• Film position transducer
• Canard E.M. brake
• Low backlash
• Robust structural design
• High efficiency steel gearing
• Position output signal
• Stroke: ±36.5° Aileron
  43.8° CW Canard / 29.2° CCW Canard

**Model 980-10 and 980-20**
The Model 980 Rotary Brushless Actuator System is an antenna azimuth drive servo actuator system consisting of the actuator motor/gearhead, separate controller and interconnecting cables. The system is used for ground vehicle radar applications in full and sector scan modes.

- Size: 4.06 x 4.06 (over mounting flange) x 14.00 inches from rear of motor assembly to front of mounting flange (Model 98000000-10 Actuator)
- Size: 11.0 x 11.0 mounting base x 7.00 inches high (Model 98000000-20 Drive Controller)
- Rated Power Point: 168 in lb @ 183 rpm
- Weight: 17.3 lbs actuator only
- Input Power: 3 Phase 120/208 400 Hz
- Rare earth brushless DC Hall sensor commutated motor with thermistors
- Encoder rate feedback
- Robust structural design
- Low endplay
- High efficiency planetary steel gearing
- Front flange mount
- Stroke: continuous rotation
- Stall point: 1,650 in lbs
- No-load speed: 230 rpm (limited by controller)
- Scan, sector and stare modes
- Bit test outputs
- Separately package drive controller that accepts RS-232 commands

**Model 873**
The Model 873 Rotary Brushless Actuator is used to control the rotational function of the aircraft's night vision targeting system.

- Size: 1.6 x 3.5 x 5.8 inches
- Power: 150 VDC and ±15 VDC
- Power point: 40 in-lb @ 621 rpm
- Weight: 3.9 lbs
- Peak torque: 135 in-lbs
- ±10 VDC analog command input
- SmCo permanent magnet DC brushless motor
- 1 & 16 speed resolver
- Fail safe brake
- Very low backlash
- Robust structural design
- High efficiency steel gearing
- No load speed: 660 rpm

**Model 874**
The Model 874 Rotary Brushless Actuator is used to control the derotational function of the aircraft's night vision targeting system.

- Size: 1.25 x 2.35 x 4.0 inches
- Power: 150 VDC and ±15 VDC
- Power point: 40 in-lb @ 660 rpm
- Weight: 1.4 lbs
- Peak torque: 30 in-lbs
- ±10 VDC analog command input
- SmCo permanent magnet DC brushless motor
- 1 speed resolver
- Tachometer
- Very low backlash
- Robust structural design
- High efficiency steel gearing
- No load speed: 790 rpm

**Model 875**
The Model 875 Rotary Brushless Actuator is used to control the shroud function of the aircraft's night vision targeting system.

- Size: 2.2 x 2.6 x 6.8 inches
- Power: 150 VDC and ±15 VDC
- Power point: 21 in-lb @ 230 rpm
- Weight: 3.0 lbs
- Peak torque: 46 in-lbs
- ±10 VDC analog command input
- SmCo permanent magnet DC brushless motor
- 1 speed resolver
- Tachometer
- Fail-safe brake
- Very low backlash
- Robust structural design
- High efficiency steel gearing
- No load speed: 320 rpm

**Model 870-30**
The Model 870-30 Rotary Servo Actuator is used to position the control surfaces of a reconnaissance unmanned air vehicle and is designed to operate under extreme environmental conditions.

- Size: 2.3 x 4.9 inch foot print and 5.4 inches long
- Power: 28 VDC
- Power point: 150 in-lb @ 25 rpm
- Weight: 3.0 lbs
- Peak torque: 300 in-lbs
- ±10 VDC analog command input
- Brushless permanent magnet DC motor
- Electronic position and torque limiting
- Film position transducer
- Position output signal
- Current output signal
- Low backlash
- Robust structural design
- High efficiency steel gearing
- Mechanical stops
- Bandwidth to 10 Hz
- No load speed: 35 rpm
- Stroke: ±46°

**Model 905-30**
The Model 905-30 Rotary Servo Actuator is used to position the control surfaces of a reconnaissance unmanned air vehicle and is designed to operate under extreme environmental conditions.

- Size: 2.3 x 4.9 inch foot print and 5.4 inches long
- Power: 28 VDC
- Power point: 150 in-lb @ 25 rpm
- Weight: 3.0 lbs
- Peak torque: 300 in-lbs
- ±10 VDC analog command input
- Brushless permanent magnet DC motor
- Electronic position and torque limiting
- Film position transducer
- Position output signal
- Current output signal
- Low backlash
- Robust structural design
- High efficiency steel gearing
- Mechanical stops
- Bandwidth to 10 Hz
- No load speed: 35 rpm
- Stroke: ±46°

**Model 907-30**
The Model 907-30 Rotary Servo Actuator is used to position the control surfaces of a reconnaissance unmanned air vehicle and is designed to operate under extreme environmental conditions.

