

# Enova

Design, calculations and manufacturing  
of Storage Systems



## SHUTTLE CART

The Strength of simplicity



We can draw on more than **50 years of knowledge** in the design and manufacture of Storage Systems. We have consolidated and strengthened our position based on the straightforward and fresh approach of a young and specialised team, which, together with our state-of-the-art technologies, has enabled **ESNOVA** to enjoy the trust of new clients every day.



WE EXPORT TO MORE THAN **35 COUNTRIES**



Design, calculations and manufacturing of **Storage Systems**



## EXPERIENCE

We can rely on a large group of professionals with extensive experience in the logistics sector.

We shall provide you with a swift and straightforward response. We have a large number of items in stock available for delivery in a few days and we can adapt to the specific needs of any type of business and warehouse. From the lightest shelving to the most sophisticated automated warehouses.

We create efficient warehouses, study each individual case, and offer customised solutions that:

- Optimise available space.
- Increase storage capacity.
- Improve the profitability of each square metre dedicated to storage.
- Enhance organisation for easy location and greater protection against damage and misplacement.
- Increase safety for staff and facilities.
- Deliver greater productivity across operations and resources.
- Provide a better service to customers.



## SOLUTIONS

Metal industrial shelving for the storage of all types of products. Light, medium and heavy loads, palletised loads, large loads...

Standard pallet racking, Drive-in racking, Cantilever, Clad-rack and automated warehouses, Manual loading racks, Riveto boltless racks, Multi-tier racking, Mezzanines, Metal containers... All of them make up a wide range of storage solutions which, together with the advice of our technical and sales team, will provide a quality, safe and cost-effective solution to your storage problems.



## Technology

Our machinery at your fingertips. We employ the most flexible and advanced production systems to design and manufacture cost-effective metal parts, components and products.



## Tests

We have a Testing Laboratory where we verify the properties of the various components of each system and perform load tests, resistance tests, buckling tests...



## Innovation

Innovate to improve new products and optimise existing solutions.

## Quality



At Esnova, quality is a priority in each and every one of the processes we carry out.

- Certificate in quality management system (ISO 9001).
- Certificate in environmental management system (ISO 14001).
- Certificate in occupational health and safety management system (ISO 45001).
- CE Marking certificate.
- Member of the European Materials Handling Federation FEM/AEM.



Management System  
ISO 9001:2015  
ISO 14001:2015  
ISO 45001:2018  
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ID 9105076955



