



an introduction to
container loading
with hydraulic skates

INTRODUCTION

The hydraulic container loading system is based on the Joloda Skate & Track principle; two modular skates (or skate trains) which lift and roll the load inside the container. In principle a set of two skate trains is sufficient to load a container. The maximum lifting capacity of our system is 27 tonnes over 12 meters of skates.

LOADING METHODS

When using the Joloda hydraulic skates, there are two different loading methods. The one shot loading method and the container stuffing method.

ONE SHOT LOADING



With one shot loading, the load is prepared and moved into the container from a special loading ramp or loading plinth in front of the container.

The skate train consists of a master skate with an integrated hydraulic pump for manual lifting of the skate. Depending on the length of the load, multiple extension skates can be connected to the master skate. The two skate trains run in a special steel track which are placed on the required loading platform / plinth and on top of the container floor. The load itself is placed on a slave pallet (pallet on which the actual load is placed and lashed) which is lifted by the Joloda system and pushed into the container.

When the load is inside the container, the two skate trains are lowered and pulled from underneath the slave pallet back onto the loading platform / plinth. Finally the tracks inside the container are also pulled out from underneath the slave pallet. The only two things which stay behind in the container are the slave pallet and the load itself.

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CONTAINER STUFFING



With the container stuffing method no loading platform is used. The load / slave pallet is placed straight into the container. Same as with the one shot method, a hydraulic skate kit is used to bring the load into the container.

The skate kit composes of a master skate set and possible also extensions skates. This depends on the length of the load. Same as with one shot loading, once the load is in place and the container is loaded, the tracks will be pulled out from underneath the pallet to be used for the next container load.

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COMPONENTS

Aside from the chosen loading method is each skate kit containing the following parts:

- Hydraulic master skate kit
- Extension skate sets
- Heavy duty portable skate tracks

The hydraulic master skates, made of high quality galvanized steel, are the key element and the first part of the skate train. The master skates have the integrated hydraulic pump which actually lift the skate train by means of a manual operated lever. A set always contains a pair of master skates. For each skate an operating handle is included.

Lifting of the skate is done by using the lever. After twenty pumps the skate has reached its maximum lift. Lowering the skates is done by pushing the lever all the way forward. This releases the pressure and results in an instant and full drop of the skates with the load back on the floor.

The master skates come in two standard lengths; 1.211mm and 1.521mm.

EXTENSION SKATE SETS

The extension skate sets, made of high quality galvanized steel, are required in case the load exceeds the length of the master skates. The extensions skates are suitable for connection to the master skates as well as to other extension skates.

The extension skates come in two standard lengths; 1.211mm and 1.521mm. When loading 45ft containers a special extension skate is available.

We recommended not to exceed a skate train length of 13.650mm / 45ft.

The skates run in the heavy duty portable skate tracks. These tracks provide the guidance to the skate train both on the platform and in the container. There are platform bound tracks and tracks that will be used for inside the container. The skates require an aligned layout to guarantee smooth movement.

The portable tracks are modular in set up. After loading is commenced, the tracks inside the container will be disconnected from the tracks on the platform. Then the tracks are taken out of the container before the doors are being closed.

The tracks are available in two standard lengths: 3.000mm and 3.200mm. In case of container stuffing the 3.000mm version is used. For the one shot loading setup the 3.200mm tracks are used.



Example of a skate train for a 40ft one shot loading setup



Example of two connected modular tracks for hydraulic skate system

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SLAVE PALLETS

For both loading methods a slave pallet is required on which the load will be placed and lashed. The slave pallet is not a Joloda product but is to be sourced by the customer from a third party.

Normally made of wood, but any other material will do as well. Important in the design is that the pallet provides an equal spread of the load and that the pallet cannot deform when being lifted. If required Joloda can make a recommendation on design and setup.

