

*Sustainable logistics
with intelligent docking systems*



Loading Technology

Complete solutions for more efficiency







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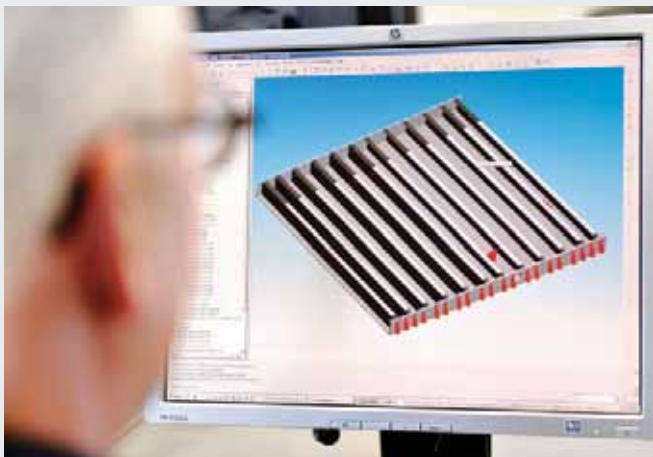
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Brand Quality from Hörmann

Reliable and oriented towards the future



Alnatura logistics centre in the city of Lorsch in the German state of Hesse



In-house product development

At Hörmann, innovation is produced in-house – highly qualified employees of the development department are in charge of product optimisation and new developments. This results in market-ready, high-quality products that are very popular around the globe.



Modern manufacturing

Hörmann's high automation level ensures a consistently high quality level. All production processes are precisely calibrated and monitored by modern computer systems. This way, large quantities of dock levellers, shelters and seals are manufactured, all with equal precision. However, we also manufacture smaller quantities or customised special solutions according to customer specifications at the same high quality level.



As Europe's leading manufacturer of doors, frames, operators and loading technology, we are committed to high product and service quality. This is how we set standards on an international scale.

Highly-specialised factories develop and produce construction components that are marked by excellent quality, functional safety and a long service life.

Our presence in the global economy's key regions makes us a strong, future-oriented partner for industrial and public construction projects.



Competent advice

Experienced specialists within our customer-oriented sales organisation accompany you from the planning stage, through technical clarification up to the final building inspection.

Complete working documentation, such as technical manuals, is not only available in printed form, but is always accessible and up-to-date at www.hoermann.com.



Efficient service

Our extensive service network means that we are always nearby and at your service around the clock. This is a major advantage in terms of inspections, maintenance and repairs.



Sustainability documented and approved by the ift in Rosenheim

Hörmann has already received confirmation of the sustainability of all its multi-function doors through an environmental product declaration (EPD)* in accordance with ISO 14025 from the Institut für Fenstertechnik (ift – Institute of window technology) in Rosenheim. The inspection was based on the Product Category Rules (PCR) Doors and Gates from ift Rosenheim GmbH, issue PCR-TT-0.1. Environmentally-friendly production was confirmed by a life-cycle analysis in accordance with DIN ISO 14040 / 14044.

Sustainably produced loading technology from Hörmann

Environmentally friendly production
A comprehensive energy management system ensures environmentally-friendly production.

Regional raw materials
The majority of applied raw materials is purchased from Germany and central Europe.

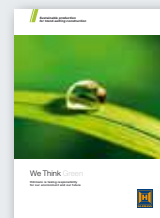
Long-lasting products
A long service life and low maintenance costs thanks to the use of high-quality materials.

Sustainable construction with Hörmann's expertise

Hörmann has been able to gain great expertise in sustainable construction through various projects. We also apply this know-how to support your projects. You will receive the information required for product certification as a corresponding EPD along with our offer for loading technology and industrial doors.



DGNB
Deutsche Gesellschaft für Nachhaltiges Bauen e.V.
German Sustainable Building Council

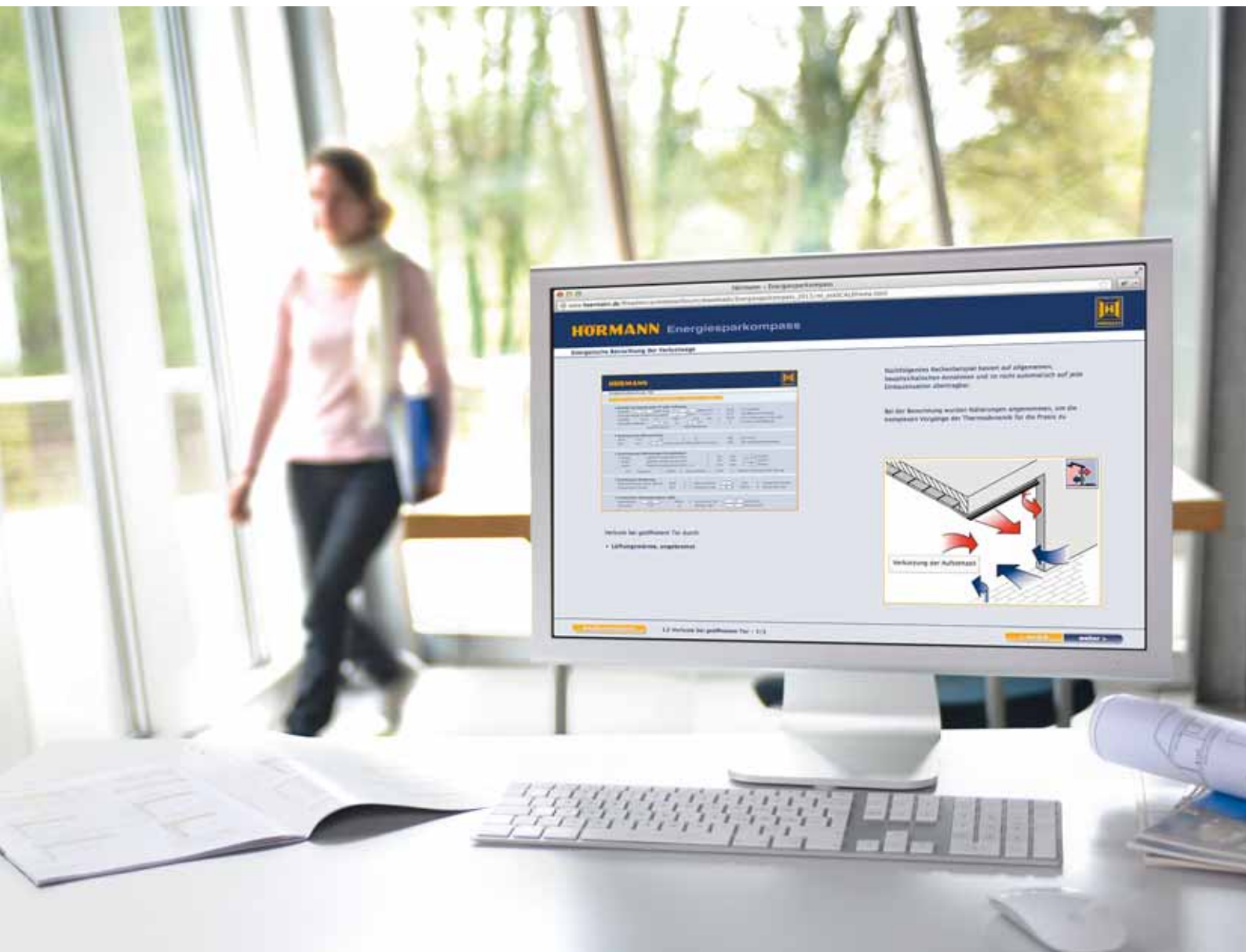


Find out more about Hörmann's environmental activities in the We think green brochure.

* You can find the Environmental Product Declaration (EPD) on the Internet at www.hoermann.de/Dokumentationen.

Sustainable planning

With the energy savings compass



As a part of the building envelope, loading technology solutions play a significant part in the energy efficiency of commercial buildings. Hörmann's energy savings compass shows how loading bays and industrial doors are planned with energy-efficiency and sustainability in mind. An integrated calculation module estimates the amortisation period for door modernisation.



Plan with the energy savings compass at:
www.hoermann.com/energysavingscompass

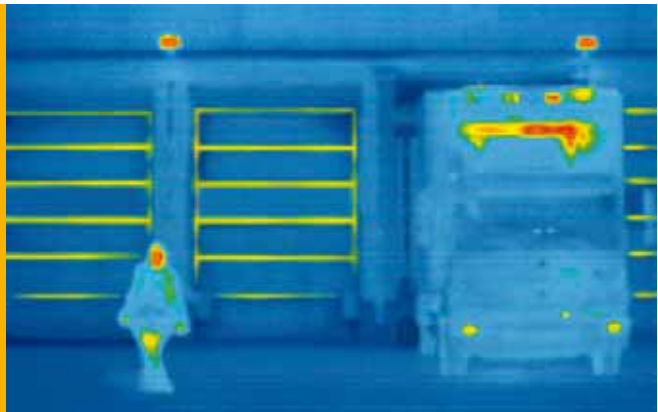


The right concepts

Efficient planning

Energy efficiency

Thermographic studies confirm that a building's openings are a particularly critical factor when it comes to energy efficiency. With proper planning and the proper equipment that matches the building's intended function, thermal loss can be kept at a minimum.



Safety

Workplace safety is quite rightfully a very important issue. Accident and health risks as well as damage to goods, vehicles and building equipment must be avoided. Especially at loading bays, where your own employees and external staff work together, suitable measures must be considered carefully.



Longevity

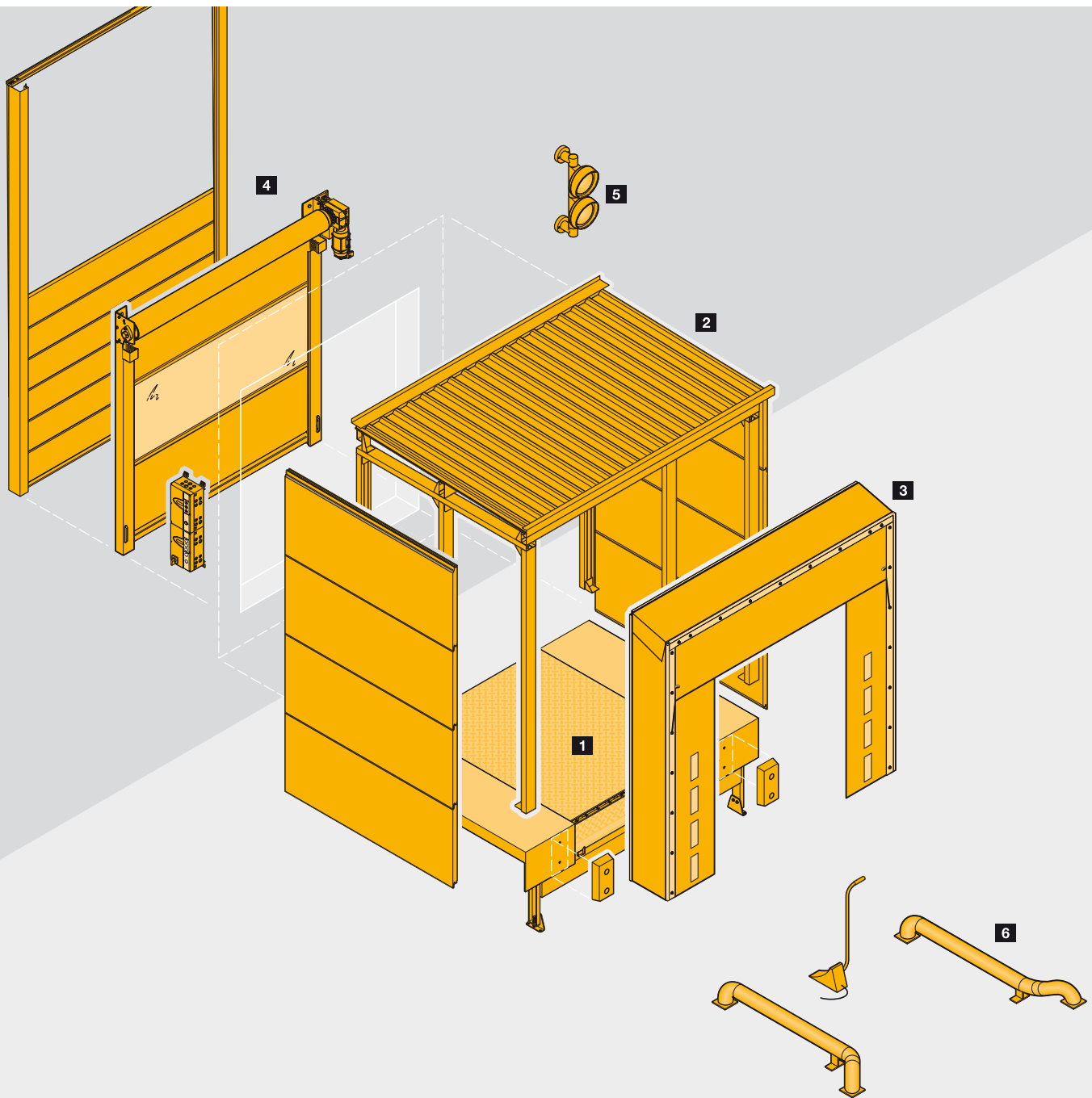
The rough nature of daily use quickly leaves its mark on loading bays – quick wear and tear, collision damage and planning errors can require costly repairs and replacements within a very short period of time. High-quality materials, coupled with foresighted planning and the selection of suitable protection measures protect your valuable investment.



Increasing demands as to energy efficiency, safety and longevity require individually adjusted solutions. We advise you on site and recommend an economically efficient system which in terms of quality, function and reliability meets your requirements.

The right products

Developed and manufactured in-house



Optimally co-ordinated system

All components for your loading bay are available from a single source: Hörmann. Developed and manufactured in-house, Hörmann products are optimally co-ordinated, which ensures smooth loading and unloading at your loading bay.

