

Dear Reader,

American Airlines at Los Angeles international airport recently underwent a thorough upgrade to their baggage handling system. Nearly 450 MOVIGEAR® mechatronic drives from SEW-EURODRIVE were at the heart of this upgrade. By reducing incoming power, excess heat, and extra cooling, the new system decreased energy consumption by nearly 40%.

To know more about the details of this project, please read the short article below.

Brand & Communication Team, SEW-EURODRIVE

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Drive technology TODAY

American Airlines saves nearly 40% in energy costs at Los Angeles Int'l Airport (LAX) with MOVIGEAR®

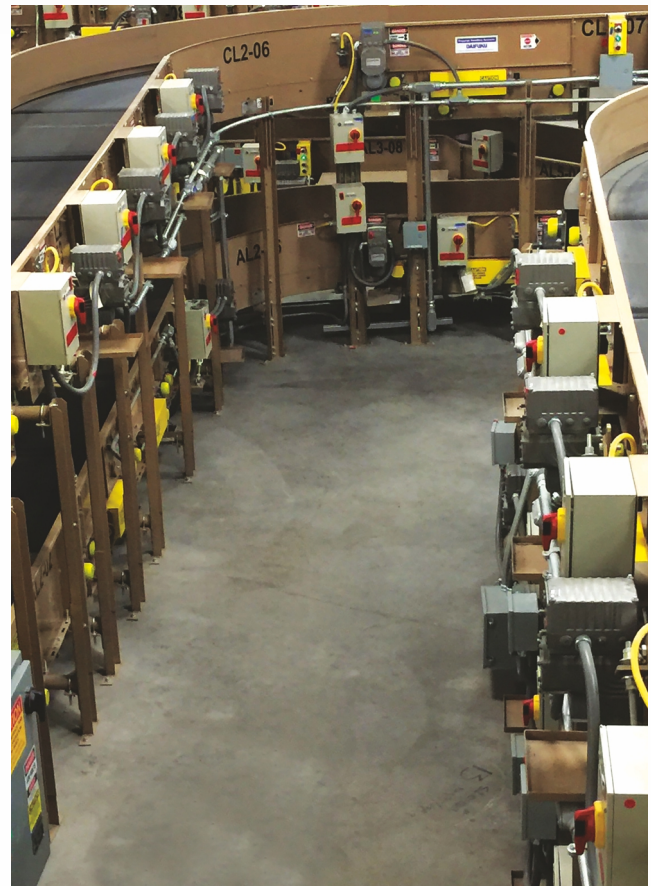
Overview

► Terminal 4 in the LAX airport needed a thorough upgrade to the baggage handling system (BHS) for both American Airlines and TSA operations. Complying with strict California Title 24 energy standards and reducing the load on the existing power station were both high priorities. Spatial constraints and flexibility for future expansion were also very important.

Project description

The existing system used typical asynchronous motors that were oversized to handle large starting torque requirements. Unfortunately, that meant they operated well below their ideal efficiency after the load started. Their high starting current and low operating efficiency created excess heat that required extra cooling. Therefore, the goal was to increase efficiency to reduce both operating costs and cooling costs.

In 2017 through the combined efforts by CAGE, Inc. consultants and SEW-EURODRIVE, the goal became reality. They were able to size each application from scratch, allowing them to determine the most efficient selection. Furthermore, by taking advantage of MOVIGEAR®'s unique breakaway torque characteristic, they were able to optimize inventory by using fewer spares to cover a wide range of speeds. Nearly 450 MOVIGEAR® mechatronic drives and DRC.. motors were used in the new outbound installation. Both drives contain a permanent magnet IE4 motor. Their unique design delivers high starting torque while halving the full-load amps, requiring much less incoming power. ►



SECTOR

Baggage Handling

Application

Baggage Handling and Screening System at LAX

Solution

MOVIGEAR® and DRC.. mechatronic drive system

450 unit



Result

The new system has been highly reliable, efficient and accurate at screening bags. TSA employees appreciate that the new drives create less noise and radiate less heat due to their advanced electronics and their ultra-high operating efficiency. By reducing incoming power, excess heat, and extra cooling, the new system decreased energy consumption by nearly 40%. Furthermore, the system requires fewer unique spares for inventory and its flexible design can accommodate expansion for future growth.

The BHS industry realizes that MOVIGEAR® permanent magnet motor technology is the future. By increasing efficiency, they can virtually double the size of the baggage system using their existing power station. Construction has already begun on a new inbound system in the same terminal using the same proven technology.

Features of MOVIGEAR®:

- Compact: motor, gear unit and electronics are combined in a single drive unit
- Over 300% breakaway torque for 5 sec - perfect for baggage handling
- Reduced full-load amps during ongoing operation for energy savings
- Reduced energy costs due to ultra-high efficiency
- Reduced CO₂ emissions
- Reduced inventory costs due to universal mounting position and fewer variations
- Reduced startup and operating costs of the conveyor system
- Reduced installation costs using SNI (single line network installation) - only one cable used for both energy and data transfer
- No electronic line losses: controls located at motor
- Quick amortization - often less than one year
- IP66 design: hygienic surface with HP200 anti-stick coating
- Resistance to common cleaning agents
- Totally enclosed, non-vented (TENV) for quiet operation without air/dirt/germ swirls
- Simplified system planning and design
- High reliability ◀