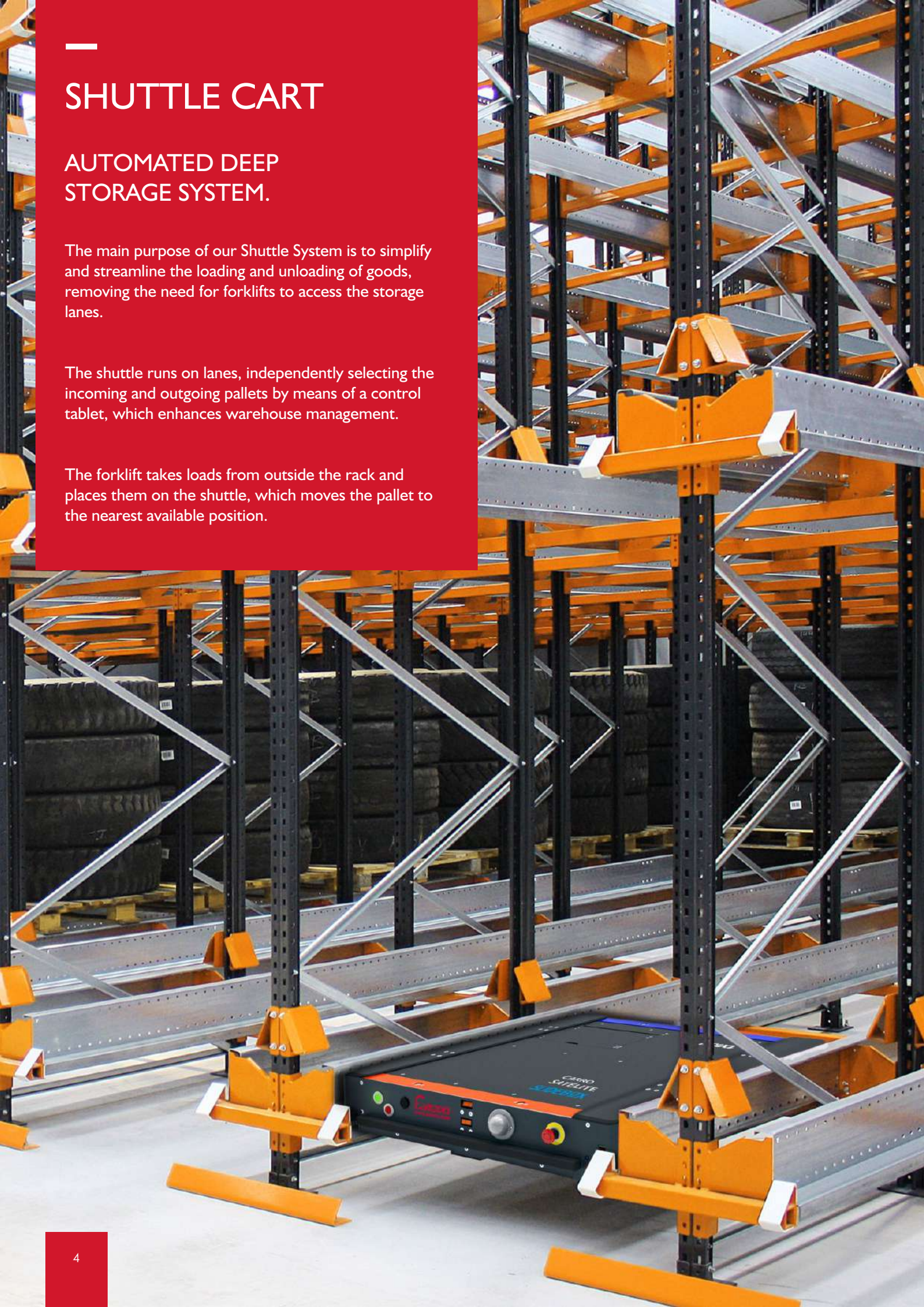
# SHUTTLE CART

## AUTOMATED DEEP STORAGE SYSTEM.

The main purpose of our Shuttle System is to simplify and streamline the loading and unloading of goods, removing the need for forklifts to access the storage lanes.

The shuttle runs on lanes, independently selecting the incoming and outgoing pallets by means of a control tablet, which enhances warehouse management.

The forklift takes loads from outside the rack and places them on the shuttle, which moves the pallet to the nearest available position.



## OPERATION, THE 4 STAGES

In semi-automatic facilities that use a shuttle, it should be noted that the operators only handle the forklifts and activate the operation of the shuttle.

The shuttle moves independently once it is on the metal rack system.

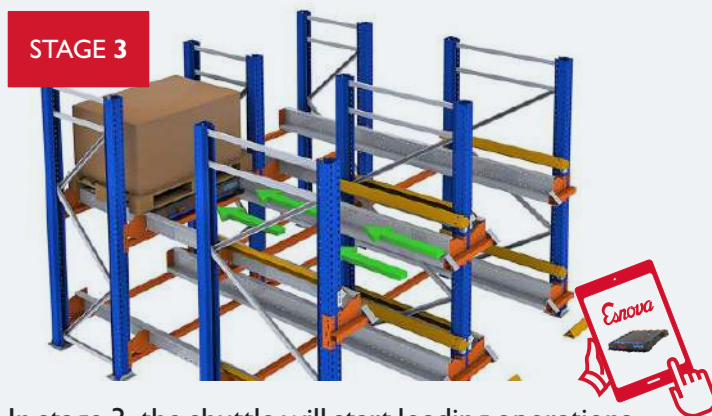
There are 4 stages in the storage process when a shuttle is used:



The shuttle is placed on the lane where it is to be operated by a forklift.