- 1 Dock levellers**
- 2 Loading houses**
- 3 Dock seals / shelters**
- 4 Industrial doors**
- 5 Control systems**
- 6 Dock and safety accessories**

Good reasons to try Hörmann

Individual solutions from the market leader for doors and loading technology



1

Robust dock levellers

Sustainability and quality go hand in hand. Dock levellers have to withstand the rough day-to-day loading environment. For this reason, all components are manufactured using high-quality materials. The design of all dock levellers corresponds to EN 1398 and, with regard to loading capacity, is dimensioned generously. Particularly sturdy flat anchors, ventilation slots in the edge bracket and adjustment angles to screw ensure reliable fixing in the building structure, one of the most important prerequisites for a long service life.

For further information, see pages 18 – 19.



2

Energy-efficient loading houses

The dock leveller is fit directly in front of the building with a loading house, allowing the building opening to be sealed efficiently with an industrial door. As early as the quotation phase, we are able to provide model statistics defining the maximum wind and snow loads for Hörmann loading houses.

Any unevenness in the door can easily be compensated for using adjustable feet.

For further information, see pages 34 – 37.



3

Flexible dock seals and shelters

Dock seals and shelters are particularly efficient when they are optimally adapted to the docking vehicles and the loading situation. This requires a wide range of flexible solutions.

Robust push-in flap dock shelters with different frame constructions prevent them from being damaged during docking.

Inflatable dock seals adjust to different vehicle dimensions. Roll-up flaps compensate for even larger differences in vehicle heights.

Dock seals and shelters with telescopic link arms or rising roof constructions are recommended to compensate for vehicle movements or when placing interchangeable containers.

For further information, see pages 38 – 43.



4

Compatible control systems

From development to production, all Hörmann door and dock leveller controls come from the same source, making them optimally matched to each other. As a result, you benefit from a uniform operating concept with standardised housing sizes and the same cable sets for dock levellers and door controls.

Another advantage: If the dock leveller control is placed beneath the door control, both controls can be combined into a single compact unit.

For further information, see pages 26 – 27.

Proper planning

Sustainability begins with planning

Loading technology inside the building

With many interior solutions, energy is lost through the dock leveller even when the door is closed. This leads to unnecessary energy loss in temperature controlled buildings, which can be prevented with the proper planning.

For such cases, Hörmann offers concepts with advance travel doors and insulated panels under the dock leveller. This minimises heat loss outside loading times.

For buildings that are not temperature controlled, the conventional fitting with a door mounted to the dock leveller is suitable.



Loading technology in front of the building

In the external solution, the dock leveller is placed in front of the building in a loading house. The loading house acts as the door to the building, minimising energy loss, especially when no loading is in process.

A further advantage: The interior building space can be used entirely up to the door. This solution is also suited for modernisation, as a complete loading bay can be added to the building without costly reconstruction measures.





Planning made simple with Hörmann

Hörmann offers detailed **planning documents** as well as descriptive **information and demonstrations** of special solutions on the Internet. Utilise the know-how of Hörmann to optimise your planning!



Planning documents with detailed information and drawings



Information and demonstrations of special solutions such as the DOBO system



You can find information and demonstrations at

www.hoermann.com/en/videos

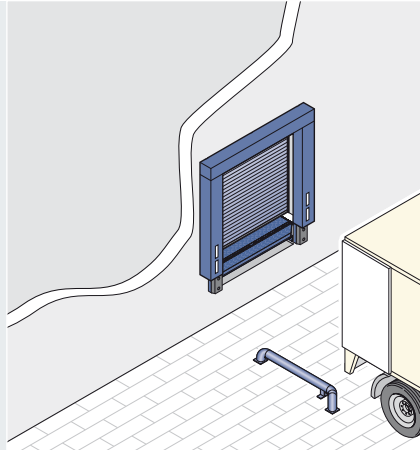


Logistics solutions inside the building

Example plans

Fleet with nearly equal loading heights

Mechanical dock levellers are economic solutions whenever lorries with nearly identical loading heights are loaded and unloaded and no under-riding is required. In case of relatively low loading frequencies, we recommend using a manual rolling shutter as the hallway door.

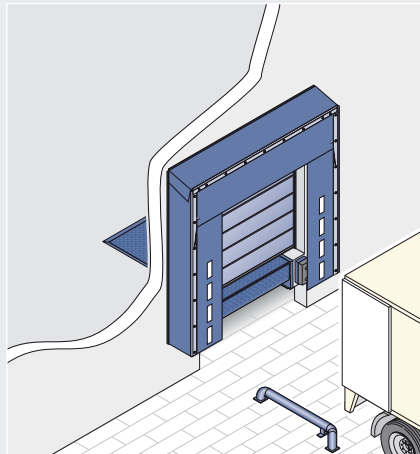


Recommended product

- Mechanical dock leveller MLS
- Manual rolling shutter
- Dock shelter
- Buffers
- Wheel guide

Lorries with different loading heights

If a loading bay is used by lorries with different loading heights, a solution with a hydraulic dock leveller is the best choice. A lorry tail lift can be moved underneath the dock leveller. With suitable dimensions, it can also be used for the loading of heavy goods.

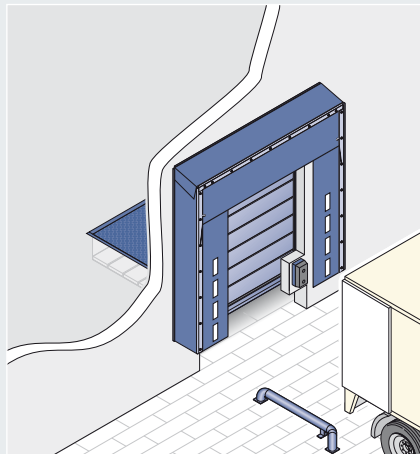


Recommended product

- Hydraulic dock leveller
- Industrial rolling shutter or sectional door
- Dock shelter
- Buffers
- Wheel guide

Thermal insulation solution for temperature controlled buildings

Most of the time, goods are not being loaded at a loading bay and the door is closed. To minimise thermal losses during those periods, a double-skinned thermally insulated sectional door is positioned in front of the dock leveller and the dock leveller is additionally insulated on the underside by an insulated panel.

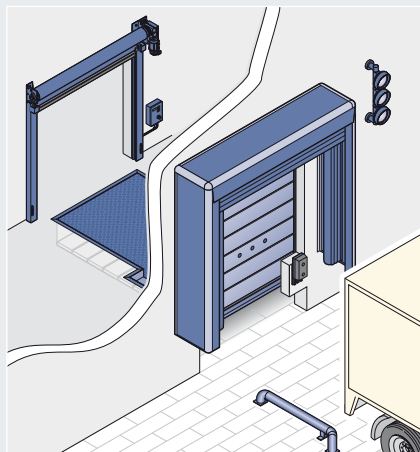


Recommended product

- Hydraulic telescopic lip dock leveller with extended lip
- Insulated dock leveller bottom side with insulated panel
- Industrial sectional door travelling in front of the dock leveller with a low U value
- Dock shelter
- Buffers
- Wheel guide

DOBO system for refrigerated warehouses

To prevent any interruptions of the cold chain of refrigerated or frozen goods, the lorry doors are only opened after docking. The optimally co-ordinated Hörmann DOBO system offers a high degree of comfort and low energy loss. See page 24 for detailed information.



Recommended product

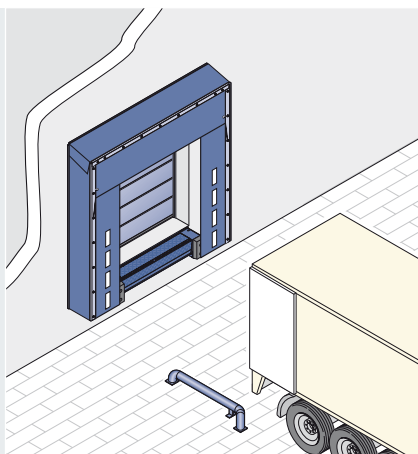
- Hydraulic telescopic lip dock leveller as DOBO version with extended lip
- Graduated ramp
- Insulated dock leveller bottom side with insulated panel
- Industrial sectional door travelling in front of the dock leveller with a low U value
- Flexible high-speed door
- Inflatable dock seal
- Height-adjustable buffer
- Docking assistant HDA-Pro
- Wheel guide

Logistics solutions in front of the building

Example plans

Temperature controlled building and lorry with the same loading height

In this energy-efficient and inexpensive solution, the door travels down to the building floor and seals the door opening. The mechanical dock leveller is fitted in front of the building and bridges the difference to the lorry loading surface in case of small height differences.

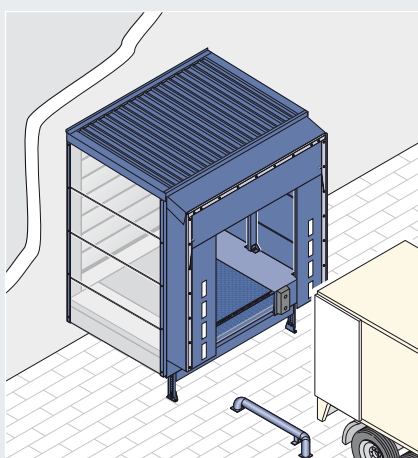


Recommended product

- Mechanical dock leveller MRS
- Industrial door with low U-value
- Flap dock shelter with 900 mm depth
- Buffers
- Wheel guide

Temperature controlled building with fully utilised space

By moving the dock leveller in front of the building, the building can be completely utilised. The hydraulic dock leveller allows docking of lorries with different loading heights. In addition, the double-skinned insulated industrial door seals the building well.

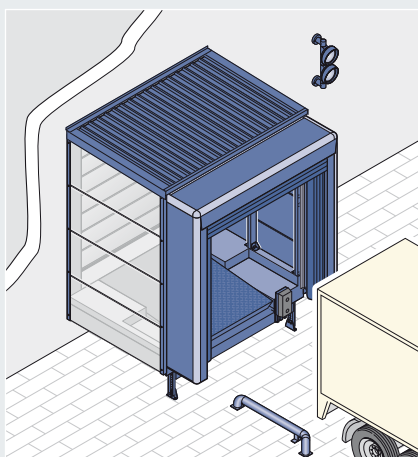


Recommended product

- Loading house with hydraulic dock leveller
- Industrial sectional door with low U-value as the door to the building
- Dock shelter
- Buffers
- Wheel guide

DOBO system for safe loading

For customs goods and to prevent theft, with this system the lorry doors are only opened shortly before loading. The semi-trailer or swap trailer can remain docked to the loading bay unattended, e.g. overnight. A safe situation for drivers as well: they can dock completely without exiting the vehicle, preventing them from entering the zone between the vehicle and the ramp.

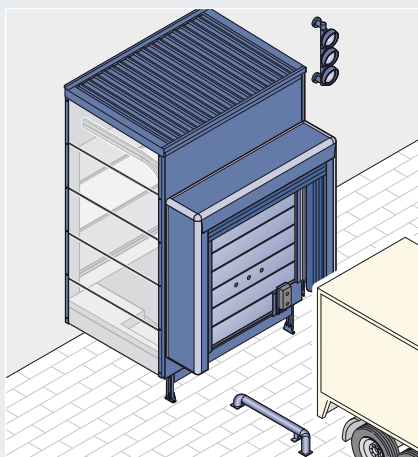


Recommended product

- Loading house with hydraulic telescopic lip dock leveller as DOBO version and with extended lip
- Graduated pedestal
- Industrial sectional door with low U-value
- Inflatable dock seal
- Height-adjustable buffer
- Wheel guide

DOBO system for refrigerated warehouses and effective building use

To fully utilise the floor space of a refrigerated warehouse, the DOBO system is combined with a thermal loading house. The industrial door closes the loading house from the outside. The expanded temperature controlled area is insulated efficiently through insulated panels on the exterior walls and under the pedestals, as well as the door travelling in front of the dock leveller.



Recommended product

- Thermal loading house with hydraulic telescopic lip dock leveller as DOBO version with extended lip
- Graduated pedestal
- Industrial sectional door with low U-value
- High-speed doors for deep-freeze logistics
- Inflatable dock seal
- Height-adjustable buffer
- Docking assistant HDA-Pro
- Wheel guide

Mechanical dock levellers

Manual operation with nearly identical loading heights



In cases where lorries with almost identical loading heights are used, i.e. for uniform fleets, the proper planning of the dock height results in minimal height differences to the loading surface of the vehicles. With a standard rated load of 60 kN, the MLS and MRS mechanical dock levellers are able to meet most demands and are the most economic solution for such situations. They are simple to operate via a control bar.

Of course they fulfil the requirements for dock levellers stipulated in EN 1398.

Hörmann practical application tip

With MRS ramp houses, use a flap dock shelter of at least 900 mm depth to bridge the depth of the side brackets and buffers.

Dock leveller MLS

For fitting into a prepared pit recess in the building floor. The MLS dock leveller can be welded in quickly and easily. Optionally, it can be equipped with a cast box to be completely set in concrete during the construction phase.

Ramp house MRS

The entire ramp house with mechanical dock leveller and side brackets is simply positioned outside in front of the opening. It is quickly fitted without a recess in the building and can even be attached to existing ramps.

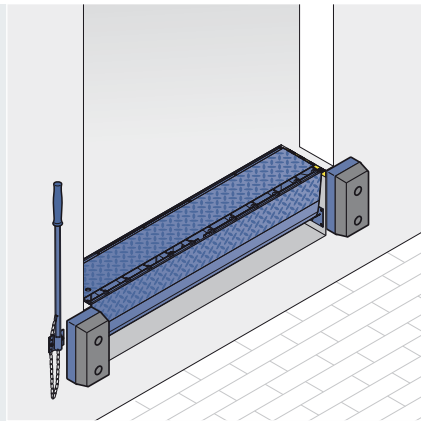
The side brackets, arranged either vertically or horizontally, constitute the sub-construction for the buffer. They can be simply screwed onto the existing screw-in sleeves.