- Size: 2.3 x 4.9 inch foot print and 5.4 inches long
- Power: 28 VDC
- Power point: 150 in-lb @ 25 rpm
- Weight: 3.0 lbs
- Peak torque: 300 in-lbs
- ±10 VDC analog command input
- Brushless permanent magnet DC motor
- Electronic position and torque limiting
- Film position transducer
- Position output signal
- Current output signal
- Low backlash
- Robust structural design
- High efficiency steel gearing
- Mechanical stops
- Bandwidth to 10 Hz
- No load speed: 35 rpm
- Stroke: ±46°

**Model 917**
Our military qualified Model 917 Rotary Brushless Actuator is an azimuth drive servo for an airborne rate and position antenna system.
system. The Model 918 Servo Actuator provides the pitch roll-yaw functioning for this system.

- Size: 11.30 x 4.59 x 6.53 inches
- Power: 115 VRMs, 400 Hz
- Weight: 11 lbs
- Command: ±10 VDC
- Position feedback: resolver
- High efficiency steel gearing
- Rate feedback: brushless DC tachometer
- Fail-safe brake: optional
- Inertial loads: to 4200 lbs-in²
- Scan Modes: 48, 91, 96, 153, 160, 320, 480 and 960 rpm
- Sector Mode: ±48°
- Bit test outputs
- Robust structural design
- MTBF: 5000 hrs

**Model 918**

Our military qualified Model 918 Rotary Brushless Stepper Actuator controls the pitch-roll-yaw function of an antenna system in conjunction with the Model 917 azimuth drives.

- Size: 4.06 x 2.50 x 4.35 inches
- Power: 20 VDC
- Weight: 2 lbs
- Command: ±10 VDC
- No-load speed: 300 rpm
- Fail-safe brake: none
- Inertial loads: 3 lb-in²
- Position accuracy: ±0.5°
- Backlash: 30 arc-minutes
- MTBF: 5000 hrs
- Stroke: ±360°
- Robust structural design
- High efficiency steel gearing

**Model 965**

The Model 965 Rotary Servo Actuator is used to position the control surfaces plus utility applications in unmanned air vehicles. This unit is designed to operate under the demanding environmental requirements seen worldwide.

- Size: 3.50 x 7.10 x 8.90 inches long from front of mounting flange to rear of housing
- Power: 28 VDC
- Rated Power Point: 2200 in lbs @ 35 deg/sec
- Weight: 10.7 lbs
- Peak torque: 2500 in lbs
- SMCO permanent magnet DC brush motor
- ±10 VDC analog input command
- Robust structural design
- Low endplay
- High efficiency steel gearing
- Position output signal
- Electronic position and torque limiting
- Non-jamming mechanical stops
- Film position transducer
- Front flange mount
- Stroke: ±45° electrical stroke
- Bandwidth to 8 Hz
- No-load speed: 87 deg/sec
- MTBF: 5000 hr

**Model 971**

Our military qualified Model 971 Rotary, Brushless, Stepper Motor. Limited Rotation Trim Actuator for the military helicopter.

- Size: 3.0 x 3.48 x 6.56 inches
- Power: 28 VDC
- Weight: 3.2 lbs
- Holding torque: 200 in-lbs
- Command: four phase stepper motor control from an external amplifier
- Stroke: ±30°
- Step rate: 1 rpm
- Step size: 0.1°
- Load rate: 15 in-lbs @ 0.6 rpm
- Eddy current damper
- Backlash: 0.15°
- MTBF: 5000 hrs

**Model 993**

Our Model 993 Rotary Servo Actuator provides mechanical valve control of the aircraft’s hydraulic flight control surfaces.

- Size: 4.10 inch diameter x 7.9 inches
- Power: 28 VDC
- Rated Power Point: 2200 in lbs @ 35 deg/sec
- Weight: 7.4 lbs
- Peak torque: 2500 in lbs
- SMCO permanent magnet DC brush motor
- ±10 VDC analog input command
- Robust structural design
- Low endplay
- High efficiency steel gearing
- Position output signal
- Electronic position and torque limiting
- Non-jamming mechanical stops
- Film position transducer
- Front flange mount
- Stroke: ±45° electrical stroke
- Bandwidth to 8 Hz
- No-load speed: 87 deg/sec
- MTBF: 5000 hr

**Model 965**

The Model 965 Rotary Servo Actuator is used to position the control surfaces plus utility applications in unmanned air vehicles. This unit is designed to operate under the demanding environmental requirements seen worldwide.

- Size: 3.50 x 7.10 x 8.90 inches long from front of mounting flange to rear of housing
- Power: 28 VDC
- Rated Power Point: 2200 in lbs @ 35 deg/sec
- Weight: 10.7 lbs
- Peak torque: 2500 in lbs
- SMCO permanent magnet DC brush motor
- ±10 VDC analog input command
- Robust structural design
- Low endplay
- High efficiency steel gearing
- Position output signal
- Electronic position and torque limiting
- Non-jamming mechanical stops
- Film position transducer
- Front flange mount
- Stroke: ±45° electrical stroke
- Bandwidth to 8 Hz
- No-load speed: 87 deg/sec
- MTBF: 5000 hr

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