HTL3

Introduction to the new series

HÖRMANN



New series

Hörmann has enjoyed success with its series 2 hydraulic dock levellers for more than 20 years now. The new series 3 is an optimised, future-proof range that excels in cost-effectiveness, quality, sustainability, and adaptability to demand. It includes hydraulic dock levellers with a rated load of up to 60 kN.

This series is being developed and introduced in phases. The complete range offers products with telescopic lip and hinged lip, for new construction and renovation and for installation in or in front of the building. This document describes the introduction of the standard versions of the HTL3 telescopic lip dock levellers for installation in the building floor.

Peak loads for the current series have been determined by means of extensive calculations, sophisticated load and fatigue tests and by analysing damage cases. Through an iterative process[1)], all components have been examined and optimised for

- Stability and possible susceptibility to wear
- Synergy with other components
- Impact across the manufacturing and supply chains

This knowledge was used as the basis for developing an optimised and exceptionally well-balanced series.

1) Iterative process for problem solving: step-by-step repetition of a process where the outcome of each round acts as the foundation for the next. The repeated adjustments ensure an ideal, or at the very least, enhanced solution.

Result

The introduction of the new series starts with the HTL3 telescopic lip dock leveller, which offers a rated load of up to 60 kN in its standard versions. Drawing on the detailed test data, we successfully implemented over 20 improvements. Here are the most important:

- **Longer service life** thanks to reduced stress peaks in materials and welding seams.
- **10% weight reduction** achieved by utilizing materials more efficiently, without compromising strength.

Major changes

- **Value-for-money pit model with minimum transport height**
  This is made possible by the carefully engineered new design and compact collection unit.
- **Renovation solutions from the next product introduction phase**
  Available from mid-2025.
- **Additional standard length 2250 mm**
  This version offers a price advantage and reduces the need for custom lengths.
- **Installation height for dock levellers up to 3000 mm, always 645 mm**
  At 645 mm, the float zone for dock levellers up to 2500 mm is slightly larger than it is on the HTL2 (595 mm). This means a slightly larger float zone below level. Depending on the transport vehicle, however, it could be that fewer dock levellers are loaded.
- **New preassembled frame BFT3 includes front beam**
  The new frame has an almost identical construction to the base frame of the FR model. It is combined with a compact dock leveller (C model) without a base frame. Unlike the casting frame for HTL2, the assembled frame requires lifting gear to position it in the pit.

Dock leveller construction

Series 3 has a modular construction. The dock leveller features a standardized base unit and a frame construction designed for specific demands.



Agile

Advantages

- More adaptability to individual requirements (agility)
- Improved achievement of needs-based delivery times
- Quick and simple renovation solutions possible

Core base unit

The base of the dock leveller consists of the platform, lip and hydraulic system.



We call this dock leveller unit **without** frame construction and **without** front beam “Core”. It is part of every fitting model. The base unit is available in standard sizes. It can also be supplied separately under the designation HTL3-C.

Frame construction

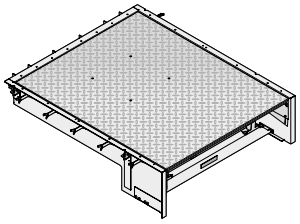
The supporting components are part of the frame construction. This **also** includes the front beam.



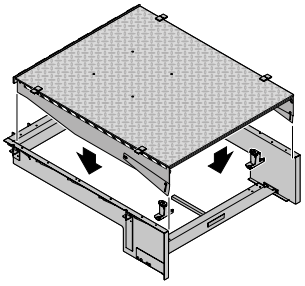
The frame construction depends on the fitting method. It is tailored to meet specific requirements.

Core + frame construction = dock leveller

The Core base unit and the frame construction can be delivered as usual as a single unit or separately, similar to the combination of casting frame and F-model of the HTL2.



Complete dock leveller



Delivery and fitting in 2 phases

Core base unit: What's new?

Platform construction

We use an advanced, stronger material for the running plate of the platform and lip with a slightly reduced thickness:

	HTL2		HTL3	
	Material	Thickness in mm	Material	Thickness in mm
Platform	S235	8/10	S355	7/9
Lip	S355	12/14	S420	11/13

Despite the reduced material thickness, the new running plate is approx. 12% stronger. The sheet thickness (= material thickness) has less influence on the load-bearing capacity than the yield strength of the material. Fatigue tests have confirmed the calculations. Further design improvements led to a 50% better fatigue resistance of the platform in the tests.