Then, the pallet is brought to the entrance of the lane using a forklift and placed on the load profiles.



In stage 3, the shuttle will start loading operations when the operator gives the command using a tablet.

The shuttle lifts the pallet and moves horizontally until it reaches the first available location to place the load.

The movements of the loads are controlled by a range of extremely accurate sensors.



In the last stage, the shuttle performs the same action at the beginning of the lane where it picks up the next pallet and repeats the operation until the lane is full.

The shuttle is removed before the last slot is occupied. It then repeats the process in the next lane where it is needed to place more loads.

Several shuttles can be used in the same facility.

Offloading is carried out in the same way but in reverse order.

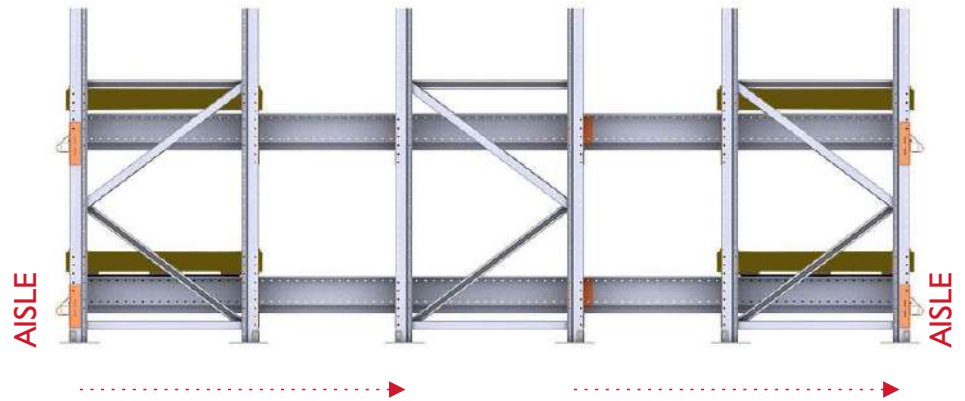
## 2 WAREHOUSING OPERATIONS

Semi-automatic compact storage systems, as we have already mentioned, make it possible to store items using two types of operations:



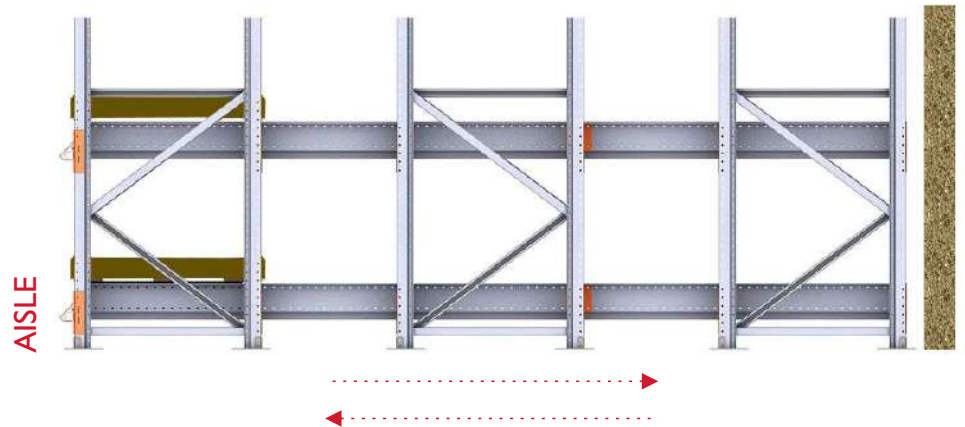
### FIFO (First In, First Out)

This procedure requires two access aisles, one for incoming items and one for outgoing items. The first pallet in is the first out.



### LIFO (Last In, First Out)

In this case, the last pallet in is the first out. Therefore, loading and retrieval operations are performed at the same point.



