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# NALON S4 – AUTOMATED TRUCK SIDE LOADING & UNLOADING

## PERFORMANCE

The Nalon S4 has been developed by DF for the lateral loading of trucks in a totally automatic way, so that it is possible to complete without human intervention the entire cycle from storage to loading the products in the truck.



The system must be either indoor or protected under a roof structure (out of DF scope) that will protect it from the rain, the wind and the sandstorms. Electrical Protection IP64.

The Nalon S4 is capable to load a (26 pallets truck box) in less than 20 minutes.

The control system is based on a programmable logic controller (PLC). All the control and command equipment of Nalon S4 are controlled via the ETHERCAT field bus.

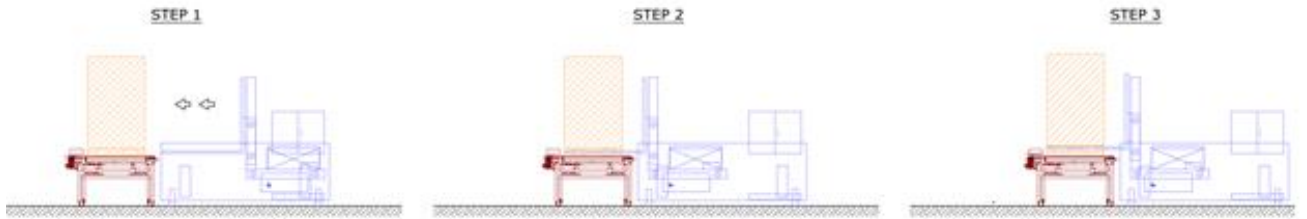
The Nalon S4 is a complex equipment that can do the following movements:

1. Longitudinal movement: Move along the truck box, for that movement the Nalon S4 will move over two steel rails.
2. Transversal movement: this movement will allow the machine to pick up the pallets and place them on the truck box.
3. Vertical movement: this movement will allow the machine to raise or lower the pallets.

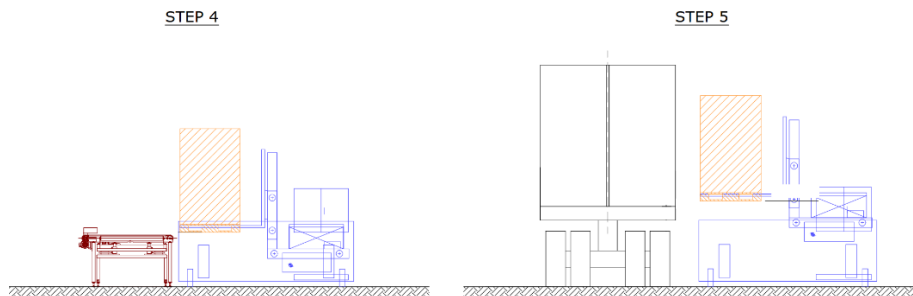


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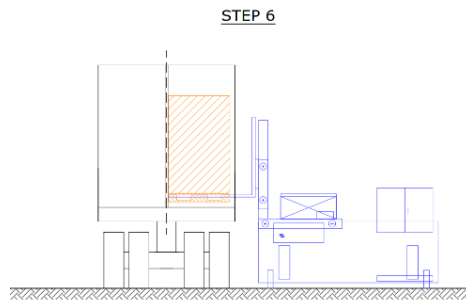
The NALON S4 is a cart designed to carry out the following loading cycle:



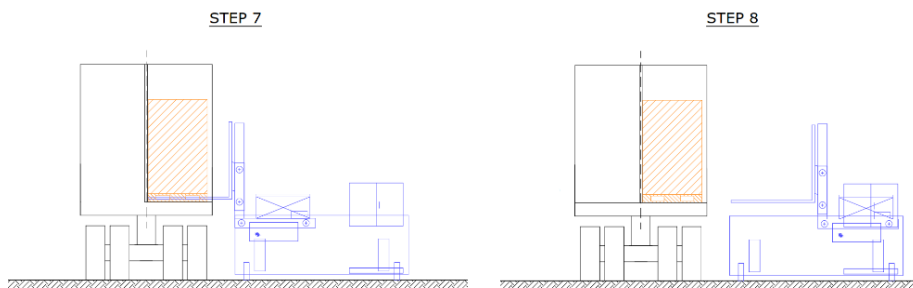
Step 1, 2 & 3: Collect the load of an Input Station



Step 4 & 5: Place the load in the cart itself & Move along the truck to the desired position



Step 6: Place the load over the truck box



Step 7 & 8: Drop the pallet in the truck & retreat to go to the starting position to pick up a new load





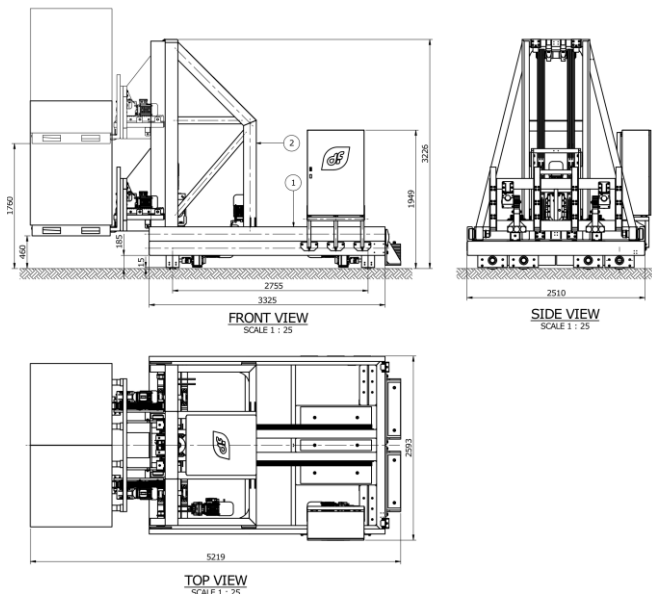
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## ADVANTAGES NALON S4

The Nalon S4 automatic truck loading system has the following advantages:

- The Nalon S4 does not need to make modifications on the truck for its operation.
- The Nalon S4, as it does not need human intervention, eliminates the risk of accidents for workers.
- The Nalon S4 supposes a reduction of the operating costs.
- The Nalon S4 reduces the load times on a conventional system, with the advantage that it can work 24 hours, 7 days a week.
- The Nalon S4 contributes to improve transport management, adding value to the supply chain and improving its external image.
- The Nalon S4 helps to protect the environment, since it does not emit gases during its operation.

## MAIN CHARACTERISTICS



### Main characteristics

Machine weight	6.500 kg
Max. Load	3.200 kg
Travel speed with load	60 m/min
Travel speed without load	90 m/min
Extraction speed	25 m/min
Elevation speed	5 m/min
Installed power	20 kw