

BVR™ Aerospace Actuators

Precise, high-reliability motion-control solutions featuring:

- Brushless DC motors
- High-efficiency servos
- Compact digital controls
- High-performance gears

Compact, lightweight aerospace utility actuators for high performance and long life



BVR utility actuators from Esterline are a cost-effective, reliable solution to move doors, valves, radars, and other airframe equipment. Our engineering strategy follows a modular approach, based on our very large library of designs proven in demanding flight environments for decades.

We integrate all elements, including motors, reduction geartrains, position sensors, and control electronics. For example, we carefully match motors and gearboxes for a specific application, to deliver the required speed, acceleration, and limit load, as well as high torque-volume ratios.

Our advanced gear-cutting capabilities mean tighter tolerances, better surface finishes, and more efficient transmission, with hardened, precision gears up to AGMA Quality 12 to ensure accurate operation, long life, and long duty cycles.

BVR utility actuators offer:

- High-reliability brushless DC motors and stepper motors
- Microprocessor-based controls, reducing size and weight, helping distribute processing away from central systems, and facilitating integration
- I/O capability for discrete serial or analog commands
- BIT coverage in excess of 95 percent
- Proprietary non-contact, digital position sensors for higher-performance servos: our efficient designs yield a 30 to 40-percent reduction in footprint, envelope, and weight, and a higher power-to-weight ratio
- High-power / high-torque capabilities

With BVR actuators from Esterline, you have access to our world-class engineering and manufacturing capabilities and a mature range of reliable solutions and products. We can support your requirements with component-level solutions and subsystem integration.

BVR aerospace utility actuators

Specifications

- Field-loadable software available to permit performance and/or travel-limit changes
- Designs available with integral hard stops
- Ability to meet stringent sealing and submersion requirements
- Designed for more than 20 million cycles
- Low backdrive torques: 5 inch-ounces or less is possible
- Breakaway torque optimized for smooth startup
- Low mechanical backlash (10 arc minutes)
- MTBF > 40,000 flight hours
- Service life designed to > 80,000 flight hours over 20 years
- Actuators and controllers designed to meet safety requirements
- Failure rates less than 1×10^{-9} per flight hour

Auxiliary Components

- Slip clutches
- Dampers
- No-backs and overrunning clutches
- Friction brakes
- Toothed clutches and brakes
- Rotary position sensors, analog or digital

For more information about BVR utility actuators for aerospace, call us at 815-874-2471 or email bvr.sales@esterline.com.

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