

## An Affordable, High Performance UAV Servo



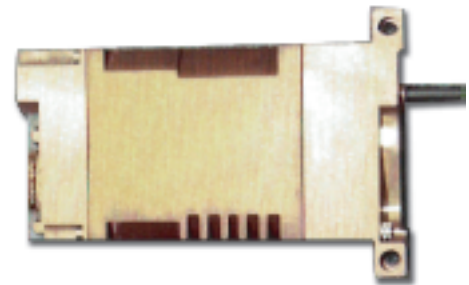
Rogerson Aircraft is developing 3 basic servo actuator model for the UAV industry. The 3 models are designed to meet the actuation requirements of future UAV's in the 75 - 3,000 pound class. RA servo actuators are designed to provide the high performance and high reliability required in a modern UAV or UCAV at a price that can only be achieved thru a Commercial Off The Shelf (COTS) approach.

The three models take advantage of common parts and a common scaled design approach to maximize production efficiency and minimize development time. The control electronics, RS 485 digital interface, and feedback hardware are identical in all three models. The motor, power reduction gearing and housings are seized depending on performance requirements. Software is 90%+ common in all models.

The RA actuators utilize a 28 VDC brushless electric motor as a prime mover driving thru reduction gearing to provide the torque specified for each model. Position feed back is taken directly off the output shaft and is used for internal loop closure, but can also provide an external position feed back signal. The electrical - electronic design conforms to the requirements of MIL-STD-461D. All Models provide a minimum no-load frequency response of 6 HZ at - 3Db and no load rate of 200 deg/sec. All models are designed to accept a standard torque doubling out gear set for applications where speed and frequency response is not critical and high torque is required.

The 3 Models provide the following stall torque:

- RA-100 20 In-Lb
- RA-200 45 In-Lb
- RA-300 250 In-Lb.



**RA model 100, 200, & 300 SERVO ACTUATORS**