Work area

	MLS, MRS		
Ordering widths	1750 mm	2000 mm	2250 mm
Work area	With max. 12.5 % gradient in accordance with EN 1398: 68 mm above dock level, 106 mm below ramp level		
Dock leveller length	Approx. 735 mm		
Bearing surface	Approx. 150 mm		
Support depth	Type MRS: 435 mm without buffers		

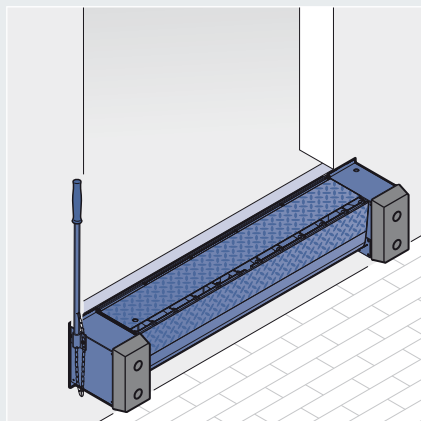
Bascule bridges

These dock levellers made of heavy duty corrosion-resistant aluminium are used for small to medium height differences and can be operated by a single person. For side loading and unloading of lorries and railway cars, sideways shifting versions are available.



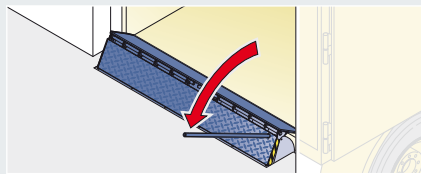
Dock leveller MLS

Fitting in the building floor.



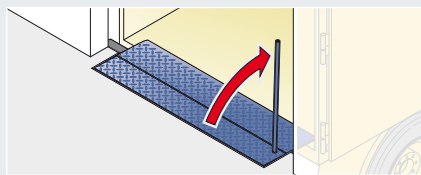
MRS dock leveller

Fitting in front of the building, either with vertical or horizontal buffer supports. Recommended dock shelter **DSS** with 900 mm depth



Easy operation

via gas spring support



Bascule bridges

sideways shifting for fitting to ramps

Hydraulic dock levellers

Comfortable operation with great levelling



Hydraulic dock levellers are available as hinged lip or telescopic dock levellers. With a length of up to 5 metres, they can bridge large height differences between the ramp and the lorry loading level. Up to a size of 2000 × 3000 mm, the dock leveller platform is made of a single piece. With wider and longer dock levellers, a carefully made weld seam joins the plates, resulting in a continuously sturdy platform. **All Hörmann dock levellers comply with the requirements of EN 1398.**

Detailed quality

For long, sustainable use



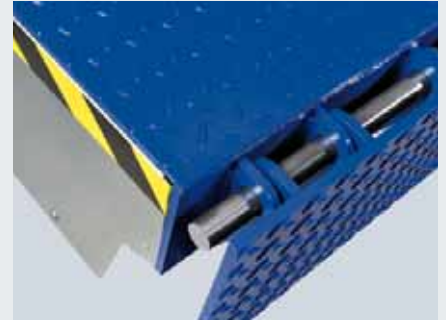
Flat transitions

The flat transitions from the platform to the telescopic lip and to the loading surface ensure safe loading.



Stable telescopic lip

The telescopic lip with a robust front lip is reinforced throughout. The 12 / 14 mm thick running plate is made of a single piece.



Robust hinged lip

The open design with hinge points close to one another prevents the accumulation of dirt, such as wood shavings, in the hinge.



Safe, reliable operation

2 hydraulic cylinders ensure the balanced, reliable and, most importantly, safe operation of the dock leveller. It comes equipped with automatic emergency-stop valves.



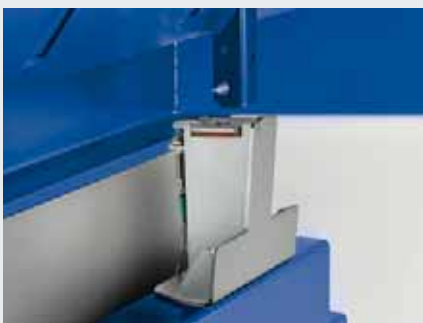
Long-lasting design

A high-quality running plate, 6 / 8 or 8 / 10 mm thick, with a standard rated load of 60 kN permanently carries goods and transport equipment.



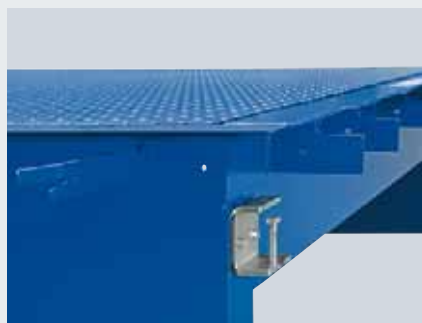
Reinforcements on the underside

The number and design of the girders prevent deformation (track groves) beyond the degree required by EN 1398.



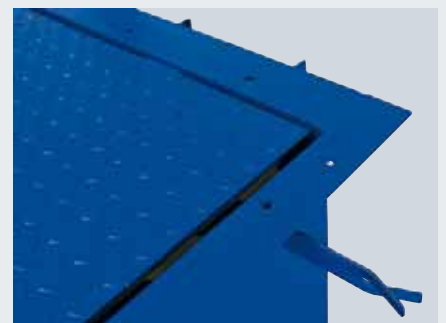
Noise-reducing pedestal

Steel meeting steel results in a noise that is neither pleasant nor healthy for employees. Rubber buffers on the telescopic lip dock leveller pedestals reduce the contact noise when positioning the platform.



Adjustable angle and fitting anchors

Adjustable angles to screw allow the dock leveller to be adjusted optimally. Anchor brackets on the frame that are welded before being cast to reinforcing iron or the reinforcement ensure a reliable connection. Especially in the rear area where strong forces are at work on the hinges.



Practical ventilation holes

Air pockets, which may above all form in the area below the edge bracket, weaken the connection of the dock leveller to the building structure. Ventilation holes in the edge bracket ensure that the air is released in the sealing process, guaranteeing a closed-linkage connection.

Hydraulic dock levellers

Precise levelling, even with great distances from the lorry loading area

Standard equipment

Rated load/carrying capacity

Hörmann dock levellers have a carrying capacity of 60 kN as standard (rated load according to EN 1398). Higher rated loads, even up to 180 kN for the HLS-2, are available upon request.

Gradient/slope

See "Determination of the levelling" on pages 30/31 (acc. to EN 1398 max. 12.5 % allowed).

Surfaces

Moulded, slip-resistant steel, shot-blasted or anodised and coated with two-component PU varnish. Optionally also available completely galvanized, recommended for outdoor use, for example in loading houses.

Colours

Ultra marine blue (RAL 5002) or Traffic black (RAL 9017), other colours based on RAL available upon request.

Special equipment



Anti-slip coating

For increased anti-slip requirements (class R11 according to DIN 51130). The anti-slip coating is applied on moulded material. This ensures that even in case of damage, the anti-slip requirements of EN 1398 continue to be complied with.



Acoustic insulation

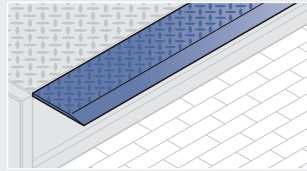
This additional coating on the platform and lip reduces the contact noise and thus creates a pleasant work environment.



Gap sealing

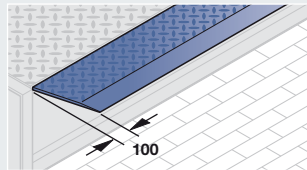
For dock levellers that are fitted inside the building, we recommend gap sealing. When the dock leveller is not active, it seals the side gap and prevents drafts as well as the escape of warm air.

Lip shapes



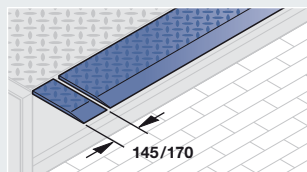
Type R, straight

Standard up to 2000 mm ordering width



Type S, angled

Standard over 2000 mm ordering width

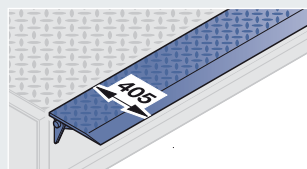


Type SG, with separate lip segments to accommodate different lorry widths

(for telescopic lip dock levellers 170 mm wide and retractable, for hinged lip dock levellers 145 mm, the segments can be loaded with up to 1 tonne)

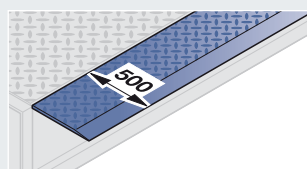
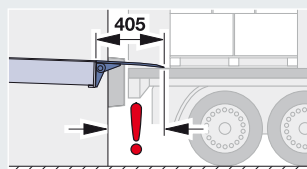
Lip lengths

Select a lip length to ensure a bearing surface of 100 – 150 mm in accordance with EN 1398. Note the distance from the lorry to the ramp using buffers on the ramp and vehicle.



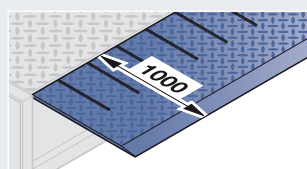
Hinged lip dock leveller

The lip is 405 mm long as standard, 500 mm also available on request. When selecting, please note that the protruding lip hinge reduces the possible levelling. Request detailed information and seek consultation!



Telescopic lip dock leveller

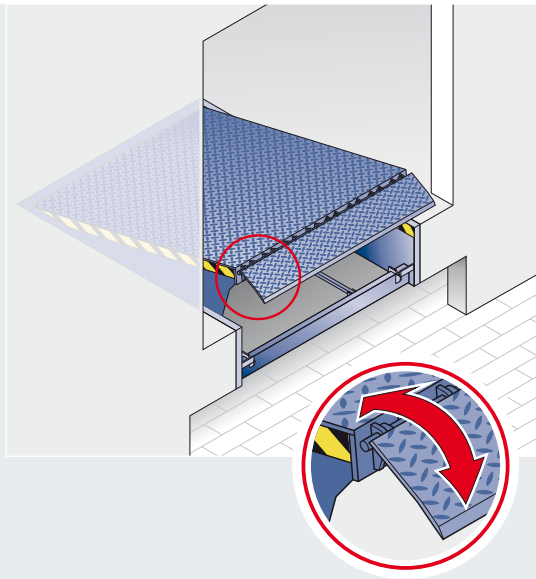
As standard, the telescopic lip is supplied in a length of 500 mm. Some applications, particularly when the building door is positioned in front of the dock leveller, require a longer lip. For such cases, the telescopic lip lengths 1000 mm and 1200 mm are available.



Hinged lip dock leveller

The electronic hydraulic system moves the platform to the highest position and then automatically extends the hinged lip. The platform is then lowered until the hinged lip is placed on the loading surface. Now the lorry can be quickly and safely loaded and unloaded. Particularly strong hinges and the continuous hinge band guarantee reliable functioning. The open design keeps the hinges free of dirt.

For especially heavy goods, for example when loading paper, the hinged lip dock leveller is also available for rated loads up to 180 kN.



HLS hinged lip dock leveller

As standard with a 405-mm-long lip. Rated loads up to 180 kN are available upon request.

Due to the lip hinges, the bridging length does not correspond to the lip length. Please seek consultation.

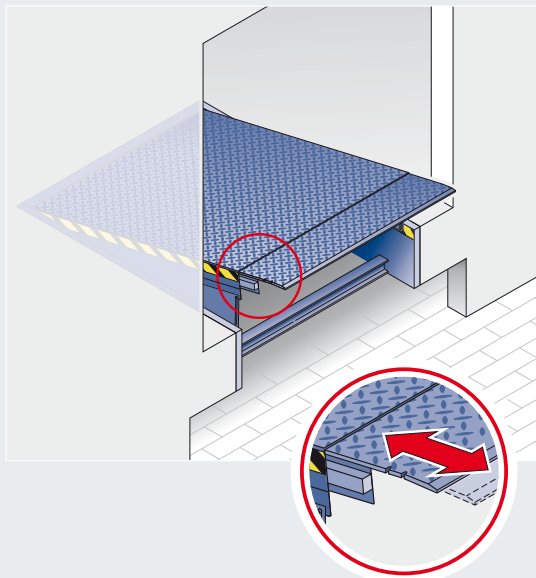
Telescopic lip dock leveller

The continuous and to the centimetre precise extending and lowering of the dock leveller's telescopic lip allows simple and safe unloading of even fully loaded lorries. This way, even pallets that are situated at the end of the vehicle's loading surface and thus only provide limited telescopic lip space, can be loaded.

The design with interleaved beams of the platform and telescopic lip as well as side plastic runners, ensures regular and reliable guiding.

The telescopic lip can be extended and retracted in a targeted manner via separate control buttons, and can be placed precisely and controlled on the loading surface. Marks on the telescopic lip indicate the minimum and maximum positioning depth.

The telescopic lip has a length of 500 mm as standard. Longer versions are also available. These are required, for example, when the dock leveller is located behind the door construction.



HTL 2 telescopic lip dock leveller

Standard with 500 mm long telescopic lip.

Indentations in the dock leveller mark the optimal support surface between 100 – 150 mm.

Dock levellers for special requirements



With telescopic lip dock leveller HTLV 3, lorries and transit vans can dock on a loading bay



The lift leveller is a combination of a telescopic lip dock leveller and scissors lift table

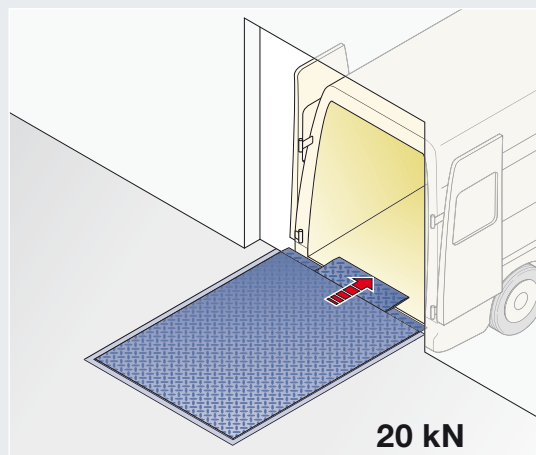
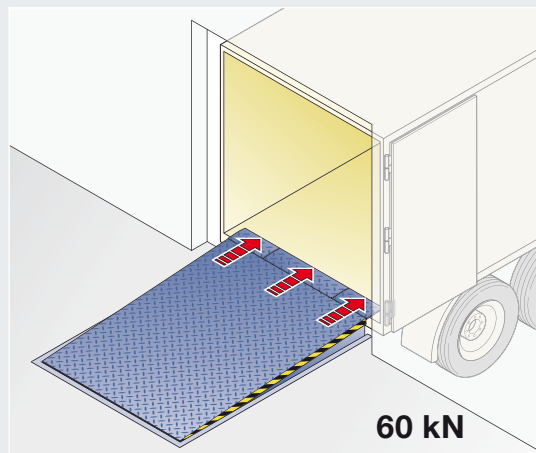
Dock leveller with 3-part telescopic lip for lorries and transit vans

The advantage of the HTLV 3 dock leveller with a 3-part telescopic lip: You can load and unload lorries and delivery vans at the same ramp.

