

# ALSTEF GROUP



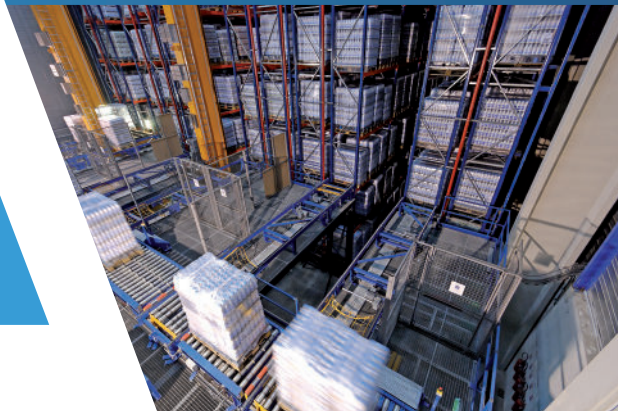
## AIR CARGO WAREHOUSING AUTOMATION

A collaboration of

**ALSTEF**  
GROUP

& **SACO**

AIRPORT  
EQUIPMENT



## BEYOND AUTOMATION



## EXCELLENCE IN AIR CARGO SOLUTIONS

Alstef Group designs, integrates and maintains turnkey, tailor-made cargo handling solutions, to automate all the flows of your cargo terminal suited to your needs.

As the industry **leader of airport material handling systems and logistics**, Alstef Group understands the importance of efficient and reliable operations in air cargo terminals. We offer comprehensive solutions that are designed to optimize your terminal's flows and enhance productivity.

### **Our Values & Philosophy: Guiding Your Success**

**Collaboration and teamwork** empower our achievements, while **safety and sustainability** guide our operations. Our global reach, combined with local expertise, ensures customized solutions for seamless air cargo handling.

Aligned with these values, we partner with **SACO, a renowned specialist in air cargo ULD handling and storage equipment**, to merge our skills and expertise to deliver future-focused solutions in equipment management and airport handling systems.

### **Our Commitment to Operational Efficiency and Customer Satisfaction**

Whether you're dealing with high volumes, complex logistical challenges, or evolving industry demands, Alstef Group is by your side. Our commitment to operational excellence and customer satisfaction drives us to continually innovate and adapt, ensuring that your air cargo terminal remains a trusted and efficient partner in the global supply chain.





## YOUR TRUSTED PARTNER

**Alstef Group and SACO** join forces to offer you a comprehensive range of innovative, efficient, and reliable air cargo solutions. Whether you are an airline, an airport, a freight forwarder, or a transportation company, our combined expertise will meet all your air freight management and handling needs.



### WHY CHOOSE OUR AIR CARGO SOLUTIONS?

**Operational Efficiency:** Alstef Group and SACO will bring sophisticated handling systems, such as conveyors, loading docks, workstations for assembly and disassembly of loads, as well as automated solutions (AGVs') to facilitate the smooth movement of ULDs. These technologies will enhance the efficiency of loading and unloading operations, thereby reducing wait times and delays.

**Flexibility and Adaptability:** Our solutions enable our customers to quickly adapt to demand fluctuations using modular and scalable systems ensuring an efficient handling of cargo, even during sudden increases in air traffic volume.

**Safety and Precision:** We integrate weighing, tracking to ensure that loads are properly handled, tracked, and recorded, which minimizes errors and improves operational safety.

**Advanced Automation:** Our combined expertise in automation allows us to design and deliver cargo handling and storage solutions reducing dependence on labor and increasing overall productivity.

**Integrated Management:** The control and management solutions provided will permit companies to monitor and manage the entire cargo handling and storage process in a centralized manner. This will facilitate informed decision-making and resource optimization.

# ENERGY-EFFICIENT, ROBUST, RELIABLE SYSTEMS FOR ULD & AIRFREIGHT PALLETS

## AIRSIDE AND LANDSIDE TRANSFER

We offer specialized truck docks and dolly docks designed for both airside and landside transfer, customized to match your specific handling needs. These docks accommodate a range of cargo, from smaller **5-foot containers to larger 20-foot pallets**, and come with a variety of features including height adjustment, side shifting, and weighing capabilities.



## AUTOMATED GUIDED VEHICLES (AGV)

Our **AVILOAD & AVILOADXL** AGVs ensure safe and efficient ULD container and cargo pallet transport. They handle diverse loads (**from 5 to 10-foot long**), adapt to varied conditions, and excel in covered outdoor spaces (-10°C to +45°C) meeting the 250h BS standard. With up to 45,000 hours average lifetime, our robust AGV fleet offers advanced control, easy maintenance, and operational flexibility.

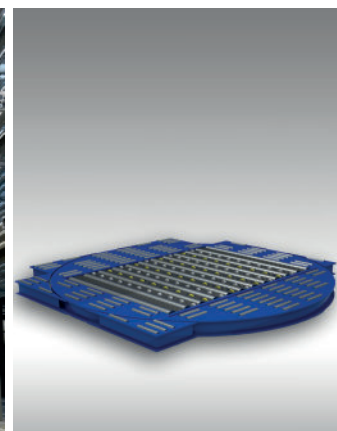


## CONVEYING & STORAGE SYSTEMS

Our comprehensive conveyor range includes various types, such as the motorized roller deck, right angle deck, turn-table, and castor deck, catering to diverse material handling needs.

**Elevating Transfer Vehicles (ETV)** for automatically receiving, holding and transferring ULD's in a multi level storage deck system.

**Transfer Vehicles (TV)** for automatically receiving, holding and transferring ULD's in a single level storage deck system.



