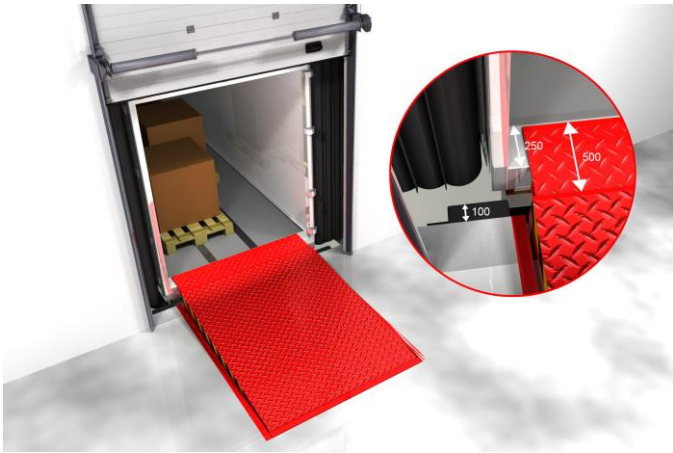


# Dock leveller with telescopic lip 100kN



**Electro hydraulic dock leveller including a sliding (telescopic) lip and an increased capacity. The platform as well as the lip is driven hydraulically.**

### Materials

Platform and lip are made of high-quality durbar plate:

- Platform: Durbar plate 8/10, S235JRG2, St-37
- Lip: Durbar plate 20/22, S235JRG2, St-37.

Depending on the width, the sliding lip of the dock leveller 233 is reinforced in the longitudinal direction by 6 heavy steel profiles in steel 52. Dock levellers that are wider than 2000mm are strengthened by 8 heavy sections. The telescopic lip is strengthened with guides, which slide into the profiles of the platform. This guarantees an optimal connection between lip and vehicle bed, whilst maintaining a high degree of platform 'twist'.

The rear of the top platform is connected to the lower frame by means of three hinges (each with a length of 300 mm) to the lower frame. The pins of the hinges ( $\varnothing 30\text{mm}$ ) are made from blanc, drawn steel rods and are zinc plated. They can easily withstand the applied forces.

The robust front beam absorbs the forces created by an emergency stop, cross traffic and where goods are being loaded below dock height. The self-supporting characteristics enable either an open or closed pit floor to be selected, or for a so-called letterbox opening to be used. Furthermore the front channel fixed to the lower frame provides protection for the hydraulic and mechanical components on the underside of the dock leveller.

### Drive

The platform is powered by two hydraulic cylinders ( $\varnothing_{bu}$  65mm) and the telescopic lip by a separate double-acting hydraulic cylinder ( $\varnothing_{bu}$  50mm).

The hydraulic system is completely closed and cannot, even under the most extreme circumstances, be affected by dirt, sand or dust. Thanks to the over sized cylinders a low working pressure of approximately 100 bars is created.

The chrome hardened plunger cylinders are designed with a pressure of 1200 bar. The hydraulic hoses are designed to hold a working pressure of 180 bars and a have a burst pressure of 600 bars. As a precautionary measure, pipe burst valves are integrated in the main cylinders.

The compact hydraulic power pack is positioned to the platform to prevent it from any possible damages. All these characteristics ensure a safe hydraulic system with a long life span and a minimum of maintenance.

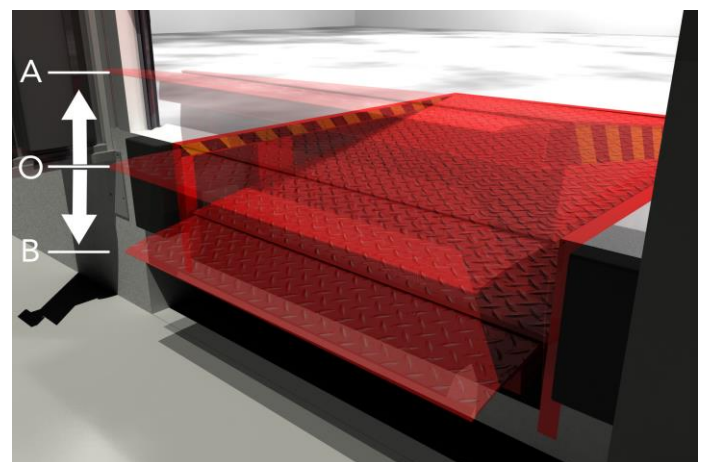
### Dimensions

The dock leveller 233 can be delivered tailor-made. However standard models with a construction-height of either 700 mm are available in a large range of platform dimensions.

