

FLEXY

The satellite that moves
the warehouse

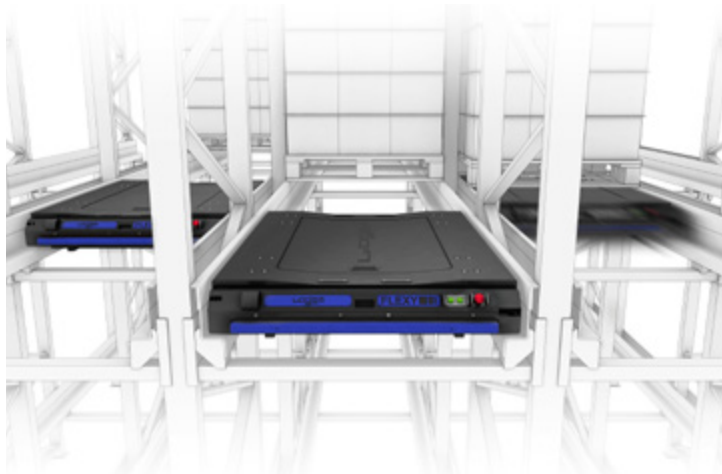


SPEED, PRECISION AND SAFETY

**Efficient handling of goods
is a strategic component for
the smooth running of a warehouse**

Thanks to the development of automation, companies today can rely on state-of-the-art systems such as shuttles and shuttles, which can move at speed within the loading channels, guaranteeing precision and safety in storage and retrieval operations.

The **Flexy automated pallet shuttle** is the solution designed by Logiss, suitable for multiple warehouse solutions and ideal in high-density storage systems with a high number of references.



FLEXY IS SUITABLE FOR:

- fast-moving consumer goods
- highly perishable products
- goods produced in batches

WHAT IS A SATELLITE?

The satellite - also called shuttle - is one of the most important automated material handling tools

These systems are used in both **automated and traditional multi-depth racking and warehouses** to increase the number of references that can be handled.

What distinguishes them is first of all the management: in picking and depositing operations, the satellite can be guided through the channels by the operator using a remote control, or it can be managed by WMS (Warehouse Management System) software.



HOW IT WORKS

The satellite is designed to run along rails within the storage channel, so that the load unit can be reached and deposited in the indicated position.

It is thus possible to store a large number of pallets in depth on each level of the racking, optimising all available storage space. The use of the satellite also allows codes to be grouped by channel, unlike drive-in systems in which the same code fills the entire aisle.

Thanks to its versatility, the satellite can operate according to both **FIFO** (First-In, First-Out) and **LIFO** (Last-In, First-Out) logic.

THE AUTOMATIC FLEXY SATELLITE

Flexy is the pallet shuttle that Logiss makes available to companies in a wide variety of sectors

Making it a highly flexible solution is the possibility of adapting the shuttle to different pallet sizes and increasing the number of shuttles over time to increase productivity, Flexy is also designed with 8 wheels to ensure greater traction and better load distribution on the rails.

These features help to optimise the warehouse, increasing efficiency, enhancing performance and ensuring maximum safety of materials and operators. The possibility of integration with the company's ERP via WMS adds the advantage of being part of the Industry 4.0 benefits.

Moreover, thanks to its lithium-ion batteries, Flexy has up to 8 hours of working time at full capacity.

Finally, the satellite is able to guarantee high performance both at room temperature and in temperature-controlled cold rooms down to a maximum of -30°.

BENEFITS

- High-density storage system that also handles multiple codes on the same tunnel
- Ability to operate at temperatures between -30° and +35°
- Flexibility and scalability for number of shuttles and pallet sizes
- Reduced operating costs
- Increased storage speed
- Increased operational efficiency
- Space optimisation
- Reduced risk of accidents
- Reduced risk of damage to shelves and goods
- Low cost maintenance

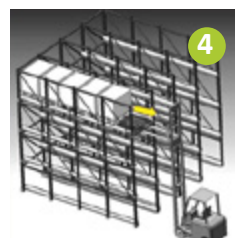
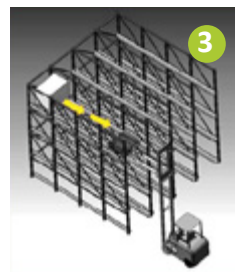
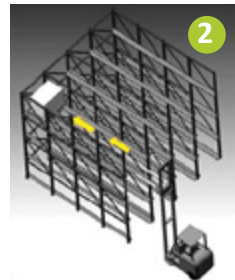
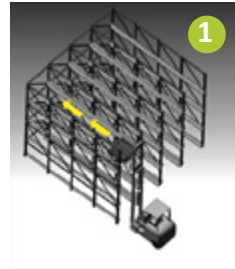
FLEXIBILITY AT THE SERVICE OF YOUR WAREHOUSE

