4. Dock levellers

Loading Systems PoweRamp dock levellers offer you the possibility to bridge the difference in height and distance between the warehouse floor and vehicle in the most efficient way.

Efficient and safe loading and unloading

Loading Systems dock levellers ensure optimal bridging is achieved between the dock leveller and the vehicle bed. Even if the vehicle bed is not entirely horizontal due to uneven loading, the flexible platform construction will easily compensate the difference in height resulting from the platform not being horizontal.

Everything we do revolves around the needs of our customers

Loading Systems can provide bespoke solutions tailored to the customer's specific needs. No project is too large or too small as we provide solutions for: large distribution centres, small warehouses with a single loading bay, double-deck trailers or standard vehicles. We can advise and supply you with solutions for new build or refurbishment projects.

We have a solution for most loading bay applications. Our comprehensive product portfolio and range of options is designed to improve ease of use, safety, and integration with other products or systems typically associated with loading bay activity. Naturally our products and solutions are designed to be incorporated into the architectural aspects of the building.

We have more than 45 years experience of providing products and solutions to all market sectors including but not limited to: logistics, material handling, storage, food manufacturing, cold storage, transport, construction, industry and government.

Options

Our dock levellers are available as hydraulic, including extendable or telescopic lip, in a various range of dimensions, capacities, or built bespoke to your requirements. By selecting the options which best suit your needs you can achieve considerable capital savings but you also profit from lifetime cost savings through improved efficiency, high quality and reliability and the safety of your dock leveller.

The 233M with extendable lip can be extended or retracted by means of a separate control station. This operation ensures an ultimately accurate positioning of the dock leveller lip onto the vehicle bed. This ensures you prevent damaging the last load into the vehicle, also referred to as the end load.

The standard load capacities are 60kN or 100kN. However, most load capacity requirements are possible. During the loading or unloading process the vehicle's upward and downward movement, or float, is automatically followed.

The Loading Systems dock levellers are also suited to load or unload so called end loads below warehouse level.

The working range or lip angle can be adjusted to suit specific requirements.

Dock levellers can be delivered in most colours or hot-galvanised.

Durability

The robust construction and self-bearing characteristics facilitate open or closed pit styles or even tailgate openings.

The modular front beam on the lower frame serves to protect the hydraulic and mechanical construction at the bottom of the dock leveller.

The Loading Systems dock levellers include a fully closed hydraulic system.

Safety

The loading bay opening is typically an extremely active egress and ingress logistical opening, so good route planning is essential to manage safety. Loading Systems can increase safety on and around your loading bay openings and can offer you an extensive range of products and accessories.

Low operating hydraulic pressure

The use of one single chrome hardened main cylinder with double sealing ensures that the hydraulic system has an extreme low operating pressure. This reduces failures and increases durability.

Emergency stop facility

Loading Systems has a unique emergency stop safety device integrated into the main cylinder which, unlike most hose rupture valve devices, is not temperature sensitive or susceptible to failure.

Emergency switch

The control box can be provided with an emergency stop switch with reset protection (panic stop) as an option.

Anti-skid coating

The platform is provided with tear plate as a standard. As an option the platform can also include an anti-skid coating which also has sound-absorbing properties.

Leveller and door protection

With manual or electrically operated doors, a dock leveller and door protection interlock can be fitted to the dock leveller. This means the dock leveller can only be operated if the door is opened.

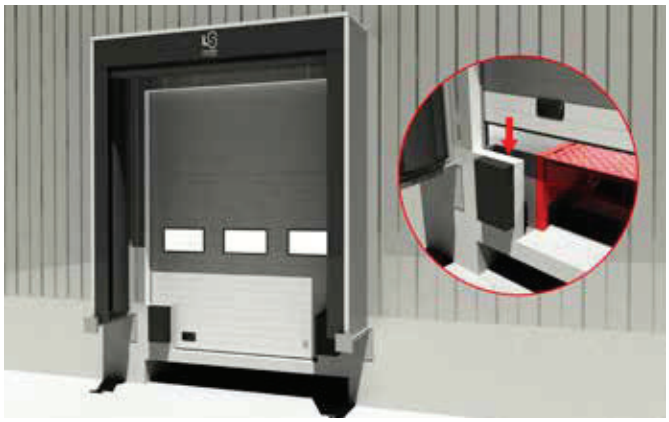
Energy-saving & sound insulation

The Loading Systems products are typically located at the interface between the internal and external environments. We are often presented with the challenge of keeping the cold out and the warmth in, or visa versa.

