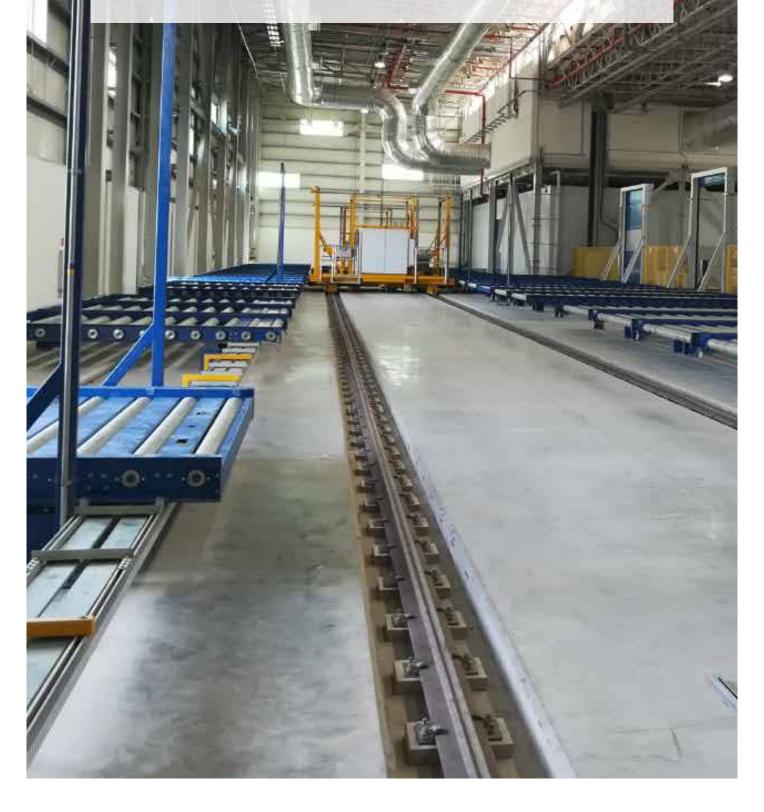
# AUTOMATED AIR CARGO SOLUTIONS

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ALS LOGISTIC SOLUTIONS

# INNOVATIVE AUTOMATED SOLUTIONS





ALS Logistic Solutions is a leading automation solutions provider of Air Cargo, Material Handling and Car Park Systems. With more than 30 years of experience, our material handling portfolio covers a full range of all solutions from manual operation to fully automated, robotically supported operations, consisting of, but not limited to- Air Cargo Handling Systems, Modular Warehouse Equipment, Express Handling Systems, Industrial Facility Automation and Autonomous Vehicle Transport systems.

With Head Offices in UAE, Germany, Malaysia and Singapore to cover the Middle East, African, European and Asian markets we ensure a reliable network of suppliers providing world-class engineering and IT solutions for our clients worldwide.

ALS designs Automated Storage and Retrieval Systems (ASRS) for the computerized storage and retrieval of goods in the Cargo handling, manufacturing, stock-keeping and distribution facilities where space is scarce and efficiency and high throughput are a must.

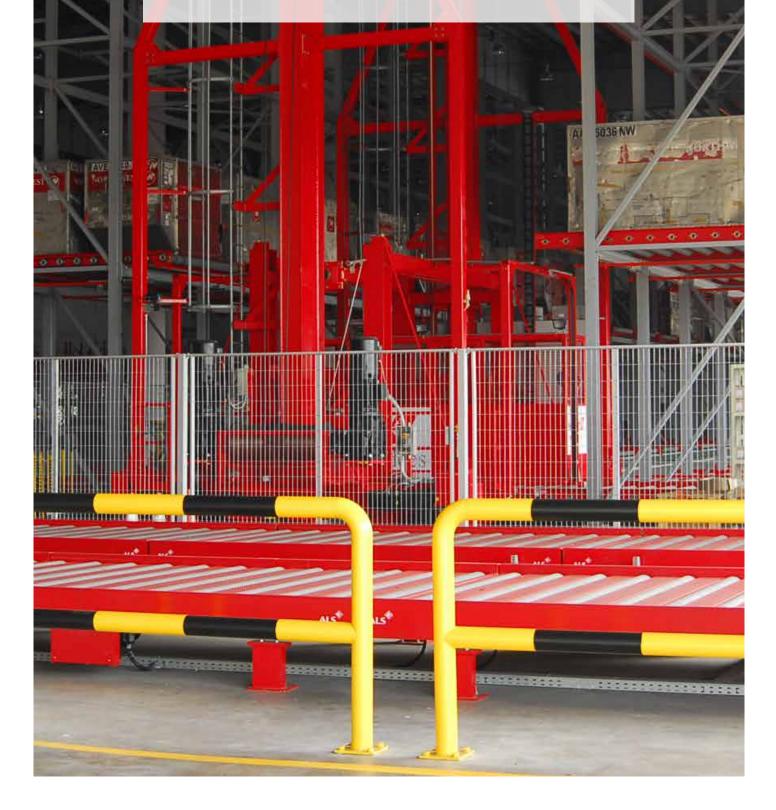
Our company is abreast of regulatory requirements and has developed new processes and innovative technology to support next generation cargo and logistics/material handling systems- using technology solutions that improve throughput, enhance real time data capture with embedded security functionality expediting each step in the logistics process.