The entire width of the telescopic lip (approx. 2000 mm) can be continuously extended for lorries. With a rated load of max. 60 kN, the HTLV 3 can be used like a conventional dock leveller.

A simple switch on the control lets you extend the centre section of the telescopic lip, while the side parts remain mostly behind, making it ideal for delivery vans. An intelligent hydraulic system provides the necessary weight compensation to relieve the load on the van. The dock leveller follows the movement if the loading floor of the delivery van lowers during loading. This ensures proper positioning at every point. The dock leveller can be loaded by up to 20 kN in accordance with EN 1398.

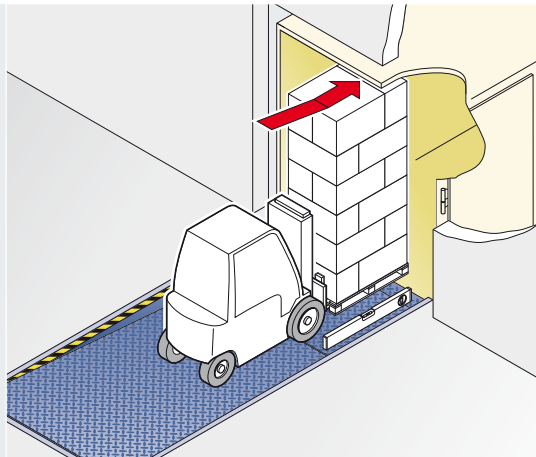
Not every forklift is suitable for the resulting gradient. A longer dock leveller ensures a more favourable angle. Let us advise you!



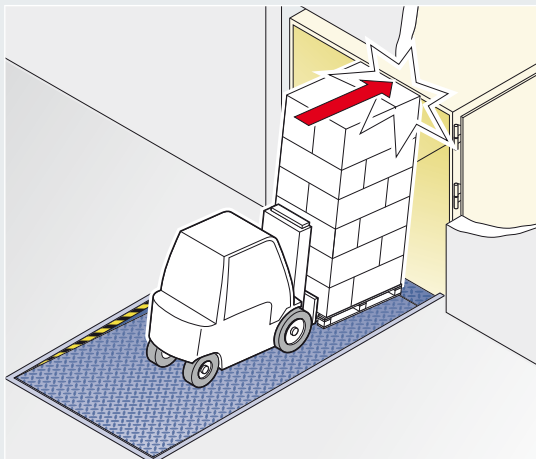
Telescopic lip dock leveller HTLV 3

Telescopic lip dock leveller with parallel joint

Dock leveller type HTLP 2 was designed so that the front part is always positioned parallel. This may be necessary when very tall goods need to be loaded, possibly with a forklift. In an angled position, they would hit the vehicle ceiling. Dock leveller HTLP 2 allows the entire loading height to be used.



Telescopic lip dock leveller HTLP 2

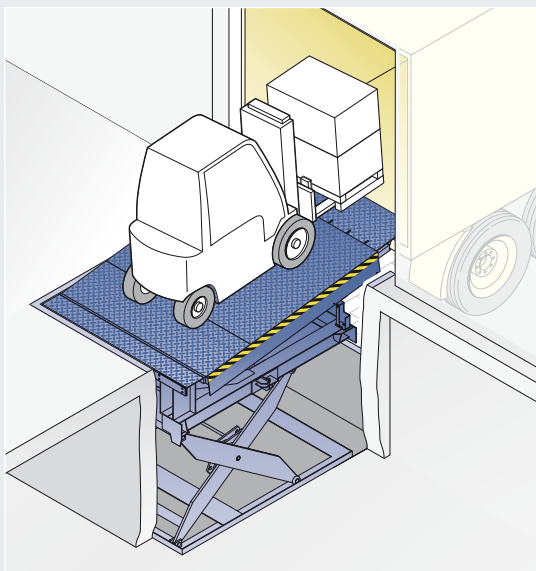


Lift leveller: dock leveller in combination with scissors lift table

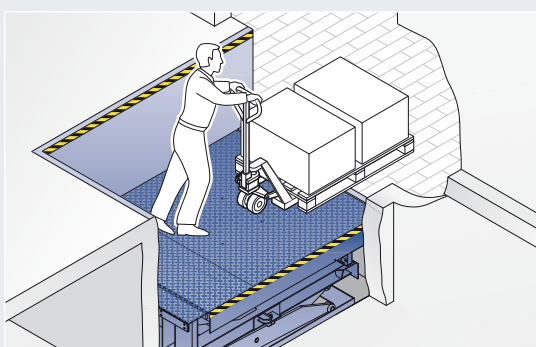
The lift leveller is used to perform two very different functions in the most limited space:

At the ramp level, the lift leveller works like a normal hydraulic telescopic lip dock leveller: it bridges the distance and any height difference to the lorry loading surface, allowing for an efficient loading process.

Thanks to the integrated scissors lift table, it is also possible to lift goods from the roadway level to the building floor easily and quickly, or vice versa, to lower them from the building to the roadway level.



Lift leveller
Telescopic lip dock leveller combined with scissors lift table



DOBO system

Dock first – open doors later



The DOBO system is the ideal solution: For hygienic transport, to warrant uninterrupted cold chains, lower energy costs, theft prevention or for customs purposes. For additional safety: the driver can safely dock without exiting the vehicle. This minimises the risk of accidents in the danger zone between the vehicle and ramp.

Hörmann practical application tip

The DOBO system can also be implemented in conjunction with a loading house.

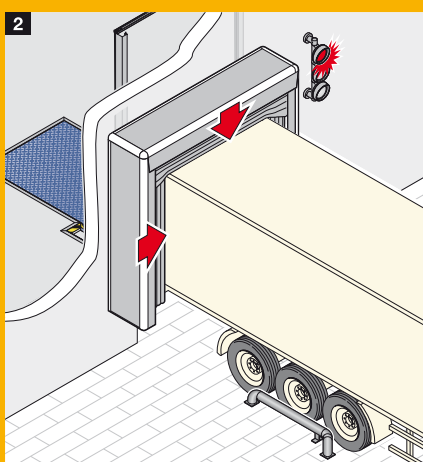
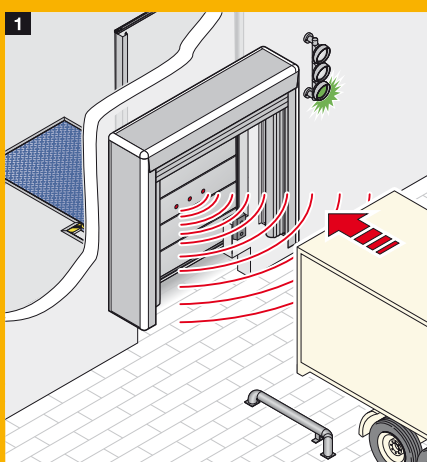
On conventional ramps, the driver gets out of the vehicle, opens the vehicle door and then docks the vehicle.

If the vehicle has already docked on the previous evening, inconvenient adjustment processes are necessary to open the doors.

With the DOBO system, a lorry can dock with its doors closed. They can be opened whenever needed. Until that time the goods remain well protected inside the vehicle.



Take a look at the video at:
www.hoermann.com/videos

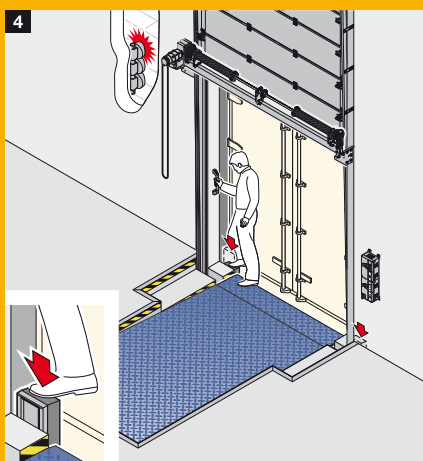
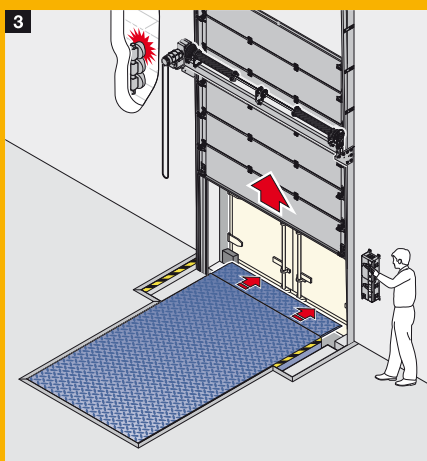


1 Safe docking

The Hörmann Docking Assistant HDA helps the driver to dock safely. The vehicle doors remain closed. Sensors in the door leaf recognise the position of the vehicle.

2 Reliable sealing

As soon as the lorry is docked, the dock seal DAS-3 is inflated and seals the vehicle from 3 sides.

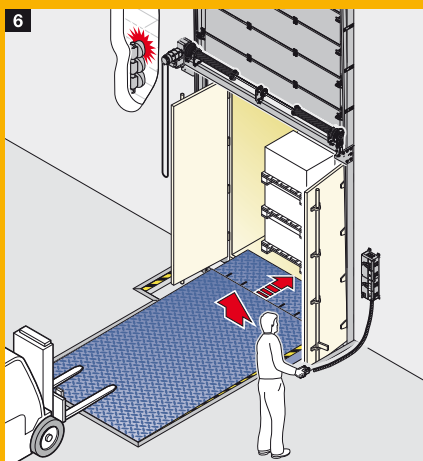
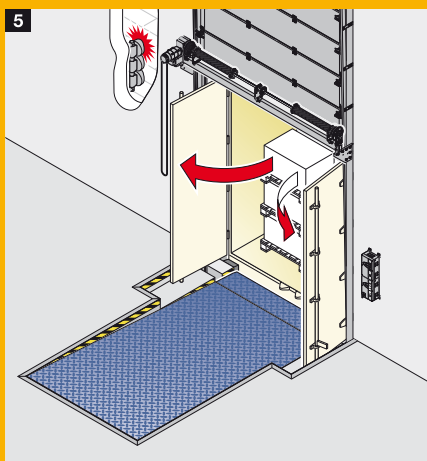


3 Opening the dock door

After the door is completely opened, the telescopic lip of the dock leveller is extended to decrease the gap to the vehicle.

4 Lowering the bumpers

Now the flexible bumpers VBV 4 can be lowered manually and locked to open the lorry doors.



5 Opening the vehicle door

The ramp features a recess that provides enough space for the door to open completely.

6 Extending the dock leveller

The dock leveller HTL 2 with a 1000 mm long telescopic lip easily bridges the gap between the ramp and the loading floor and can be precisely positioned up to the last centimetre.

Control systems

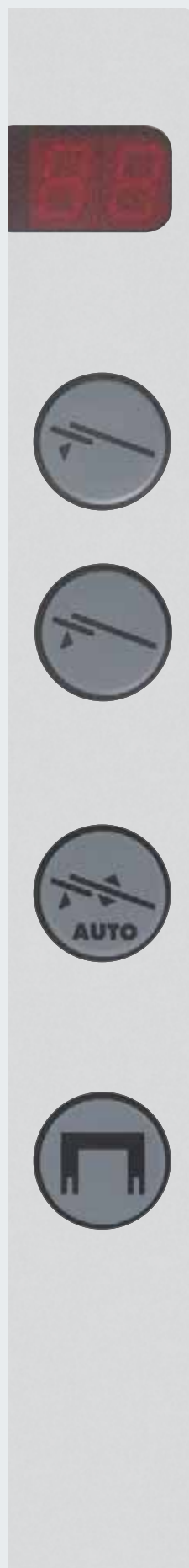
Compatible system solutions



From development to production, all Hörmann products come from the same source, making them optimally matched to each other.

You benefit from a uniform operating concept with standardised housing sizes and similar cable sets for all dock levellers and door controls.

Another advantage: If the dock leveller control is placed beneath the door control, both controls can be combined into a single compact unit.



Comfort function for simple operation

Double 7-segment display with operational and error display

- for comfortable menu readout and programming
- Service menu with maintenance, cycle, and operating hours counter, as well as fault analysis
- Readout of the last 5 error messages

Comfort telescopic lip operation

Two separate buttons for the extension and retraction of the telescopic lip allow comfortable and precise positioning on the loading surface.

Automatic impulse re-parking with telescopic lip and hinged lip dock levellers

With a single impulse the dock leveller is completely returned to its normal position. This function is standard for all controls. With the respective equipment the door subsequently closes automatically.

Integrated control of the dock seal

The operation of an inflatable dock seal or an electric top flap can be integrated into the dock leveller control.

Semi operation sequence control

The door opens automatically as soon as the dock seal has been inflated or the electric top flap has been lowered. As soon as the dock leveller is returned to the normal position, the door closes automatically and the dock seal switches off or the top flap extends.