Loading Systems offers a variety of solutions for these requirements. Our control boxes, which can be custom made, play an important part in providing the best solution. Please do not hesitate to ask for information on how we can accommodate the sequential logic of your operational needs into the control box, which can be programmed to suit your needs.

ISO Dock solutions

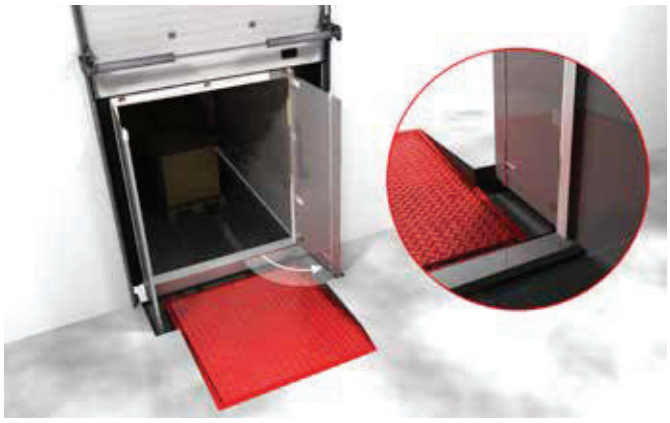
Our hydraulic dock levellers 233M with extendable lip of 1000 mm can be built-in into an ISO-dock layout. This solution allows the industrial door to close in front of the dock leveller, which ensures optimal insulation.



Our dock levellers comply with all safety requirements aspects in the European Directive

Stepped dock or dock house

For cold storage with refrigerator vehicles or fresh food processing environments where food contamination is a concern, it is important that vehicle doors are only opened after the vehicle is actually docked. We can offer a product solution for this requirement.



Durable draught sealing

Loading Systems has a durable solution to seal even the smallest of gaps between the pit edge and the dock leveller at the sides and at the rear.

Platform insulation

Dock leveller platform insulation not only improves insulation but also provides sound-absorption.

Silent Block

The dock leveller 232M with extendable lip can be provided with Silent Blocks as an option. This significantly reduces the impact sound made when the dock leveller reaches the lowest position.

Legislation

All Loading Systems dock levellers are provided with a CE marking and complies with all safety aspects stipulated in the European Directive EN 1398: 2009. Furthermore, the Loading Systems dock levellers are extensively tested in both real life and simulation software tests.

4.1 232M dock leveller with extendable lip

The Loading Systems 232M is an electro-hydraulic dock leveller with an extendable lip. Both the platform and lip are hydraulically driven.

Dock leveller 232M - dimensions and working range

Metric dimensions (mm)

Length	Construction height	A	B
2000	600	415	290
2500	600	370	280
3000	600	355	275
3500	600	315	270
4000	600	295	265
4500	900	355	600
5000	900	347	600

Platform width: 2000 or 2250 mm

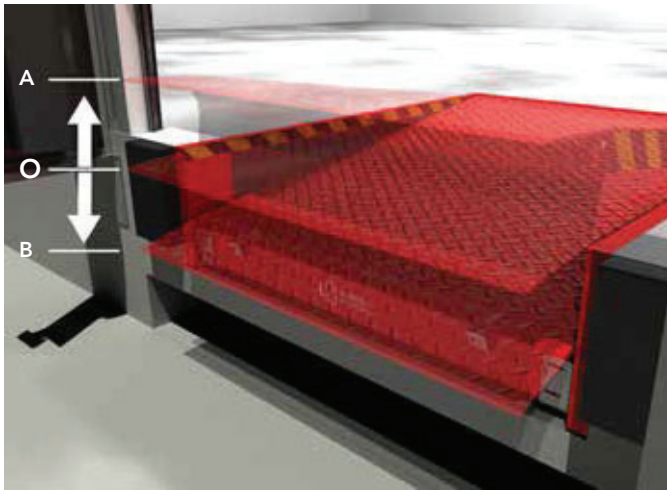
Imperial dimensions (mm)

Length	Construction height	A	B
2170	600	400	285
2770	600	365	275
3370	600	325	270

Platform width: 1830 or 2100 mm

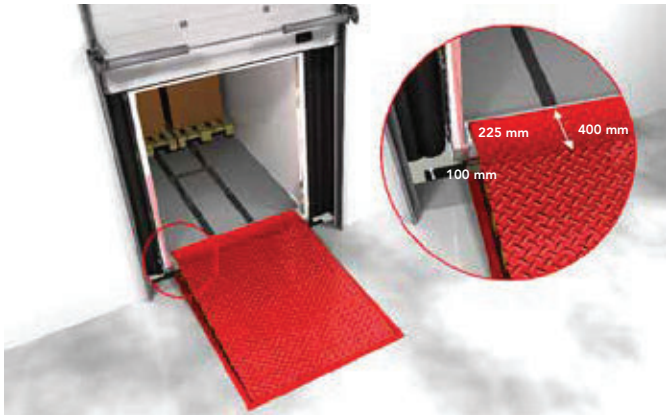
In compliance with EN 1398 it is not permitted to use dock levellers outside the permitted gradients of ± 12.5% (approx. ± 7°).