Characterising the Flexy satellite is also its flexibility, which makes it a perfect solution for responding to the needs of companies in different sectors

Pallet storage with the FLEXY satellite

But how is handling done with Flexy?
Let us enter a warehouse and see:

- 1 The forklift positions the Flexy on the runners of the channel where the pallets are to be stored.
- 2 The load unit is then picked up by the satellite which, at the operator's command, transports it into the rack, without any further intervention by the operator.
- 3 Flexy deposits the load in the first free position in the channel, placing it next to any pallets already present. Once the operation is complete, the shuttle automatically returns to the front to receive the next load.
- 4 Once the aisle has been filled, the Flexy is ready to be transferred to another aisle and start the incoming cycle again. The UDCs are then moved so that the operators always place the pallet in line with the picking front.



What about the operators?

While Flexy runs along the channels, the operators can pick up the next pallet to be stored, without wasting time.

The result? An optimised warehouse with increased efficiency, high performance and maximum safety for goods and operators.

SOME NUMBERS

Flexy has a rated capacity of 1500 kg and a travel speed ranging from 1.1 m/s empty to 0.65 m/s fully loaded.

The lifting time is 3 seconds.

The stacker crane is available in three models, suitable for pallets of different depths from 800 mm up to 1200 mm, with the possibility of handling also overboard.

The number of Flexy shuttles required depends on:

- Quantity of pallets handled per hour
- Length of channels, number of lanes and layout of facilities
- Time required for loading and unloading
- Number of forklift operators working at the same time

FLEXY MANAGEMENT FROM PROPRIETARY WMS

The software designed by Logiss makes Flexy communicate directly with the WMS and, consequently, with the company management system. All information is exchanged with the operators via wi-fi terminals. In this way, Flexy becomes an important part of the warehouse that guarantees efficient, error-free picking and maximum safety for operators and goods.



SAFETY

Special systems are in place to ensure full safety in operations.

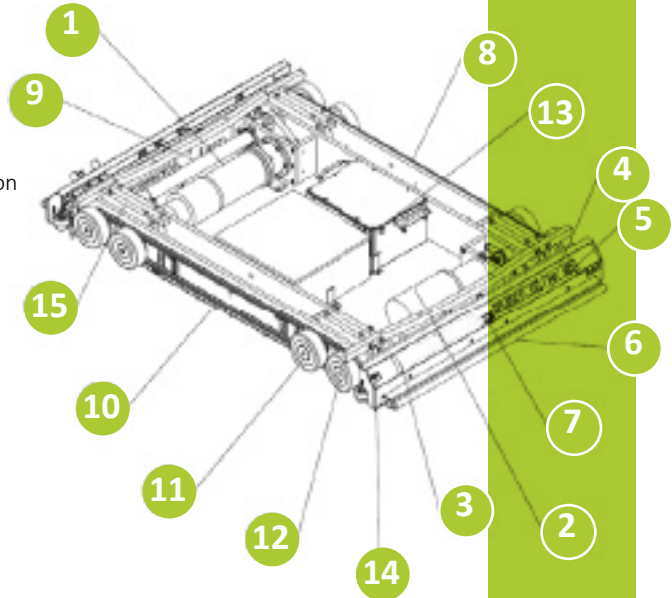
These include:

- Safety stop activated by pressing the emergency buttons located on the machine.
- Electromechanical “bumpers”, to protect the machine against any collision during operation.
- Luminous and audible warnings, to signal operations in progress and direction of movement.
- Control sensors in the event of misplacement in the lane.



MAIN FLEXY COMPONENTS

1. Lifting geared motor
2. Travelling gear motor
3. Wi-fi / Radio antenna
4. On/off button
5. Alarm/emergency reset button
6. Emergency Mushroom
7. Electromechanical bumper
8. Laser distance meter
9. Inductive lane presence lane presence sensor
10. Lifting shaft
11. Transmission chain
12. Idler wheels
13. Motorised wheels
14. Lithium battery
15. Lane stop photocell
16. Lifting position sensors



HOW IT WORKS THE OPERATOR

The presence of the Flexy satellite in the warehouse also changes the way the operator works.

