LoadMatic®

Petrochemical industry

Truck and container loading automation for petrochemical industry

The loading of petrochemical products is an essential phase when supplying sensitive, valuable materials to the end customers. We at Actiw know the safety risks, challenges, and costs if the petrochemicals are damaged in loading and transportation.

Actiw’s automated solution loads your palletized or palletless products efficiently and undamaged for standard, non-modified trucks, trailers or containers. Actiw’s LoadMatic integrates seamlessly with any outgoing material streams, like production lines or automated warehouses. In addition, no alterations to the cargo space or substructures beneath the cargo are required.

Automation improves safety of your loading

Automating the loading of petrochemical products reduces both labour accidents and product damages.

- Improve work safety
  When load handling includes manual preparation, there is a high risk involved in each working step. With automating the entire loading process, you reduce safety risks.

- Achieve over 80% savings in labour and handling costs
  Automation eliminates unnecessary working steps in load handling. Instead of a team operating reach stackers and forklifts, only one LoadMatic operator can handle the operation of several LoadMatic units, i.e. several packaging lines.

- Minimize handling damages
  Eliminate all damages of your sensitive petrochemicals when loading them for trucks or containers. A reliable automatic loading solution keeps your products intact and your end customers satisfied.

- Save in machinery investments
  LoadMatic reduces significantly your machinery investments removing a fleet of forklifts that are used in loading operations.

- Enhance eco-efficiency
  LoadMatic generates additional savings by lowering energy consumption. It runs on electricity eliminating emissions. The total cost of energy with LoadMatic is estimated to be less than 10% compared to the traditional alternatives of loading.

Increase capacity, decrease operation costs

When automating the entire loading process, you gain a great reduction in the required machinery and labour. With LoadMatic you can also eliminate the costs of product damages which occur often in manual loading.

- Product damages: $50 k€
- Labour & Handling: $700 k€
- Machinery: $350 k€

Traditional LoadMatic

Annual operating cost: $1,1 M€

-86%
LoadMatic for petrochemical industry – How does it work?

The LoadMatic operates in a few simple steps:

- **Load forming** – LoadMatic’s load forming equipment arranges incoming pallets one row at a time, that is 2 pallets side-by-side. Infeed of pallets can come on either single or double conveyor. After this, the pallets are gently pushed onto the loading plate which is covered by rollers.

- **Alignment** – LoadMatic stands on sets of legs. Both ends are separately adjustable in height to cater varying trailer heights. Legs are also adjustable in horizontal direction, enabling accurate alignment with the container or trailer. Alignment is done after full set of pallets is on top of loading plate.

- **Loading** – The pallets are pushed into the cargo space on the loading plate. The stopper gate is driven down to keep the pallets inside the cargo space while the loading plate is pulled out. When the plate is out, the loading process is complete and the container is ready for transportation and the LoadMatic is ready to receive pallets for a new load. Loading cycle takes ~5 minutes to complete.

All functions are controlled by PLC (Programmable Logic Controller) based control system, ensuring safe and easy operations of the system. PLC system can be easily integrated with any upstream system, such as palletizer or conveyor system, as well to factory DCS system.

**What Actiw LoadMatic offers to you?**

- Fully automated loading, seamlessly integrated with any palletizer, automatic warehouse, or conveyor systems
- Easy and reliable operations
- System is capable to handle majority of different chemical pallet types
- Suitable for palletless products, such as Jumbo bags
- Reducing docking time to a matter of minutes
- Less manual work and equipment needed
- Gentle loading, both for cargo and cargo space
- No alterations needed to trailers and containers
- No special equipment required at the receiving end
We have over 35 years and 200 projects of experience in solving, automating and optimizing our customers’ material flows. Excellence in engineering, commitment and continuous improvement have driven us to innovate loading solutions to improve intralogistics efficiency across many industries. Fully automated loading improves efficiency of your loading decreasing your operations costs over 80%.

Due to the drastic decrease in your every day costs the payback time of Loadmatic is less than a year.

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### Technical details

<table>
<thead>
<tr>
<th><strong>Capacity</strong></th>
<th>Up to 72 pallets / hour (4 containers / hour) (depending on layout configuration and loading pattern)</th>
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</thead>
<tbody>
<tr>
<td><strong>Unit load</strong></td>
<td>PALLETTIZED CP/PRS or equal and other 4-way 1200x1000 and so on PALLETTLESS FFS, woven, slip sheet, jumbo bags etc.</td>
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<tr>
<td><strong>Max load</strong></td>
<td>Up to 30 000 kg</td>
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<tr>
<td><strong>Cargo spaces</strong></td>
<td>Sea containers 20', 40' and 45' (DC, HC,PW) 13,6 m box / curtain trailer</td>
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</table>
| **Installation location** | Indoors or sheltered  
Temperature range -30 to +54 °C                                                     |
| **Safety**            | acc. EC directive 2006/42/EY                                                                    |
| **Availability**      | 98%                                                                                              |
| **System lifetime**   | Designed system lifetime is minimum 10+ years                                                    |

#### Actiw customer care keeps your operations running smoothly

- 24/7 support helpdesk
- Preventive maintenance reporting, on-site support if required
- Trainings for operational and maintenance staff
- Software support for Actiw control system by remote access
- Spare parts to ensure trouble-free operations
- Retrofits to adapt your changing loading needs
Actiw is a Finland-based manufacturer and turnkey integrator of intelligent and highly efficient automated loading solutions and warehouse dispatch systems. The company has a solid track record with hundreds of successful installations and pleased customers all over the world. Automated material handling projects have been executed for several industries since mid-1980’s.