Upon request, varying dimensional and working ranges can be provided to ensure the permissible tolerances are achieved.



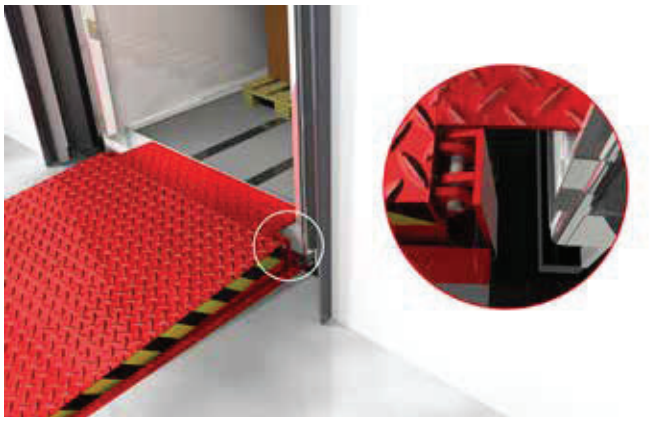
Lips

The lip has a standard length of 400 mm and - if 100 mm dock bumpers are used - a free loading surface of 225 mm depth on the vehicle bed can be achieved. As an option a lip length of 500 mm can be provided, and we can also adjust the lip angle to suit your specific applications.



The orthotropic construction is extremely robust and also prevents pallet debris from hindering the hinged structure.

To increase the adaptability of the 232M, the lip can be supplied bevelled at the end or supplied with side sections.



Operation

The Loading Systems dock leveller 232M is operated by means of a single button. By keeping the button pressed, the platform will rise from its rested, or parked position and will extend the lip automatically when the platform reaches the highest position. If the button is subsequently released, the platform and lip will automatically lower to the vehicle bed level.

When used in conjunction with the “Auto-Return" button option, the Loading Systems dock leveller will automatically return to its home position as soon as the loading and unloading process is completed.

Dimensions, working range and load capacity can be adjusted upon request

4.2 233M dock leveller with telescopic lip

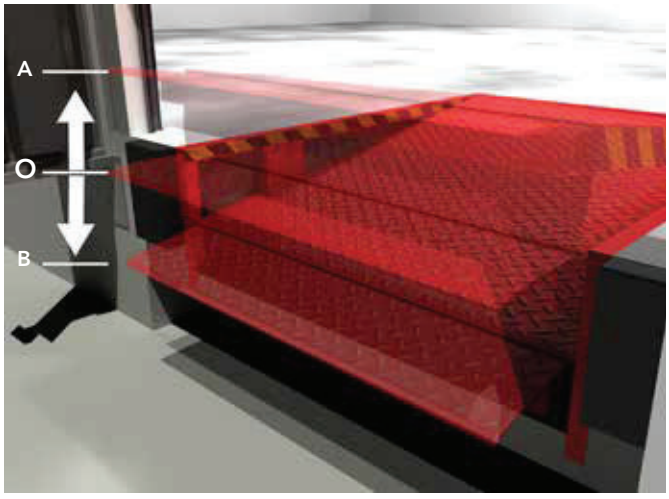
The Loading Systems 233M is an electro-hydraulic dock leveller with a telescopic lip. The platform and lip are hydraulically driven.

Dock leveller 233M - dimensions and working range

Dimensions (mm)

Length	Construc-tion height	500 mm lip		1000 mm lip*	
		A	B	A	B
2000	700	500	450	-	-
2500	700	395	405	470	470
3000	700	415	380	490	430
3500	700	375	365	435	405
4000	700	350	350	400	385
4500	1000	400	640	450	700
5000	1000	400	640	450	700

Platform width: 2000 or 2250 mm
*) Optional



In compliance with EN 1398 it is not permitted to use dock levellers outside the permitted gradients of ± 12.5% (approx. ± 7°).

Upon request dimensions and working range can be adjusted to the permissible tolerances.

