

**Innovative drive and  
automation solutions  
for the airport industry**



## Drive 360° – seeing the big picture. And getting things moving in the airport industry

Airports at which hundreds of planes take off and land every day, around the clock, require an immense amount of planning and perfect coordination of complex processes. Several thousand passengers move through the terminals every day, and tons of cargo need to be handled. A growing focus on capacity and security, shorter ground times, increasing competition among airports, and stricter environmental regulations pose enormous challenges to the airport industry.

In the future, it will be necessary to move passengers and cargo even faster and more efficiently and to further reduce the ground times of airplanes. Terminal equipment must be larger and more efficient to be able to deal with the increasing amount of passengers and cargo per flight. Airport operators also need to

make smart investments in the fields of airport design and passenger comfort. This is why they rely on partners with in-depth knowledge of the complex processes involved in airport logistics. SEW-EURODRIVE prove that they have this knowledge on a daily basis around the world.

Drive technology „made by SEW-EURODRIVE“ has for years played a vital role in ensuring smooth transport and logistics processes at a host of international airports such as Frankfurt, London, Paris, Hong Kong and Sydney. SEW-EURODRIVE is a family-owned, internation-

ally successful business with roughly 14,000 employees and global sales of more than EUR 2.0 billion. With 75 Drive Technology Centers and 15 production plants in 45 countries, we make sure that the world keeps moving. As we have done for more than 80 years.



# Drive<sup>360</sup>





## Solutions for the airport industry: Reliable, efficient, and innovative

SEW-EURODRIVE is familiar with the requirements of the airport industry: Be it baggage sorting and distribution or modern electric mobility solutions – tried-and tested, reliable application solutions from our modular product concept improve the efficiency, flexibility and safety of all processes in the airport industry. A few examples of application solutions from SEW-EURODRIVE for the airport industry are presented below.



### Baggage handling ①

In the baggage handling system, belt conveyors transport the baggage items smoothly and reliably within the terminals. Airport baggage handling systems are often equipped with several kilometers of belt conveyors between the check-in counter and flight make-up or between the plane unloading point and the baggage reclaim area. Especially for large airport premises, a modular machine and system layout is advisable, which requires appropriate drive technology. The decentralized technology products from SEW-EURODRIVE are setting standards in this area: MOVIGEAR® with its different control variants (binary, AS-Interface and SNI – Single Line Network Installation) meets all requirements for both retrofits and new plants. It is easily integrated in existing control archi-

tectures, and its overload capacity and constant torque across the entire speed setting range (1 : 2000) reduce the number of installed drive variants significantly. This minimizes the costs for stockkeeping and expenses during the operating period of the system.

#### SEW-EURODRIVE products for your application:

- MOVIGEAR®, the mechatronic drive system
- MOVIMOT®, the gearmotor with integrated frequency inverter
- MOVIPRO®, the decentralized application controller
- Modular DR gearmotor system