The energy saving mode for controls 420 S / T and 460 S / T lowers electricity costs by approx. 80 %



	Hinged lip dock levellers		Telescopic lip dock levellers	
	Basic control	Multiple controls	Basic control	Multiple controls
Control	420 S	460 S	420 T	460 T
Control in protection category IP 65 (jet-water protected)	●	●	●	●
LED operation indicator	●		●	
7-segment display with operational and error display		●		●
Prepared for the connection of wheel chock with sensor	●	●	●	●
Prepared for the dock leveller release function	●	●	●	●
Prepared for the door release function	○	●	○	●
Comfort telescopic lip operation			●	●
Automatic impulse re-parking	●	●	●	●
Integrated control button for dock seal		●		●
Automatic door close function		○		○
Semi operation		●		●
Expanded connection options		●		●
Energy saving mode	●	●	●	●

● as standard
○ with corresponding equipment



Control WA 300 (above) in combination with control 420 S (below)

Push button control 300 U

- For the operation of Hörmann industrial doors with operator WA 300
- Compact unit in combination with dock leveller controls 420 S and 420 T
- Optionally available with an integrated main switch
- Space-saving and inexpensive solution

External control DTH-T

Allows for the exact control of the dock leveller at the loading point. For further information, please see page 56.



Dock management

Visualisation ensures controlled processes

You control, monitor and manage the entire control system via a graphic interface. It is depicted via a control panel or a web application.



Safe start-up and docking

Docking assistants



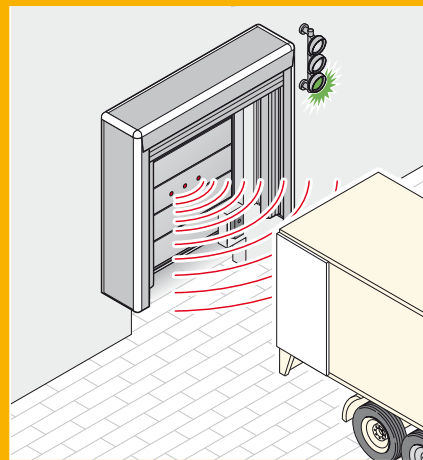
Safe and comfortable start-up. With the Hörmann Docking Assistant **HDA-Pro** and **HIB-Pro**.

The Hörmann docking assistants HDA-Pro and HIB-Pro make driving up to the loading bay comfortable and safe. While manoeuvring, the colour of the warning light tells the lorry driver how far he is from the dock. Red indicates that the optimal docking position has been reached and the lorry should be stopped.

HDA-Pro Docking Assistant with sensors in the door leaf

Several sensors on the door leaf register the rear side of the closed lorry and control a “green-yellow-red” signal system.

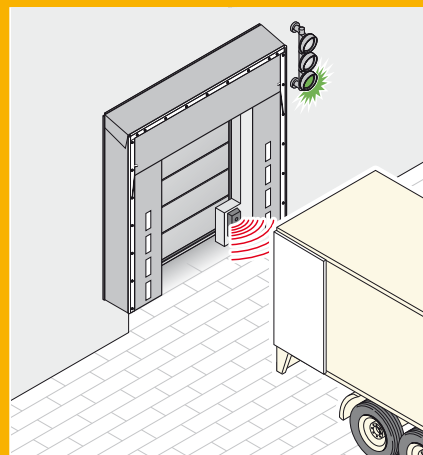
The precise measurement takes place via ultrasound waves. The distance and position of the individual signal phases up to a distance of 3 m and can be simply programmed with the HDA-Pro control.



HDA-Pro docking assistant with sensor in the door leaf

HIB-Pro Docking Assistant with distance measurement in the buffer

The distance between the lorry and the loading bay is recognised by the buffer. The traffic light phases can be set up to a distance of 20 cm.



Only from Hörmann

**HIB-Pro docking assistant
Distance measurement in the buffer**

Docking support and position monitoring

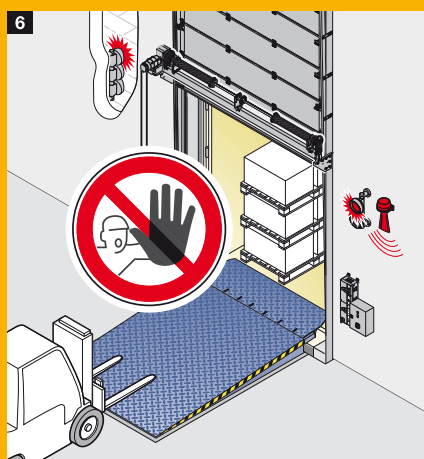
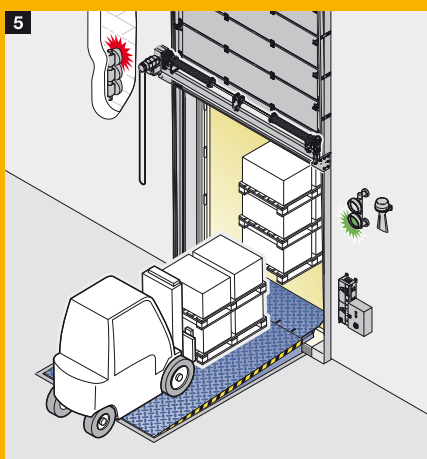
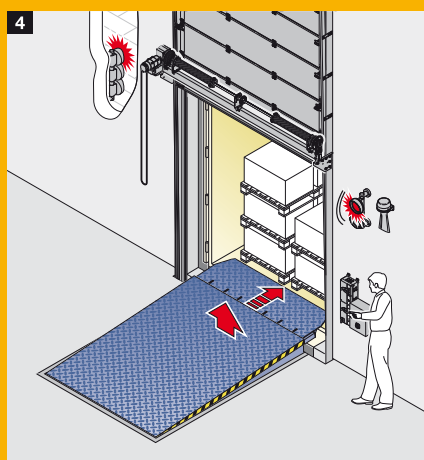
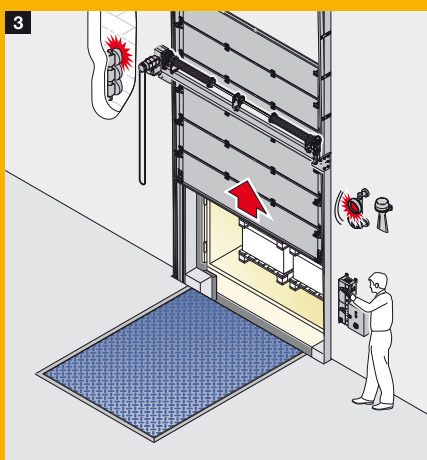
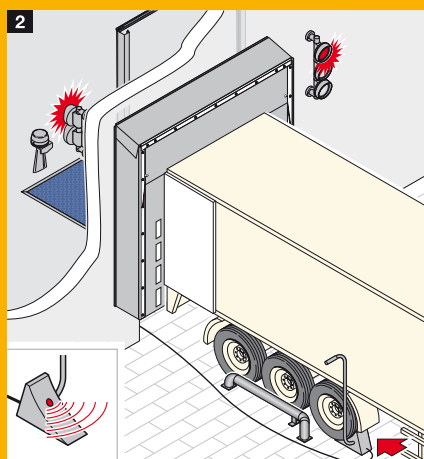
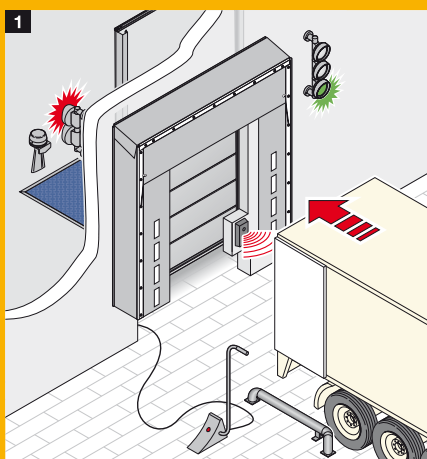
Hörmann Dock Control

Hörmann Dock Control reliably monitors and controls the entire loading process. Working as the control centre for comprehensive safety equipment, Dock Control evaluates information coming from e.g. the sensors in the wheel chock and the buffer and then controls specified blocking and signal functions.

The equipment can be adjusted depending on the customer's wishes and needs. Let us advise you!



Take a look at the video at: www.hoermann.com/videos



1 2 Safe docking

The buffer with sensor safely guides the lorry to the loading bay via the traffic light control. The sensor system in the buffer reports the distance of the lorry to the loading platform and when it has reached the final docking position. The lorry is then additionally secured by a wheel chock with a sensor. Upon contact with the tyres and the correct position, the sensor releases the door control.

3 4 Secured and controlled processes

After the lorry has been secured, the door can be operated. If the door is opened completely, the dock leveller is released via the door control limit switch reporting and can be operated. The traffic light then switches from red to green, releasing the loading bay. After the loading process, a sensor in the dock leveller releases the door for closing as soon as the dock leveller has returned to the home position.

5 6 Safety risk warning

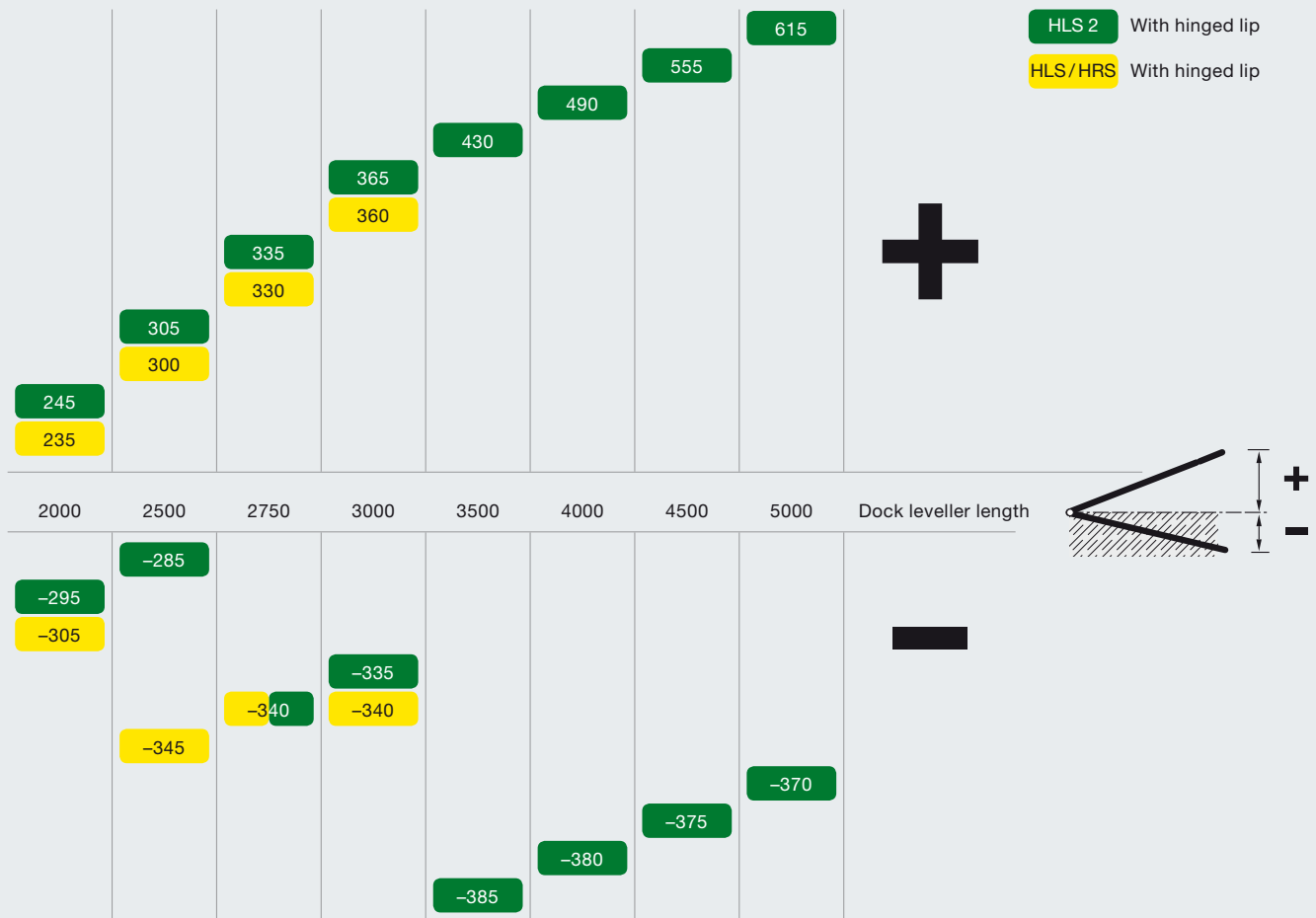
Sensors in the buffer and the wheel chock immediately report unintended rolling away of the lorry from the ramp or the removal of the wheel chock. The traffic light inside switches to red and an acoustic warning is sounded to timely interrupt the loading process.

Working ranges, dimensions

Hydraulic dock leveller with hinged lip

The values in the table indicate the maximum bridgeable height difference which is permissible, taking into account the maximum gradient/tilt of 12.5 % as per EN 1398.

Note that these are limit values. The levelling required should not be in the limit value range. Instead, select the next highest length.