Telescopic lip

The standard continuous telescopic lip can slide from 0 mm up to 500 mm and has a free loading surface on the vehicle bed of 250 mm in depth. The board or lip can be extended to a length of 1000 mm and the lip angle can be adjusted for specific applications, as an option.

To increase the adaptability of the 233M dock leveller, the lip can be supplied bevelled at the end or supplied with retractable side sections. These smooth running side sections prevent damage to the rear of the docked vehicle.

Operation

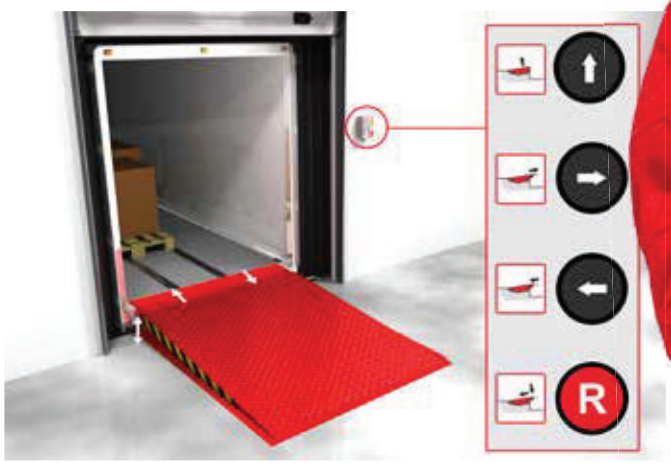
The 233M dock leveller is provided with a 4-button control station as a standard.

Operation is extremely simple. By keeping the button "Up" pressed, the platform will rise from its home or parked position up to the required loading level.

The individual buttons "Lip-In" and "Lip-Out" are unique features. They allow operation of the lip when the platform is in any position. This provides extremely accurate positioning of the lip onto the vehicle bed.

If the buttons are released, the platform and lip will automatically lower to the vehicle bed level.

Activating the button “Auto-Return” (impulse) automatically returns the Loading Systems dock leveller to the home or parked position as soon as the loading and unloading process is completed.



Simple operation with which the lip can be positioned in an ultimate accurate manner

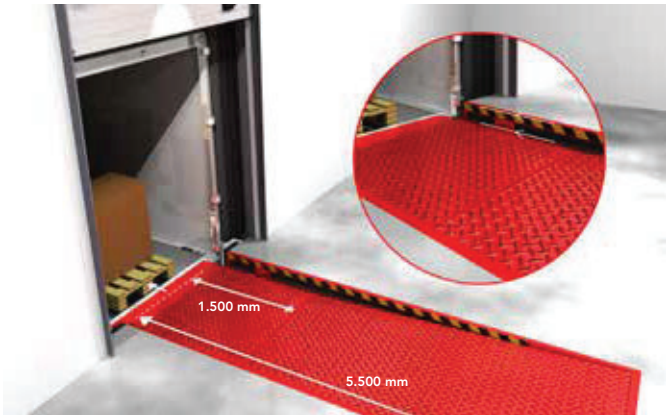
4.3 253 dock leveller for vehicles and delivery vans

A single dock leveller solution which facilitates articulated vehicles and delivery vans? The PowerRamp 253 can accommodate both.

The dock leveller has a segmented lip or board. The dock leveller can be used as a "standard" dock leveller with telescopic lip for articulated vehicles. Or alternatively, when used for loading or unloading vans only the centre section of the lip or board slides out. Furthermore, the dock leveller load capacity can be adjusted to prevent overloading the delivery van.

4.4 256 parallel dock leveller for end load and high stacked goods

The parallel dock leveller ensures easy loading and unloading of end loads and high stacked goods. The dock leveller is provided with a parallel section at the front side, to enable the MHE vehicles to always enter the vehicle horizontally.



Special dock levellers for special applications

4.5 CombiControl

Loading Systems is a total solution supplier, and not only provides control systems for basic operation of individual products, but we also provide control systems for totally integrated operating systems. This means that Loading Systems delivers combined control boxes for dock levellers, inflatable dock shelters, dock shelters with electrically operated top curtains, and industrial doors and accessories.

Integrated solutions

From an aesthetic perspective, integrated solutions are more attractive than individual control boxes delivered by some suppliers. By combining the operation of your loading bay products into one single control station, only one power supply is required. You will not only save on installation costs but lifetime maintenance and repair costs can also be reduced.

Sequential logic

When using sequential logic, the Loading Systems products and accessories combined with the CombiControl control boxes can be programmed to suit your exact operating sequence as a standard feature.

Standard "Auto-Return" and possibility to include automatic sequential logic

All dock leveller control boxes can include an "Auto-Return" button, allowing the dock leveller to automatically return to its home position as soon as the loading and unloading process is completed.