Top quality



CO_2 – 10%

Advantages

- Approx. 50% resistance to fatigue, longer service life
- Approx. 12% more resistance to permanent deformation
- Fewer downtimes and complaints
- Lower material consumption, resource-efficient, overall carbon footprint reduced by approx. 10%
- Lower weight, more economical and more advantageous for transporting both finished dock levellers and components

Telescopic lip construction

The front of the telescopic lip has been reinforced.

- Optimised angles
- Beams no longer pierce through



HTL2: 45° angle



HTL3: 60° angle



Top quality

Advantages

- Less prone to wear, longer service life
- Fewer downtimes and complaints
- Improved aesthetics

Frame construction: What's new?

Dock levellers up to 3 m long

The dock levellers have a lighter frame construction.

- The lifting cylinders are directed forward and rest on the front beam.
- Rear crossbeam (cylinder support beam) no longer used.
- The side plates of the frame models are only at full installation height throughout at the front. The dock levellers are fitted with support pedestals on the rear side for transport and storage purposes.



HTL3-FR

- The frame of the pit model consists only of the front beam and flat steel at the rear with 2 fitting supports at the hinge points.



HTL3-P

CO_2 – 10%

Advantages

- Reduced material consumption
- Lower weight, more economical and more advantageous for transporting both finished dock levellers and components
- Compact pit model with very low transport height, similar to HLS
- Resource-efficient, carbon footprint reduced by approx. 10%

Dock levellers over 3 m long

For reasons of stability, this is not possible for dock levellers over 3 m. This situation remains the same: Cylinders are supported on an additional crossbeam. Side plates are closed over their full installation height.



HTL3-FR in lengths up to 3 m

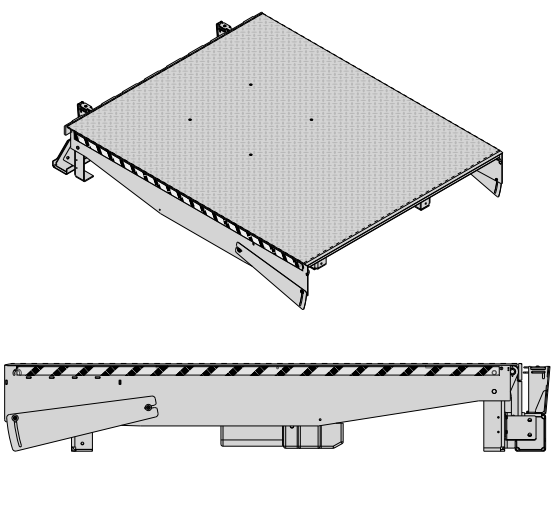


HTL3-FR in lengths over 3 m

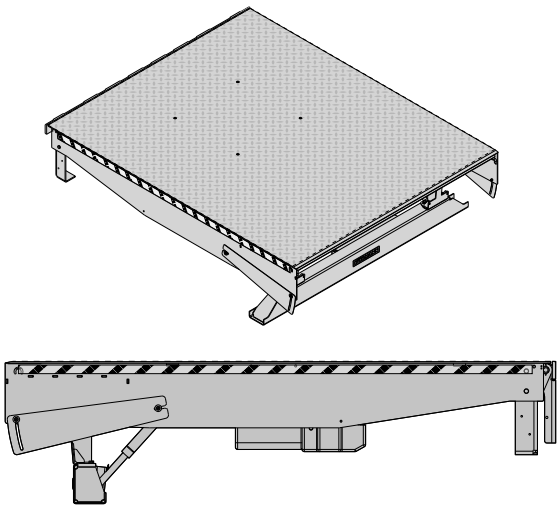
Fitting model details

Pit model P

Pit model P is available in lengths of up to 3 m. Alternatives are available to cover the relatively low demand for longer pit models.
The front beam is supplied loose. It is attached to the rear side for transport purposes. This means that the P-model has a particularly low transport height.



