

## Cargo Handling Systems



**SOLVING YOUR CARGO HANDLING CHALLENGES**

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## We take care!

### SACO AIRPORT EQUIPMENT - CARGO HANDLING SOLUTIONS

With air traffic predicted to grow at an average rate of 8% per year, and in some areas even up to 20%, the amount of air cargo flown around will also increase tremendously. As a result, companies involved with air cargo face growing challenges on how to organise this and how to get cargo from and to their customers safely and on time. For this, SACO backed by more than 50 years of experience, offers ULD handling solutions ranging from basic systems for manual manoeuvring to fully mechanised and automated systems.

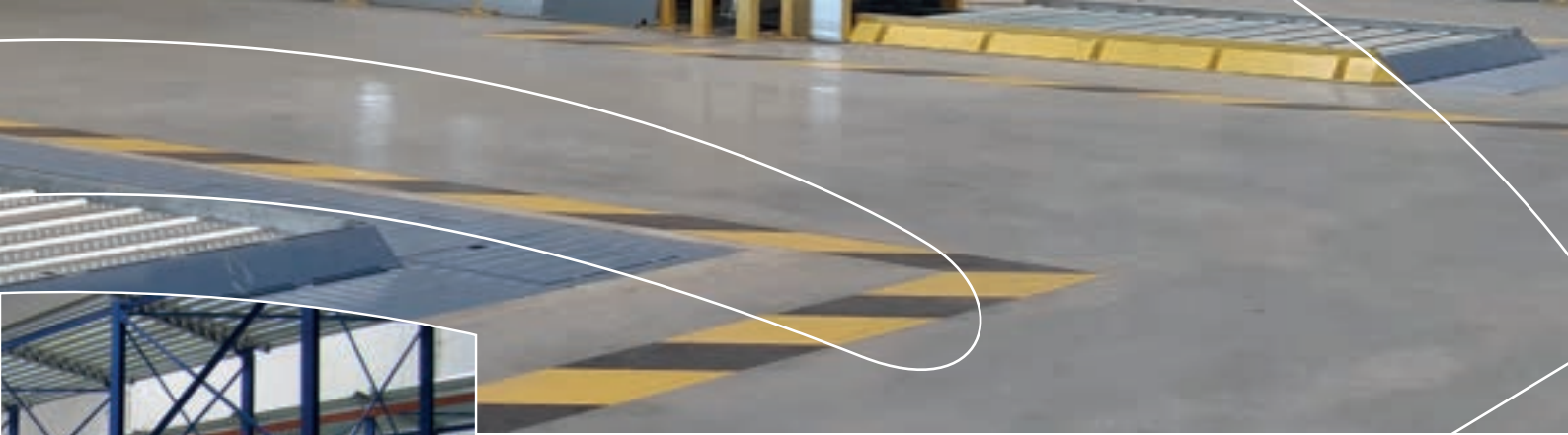
Based in Mierlo, The Netherlands, SACO designs, manufactures and supplies turnkey Cargo Handling Equipment and

Systems. Due to the modular design of SACO's units, it is easy to move, modify, extend and upgrade an existing system in phases when cargo volumes grow. Users can adjust investments to their needs. Full after sales support, tailor made maintenance solutions and 24-hours service ensure a high performance standard throughout the system's entire life span.

SACO's systems have been successfully supplied and commissioned in many European countries, but also in India, Indonesia, Russia, U.A.E., USA, Canada, Brazil, Rwanda, Ethiopia, Australia and New Zealand.

### SACO IS MEMBER OF:





## CORPORATE BACKGROUND

SACO is fully owned by and incorporated into SMA BV based in The Netherlands. SMA BV has its origin in 1951 and has evolved into an internationally oriented organisation with multiple divisions. The core activities of the company - construction, manufacturing, supply and assembly of steel and machine constructions – are sub-divided in five divisions. SACO enjoys the advantages of having a flat organization with short and direct communication lines, whereas SACO is also able to handle large projects requiring extensive manpower and project management is part of the Machine constructions division.