The automatic sequential logic ensures that the CombiControl can be set so that upon activation of the "Auto-Return" button the industrial door, in conjunction with the door safety edge option, automatically closes as soon as the dock leveller returned to its home position.

Main power switch

All control boxes include a main power switch with padlock safety in accordance with EN 418 as a standard.

Advanced Control Centre

All controls have been prepared for the Advanced Control System. No error-sensitive and expensive control boxes are required to detect the product status when Loading Systems control boxes are used. All controls include LED indication to display the product status, and as an option can immediately report a failure.

Easy to install

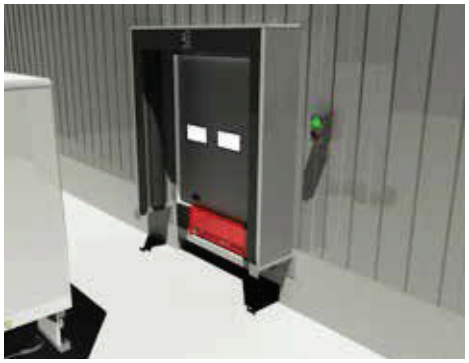
By designing the controls so that only a limited amount of space is required, our controls can easily be installed in even the most space restricted environments.

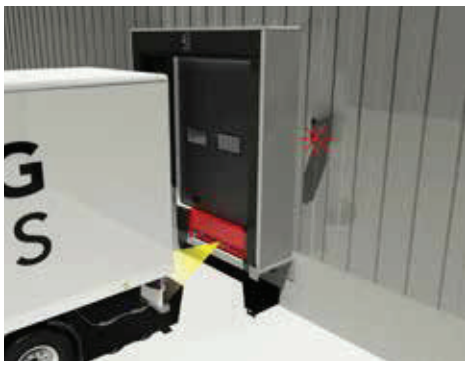
Accessories

All control boxes can easily be adapted to accept most Loading Systems Accessories, and can easily and retrospectively be modified to be integrated in the sequential logic to improve safety on or around the loading dock to reduce damage and reduce energy consumption.

Docking Assistant

By means of "green and red" signals the Docking Assistant provides an indication of the distance between the rear of the vehicle and the loading and unloading bay. This system simplifies docking and reduces risk of vehicle damage.





Warning lights

It is possible to include traffic signal lights to work either independently or in conjunction with a warning light in the control station to improve safety on or around the loading bay.

As soon as the loading and unloading system is activated, the external stop light switches from green to red (unsafe to depart), and as soon as the dock leveller lip is positioned on the vehicle bed, the warning light on the control box inside, switches from red to green.

As soon as loading and unloading is completed, and the system returned to its home position, the external signal light switches from red to green and the warming light inside switches from green to red (unsafe to load and unload).

Vehicle detection sensor

The sequential logic in the control box can be set according to your preferred choices. The sequential logic, combined with the vehicle detection sensor, can ensure that the industrial door opens only after a vehicle is docked. This creates a safer loading or unloading situation on and around the loading and unloading bay: a fork-lift driver can no longer drive backwards onto the platform unexpectedly. Furthermore, this also significantly reduces energy loss, as the door only opens after the vehicle is "sealed' onto the loading bay.

Alarm

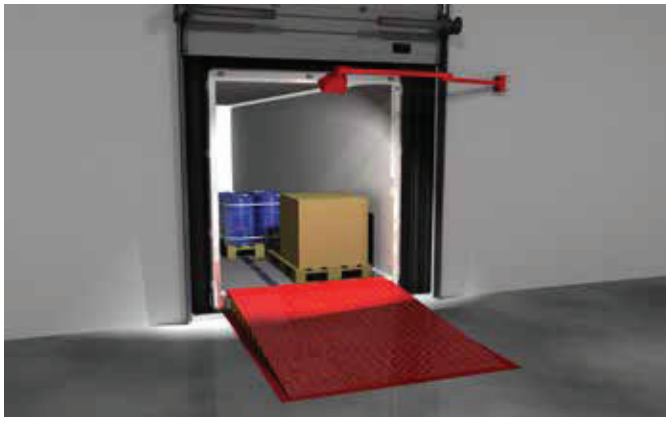
The control box can be supplied with an acoustic alarm which is combined with a vehicle detection system.
If the vehicle departs the loading and unloading bay prematurely, thus creating a dangerous situation, the acoustic warning signal will automatically be activated.

