ±10 VDC input command signal to position signal output
- Torque output limit electronics
- Position or rate servo operation
- Low backlash
- High reliability - 60,000 hour MTBF
- Mechanical interface with cable shaves, clutches and pilots throttle quadrant
- No load speed: 80 deg/sec

Linear Actuators
Linear Actuators translate rotary motion to linear motion. They have the same features and similar applications as rotary units.

Model 310
The model 310 linear actuator was designed to control the cyclic and collective feel on a helicopter.
- Size: 2.0 x 3.34 x 8.42 inches
- Power: 28 VDC
- Power point: 300 lbs @ 0.45 in/sec
- Weight: 4.5 lbs
- Peak force: 1000 lbs
- Uses C-13 rare earth permanent magnet brush motor
- Limit switches
- Robust design with steel gearing and power screw
- Environmentally sealed
- EMI filter
- Fail-safe brake
- No load speed: 0.6 in/sec
- Stroke: 3 in

Model 802
The Model 802 Linear Servo Actuator is used to position the nacelles on a tilt rotor unmanned aerial vehicle during flight conversion modes. It is designed to operate under extreme environmental and endurance conditions.
- Size: 3.33 x 3.56 x 17.44 inches long
- Power: 28 VDC
- Stroke: 11.70 inches electrical stroke
- Rated Power Point: 800 lb @ 0.75 in/sec
- Weight: 8.0 lbs
- Two NFeB permanent magnet DC brush motor/tachometers
- Two RVDT’s
- Robust structural design
- Low endplay
- High efficiency steel gearing
- Monoball end-fitting mount
- Ball screw/nut power screw assembly
- Stroke: (Model 801) 4.78 inches Electrical stroke (Model 973) 4.50 inches Electrical stroke
- Stall load: 1,120 lbs

Model 974
The Model 974 Linear Servo Actuator is used to position the nacelles on a tilt rotor unmanned aerial vehicle during flight conversion modes. It is designed to operate under extreme environmental and endurance conditions.

(Model 801/973 Linear Servo Actuator)
Transducers

Transducers have been employed on both military and commercial aircraft to provide position feedback information of flight control surfaces to the flight computers, autopilots and cockpit displays.

Model 800-XX
Our Model 800 Series Position Transmitter monitors the stabilizer position of the Boeing 757 and 767 commercial aircraft.

- Input voltage: 28 VRMS, 400 Hz
- Rotary variable differential transformer (RVDT)
- 1 speed synchro
- Flame arrester
- Anti-backlash gearing
- Robust structural design
- Size: 4 inch OD x 5.2 inches long

Amplifiers

Amplifiers are used to control the actuators when the drive electronics are located separately outside the actuators.

Model 871-01
150 VDC transconductance amplifier used with the Model 873 Rotary Actuator.

Model 911-01
270 VDC brushless motor controller for a pump system on a military armored vehicle.

Model 944-01
150 VDC transconductance amplifier used with the Model 875 Rotary Actuator.

Model 962-01
150 VDC transconductance amplifier used with the Model 961 Rotary Actuator.

Model 933-01
The flap position transducer is used in C-5 military transports to convert the mechanical position of the flaps to appropriate electrical signals for position indication.

- Input voltage: 26 VAC, 400 Hz
- Consists of 2 synchros and input shaft
- 4:1 gearing
- Single electrical connector for interfacing the excitation voltages and the synchro output signals

Model 943-XX
The Model 943 Position Transmitter monitors the stabilizer position of the Boeing 747-400 commercial aircraft.

- Input voltage: 28 VRMS, 400 Hz
- Rotary variable differential transformer (RVDT)
- 1 speed synchro
- Flame arrester
- Anti-backlash gearing
- Robust structural design
- Size: 3.88 x 4.75 x 14.75 inches long

Model 976
The Model 976 position transducer monitors the position of the nacelle of an unmanned aerial vehicle (UAV).

- Voltage 6 VAC, 3000 Hz
- 5:4 gearing
- Consists of two rotary variable differential transformers (RVDT)
- Single electrical connector for interfacing the excitation voltages and RVDT output signals