## PRODUCT PORTFOLIO

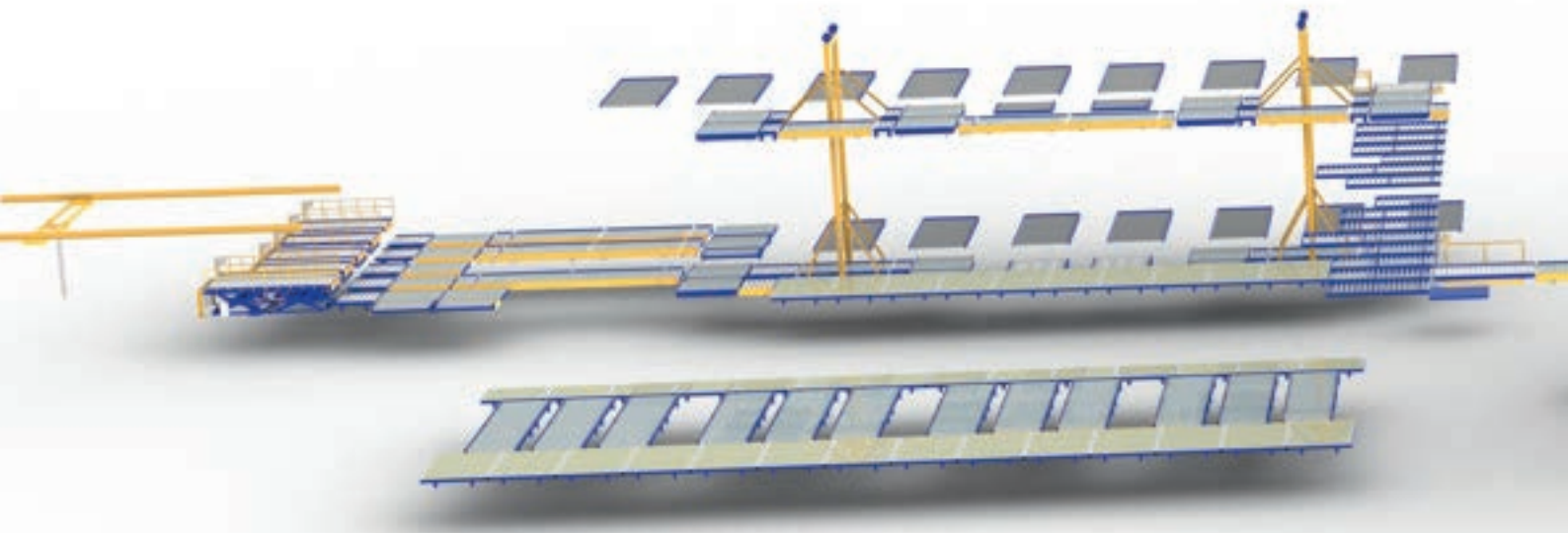
SACO's portfolio includes extensive solutions for the handling of air cargo ULD's (pallets and containers). Ranging from conveyor decks, truck docks, dolly docks, build-up / break-down workstations, weighing systems, multi-level storage systems incorporating (elevating) transfer vehicles, to SACO's slave pallet system to additional flexibility.

SACO's turnkey approach enables the supply of cost effective integrated hardware and software solutions for the control and management of air cargo handling and storage systems. This can vary from a standard PLC control system to overall Material Handling Software and management IT-systems.

## REFERENCES







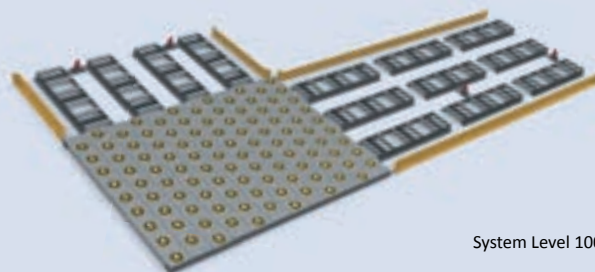
## SYSTEM LEVEL 100

System height: 100 mm

Components:

- Roller track - units with 3 or 6 rollers
- Ball deck
- Castor deck
- Pallet stop - single / double
- Side guides

*Budget cargo handling system, for manual manoeuvring of ULD's.*



System Level 100

## SLAVE PALLET SYSTEM

System height: 270 mm

Components:

- Pallet Master ride-on,
- alternatively Pallet Master pedestrian
- Slave Pallet - 10ft NEP / WEP - Open / closed
- Slave Pallet Ball deck - 10ft
- Slave Pallet Castor deck - 10ft

*Flexible cargo handling system, for handling of ULD's.*



Slave Pallet open - 10ft NEP

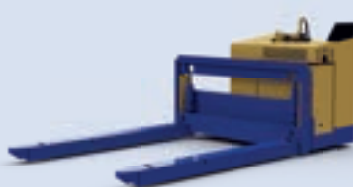
## SLAVE PALLET SYSTEM - PALLET MASTER

Turning circle: Radius 3,200 mm

Lift capacity: 8,000 kg

Lift stroke: 185 - 550 mm, to enable docking of slave pallets to conveyors at 508 mm.

*Pallet Masters for manoeuvring of ULD's on slave pallets  
Battery powered with 48 VAC system.*



Pallet Master ride-on



Pallet Master pedestrian

## SYSTEM LEVEL 508 - MANUAL

System height: 508 mm

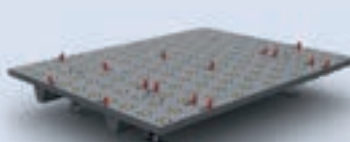
Components:

- Roller deck-10ft / 15ft / 20ft NEP / 10ft WEP
- Ball deck - 10ft
- Castor deck - 10ft

Options:

- Pallet stops
- Weighing System

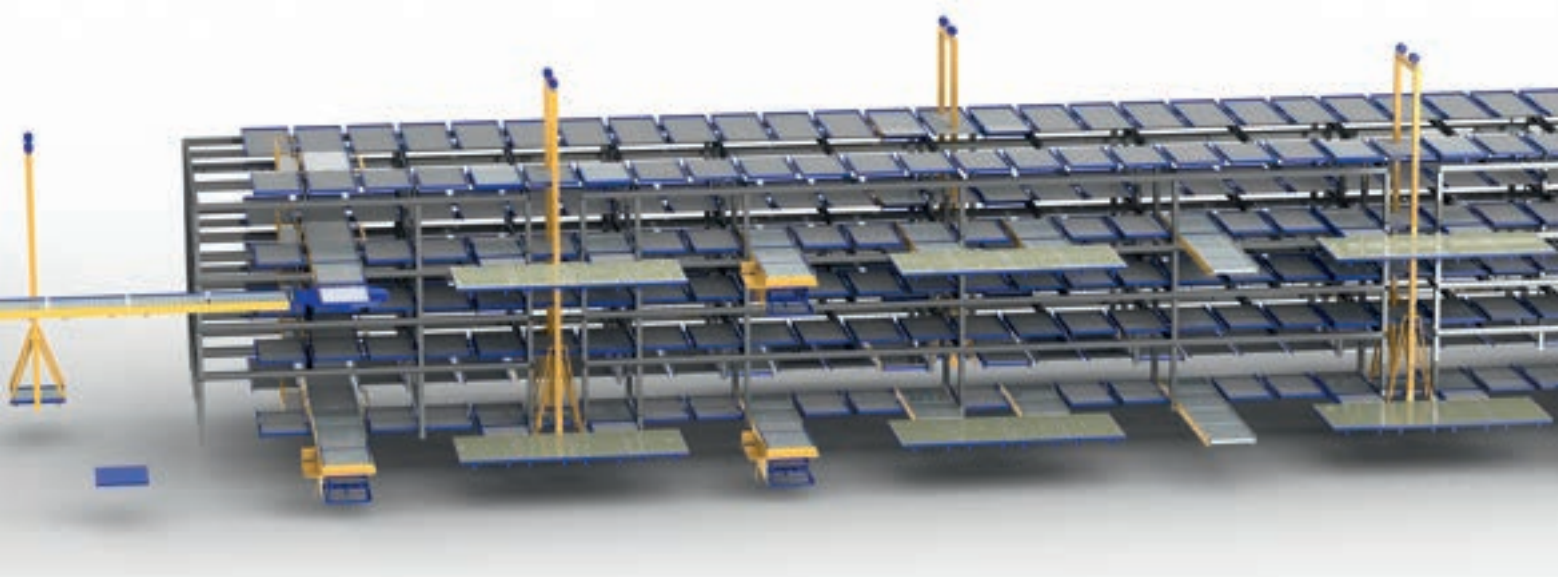
*Cargo handling system, for manual manoeuvring of ULD's at Dolly height.*