Dimensions (mm)					
L2	BH	500 mm lip		1000 mm lip*	
		$\pm O$	$\pm U$	$\pm O$	$\pm U$
2000	700	310	340	-	-
2500	700	370	390	435	450
3000	700	400	370	465	415
3500	700	360	350	410	390
4000	700	330	340	375	375

**Platform width: 2000 or 2250 mm**

\*) Option



L2 = Platform length

BH = Construction height

O = Effective working range above dock

U = Effective working range below dock

# Dock leveller with telescopic lip 100kN

According to EN 1398 the dock leveller is not allowed to be operated outside the permissible gradient range of  $\pm 12.5\%$  (approximately  $\pm 7^\circ$ ).

The stepless telescopic lip is extendible from 0 to 500 mm resulting in a lip location length on the vehicle bed of 275 mm. The working range is measured from the front of the fully extended lip.

## Operation

With a 4-switch operation, the movement of the platform and telescopic lip can be individually controlled and they can therefore be accurately moved to the required position.

The operation is very simple. By keeping the 'raise push button' pressed, the platform goes up from the rest position until it reaches the correct loading height. By means of the 'lip out push button' the lip can subsequently slide onto the truck floor until the desired support is realised. When the button is released, the platform and lip will descend automatically to the level of the vehicle bed.

The telescopic lip is fixed into position after being extended to avoid the lip from moving away from the truck floor during loading and unloading. During loading and unloading, each up and down (suspension) movement of the vehicle is automatically followed.

After the loading and unloading process has been completed, by continuously pressing the 'R-button' the dock leveller 233 can be returned to the rest position. In this position, the dock leveller rests onto sturdy steel supports to prevent the platform from lowering unexpectedly as a result of load stress by cross traffic.

The dock leveller 233 is also suitable to load or unload so-called last cargo below the dock level.

## Technical Specification

Standards.....	CE certified
Capacity (EN 1398).....	100 kN
Construction height.....	700 mm
Sliding length.....	0 - 500 mm
Lip angle.....	ca. 5°
Motor.....	1,1 kW
Power supply.....	400 V / 50 Hz / 2,5 A
Control current.....	24 V DC
Protection class.....	IP 54
Working pressure.....	ca. 100 bar
Outside diameter main cylinder.....	65 mm
Outside diameter lip cylinder.....	50 mm
Operating temperatures between -30° and +50° Celsius	
Standard colour.....	(black) RAL 9005

## Standard safety provisions

- Full hydraulic safety stop by means of a pipe rupture valves built into cylinder;
- Main switch (can also be used as emergency switch);
- Non retractable sliding toe guards;
- Sturdy steel supports for transverse movements (cross traffic);
- Black / Yellow safety markings;
- Non-removable maintenance strut;
- Motor safeguards by means of a thermal relay;
- Control panel instruction symbols.

## Standards

The dock leveller 233 is CE marked. The Loading Systems dock levellers are in accordance with all safety aspects of the European standard EN 1398. The standard load capacity, which is 100 kN (axle load) is designed on a minimum surface contact per wheel of 195 x 130 mm and a maximum gradient of the platform top of 12.5 percent, in accordance with the European standard EN 1398.

## Options

- Various types of pit construction;
- dock leveller as box model;
- Special dimensions and/or working range;
- Greater lip length;
- Tapered lip on both sides;
- Top platform plate with non-slip coating;
- Hot dip galvanised;
- Hinges with stainless steel shafts;
- Platform insulation;
- Air seals on three sides of platform;
- RAL colour as required;
- Rest position switch for control of traffic light, door, etc;
- Leveller/ door interlocking;
- Integrated control panel including control for door, traffic light, etc.;
- Upgraded IP- value;
- Other voltage.
- Front flap

## Building-in possibilities

Because of varying client specific requirements and constructional elements, a large range of build-in possibilities can be offered, such as a suspending (hang-in) frame, box model, permanent steelwork, prefab concrete elements, steel stand, dock pods including the thermal ISO version. By making the correct choice cost considerable savings can be made. Detailed building-in drawings are available upon request.