All dimensions in mm

Dimensions

Ordering length Dock leveller		2000	2500	2750	3000	3500	4000	4500	5000	Ordering width Dock leveller
Installation height	HLS	650	650	650	650					2000, 2100, 2250
	HLS2	595	595	645	645	745	745	745	745	
Possible ramp height	HRS	910 – 1350								2000, 2100, 2250 overall width 3500 mm

All dimensions in mm



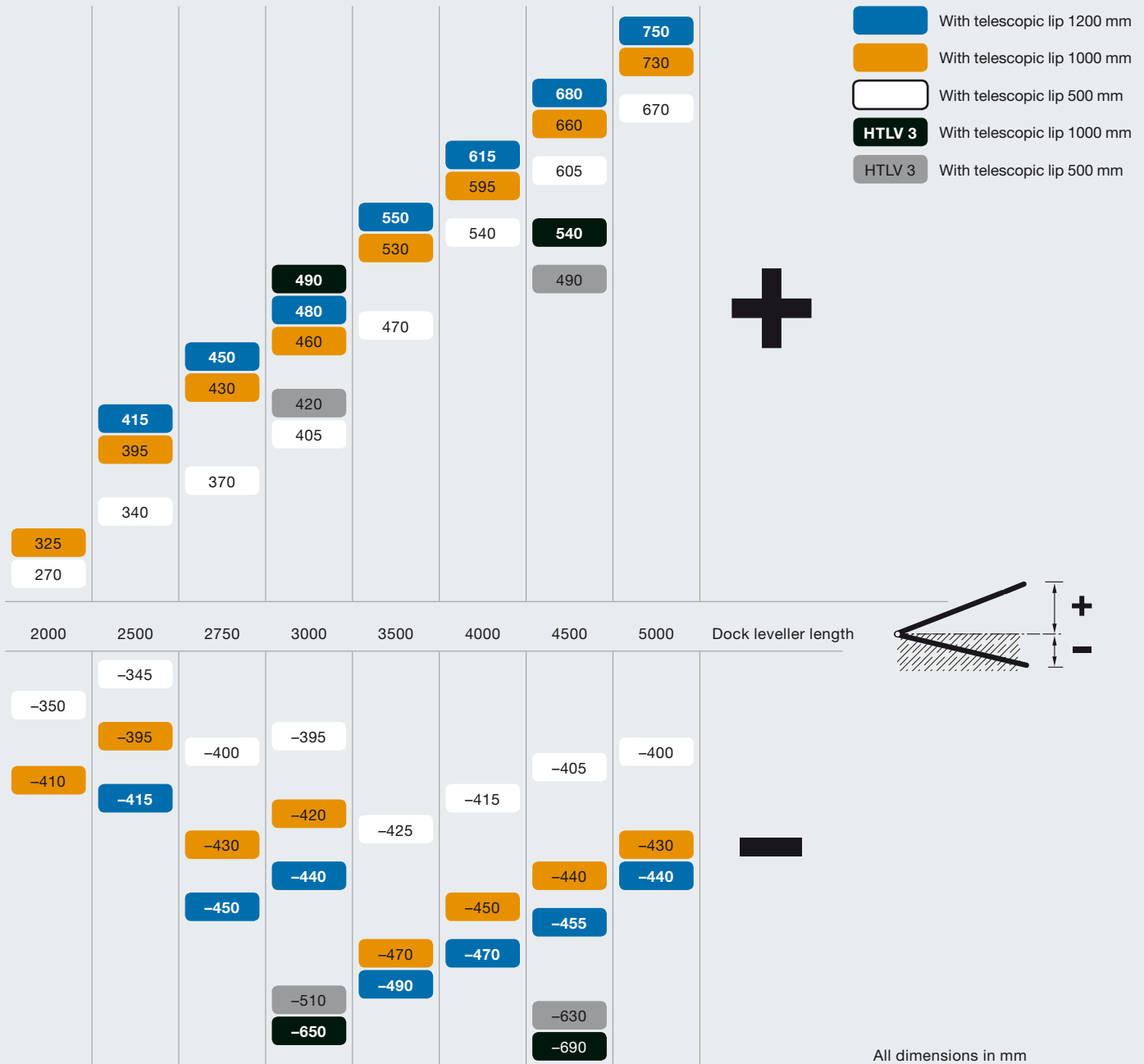
Hörmann practical application tip

Adjust the ramp height to the most frequently used lorry height. This ensures quick loading and unloading processes as well as less stress on the dock leveller.

Hydraulic dock levellers with telescopic lip

The table indicates the maximum working range (limit value range) when the lip is extended completely. Various factors play a role in determining the optimal dock leveller length.

Request our documents or seek consultation!



All dimensions in mm

Dimensions

Ordering length Dock leveller		2000	2500	2750	3000	3500	4000	4500	5000	Ordering width Dock leveller
Installation height	HTL2	595	595	645	645	745	745	745	745	2000, 2100, 2250
	HTLV 3				795			895		2000
Possible ramp height	HRT	1050 – 1425								2000, 2100, 2250 overall width 3500 mm

All dimensions in mm

Hydraulic dock levellers

Model variants for new buildings and modernisation

Request our planning drawings
for the exact dimensions of the opening!

Pit model P

For new buildings and renovations
Basic model,
open on 3 sides



Rear view of pit model P

Frame model F

For new buildings, for subsequent welding
in a preassembled frame
Self-supporting frame,
closed on sides,
edge brackets on side and rear



Rear view of frame model F

Frame model FR

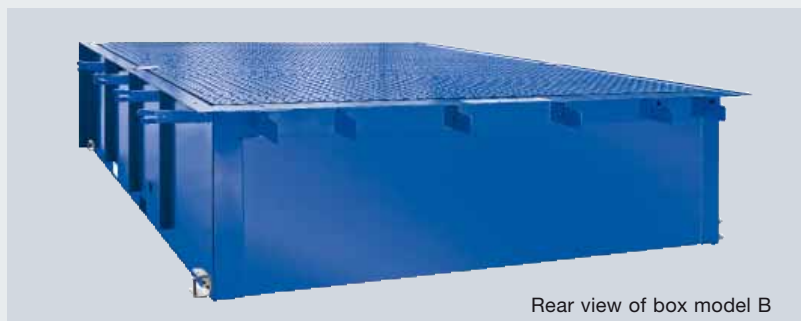
For new buildings, ideal for the use
of prefabricated concrete parts
Self-supporting frame,
closed on sides,
edge brackets and fitting anchors
on side and rear,
adjustment angle to screw



Rear view of frame model FR
(Fig. shows casting height of 200 mm)

Box model B

For new buildings
Self-supporting frame,
closed on sides and rear,
edge brackets and fitting anchors
on side and rear,
adjustment angle to screw



Rear view of box model B

Easy modernisation with pit model P



Remove the old dock leveller, disassemble
the old base frame and adjust it with adapter
profiles if necessary



Position the new dock leveller



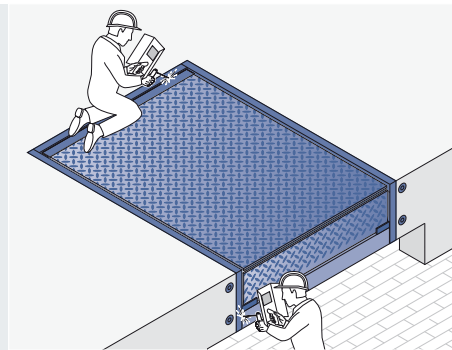
Weld to the edge brackets – finished!

Hydraulic dock levellers

Fitting variants in the building

Welded on the reverse face and front

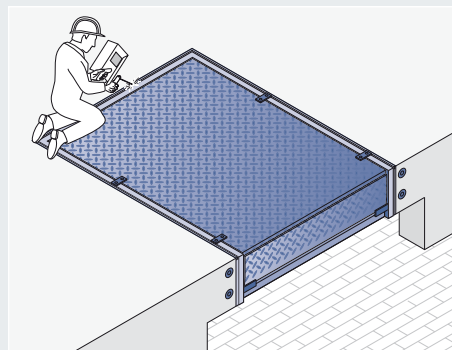
The dock leveller is placed in an existing concrete opening that is already equipped with edge brackets. This fitting variant is also suited for the renovation of loading bays.



Pit model P
Welded on the reverse face and front

3-sided welding in a preassembled frame

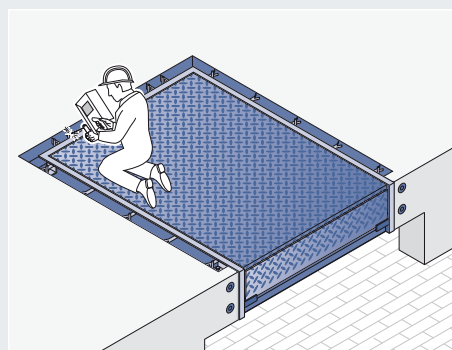
With this fitting variant, a so-called preassembled frame is cast in during the construction phase, into which the dock leveller is welded on 3 sides at a later date. The base frame of the dock leveller is equipped with an edge bracket for this purpose, allowing the dock leveller to be easily hooked in the preassembled frame.



Frame model F
3-sided welding in a preassembled frame

Casting into a pit with a casting groove

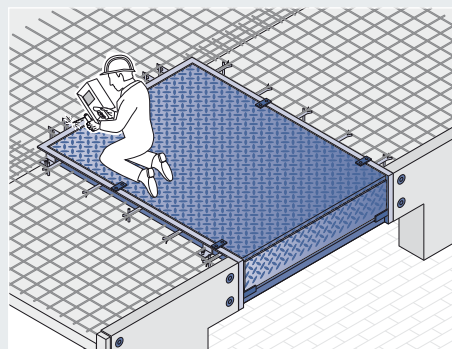
There are many methods for casting a dock leveller. One of them is fitting it into a pit with a casting groove. The groove should not be too narrow in order to allow sufficiently stable anchoring, especially in the hinge area. Joint armouring can lead to a sufficient, stable joint to the neighbouring concrete surfaces.



Frame model FR
Casting into a pit with a casting groove

Casting with prefabricated concrete elements

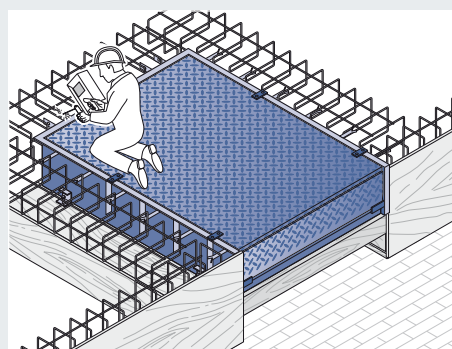
When constructing a building with many loading bays, it is common practice to use prefabricated concrete elements. In such cases, Hörmann dock levellers HLS 2 and HTL 2 can be easily fitted in the construction phase. The anchors can be either welded to the armour or to rowlocks prior to casting the dock leveller. This results in a continuous concrete cover.



Frame model FR
Casting with prefabricated concrete elements

Casting with sub-construction

The fitting of the dock leveller takes place via formwork. For this, the dock leveller is delivered with a cast box.



Box model B
Casting with sub-construction

Loading houses

The energy-efficient and space-saving solution



Loading houses are placed in front of the building, which is particularly energy-efficient and space-saving. This means that the entire building space can be used, right up to the exterior walls. The building door extends to the building floor not on top of the dock leveller, but behind it. This way, the door opening is optimally insulated, especially outside loading times. Loading houses are also suited for modernisation, as a complete loading bay can be added to the building without costly reconstruction measures.

**We also help you to plan the roof
and side connections to the building.**



Static calculation

A static calculation according to EN 1990 is available for all models. Depending on the version, the particularly stable design carries a roof load bearing capacity of max. 1 kN/m² or 3 kN/m² and is also recommended for snowy regions. The max. wind load is 0.65 kN/m². Thus, with Hörmann you can plan loading houses simply and safely. For higher requirements, please speak to your Hörmann partner.



Adjustable pedestal feet

The height of the loading house pedestal feet can be adjusted to optimally adapt to the building level. This facilitates fitting and allows for the compensation of possible building subsidence, even years later.



Optimal drainage

Loading houses are drained via a standard roof slope of 2 % towards the front. Under certain conditions, an optional roof slope of 10 % is possible. Contact us.

On request, a gutter can also be fitted to the loading houses in combination with a drainpipe.



Flexible control

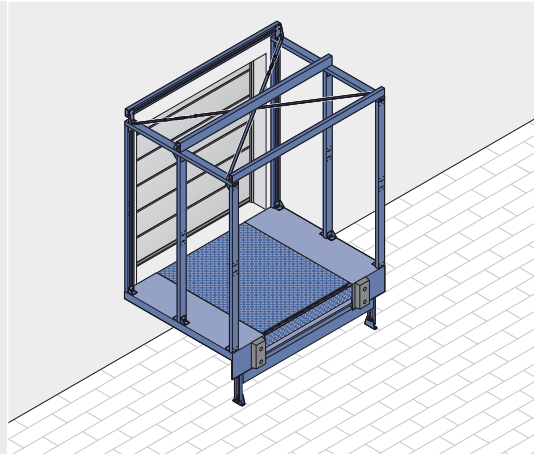
The optional external control DTH-T enables exact control directly at the loading point. This allows for the dock leveller telescopic lip to be positioned exactly onto the loading house even though the main control is located in the building. The external control can also be retrofitted to existing Hörmann door systems.

Loading houses

The right solution for any requirement

Loading house LHF 2 for on-site cladding

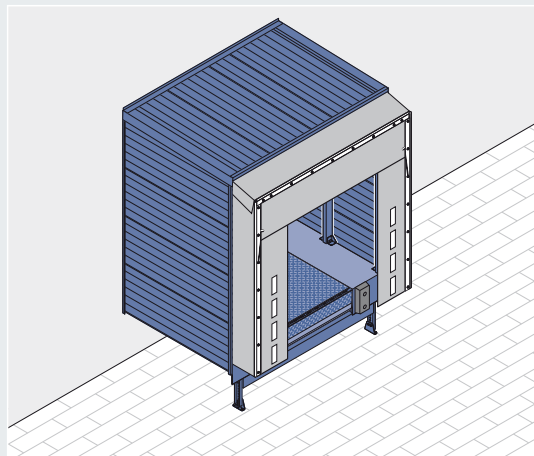
Any suitable cladding can be applied on the frame construction on-site, which is recommended when the building's facade should also determine the appearance of the loading house.



Loading house LHF 2 for on-site cladding
made of steel
for customized requirements

Loading house LHC 2 with single-skinned cladding

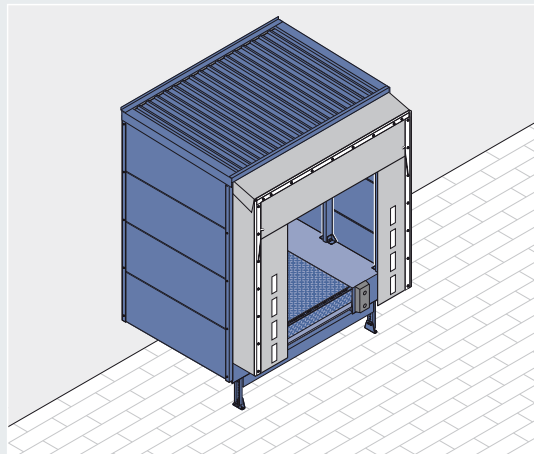
The single-skinned cladding protects staff and goods from the adverse effects of the weather during the loading process.