L508 - Castor deck 10ft



L508 - Roller deck 10ft WEP



## SYSTEM LEVEL 508 - POWERED

System height: 508 mm

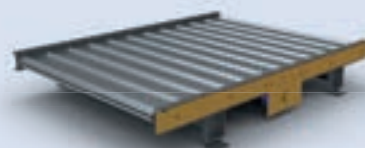
Components:

- Motor powered roller deck – 10ft / 20ft NEP / 10ft WEP
- Right Angle deck - 10ft
- Turn table with Motor powered roller deck or Right angle deck - 10ft

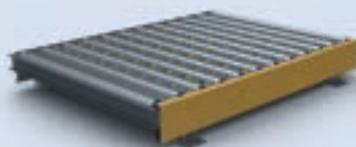
Options:

- Manual or powered pallet stops
- Weighing System

*Cargo handling system, for automated handling of ULD's at Dolly height.*



Motor powered roller deck 10ft NEP



Right Angle deck 10ft



Turn Table – Right angle deck

## TRUCK DOCKS

Operating height: 508 - 1,608 mm

Available sizes: 10ft / 15ft / 20ft NEP

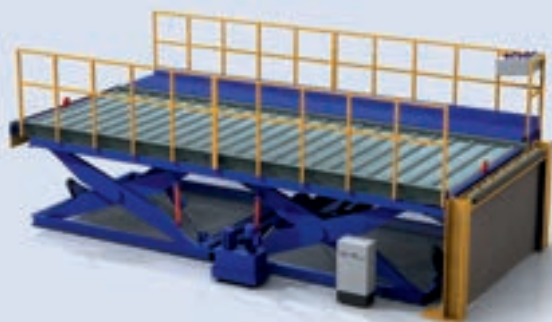
Available decks:

- Motor powered roller deck
- Roller deck
- Ball deck
- Castor deck
- Drive-over deck

Options:

- Operator platform
- Heavy duty rising roller barrier
- Side shift
- Weighing system
- Winch
- Container rotation section

*Truck docks for loading and unloading ULD's to and from trucks.*



Truck Dock - 20ft NEP

## DOLLY DOCKS

Operating height: 508 mm

Available sizes: 10ft / 15ft / 20ft NEP / 10ft WEP

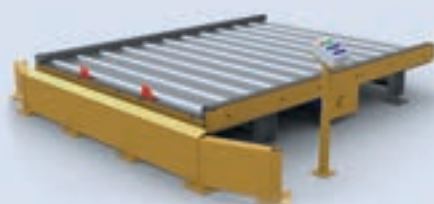
Available decks:

- Motor powered roller deck
- Roller deck
- Ball deck
- Castor deck

Options:

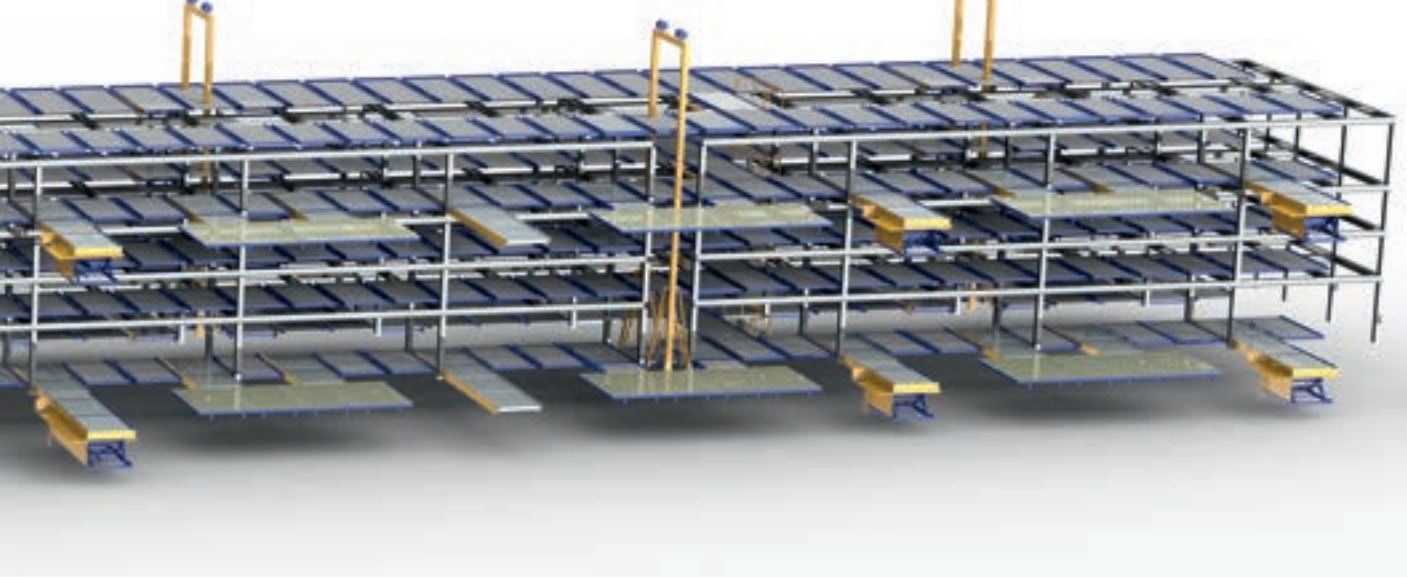
- Scissor lift
- Heavy duty protection barrier
- Side shift
- Weighing system

*Dolly docks for loading and unloading ULD's to and from dollies.*



Dolly dock – 10ft NEP



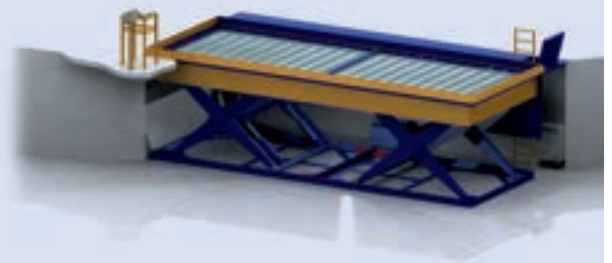


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### BUILD-UP BREAK-DOWN WORK STATIONS

- Operating height: 508 mm above floor level  
1,400 mm below floor level
- Available sizes: 10ft / 15ft / 20ft / 2 x 10ft NEP / 10ft WEP
- Available decks:
- Motor powered roller deck
  - Roller deck
  - Ball deck
  - Castor deck
  - Flat steel deck
  - Drive-over deck
- Options:
- Weighing system

*BUBD Work stations for the build-up and break-down of ULD's.*



Build-up Break-down Work station – 20ft NEP

### TRANSFER VEHICLES (TV)

- Operating height: 508 mm
- Available sizes: 10ft / 15ft / 20ft / 10ft WEP
- Options:
- TVU; Transfer Vehicle prepared to enable upgrading to a 2-level ETV
  - Weighing system
  - Automatic or semi-automatic operation

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



Transfer Vehicle – 20ft NEP

### ELEVATING TRANSFER VEHICLES (ETV)

- Typical operating 1<sup>st</sup> level 508 mm
- Heights:
- |                       |           |
|-----------------------|-----------|
| 2 <sup>nd</sup> level | 4,008 mm  |
| 3 <sup>rd</sup> level | 7,508 mm  |
| 4 <sup>th</sup> level | 11,008 mm |
- Available sizes: 10ft / 15ft / 20ft / 10ft WEP
- Options:
- Weighing system
  - Automatic or semi-automatic operation