### High-speed transport ②

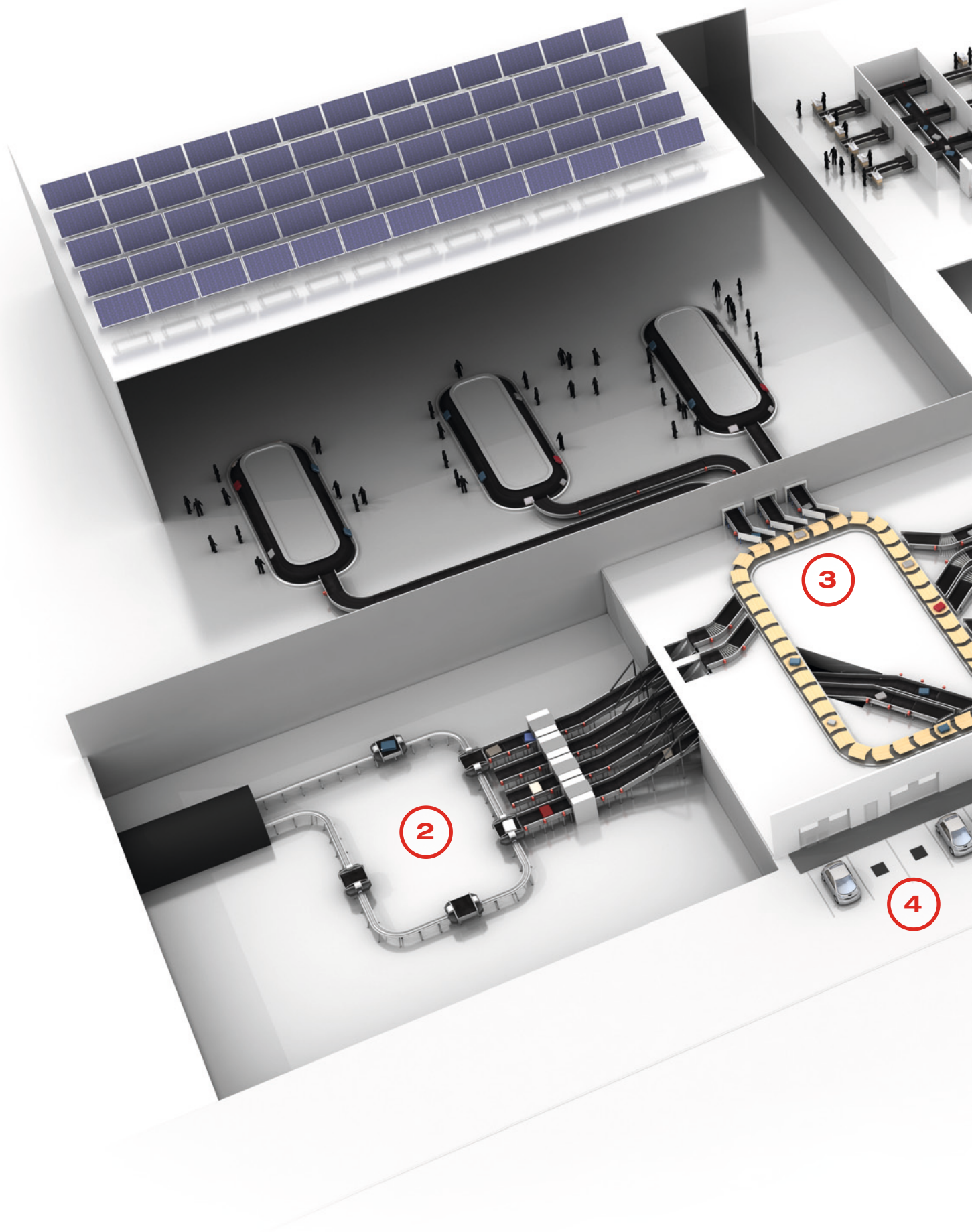
High-speed conveyors are of particular importance for spread-out transit airports. The baggage of transit passengers must be transported quickly and reliably from one terminal to another. But medium-sized airports can take advantage of such systems as well, especially if sorting is also handled by the high-speed conveyor. Using contactless technology from SEW-EURODRIVE for transferring energy, data and force offers crucial advantages here. The almost wear-free and low-maintenance technology improves the availability of the transportation system. In combination with decentralized client controllers and network solutions from

SEW-EURODRIVE, it provides a simplified customer interface. The high bandwidth of the slotted microwave guide radio transmission allows for continuous monitoring of the track, e.g. using an IP camera.

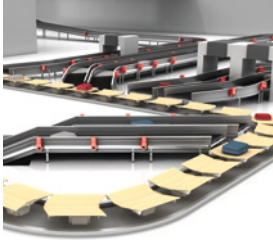
#### SEW-EURODRIVE products for your application:

- Contactless energy transfer
- Slotted microwave guide for contactless data transfer
- SLC synchronous linear servomotors









### Sorters ③

Modern sorting systems are not only characterized by a high sorting speed and availability, but also by their energy efficiency. Especially in the airport industry, the CO<sub>2</sub> balance is becoming a more and more important criterion. Being a leading manufacturer of electric drive technology, SEW-EURODRIVE has been helping to pave the road to more efficiency with innovative products for quite some time now. Sorters with a synchronous linear servomotor from SEW-EURODRIVE offer a higher efficiency level than sorter with conventional asynchronous linear motors. Using materials with no

rare-earth elements makes this solution particularly economical. From tilt tray sorters to cross belt sorters, SEW-EURODRIVE has the right drive for you.

#### **SEW-EURODRIVE products for your application:**

- MOVIDRIVE®, the single-axis inverter
- SLC synchronous linear servomotors
- Contactless energy transfer
- Slotted microwave guide for contactless data transfer



### Induction charging parking space ④

The infrastructure of the future can be realized at every desired location in urban areas. It is simple and can be used intuitively by every motorist and cyclist. Our components for such a future-proof infrastructure meet all these requirements. Be it stationary infrastructure components or mobile vehicle components, they have already been tried and tested in everyday industrial use at the premises of many of our customers.

The intelligent solutions from SEW-EURODRIVE can charge the batteries of electric vehicles without cables, plugs or long waiting times. The vehicle stops above an induction plate that is embedded in the road surface or a charging pad installed on the road surface. The battery

is charged without contact. The charging pad (primary coil) is installed flush with the ground in newly constructed parking spaces. In existing parking spaces, the pad can simply be installed on the asphalt surface. The charging pad generates and concentrates the electromagnetic field for the energy transfer.