Wheel chocks

The wheel chock electric sensor detects the presence of a vehicle at the loading and unloading bay similar to the vehicle detection sensor. After the vehicle is detected, the sequential logic can be operated by means of the products (door or leveller).

Dock lights

Dock lights increase visibility around the loading and unloading bay. Dock lights can be programmed so that they illuminate the rear of the vehicle as soon as the dock leveller is activated.



Roll off safeguard fence

The roll off safeguard fence is positioned in front of the dock door to ensure that no one can accidentally fall onto the loading platform as soon as the door is opened.

Safe and CE-TUV certified

The control boxes comply with all relevant European standards and are CE-TUV certified. Quality and safety are in accordance with the valid standards.

A wide variety of accessories to improve safety on and near docks

4.6 Built-in possibilities and saving options

Loading Systems offers a large variety of built-in possibilities and architectural elements to meet all customer-specific preferences. We have a solution for most applications, and we would be pleased to consult with you on the best options to suit your requirements. Good advice will result in significant savings on construction and lifetime cost.

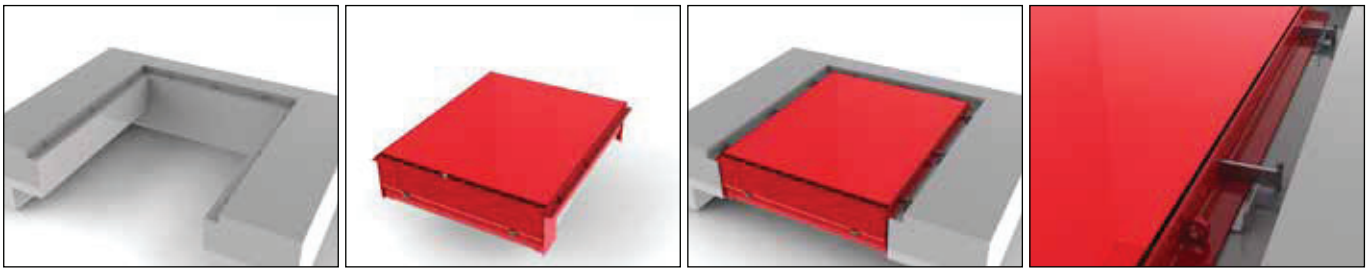
Choose from a range of built-in options for all situations to ensure considerable savings on construction and lifetime costs

Self-bearing "hang in frame", integrated into the dock leveller (Pit box system 310)

Pit box model 310 is a fully “open” construction, whereby the dock leveller "hangs in" the pit box with the tailgate opening immediately below the dock leveller. The frame dimensions are maintained during construction by diagonal bracings which are already fixed to the leveller during production. The dock leveller and frame are installed in the concrete recess by welding onto the existing reinforced concrete pin, which is then back filled with concrete.

Advantages:

- Very quick assembly.



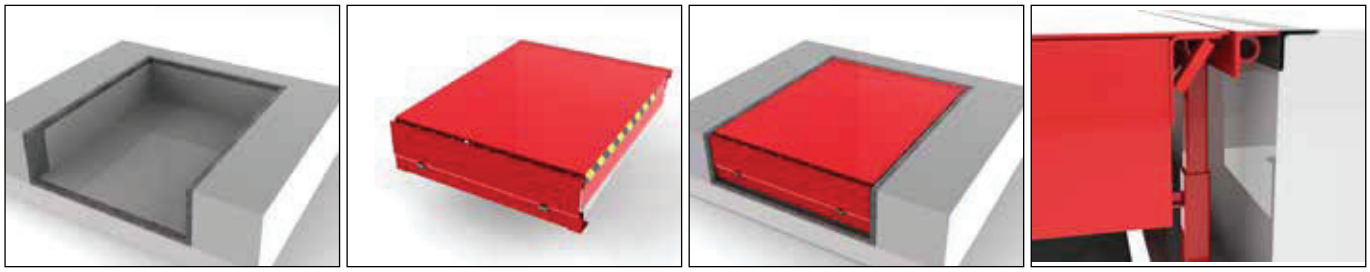
Pit box system 310

Pit box system with intermediate floor (Pit box system 320), console (Pit box system 330) or fully suspended (Pit box system 350)