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



Elevating Transfer Vehicle 10ft NEP

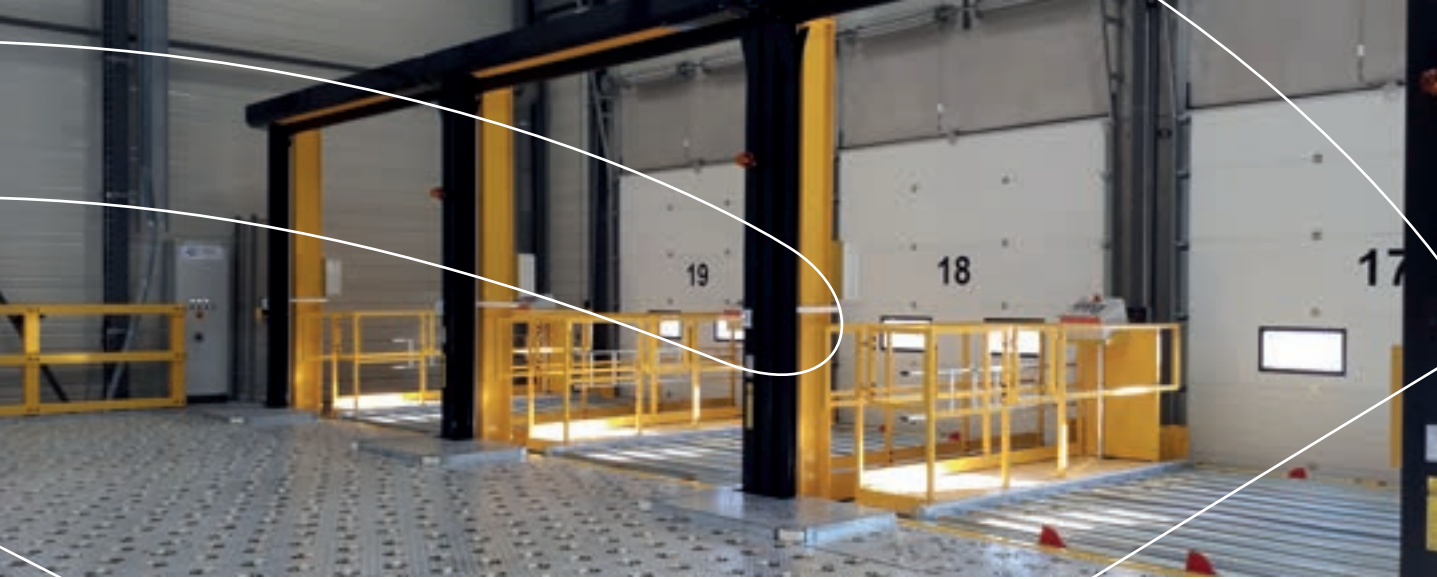
### FRICTION POWERED ROLLER DECKS

- Operating height: 508 mm
- Available sizes: • 10ft / 15ft / 20ft NEP / 10ft WEP

*Friction powered roller decks for storage of ULD's are installed in single level or multi-level racking structures.*