With ISO 9001, ALS qualified engineering and project management professionals specialized in:

- Pre-Project Planning
- Complete Design of Material Flow
- Simulation
- Information Technology & QA/QC-Quality
- Schedule Planning
- Implementation
- Training & After Sales Support

# AIR CARGO HANDLING SYSTEMS



















### Elevated Transfer Vehicles (ETV)

The Elevating Transfer Vehicle is a state of the art, automated air cargo system that combines versatility, efficiency and safety. The ETV is built on a central rail system for the efficient storage and retrieval of all types of ULDs and Air Cargo Pallets on multiple levels using friction driven motorized roller decks with a capacity of up to 14,000 kgs.

# Automated Storage & Retrieval Systems (ASRS)

The ASRS is designed for the computerized storage and retrieval of goods in the cargo and distribution facilities where space is limited and efficiency and high throughput is required. All our ASRS installations have two storage and retrieval machines per aisle for redundancy and high stock turnover.

### Transfer Vehicles (TV)

Transfer Vehicles are the traditional rail mounted prime movers for transporting, storing and retrieving cargo horizontally on a single level. The ULDs are moved on and off the racking by interconnecting the integrated roller conveyor with external roller decks. Our Transfer Vehicles can transport two containers simultaneously.

#### Lowerable Workstations

Our Lowerable Workstations enable efficient build-up and breakdown of 10ft, 15ft and 20ft ULDs. The workstation consists of 10ft Roller-Decks built on a scissors lift with reinforced bearings and rollers. This system is also equipped with a weighing scale registering the load on the platform.

# Truck Docks

The Truck Dock consists of roller decks integrated with a tandem hydraulic scissors lift mounted on a rail vehicle. This allows loading and unloading of vehicles/trucks of different heights at different loading positions. This system comes with a scale and can be connected to the warehouse with different solutions.

# **Pallet Hoists**

Pallet Hoists are designed to utilize the available vertical space in the warehouse with no additional requirements of civil works. By installing Hoists, we create an additional storage level which leads to maximum utilization of the space. The flexible design ensures a user-friendly interface between the different warehouse levels.

#### Portals & Conveyors

Portals measure and capture volume, appearance and weight of cargo in a continuous process. The automated sorting, weighing and identification of parcels are done by belts and roller conveyors with an interface to the client portal. This is a modular concept that allows easy installation in new and existing cargo facilities.

# BESPOKE CARGO SOLUTIONS







# Ball, Castor, Gravity & Roller Decks

Designed to manually and safely transfer the cargo pallets and ULDs in omni-directions within the warehouse by interfacing with cargo handling equipment. The modular design depends on the customers' requirements. The decks are equipped with accessories such as weighing scales, ram protections and volume measuring devices.



### Heavy Duty & Curve Conveyors

Conveyors are adaptable and used widely in different industries. They are particularly suitable for the transport of packed and unpacked unit loads of a variety of shapes and sizes. Long life and high reliability as well as smooth running at a low noise level allows the successful handling of loads in materials flow applications.



# Mini Load Storage Systems

The Mini Load is a high-density tote buffer designed to maximize vertical storage space while maintaining a compact footprint. A high-speed Storage/Retrieval machine move loads safely to support picking operations. Multiple input/output and integration options are available to streamline material flow.



### Input & Output Stations

Input/Output station of an automated storage and retrieval system is a set of conveyors designed to interface with the automated storage mechanism for the delivery of totes or pallets efficiently and safely to the picking stations and vice-versa. The workstations can be fitted with Volume Scanners, Scales, Barcode Readers and Contour Checks.



# **ULD Pallet Movers**

The ULD pallet mover allows to transport heavy goods around the warehouse safely on the Slave Pallets. It is equipped with three forks for stability and a load capacity of 7.5 tons. Our ULD pallet mover enables the user to do the build-up/break-down of ULD on the pallets efficiently and minimizes damage to the ULD.



# Slave Pallets

The Slave Pallet is used in Air Cargo to transport, loading and unloading of ULDs. The usage of the Slave Pallets is very versatile. It can be used as a mobile Workstation for build-up and break down of ULDs and Cargo Pallets. Slave Pallets are designed for heavy loads for transportation of up to 6.8 tons.



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