Loading house LHC 2 with single-skinned panels

Loading house LHP 2 with double-skinned 60 mm sandwich panels

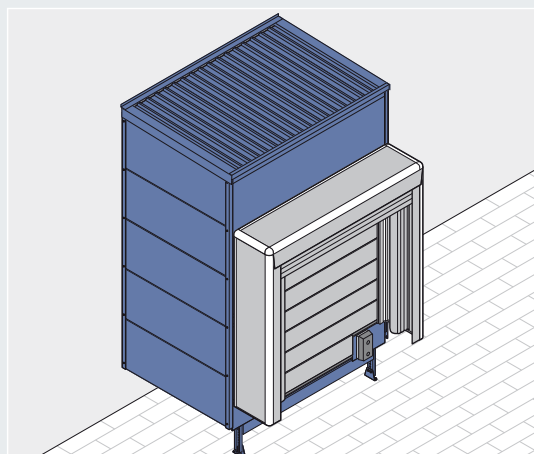
In this version, the side walls and the roof panel are made of double-skinned 60-mm-thick steel panels. The side walls are concealed, without visible screws. This version is recommended when, in addition to protection against adverse effects of the weather, noise transmission is to be decreased during loading.



Loading house LHP 2 with 60 mm panels

Thermo loading house LHP 2 Thermo with double-skinned 80 mm sandwich panels

When loading houses are part of the cooling zone, we recommend equipping them with 80-mm-thick sandwich panels. This Thermo version is additionally insulated under the dock leveller with 80 mm panels. A thermally insulated industrial sectional door should be used as an external door.



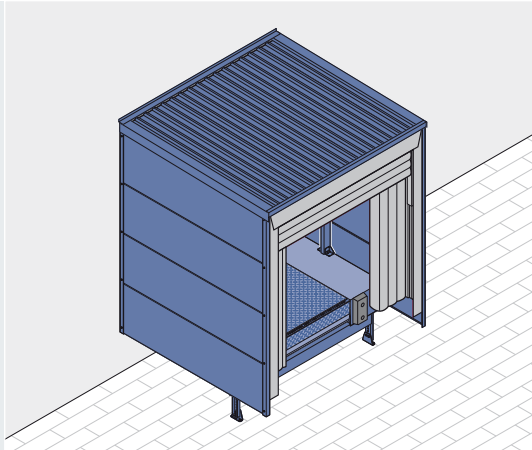
Loading house LHP 2 Thermo with 80 mm panels
Insulated
all-round, suitable for refrigerated warehouses

Hörmann practical application tip

On request, loading houses can be prepared for fitting rolling shutter SB Decotherm as an exterior door.

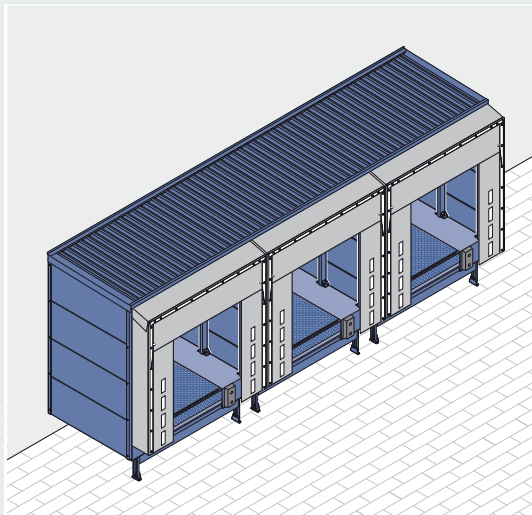
Loading house with recess for inflatable dock seal

With this solution, appearance, design and use of materials are optimally co-ordinated.



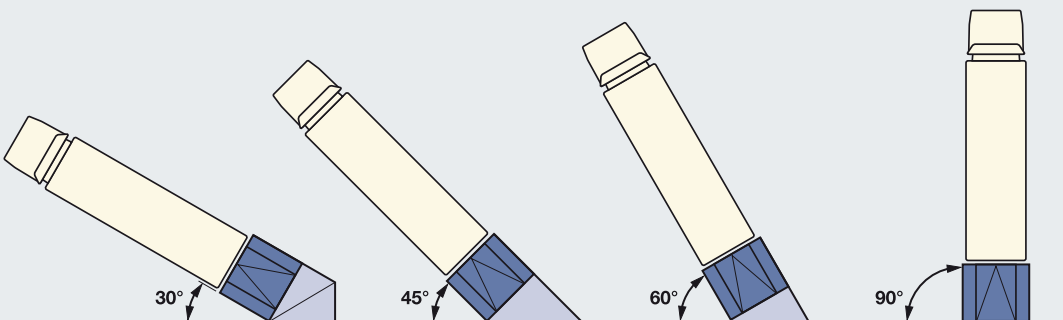
Series in element assembly arrangement

Arranged as a series with a 90° angle, several loading houses can be combined into a single compact space-saving unit. This is not possible with Thermo loading houses.



Individual loading houses in variable arrangement

Loading houses can be used as single loading bays or as a series positioned in a 90° angle in front of the building. They are also available for arrangement at angles of 30°, 45°, 60°, 120°, 135° and 150° for more manoeuvrability.



Panel versions

As standard, the roof and side cladding are supplied in Grey white, RAL 9002, on the inside and outside. The outside is also available in White aluminium, RAL 9006. Available on request in many RAL colours.



Single-skinned



Double-skinned

Flap dock shelters

Universally applicable



Hörmann flap dock shelters adjust to the lorry's size and can thus be used universally. As dock or roadway models, they are available in many variations and can therefore be optimally customised to most situations. High-quality top and side flaps, mounted on a galvanized, compressible steel frame, result in a stable, flexible and robust construction.

Flaps and frame parts are manufactured as easy-to-assemble individual elements that can be screwed together. This also makes replacements simple and inexpensive.

Flap dock shelters

The lorry determines the dimensions

Hörmann practical application tip

Cuts in the top flap reduce the load during docking.

Ask yourself:

- How high is the loading bay?
- How wide and how high are the docking vehicles?
- Do different lorry sizes have to load at the same loading bay?
- What type of goods are loaded?

Use the table below to carefully determine the required size of the front opening. This is the only way to achieve optimal sealing.

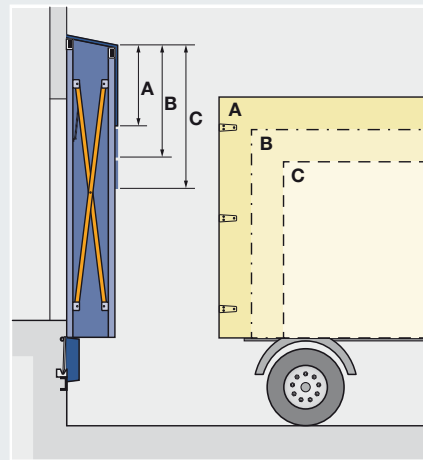
Ideally, the dock seal is 850 mm higher and 1000 mm wider than the lorry.

While a long top flap ensures good sealing even with smaller lorries, it hangs over the loading opening of larger vehicles. An overlap of approximately 150 mm is ideal.

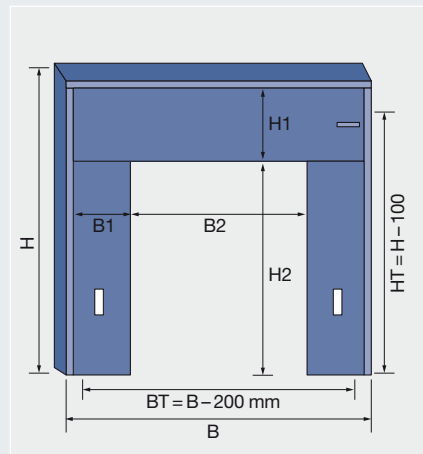
The correct combination of flap width and depth results in optimal sealing. In Hörmann dock seals, a depth of 500 mm has been tried and tested in practical application. If required by the customers, dock seals are also available with 600 mm depth, type DS even with a depth of 900 mm, which is ideal, for MRS mechanical dock levellers that are fitted in front of the ramp.

Standard widths: 3350/3500 mm
Standard heights: 3500/3750 mm
(Roadway model 4500 mm high)

For fitting the dock seal, the door opening may have the following maximum dimensions:
Door width = Width of the dock seal – 200 mm
Door height = Height of the dock seal – 100 mm



Adjust the height of the top flap to the vehicle height. Optimal: 150 mm overlap.



B Width
B1 Side flap
B2 Front opening
BT Door opening width
H Height
H1 Top flap
H2 Front opening
HT Door opening height

B Dock shelter width		DS		DT	DDF
	B1 side flap	600	700	650	600
3300	B2 front opening	-	-	-	2100
3350		2150	1950	2050	-
3400		-	-	-	2200
3500		2300	2100	2200	-

Front opening width = Dock seal width – (2 × width of side flaps)

H dock seal height		DS/DT		DT	DDF	
	H1 top flap	900	1000	1200	1350	1000
3500	H2 front opening	2500	2400	2200	2050	2450
3750		2750	2650	2450	2300	-
4500*		3500	3400	3200	3050	-

Front opening height = Dock seal height – top flap height – 100 (drainage)

* Roadway model

Flap dock shelters

Flexible frame construction

Link arm construction

Due to their special frame profiles, link arms are flexible both horizontally and vertically.

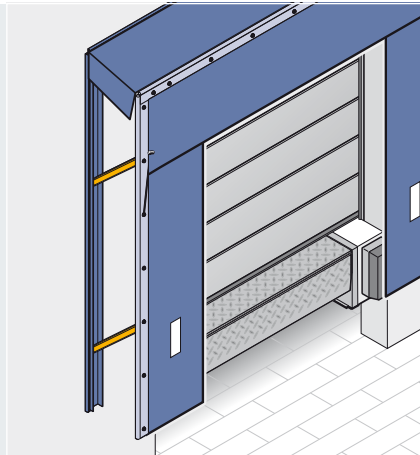


Telescopic link arm construction

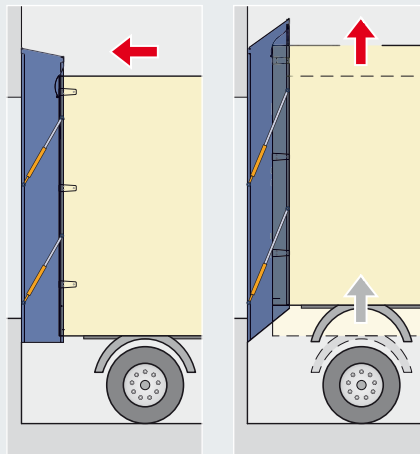
The patented construction with telescopic link arms and flexible front frame minimises the risk of damage to the top edge of the dock shelter. This may result when lifting interchangeable containers during placement or due to large docking lorries whose loading surface or design rises during loading.

Scissors arm construction

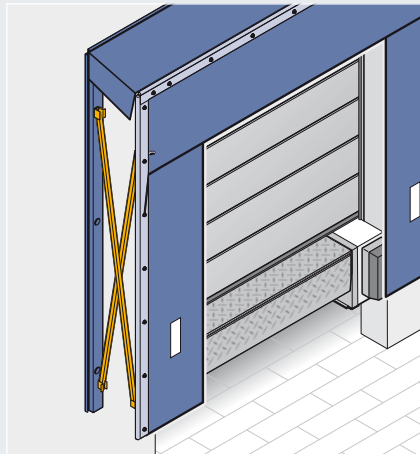
The particularly stable scissors arm design with tension springs is pressed in parallel and once more tightens the tension of the cladding after the loading process. It also supports roadway or recessed versions.



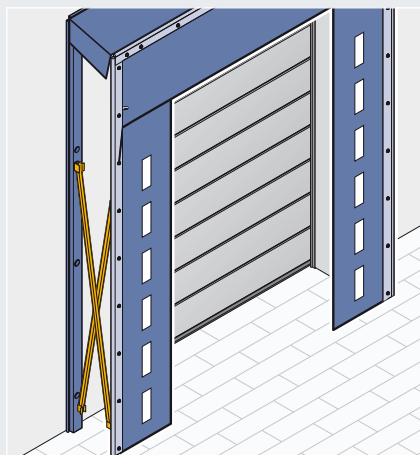
Link arm construction



Telescopic link arm construction



Scissors arm construction



Scissors arm construction
as an optional roadway model

Hörmann practical application tip

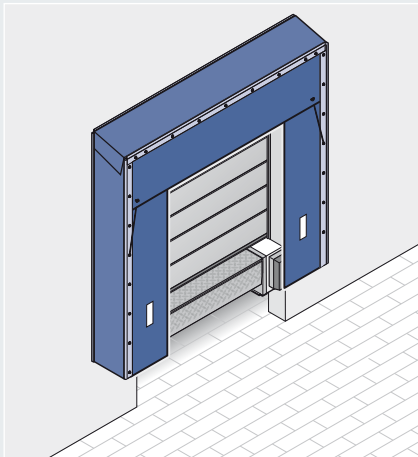
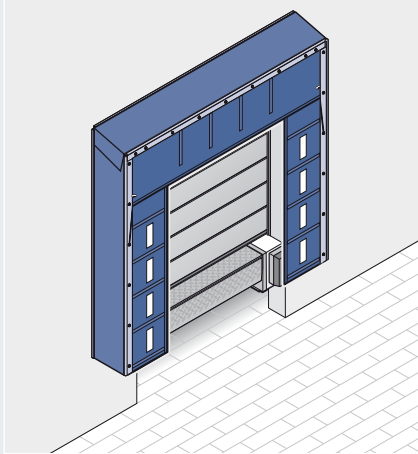
Equip the docking zone with wheel guides. They ensure that the lorries always dock correctly, allowing the flap shelter to seal properly and collision damage is prevented.

DT dock seal

In warehouses where loading takes place around the clock, the dock seal DT with its particularly high-quality flaps is the right choice. The flap material consists of high-frequency welded 2-mm-thick polyester with a special woven inlay that is coated with UVPC on both sides. Steel leaf springs are integrated in the top and side flaps to ensure a higher degree of pre-tensioning and good seal with the lorry.