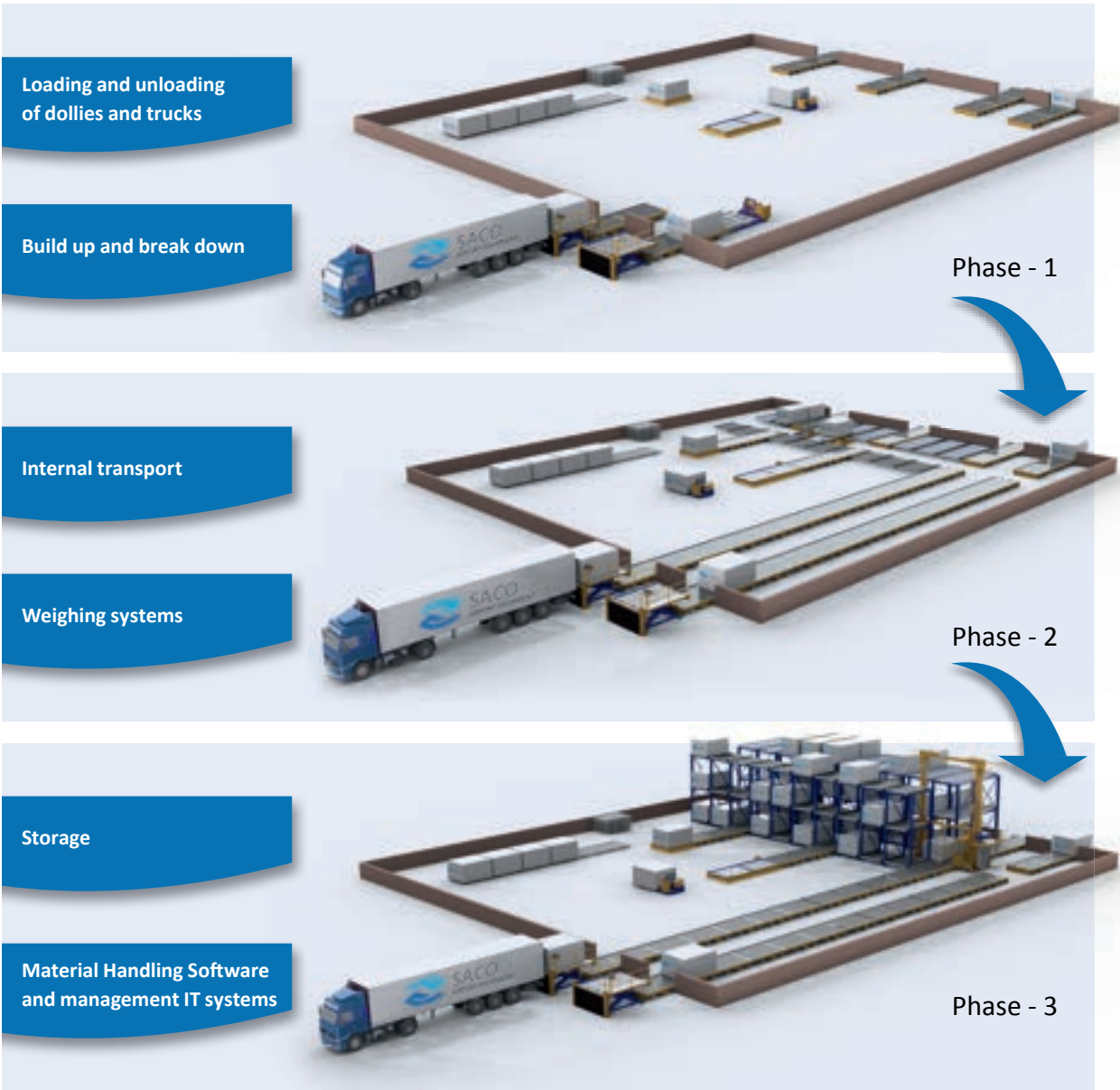


Friction powered roller deck 10ft NEP



# We take care!

SACO, your turn key supplier for a wide range of applications and investment plans. As cargo volumes grow, let your system evolve through phases with SACO's modular equipment design.