# BENEFITS



PRECISION AND SPEED. REDUCED WORKING TIMES COMPARED TO A CONVENTIONAL COMPACT SYSTEM.



HIGH STORAGE DENSITY.



INCREASED SAFETY. IT PREVENTS KNOCKS CAUSED BY FORKLIFTS AND THE ACCIDENTAL ENTRAPMENT OF PEOPLE THANKS TO ITS SENSORS AND REMOTE HANDLING.



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IT MAKES IT POSSIBLE TO STORE DIFFERENT TYPES OF ITEMS PER MODULE.



SUPPORTS DIFFERENT TYPES OF PALLETS.

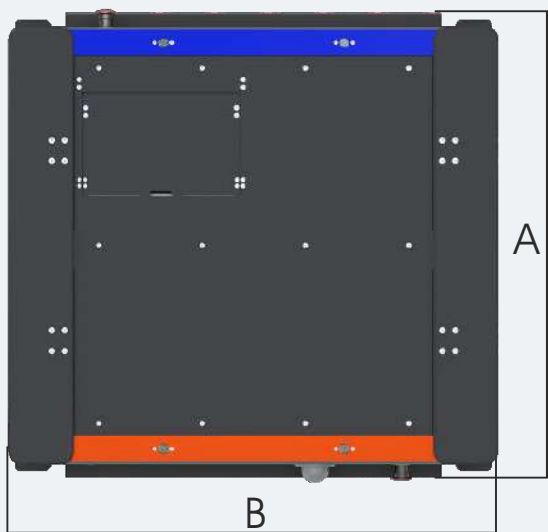


EASY TO USE.





THE SLIDEBOX SHUTTLE HAS BEEN SPECIFICALLY DESIGNED, MANUFACTURED AND MARKETED FOR THE DEEP STORAGE OF PALLETIZED GOODS TRANSPORTED ON LANES AND OPERATED BY A TABLET.