Thanks to the radio control, all operations can in fact be managed in a safe and precise manner, and the operator has all the parameters and information on shuttle operation under control in real time.

Through a simple and intuitive keypad he can in fact set the various commands: selection of the manual or automatic system, selection of automatic UDC loading and unloading cycles both single and continuous, diagnostics, setting of UDC positioning distance parameters. Alternatively, the satellite can be managed by the WMS, connected to the management system; in this case, the operator receives instructions through the terminal controlled via Wi-Fi, in accordance with Industry 4.0.

Constant control

From the radio control menu, the operator can monitor all parameters: he can, for example, view the total cycles performed by the selected satellite and the number of pallets within the channel.

Possible functions include:

- Counting function to count the number of pallets already stored within a channel. The cycle consists of a run from the beginning to the end of the channel, and vice versa.
- Continuous load cycle enable function to load pallets faster within the aisle.
- Special continuous unload cycle enable function to unload the pallet from the lane in continuous mode with the special feature that the machine only runs the cycle after the operator has removed the pallet from the lane.

Cicli diversi per esigenze diverse

Depending on requirements, the operator can set different cycles:

- SINGLE ENTRY
single pallet storage command
- CONTINUOUS INPUT
command for continuous storage of pallets (massive load)
- SINGLE EXIT
command to extract the first pallet surfaced
- CONTINUOUS OUTPUT
channel emptying command (massive unloading)
- CONTINUOUS OUTPUT
special continuous channel emptying command
- COMPACTING
COMMAND reordering pallets for FIFO type warehouse

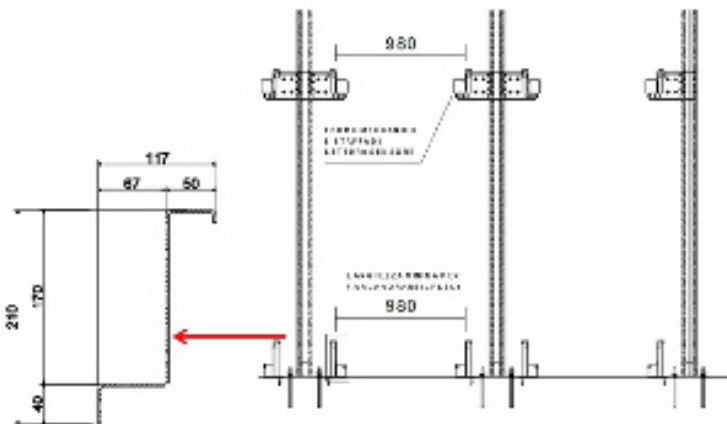
TECHNICAL SPECIFICATIONS

Loads technical data: Flexy is a pallet changer with long side feed, with a maximum load capacity of 1500 kg

After positioning the Flexy in the channel with a forklift truck, using the remote control, the operator will be able to operate the machine in one of the following two modes:

- Manual (forward- backward- up- down)
- Automatic (load cycle, unload cycle, inventory cycle, etc.)
- Therefore, once the Flexy has been placed in the aisle and set up for automatic mode, it is ready to perform automatic cycles to load and unload pallets in the same aisle. The machine has all the HWe SW safety devices to be able to work inside the channel.
- Flexy cannot work outside the channel, e.g. on the ground floor.
- Flexy can be moved by a forklift to be placed in another channel.
- Flexy is powered by a 24 V LITHIUM battery system.
- Flexy works on the rails in the following configuration (figure A)

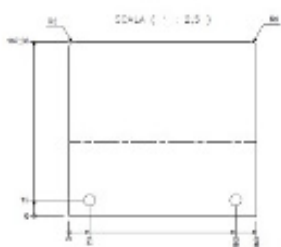
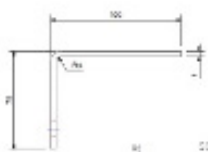
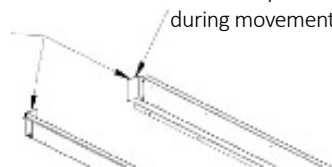
figura A



MECHANICAL STOP OF THE SHUTTLE

With bright-coloured paint (RAL 7035 or similar) to enable the shuttle's laser sensor to correctly read the position on the guides during movement.

Shuttle stops





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