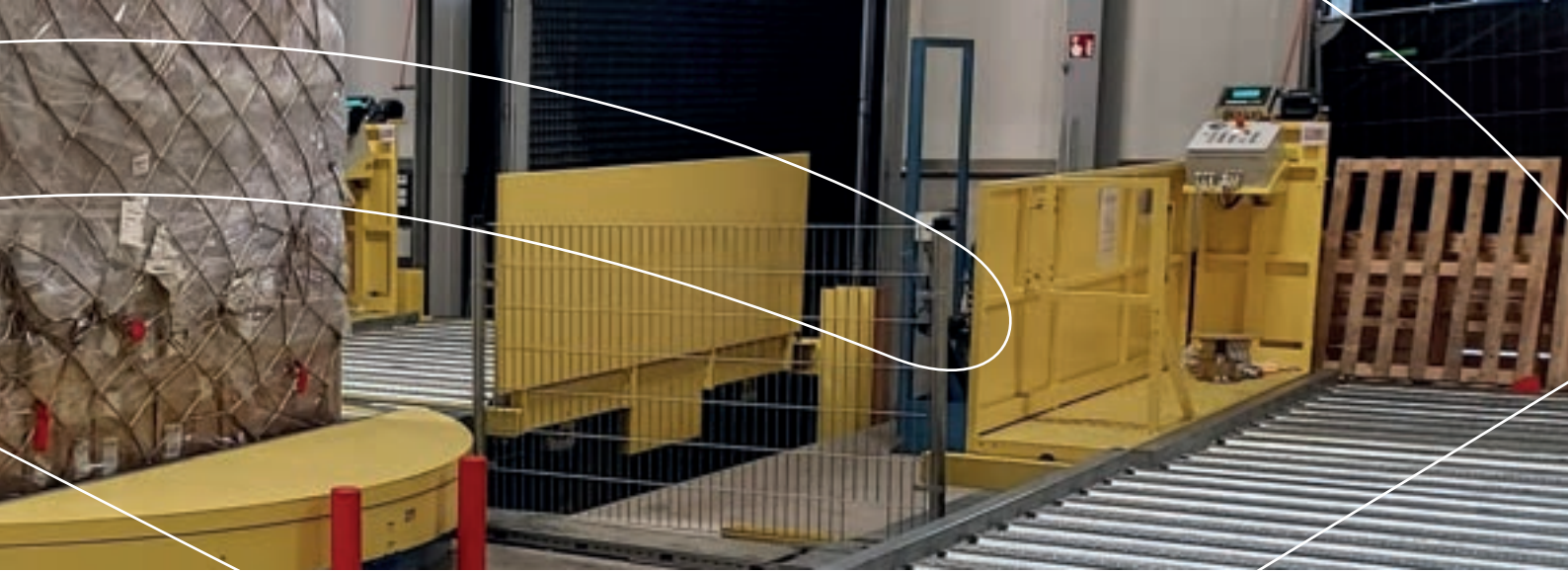


## GENERAL AIR CARGO

Based on 5 decades of relevant experience, SACO has a full set of handling equipment available to configure any solution that may be required. This includes storage and conveyor decks, truck docks, dolly docks, workstations, scissor lifts, ULD hoists, (elevating) transfer vehicles ((E)TV's, pallet masters / slave pallets, Depending on the required capacity, ULD storage systems can be based on ETV's or on the Lift & Run principle incorporating multiple TV's and hoists.



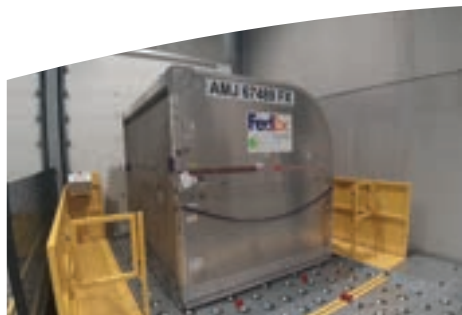




## ULD Handling and storage solutions

### POSTAL AND EXPRESS PARCEL

Speed and flexibility are of the essence with Postal and Express Parcel handling. SACO has developed a reliable set of standard equipment for ULD handling dedicated for this sector. This is mainly based on modular castor decks, roller decks, truck docks, and integrated weighing systems.



### PERISHABLE AIR CARGO

The handling of perishables such as flowers, fruits, vegetables, fish, meat, and medicines etc. requires special attention. Not only is this related to keeping the cool chain intact, or segregation and storage in independent temperature controlled conditions, but also the handling equipment is to be suited for the ambient conditions and dedicated handling requirements.





● References

Your local representative:

Please visit the website for contact details of your local representative:  
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