Guardian Couplings
Altra Industrial Motion

Application Profile

Product — Gear Grip™ Couplings

Application — **Airport Truck-Mounted Baggage Conveyors**

Highlights

- Three-piece, highly flexible in-shear design
- 7.5 degrees of angular misalignment
- Lightweight and compact
- Reinforced neoprene sleeve
- Sintered steel hubs
- 1,080 in.lb. nominal torque
- Custom cross-clamp feature

A leading manufacturer of airport ground support equipment needed a unique coupling solution for its line of mobile baggage and cargo conveyors. The diesel- or electric-powered belt loaders support a wide range of commercial aircraft. The coupling is positioned between the drive engine/motor and a hydraulic pump that raises and lowers the conveyor belt ramp as needed.

After a review of various coupling alternatives, the OEM determined that unique Gear Grip couplings available only from Guardian Couplings, with a large 7.5 degrees of angular misalignment, met its application requirements. The lightweight and compact couplings utilize a three-piece highly flexible design which includes two hubs and an elastic sleeve. The non-corrosive metal ends and rubber element provide a long service life that does not require lubrication or maintenance. The couplings are designed to handle the shock, cycling loads and vibration that produce extreme wear in other coupling styles.

The Gear Grip coupling's in-shear sleeve design acts as a safety feature in the event of an overload condition. If the coupling were to fail, only the coupling sleeve would need to be replaced. This feature can prevent damage to the expensive drive system components.

The size 76PG coupling for this application featured a reinforced neoprene sleeve, sintered steel hubs and 1,080 in.lb. nominal torque. The coupling's hubs included a custom cross-clamp feature for enhanced, non-slip shaft mounting.

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