#### **SEW-EURODRIVE products for your application:**

- Stationary infrastructure components: Supply unit, charging pad (primary coil)
- Mobile vehicle components: Charging unit, pick-up (secondary coil).



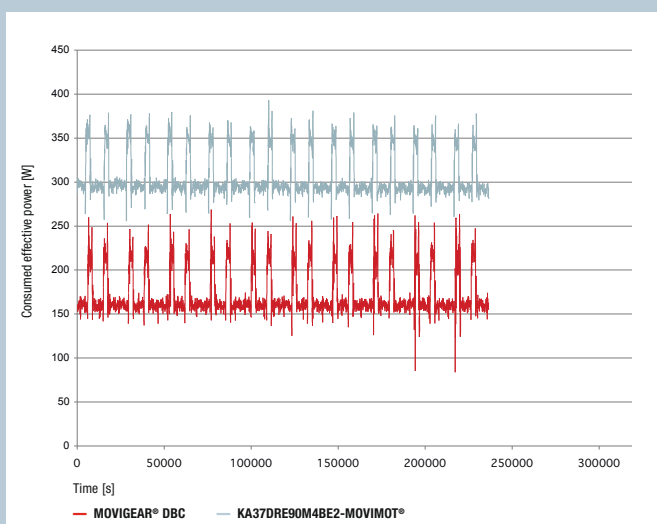
## Mechatronic drive system MOVIGEAR® – The ideal solution for baggage handling systems

The advantages of the high efficiency of MOVIGEAR® and the real energy savings in customer applications have been confirmed by numerous measurements. The comparison measurements carried out on a baggage conveyor prove this once again in an impressive way.



### Comparative measurement 1

For a comparison of the active power consumed by different drive systems, a straight belt conveyor with a length of 2200 mm was used. For each comparison cycle, 20 suitcases with a weight of 30 kg were transported at a linear speed of 0.8 m/s. The belt was started empty, and the suitcases were added to the moving belt. The active power was consumed in all three phases of the supply to the respective drive system. The measurements showed that the mechatronic MOVIGEAR® drive system from SEW-EURODRIVE delivers much better results than other gearmotors with the same technical data.



**MOVIGEAR® DBC vs. KA37DRE90M4BE2 gearmotor with MOVIMOT frequency inverter®**



## Practical example:

### Modernization of the baggage handling system at Gatwick airport in London

The London Gatwick airport has launched a £1 billion investment program to cope with the ever increasing number of passengers. Within the framework of this program, it was decided to expand the existing baggage handling systems of the north and south terminals. The goal is to increase the capacity to over 24 million passengers per year. The reliability of the baggage handling system was the main focus. Other key criteria were energy saving, a small number of variants, and the reduction of installation and startup costs.

The mechatronic, highly efficient drive system MOVIGEAR® from SEW-EURODRIVE meets all these requirements. With its compact housing that accommodates a motor, gear unit, and

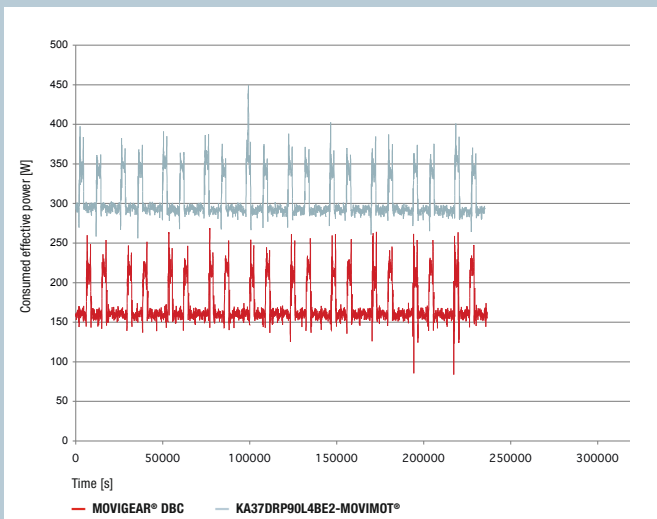
electronics and with its distinctive overload behavior, MOVIGEAR® is ideally suited for the requirements of baggage handling systems.

The extremely high efficiency level IE4 (Super Premium Efficiency) of the motor supports our claim for a sustainable, energy-saving solution.

The operator of Gatwick airport also appreciates these advantages. SEW-EURODRIVE was chosen in July 2010 as supplier of innovative drive technology for the modernization of the north and south terminals. The key requirements have already been fulfilled thanks to MOVIGEAR®.