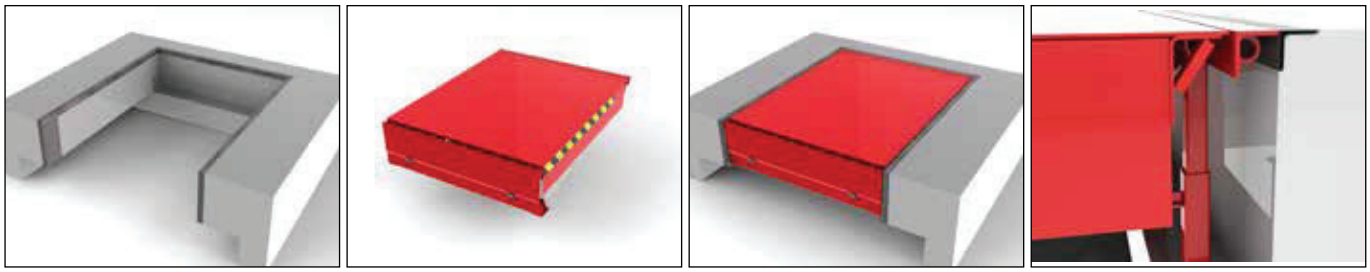
These pit box models are fully suspended and provided with a concrete intermediate floor or raised edge. For this pit box model, the frame is welded onto to the leveller during production.

Advantages:

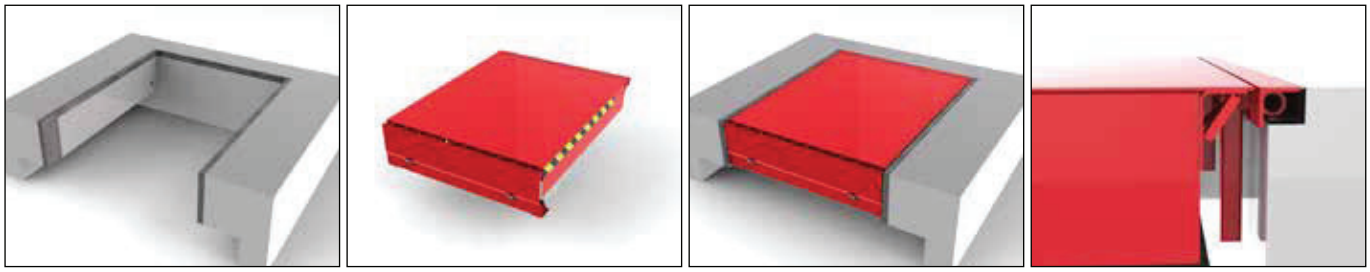
- The dock leveller is delivered in a lowered transport position, which could result in significant savings (approx. 50%) on transportation costs.
- Filling with concrete is not required.
- Very quick assembly.
- After assembly, the dock leveller is immediately ready for use.



Pit box system 320



Pit box system 330



Pit box system 350

Box model with concrete form (Pit box system 340)

With pit box model 340, the dock leveller is provided with a concrete form during production. The dock leveller including concrete form is placed on a "temporary" or permanent wooden formwork or shuttering, after which the leveller and pit box are welded onto the reinforced concrete. The concrete is then poured around the leveller and the permanent formwork is removed under the leveller.

Advantages:

- Very quick assembly.
- Low construction costs, no complex and expensive formwork.

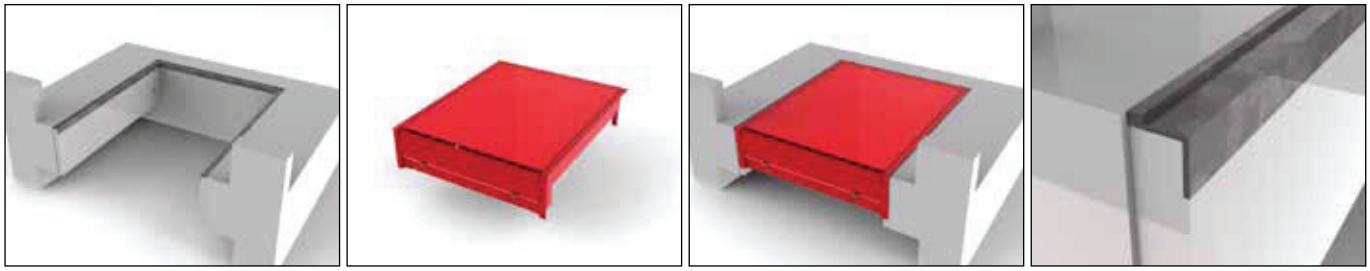
Pit box system 340

Self-bearing "hang-in frame", integrated into the dock leveller (Pit box system 360)

Pit box model 360 is a fully “open” construction, whereby the dock leveller "hangs in" the pit box with the tailgate opening positioned immediately below the dock leveller. The frame diagonal bracings are already fixed to the leveller during production. The dock leveller is welded on the pre-mounted frame in the concrete recess.

