



Product

K2G Linear Actuators

Application

Energy Efficient Airport Baggage Carousels

Highlights

- Robust 3,000 lb. static load and 1,200 lb. dynamic load capacities
- 20:1 Gear ratio
- Heavy wall extension tube
- Nitrotec® treated steel extension rod
- Heavy-duty sealed, double ball bearing motor
- High strength aluminum gear box provides high heat dissipation

A major Southeastern US airport expanded its baggage handling area to include over a dozen additional baggage carousels. The baggage handling system OEM developed a unique, energy-saving drive control for the system conveyors. The system operates similar to a 12-cylinder auto/truck engine where all cylinders are engaged on start up and then some cylinders eventually stop functioning as torque demands diminish at higher speeds.

The system consists of 4-5 friction drive carriages and sensors strategically located around each baggage carousel layout. The drive carriages consist of an AC motor, gear box, and a polyurethane wheel. Each carriage also features a Warner Linear actuator that, when activated, pivots the carriage into position under the conveyor belt allowing the wheel to engage and drive the belt. Depending on carousel baggage load, the actuators can move one or more of the friction drives off line. The disengaged motors will time out and shut down. This "On-demand" use of power allows for significant cost savings.

To meet the AC system performance and space requirements, Warner Linear engineers developed a new K2G20-115/90VR actuator with a bridge rectifier which converted the incoming AC into DC, allowing for a smaller package. The robust K2G actuators incorporate an Acme screw and patented in-line load transfer design which provides high load capability and efficient power use. The units feature heavy wall construction, a 102 mm stroke length and a 20:1 gear ratio with a 3,000 lb. static load capacity.

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