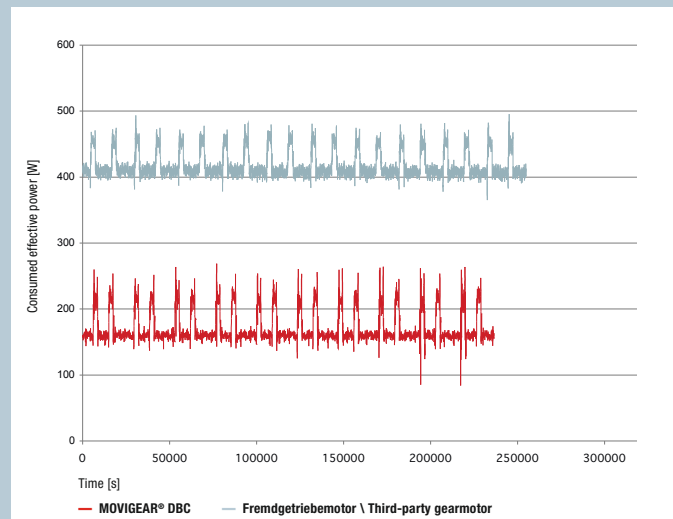
Currently, 300 drives ensure trouble-free operation of the system. It is planned to increase the number of MOVIGEAR units to about 2000.

#### Comparative measurement 2



**MOVIGEAR® DBC vs. KA37DRE90M4BE2 gearmotor with MOVIMOT frequency inverter®**

#### Comparative measurement 3



**MOVIGEAR® DBC vs. non-SEW gearmotor with the same technical data**

## Benefit from the services of a global player

### DriveBenefits – customized process solutions for your entire value creation chain

DriveBenefits from SEW-EURODRIVE offer a variety of practice-oriented possibilities to accelerate processes in every value creation phase, to simplify these processes, and to handle them in a cost-optimized manner. Selecting the suitable DriveBenefits modules and combining them to form an overall concept will give you sustainable benefits.

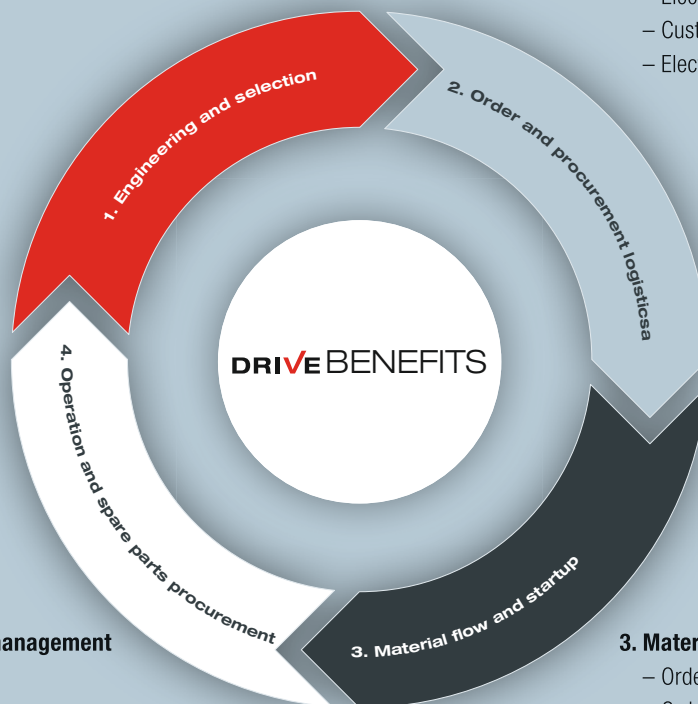
#### The DriveBenefits modules at a glance

##### 1. Engineering and selection

- DriveConfigurator\*
- DriveCAD\*
- SEW Workbench\*
- EPLAN® macros

##### 2. Ordering and procurement logistics

- Electronic data interchange (EDI)
- Customized procurement logistics
- Electronic invoicing



##### 4. Operation and spare parts management

- Ordering spare parts\*
- Inquiring spare drives\*

##### 3. Material flow and startup

- Order-specific documentation\*
- Order tracking\*
- Intelligent material flow – DriveTag

\* Available via the DriveGate® customer portal



## CDS® – Complete Drive Service

### Modular service concept

Besides innovative drive technology products, SEW-EURODRIVE has another great passion: service. For us, service is a comprehensive concept that covers all requirements of the product life cycle. This is achieved and ensured by an extensive service portfolio, local on-site service, and worldwide spare parts availability.

The individual and perfectly combinable CDS® system modules always provide exactly the service you need for your drive technology – no matter when and where you need it. Simply select the specific modules to obtain a tailor-made CDS® service package. In this

way, you always have the right solution to avoid downtimes and reduce malfunctions to a minimum.

**In other words,  
green light for your production.**



## How we're driving the world



**SEW-EURODRIVE**  
Driving the world

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