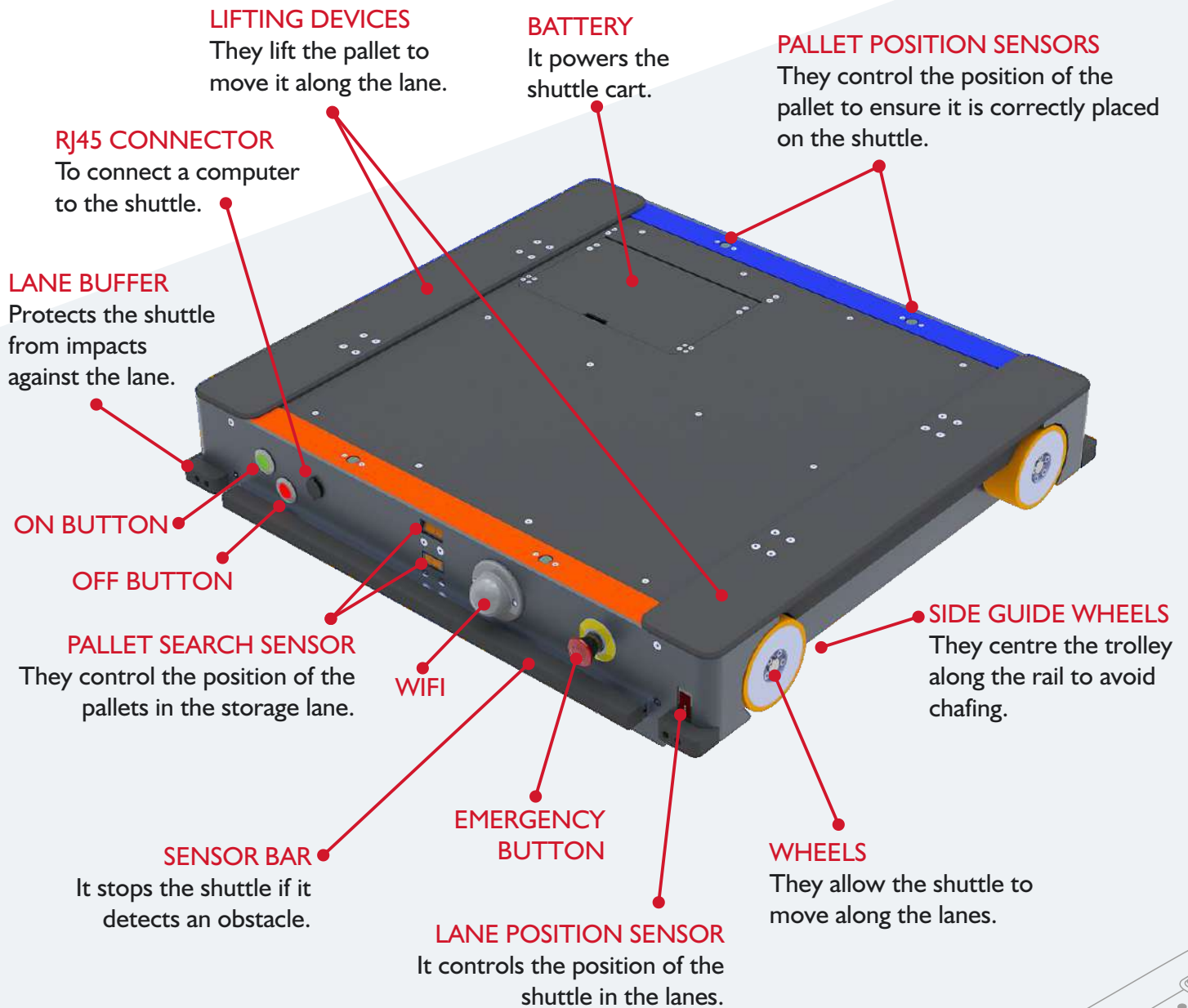


## DIMENSIONS



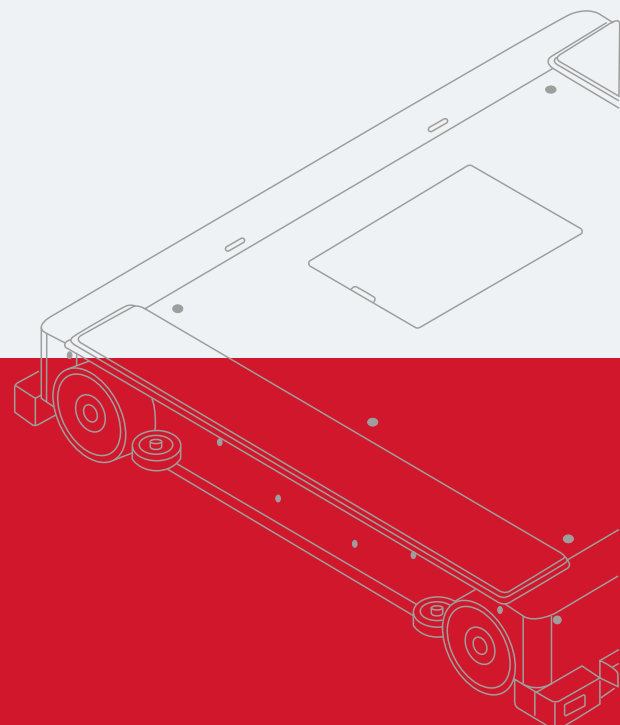
Pallet size	A (mm)	B (mm)	C (mm)
1200x800	923	947	185,5
1200x1000	1123	947	185,5
1200x1200	1323	947	185,5





## TECHNICAL DATA

- ▶ WEIGHT OF SHUTTLE (INCL. BATTERY): 1.70 KG.
- ▶ MAXIMUM SHUTTLE LOAD: 1.500 KG.
- ▶ SHUTTLE SPEED: 50-70 M/MIN (LOADED-UNLOADED).
- ▶ LITHIUM BATTERY: 8 H. DURATION UNDER STANDARD CONDITIONS.
- ▶ OPERATING TEMPERATURE: 0°C / 45°C



## SERVICE TROLLEY

An accessory that allows an operator to travel along the storage lane. Operation is fully manual.