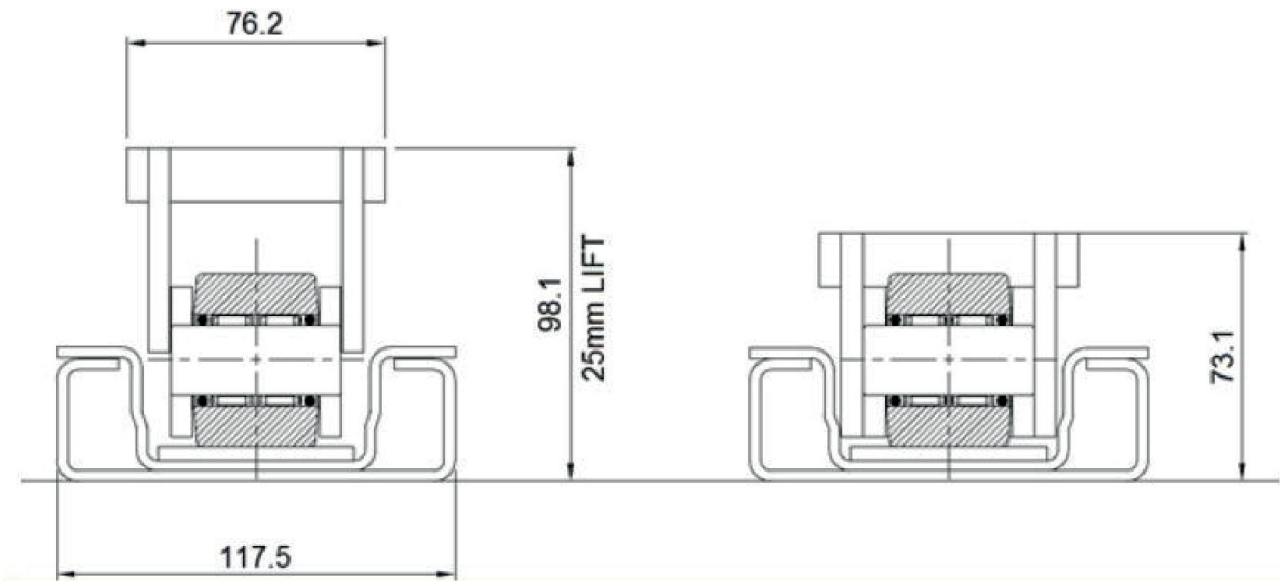


Example of the master skate positioned against the wooden slave pallet of the master skate positioned against the wooden slave pallet

DIMENSIONS AND TOLERANCES

The Joloda hydraulic skate system has a total lifting height of 25mm. In lowered position the system measures 73mm from container floor to the top of the

skate train (skate in track). We recommend a clearance of 78-80mm between the bottom of the pallet and the container floor. This leaves then a total lift of 18-22mm.



Cut view drawing of skate train in heavy duty track

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LOADING PLATFORM

In case the load cannot be placed directly into the door opening of the container, a loading platform is required. There are two possibilities to load from a platform; either with the container on the chassis of the truck (elevated platform) or the container is placed on the ground (loading plinth).

It is important that there is a connection between the truck chassis / container and the the loading platform / plinth during the loading process for a smooth transfer of the load into the container. We also recommend to have a slope of maximum 1° to ease the transfer of the load into the container.

Against additional costs Joloda can provide design drawings of both types of platforms or actually supply a platform. The Joloda platforms have a modular design which makes them very easy to build up and breakdown (one man operation with forklift).



Example of an elevated platform



Example of a loading plinth

TRAILER CHASSIS SUPPORTS

When the load is moved from the loading platform into the container, the weight of the pallet will cause the suspension of the vehicle to drop which results in 'floating tracks' in the container. This will result in permanent damaged (deformation) to both the tracks and skates from a certain weight. This is avoided by placing a pair of chassis supports on each rear side of the vehicle chassis.

Chassis supports are a standard workshop tool and can be sourced from a third supplier. If preferred, Joloda can include a set in its delivery as well.



Examples of a chassis support placed underneath the chassis

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WHEEL GUIDES

Not necessary but recommended. These steel wheel guides are placed in front of the loading platform to help the driver to align the container with the loading platform.

Wheel guides can be sourced from a third supplier. If preferred, we can include a set in its delivery as well.



Example of semi-trailer positioned between wheel guides

UNLOADING CONTAINERS

The Joloda hydraulic skate system can very well also be used by the receivers' end for the unloading of the container. Especially when it concerns a series of containers shipped to the same address, this is something to consider. The modular design of the hydraulic container loading system makes it very easy to also sent a set to the receivers' end (and have it returned after the last container is unloaded).

For a trouble free unloading operation the following points are to be considered:

THE HYDRAULIC SKATE SET

Make sure the receivers' end has the same configuration of both skates and tracks as the loading side has.

