

Servo Electric Damper Actuators

Application Challenge: To meet new clean air regulations, many plants rely upon low-NOx (nitrous oxide) burners within their boilers. These burners rely upon accurate control of the combustion air to achieve the required NOx reduction. Many plants are looking at advanced control options to improve the control of this combustion air, but to be successful, precise position control of the multiple dampers is needed.

Exlar Solution: In order to get the best possible damper control, utility engineers are now replacing existing windbox dampers with Exlar electric servo actuators. Each actuator, when supplied with Exlar's all-digital SV positioner, will respond to command signal changes in less than 5 mSec. The speed of the response combined with the dynamic capability of the all-electric actuator delivers accuracy and repeatability much greater than pneumatic or induction motor actuators.

Exlar's patented linear actuator is based on a unique design for integrating a robust and efficient threaded roller mechanism into the interior of a high power density, high performance brushless servo motor. Combined with a precise position feedback mechanism, the result is an all-electric actuator which is extremely compact, yet delivers superior performance for your damper control needs.

One of Exlar's unique differences from other electric actuators is in the roller screw's design for transmitting forces. The large number of mechanical interfaces combined with their shape create a high contact surface area that allows high load carrying capabilities and high stiffness.

Exlar's other unique difference is its high performance brushless servo motor which yields both speed and control unachievable by conventional motors.

Exlar Products:



GSM Series Actuator



SV Positioner



Typical Windbox Damper Application

Precise Feedback Control

The digital SV Series Positioners are designed specifically for use with Exlar rotary and linear actuators to control valves and dampers in process control applications. Positioning of the damper with the SV Series can be controlled proportionally in response to an analog input signal allowing for simple control by DCS or PLC systems. Resolver feedback from the servo actuator offers reliable, robust, absolute feedback even in extreme temperature environments. The SV Series Positioner also offers the flexibility of operating with auxiliary linear feedback devices offering full absolute position capability.

Actuator Characteristics

- 2, 3, 4, 5 and 7 inch frame sizes
- 3 to 18 inch stroke lengths
- Up to 12,000 lb max thrust capability
- Up to 40 inch per second linear speeds
- IP65 sealing (NEMA 4)
- Front flange, rear clevis, trunnion, side, double side or extended tie rods mounting options

Optimize your application with Exlar actuators. Visit www.exlar.com for complete product information or call us at 952-500-6200. You may also email us at info@exlar.com.