## BUILD UP AND BREAK DOWN STATIONS

For both airfreights and ISO pallets, ensuring seamless preparation. These stations include integrated weighing systems, ergonomic enhancements, and advanced safety features for a streamlines and secure operations.



## FOR ISO PALLETS

### AIRSIDE AND LANDSIDE TRANSFER

Our truck docks are precisely designed to facilitate the handling of **ISO pallets**, including standard sizes like **800 x 1200 mm and 40 x 48 inches**, as well as other dimensions as needed. Enhancing operational efficiency, we also offer sequencing and weighing systems to streamline your cargo management process.



### AUTOMATED GUIDED VEHICLES (AGV)

Designed for **ISO pallets**, our **Loadstar** offers an efficient single-pallet transport solution. Its compact yet robust design enables the handling of pallets weighing up to 1400 kg while optimizing floor space utilization by up to 20%. This **AGV-AMR** introduces versatility, outperforming conventional conveyors with its adaptability to dynamic flow fluctuations.

The **GL** is a versatile AGV that excels in narrow spaces, integrates smoothly into production lines, and handles heavy loads efficiently, making it ideal for various industrial settings.



### CONVEYING SYSTEMS

We offer a comprehensive range of conveying systems designed to meet diverse material handling needs. With decades of experience, our conveying systems have a proven track record of efficiently transferring and accumulating loads on-site.



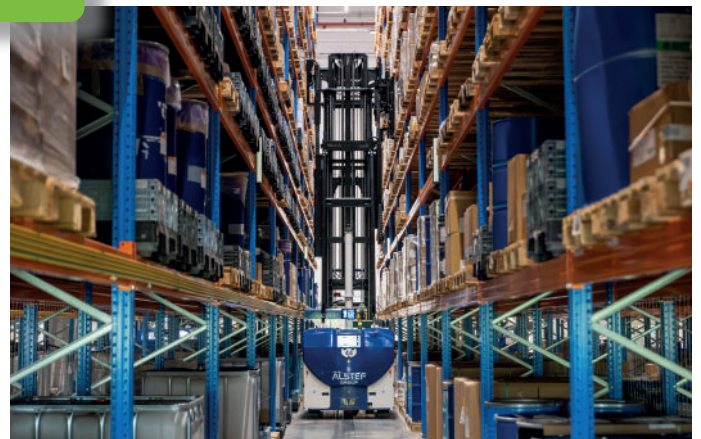
#### SUSTAINABILITY FOCUS:

We offer motor energy class optimization and economical conveyor controls to reduce the energy consumption of our installed solutions.

### AUTOMATED STORAGE SYSTEMS

Our AGV (Automated Guided Vehicle) models, the **GT16** and **GLR** meets the specific requirements related to the automation of very narrow aisle (**VNA – Very Narrow Aisles**) ensure efficient and seamless material transport within confined spaces.

**Stacker crane** (AS/RS) is designed to automate the storage and retrieval of goods, typically on pallets or in containers, from high storage racks.





## TOTAL CONTROL

INFORMATION, SYSTEM VISUALIZATION, END-TO-END PERFORMANCE AND SECURE MONITORING

**OPAL** is a **Warehouse Control System (WCS)** and AGV fleet management solution, essential for air cargo solutions. It optimizes cargo movement, provides real-time visibility, efficiently allocates resources, ensures accuracy, integrates with other systems, manages security, adapts to changing volumes, and offers performance analytics. It significantly enhances the efficiency of air cargo operations.

### CYBERSECURITY

Alstef Group supports you in the implementation of your **cybersecurity policy**. As a distinguished designer and integrator of automated solutions, we have devoted extensive efforts to enhance **cybersecurity** in **baggage handling systems** for the **airport industry** and **intralogistics** clients. Over the years, we have developed solutions that align with our clients' industrial cybersecurity policies, safeguarding sensitive data and valuable assets from potential threats. Our commitment to security ensures a reliable and secure environment for our customers' operations.





## COMPREHENSIVE SUPPORT

### EXTENSIVE O&M EXPERIENCE

Our expertise spans:

- Providing support to more than 20 airports through dedicated O&M teams
- Successfully managing multi-terminal O&M contracts at strategic locations, including prominent airports like Paris CDG, Nice, Mexico, Montreal and Brisbane.
- Demonstrating our capability in securing long-term O&M contracts, some of which span up to 20 years, showcasing our commitment to lasting partnerships.
- A proven track record in effectively managing multi-technical O&M contracts that encompass a diverse array of systems and equipment, ranging from Baggage Handling Systems (BHS) to Airbridges, Ground Power Units, and Visual Guidance Device Systems.

#### **Air France Cargo: A Tangible Illustration**

Allow us to present a concrete example of our capabilities and partnership with SACO. At **Air France Cargo**, which ranks among the world's largest air freight hubs, we harness the power of a fleet comprising **30 Alstef Group Automated Guided Vehicles (AGVs)**. These AGVs are instrumental in efficiently handling and transporting a staggering 600 pallets every single day across our expansive 12-hectare hub. Our operations are unwavering, operating round the clock, 24/7, ensuring a seamless and uninterrupted flow of cargo.

# ALSTEF

## GROUP



CUSTOMER FOCUS



INNOVATION



KNOW-HOW



COMMITMENT

ALSTEF  
GROUP  
VALUES



TEAM SPIRIT

FRANCE | NEW ZEALAND | USA | AUSTRALIA | CANADA | INDIA | CHILE | MEXICO | PERU | CROATIA | ROMANIA  
BULGARIA | TURKEY | BRAZIL | SOUTH AFRICA | SINGAPORE | COSTA RICA | DOMINICAN REPUBLIC



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