Advantages:

- Filling with concrete is not required.
- The pre-mounted frame can be fixed to the floor plate prior to mounting the dock leveller.
- Very quick assembly.
- After assembly, the dock leveller is immediately ready for use.



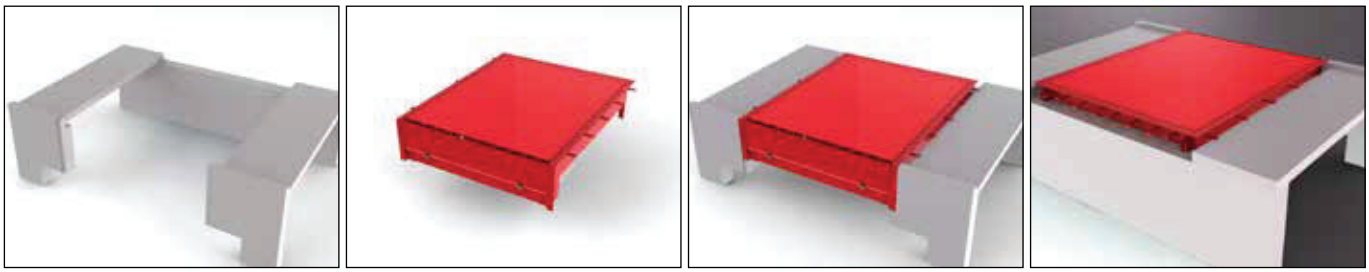
Pit box system 360

Self-bearing "hang-in" frame, integrated in the dock leveller, suited for building-in with prefab concrete systems (Pit box system 370 / 375 / 380)

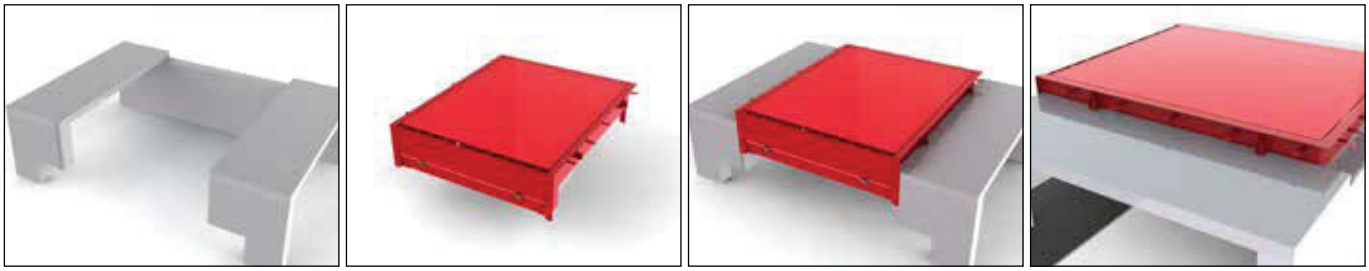
These pit box systems are similar to the pit box system 360, however these also include anchors all around the frame. The front side of the frame is supported by a prefab concrete system. The frame is provided with adjustable screws in the back frame (pit box system 370) or around (pit box system 375/380), to ensure that it can be adjusted to the same level as the warehouse finished floor level.

Advantages:

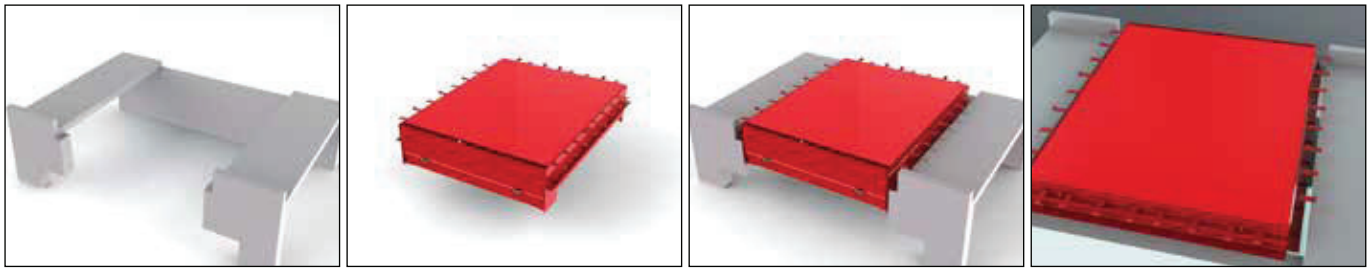
- Very quick assembly.
- Low construction costs, no complex and expensive formwork.



Pit box system 370



Pit box system 375



Pit box system 380

Low construction costs and extreme quick and simple assembly