Ideal to reach the position of a shuttle if it should unexpectedly stop working. It can be attached to the service trolley to be retrieved.

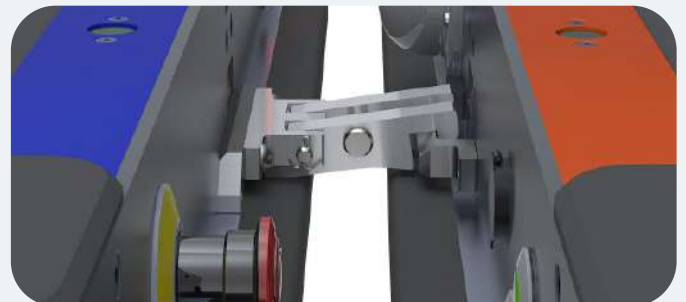
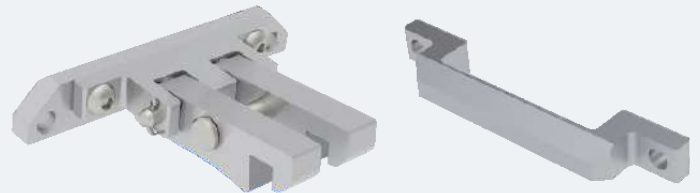


## RESCUE HOOK

An accessory used to retrieve a shuttle stranded in a storage lane.

**This accessory is only feasible if more than one shuttle is available in the facility to serve as a rescue shuttle.**

The rescue hook is bolted to the rescue trolley and is advanced from the Tablet to the damaged trolley to which a rescue handle has been previously bolted where the hook is coupled to be able to drag the damaged trolley.



## MULTIPALLET FUNCTION

Pallet recognition function for pallets of different depths. The Slidebox Shuttle can retrieve and place loads and organise storage lanes even when different pallet formats are used.

This function can be used in both storage methods (FIFO/LIFO).

A Slidebox shuttle can handle pallets with a depth equal to or less than the depth of the shuttle on the same storage lane. It can handle pallets measuring 800, 1.000 and 1.200 mm deep.



## SOFTWARE



The shuttle is operated by proprietary software that controls all its functionalities.

This software is delivered to the customer with a **Tablet**, which is used to operate the shuttle.

- **Settings:** Set shuttle speeds, distance between pallets, stopping distances at start and end points, etc.

- **Operations:** Pallet retrieval and placement, compacting, inventory, FIFO/LIFO system, manual movements, etc.

- **Alarm management:** When connected to a shuttle, the tablet will monitor all possible alarms reported by the shuttle so that the operator can establish the causes of a shutdown or any anomaly in the operation of the shuttle.

One tablet can be used to operate several shuttles and, similarly, one shuttle can be operated from several tablets.

## BATTERY CHARGER



The battery is charged by placing it in the battery charger (supplied with the shuttle). Place the battery in the charger correctly and ensure that the connectors are securely engaged.

The battery is designed to withstand the intensive use of the shuttle.

The tablet will display the current charge level, and a “charge battery” warning will appear when the battery is low.



The **Strength** of simplicity

**WE DESIGN AND MANUFACTURE STORAGE SYSTEMS**  
FROM THE MOST BASIC TO THE MOST SOPHISTICATED



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THEM FROM OUR WEBSITE

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**ESNOVA**

SOFTWARE

**WAREHOUSE  
MANAGEMENT SOFTWARE**

**HOW TO ORGANISE A WAREHOUSE?**

This warehouse management software is the ideal IT tool to control the logistics of your storage space.



Management System  
ISO 9001:2015  
ISO 14001:2015  
ISO 45001:2018



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**MULTI-DEVICE SOFTWARE**

**ESNOVA RACKS, S.A.**

C/ Ataúlfo Frieria "Tárfé", N° 5 · Pol. Ind. Los Campones - Tremañes - 33211 · Gijón (Asturias - Spain)

+34 985 308 980

info@esnova.es