HTL3-P during transport



HTL3-P when installed



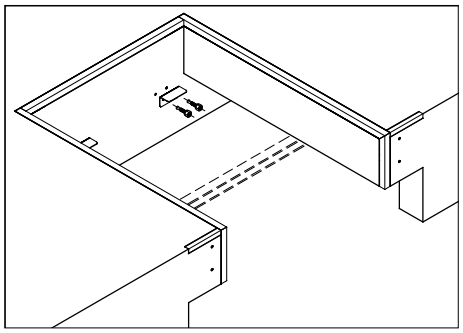
Cost savings

Advantage

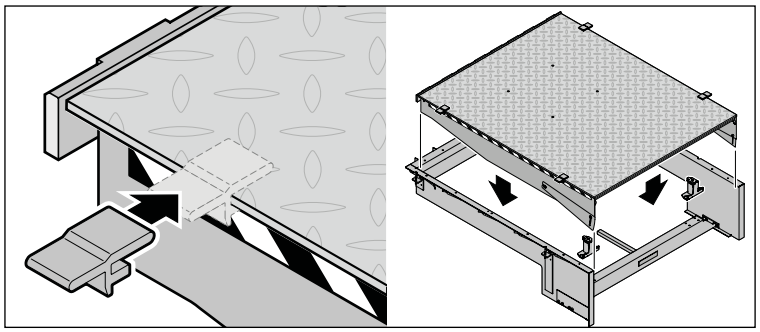
- Lower transport costs

Fitting

The front beam must first be welded on. The rear support angle brackets to be fitted on the HTL2-P are no longer required. Instead, positioning aids simplify fitting. They are inserted sideways into the recesses in the platform. The dock leveller is then simply hooked into the pit and welded at the rear.



Support angle bracket for HTL2-P



Positioning aids for HTL3-P

Frame model FR and box model B

The familiar, tried and proven frame and installation concept of these models remains unchanged.

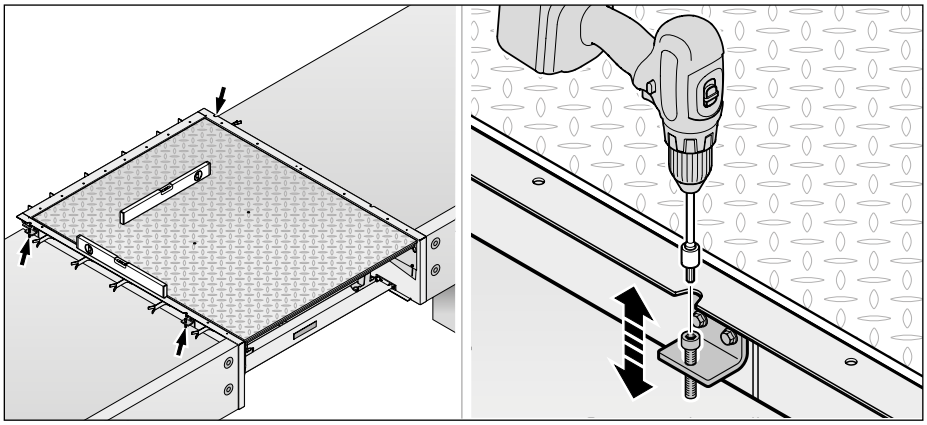


HTL3-FR



HTL3-B (rear side)

The edge bracket has semicircular recesses above the position of the adjustment angle.





Easy to fit

Advantages

- Easier to fit
- Bolts of the adjustment angle easier to access

Casting frame BFT3 and core model C

If the frame construction and base unit are delivered separately, the BFT3 casting frame is installed before the core model HTL3-C is fitted. This combination replaces the combination of preassembled frame and fitting model F used for the HTL2.

Advantages

- Delivery and installation of the frame in advance
- Protects the platform from dirt and damage during the construction phase
- Decide on or change details such as lip length, later
- Option to split the investment into 2 parts



BFT3 in lengths up to 3 m

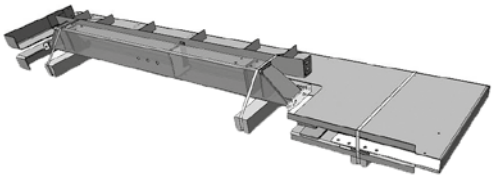


BFT3 in lengths over 3 m

The front beam is included in the BFT3 scope of delivery. It is always galvanized. The surface finish of the other components depends on the order.

Fitting

The casting frame BFT3 is supplied in individual parts and must be assembled before installation. The BFT3 is then cast in like an FR model.

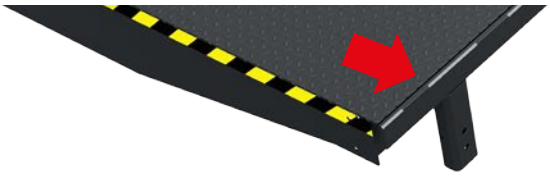


Packaging unit BFT3

Important

Suitable lifting equipment is required for positioning in the pit.

To prevent the hinge points getting dirty or damaged by concrete work, they are not fastened to the BFT3. Instead, they are located on the core model with an additional flat steel. The HTL3-C is fitted just like the HTL3-P version.



HTL3-C – rear side detail

Imprint

Issue

04/2025

Published by

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