SLAVE PALLET

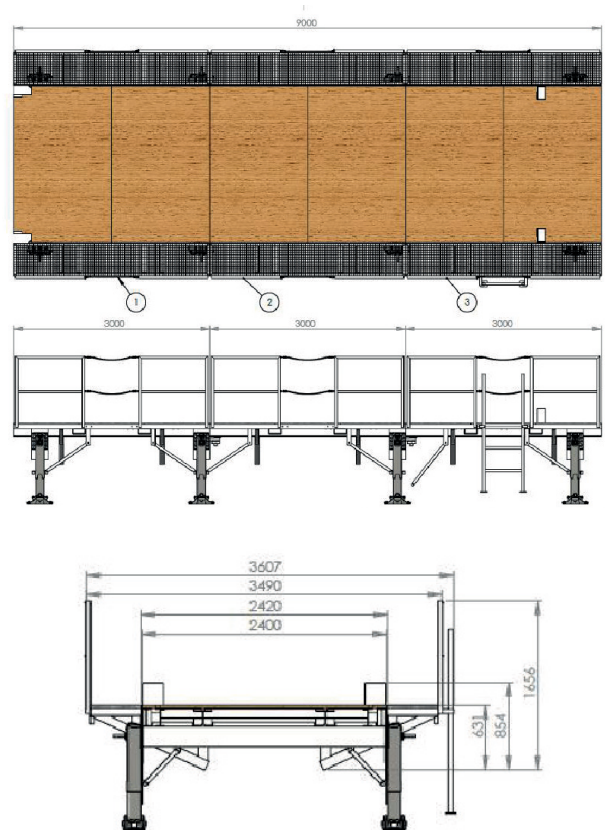
This is the most important detail for a successful and trouble-free unloading operation. To avoid the skate train from getting stuck in the tracks (and not being able to pull the load out), the tracks have to be aligned over the full length of the container. This is easy for the loading side as the container is still empty. But when having to unload the container, the load is already in. This means that the design of the slave pallet has to guarantee that the tracks will be aligned when being slide under.

Joloda can assist with the design of the slave pallet.

PLATFORM

When unloading a container, we recommend the platform to be horizontal (no slope) to avoid loss of control of the load when being lifted. Using a winch or forklift to pull out the load with straps (no cables to avoid the risk of snapping!) is the most common method.

Joloda has designed a modular platform of which its segments are suitable for being shipped in containers. Ideal for temporary use on (remote) sites. After the last the container is unloaded, the platform and skate kit can simple be dismantled and sent back to the location of origin.



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about us...

who we are

The Joloda Hydraroll Group is a one-stop-shop loading solutions manufacturer. We provide a complete range of manual, semi-automated, or fully automated solutions for modified and non-modified trailer or container applications, making loading and unloading processes more efficient and effective.



Our legacy spans more than 60 years, and our footprint encompasses six factories and offices on five continents. We have an unrivalled global network of over 35 local sales and support partners.

Our status as the global leader in loading solutions is demonstrated by our proven and trusted technologies; we have over 200 non-modified, 1,000 automated and 500,000 manual loading systems in operation worldwide.

**LIGHTENING LOADS
AROUND THE WORLD**

case studies

Get things moving quickly and efficiently with our loading solutions, but don't just take our word for it...

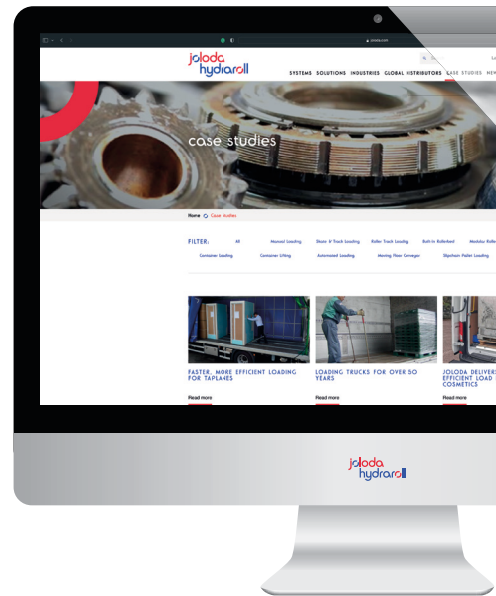
Learn how we've helped streamline other business's logistics and create the ideal solution for thier loading problems.



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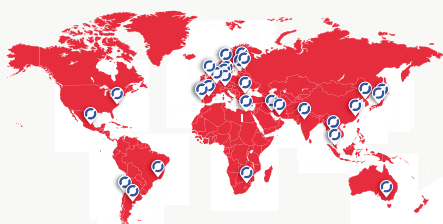
we're trusted



we're certified



we're global



12 month warranty

We are the manufacturers, the innovators and we're proud to put our name against the quality of our all of our loading systems. That's why we offer a 12-month warranty.



if you have any questions, please get in touch!

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