DS dock seal

For normal loading frequencies, dock seal DS is the ideal choice. The side and top flaps consist of 2-layered, 3-mm-thick substrate fabric made of polyester monofilament threads with double-sided UPVC coating. For docked lorries, the monofilament threads in the flap material ensure the necessary pre-tensioning/seal of the lorry's reverse side. If the vehicle heights differ greatly, a top flap with laminated corners or a fully laminated top flap can be a good choice to prevent excessive tension of the top flap with high vehicles.



DTL with link arm

DTS with scissors arm

Standard widths: 3350/3500 mm
Standard heights: 3500 / 3750 mm
Optionally as a roadway model,
4500 mm high

DSL with link arm

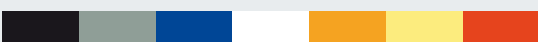
DSL-H with telescopic link arm

DSS with scissors arm

Standard widths: 3350/3500 mm
Standard heights: 3500 / 3750 mm
Optionally as roadway model,
4500 mm high, or recess model

Colours

Top and side flaps	DT	DS
Graphite black, similar to RAL 9011	●	●
Basalt grey, similar to RAL 7012	●	●
Gentian blue, similar to RAL 5010	●	●
Marker stripes		
White	●	●
Yellow	●	●
Orange	●	-
Red	●	-
Side cladding		
Graphite black, similar to RAL 9011	●	●
Basalt grey, similar to RAL 7012	●	-
Gentian blue, similar to RAL 5010	●	-



Flap dock shelters

Accessories

DDF dock shelter

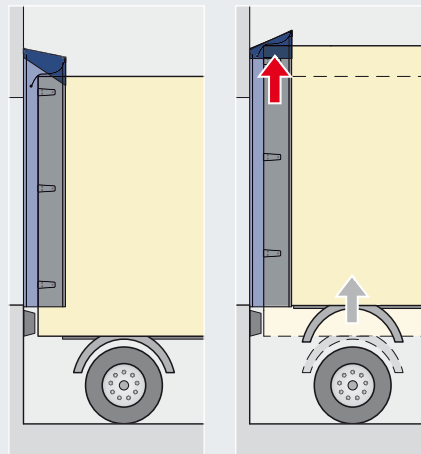
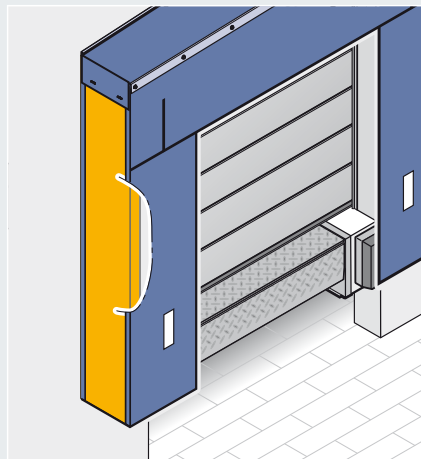
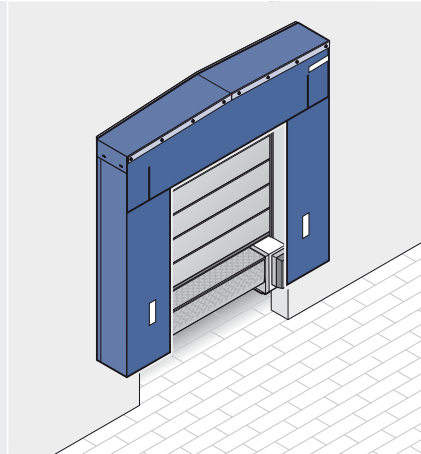
Thanks to its especially tearproof flaps made of foam-filled side cushions, the DDF dock shelter is an alternative to flap dock shelters with link or scissor arms.

The side cushions are simply pressed in the case of inexact docking or move off to the side without any damage.

The side and top flaps consist of 2-layered, 3-mm-thick substrate fabric made of polyester monofilament threads with double-sided UPVC coating.

The side flaps are fastened to the side cushions with Velcro. This allows for simple and inexpensive exchange in case of damage.

The top part is upwardly mobile, e.g. when a docked vehicle is pumped up.



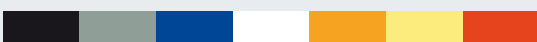
DDF

Standard widths: 3300 / 3400 mm

Standard height: 3500 mm

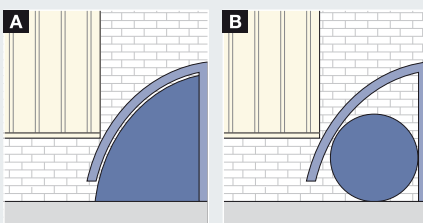
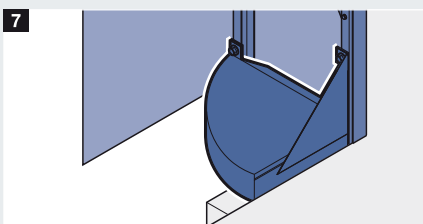
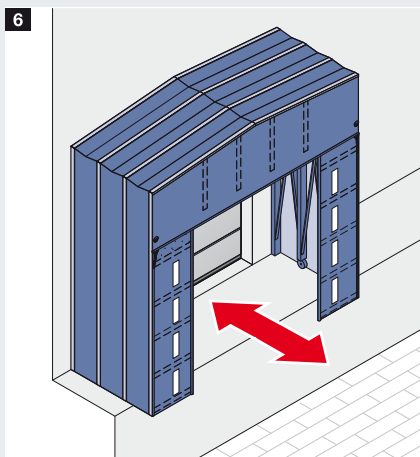
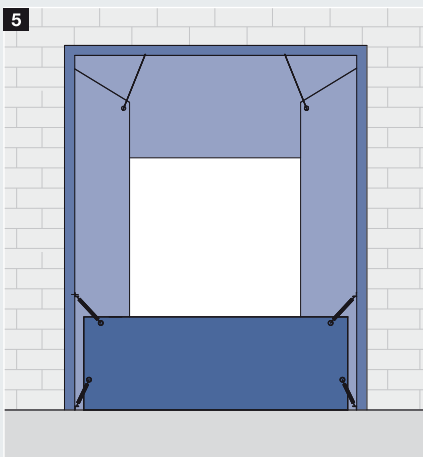
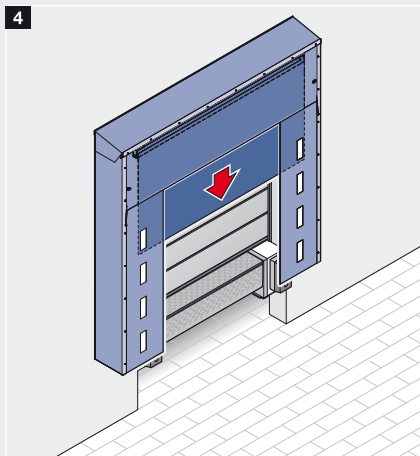
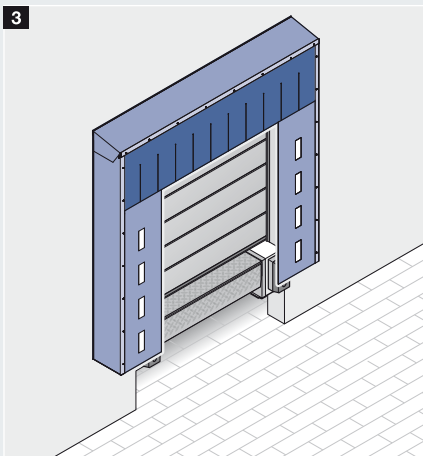
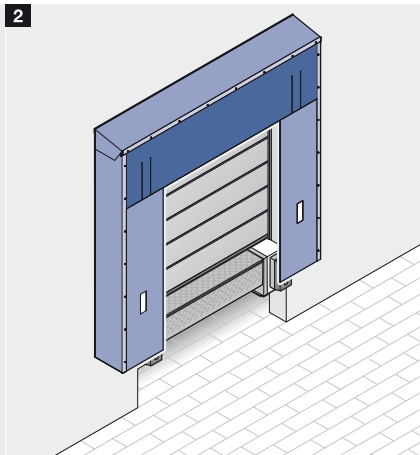
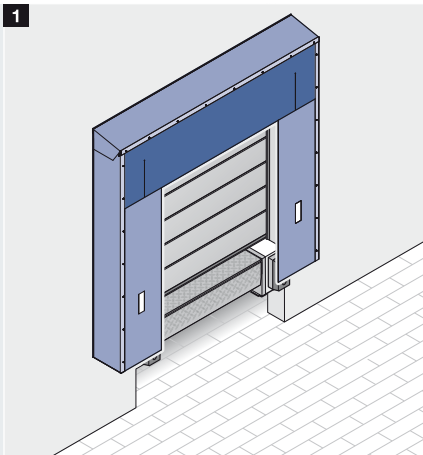
Colours

Top and side flaps	DDF
Graphite black, similar to RAL 9011	●
Basalt grey, similar to RAL 7012	-
Gentian blue, similar to RAL 5010	-
Marker stripes	
White	●
Yellow	-
Orange	-
Red	-
Side cladding	
Graphite black, similar to RAL 9011	
Basalt grey, similar to RAL 7012	
Gentian blue, similar to RAL 5010	



Flap dock shelters

Optional equipment and versions



Top flaps

1 3-part

On request, you can also receive the top flap for the dock seal DS, also with lateral incisions to reduce the load during docking.

2 Laminated corners

An alternative to the 3-part top flap, however with two incisions each at the right and left corners, possible with type DS.

3 Fully laminated

In the scissors arm design we also optionally provide the top flap laminated across the entire width with 100 % overlap.

4 Roll-up

In order to achieve overhead sealing, even on very small vehicles, an additional roll-up flap can be installed, which is manually or electrically operated.

5 Removable bottom flap in roadway models

A removable bottom flap can be installed to achieve optimum sealing at the bottom edge of the vehicle. It is hung between the rear frame of the shelter and thus makes direct contact with the vehicle loading surface.

6 Recessed version

Flap dock shelters are also available with multiple scissor arms which are manually advanced similar to an accordion. They are particularly suitable for retrofitting existing open ramps.

7 Corner sealing cushions

The bottom edge of the dock seal between the wall connection and flap can optionally be sealed with corner sealing cushions.

A With their shape, Hörmann corner sealing cushions adjust optimally to the docking situation.

B Round cushions do not seal efficiently.

Inflatable dock seals

Flexible sealing without restriction to the door opening area



Inflatable dock seals adjust particularly well to the different lorry sizes. The excellent seal mostly prevents the entrance of cold into heated buildings or of heat into refrigerated warehouses, saving energy. It envelops the vehicle without restricting the area of travel of the doors and is the optimal solution for specific situations, such as a DOBO system. After the loading process and switching off the fan, the cushions quickly withdraw via their interior tension cables and counter weights.

Hörmann practical application tip

The inflatable dock seal can be operated conveniently with multi-control 460.



Use in the DOBO system

Lorry or flatbed can be docked to the loading bay with closed doors. Before opening the door, the inflatable dock seal is activated and effectively envelops the vehicle on three sides. The doors of the lorry or the flatbed can be opened now.



Design features

1 Frame construction

The roof and side cladding are made of insulated steel panels, 20 mm thick. They are available in a choice of White aluminium, RAL 9006, or Grey white, RAL 9002, with anodised aluminium corner profiles with a rounded softline look.

2 Flap and fabric

The side and top flaps consist of 2-layered, 3-mm-thick substrate fabric made of polyester monofilament threads with double-sided UPVC coating which protect the inflatable cushions. The cushions consist of weather-resistant flexible and high frequency-welded flap material in Graphite black, RAL 9011.

3 Blower

The powerful blower is in operation during the entire loading process and thus guarantees a constant seal. Ventilation slots ensure the required pressure compensation and drain condensation water.

4 Corner sealing cushions

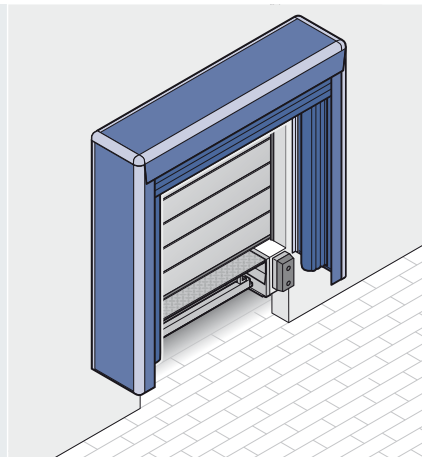
As standard, the DAS-3 is available with a foam-filled corner sealing cushion and optionally with inflatable corner sealing cushions (see page 47).

Inflatable dock seals

Versions

DAS-3 dock seal

Only after the lorry has docked, the fan inflates the dock seal around the vehicle, fully sealing the loading area within a few seconds. This type of dock seal is especially recommended for DOBO systems, for refrigerated warehouses and extended loading times. It is available upon request with a roll-up flap instead of an inflatable top cushion. Corner sealing cushions are included as standard in the scope of delivery, optionally also as inflatable versions. They seal the bottom section, between the wall connection and the side cushions.

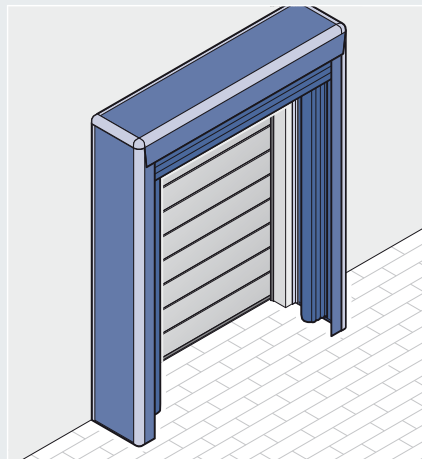


DAS-3

3-sided inflatable dock seal
Optionally as a recess model
Standard size:
3600 × 3550 × 850 mm (W × H × D)
Front opening in the home position:
3100 × 3150 mm (W × H)
With inflated cushions:
2400 × 2550 mm (W × H)

Dock seal DAS-G-3, roadway model

The roadway model allows unimpeded passage into the building with deflated cushions. It is available upon request with an electric roll-up flap instead of an inflatable top cushion.

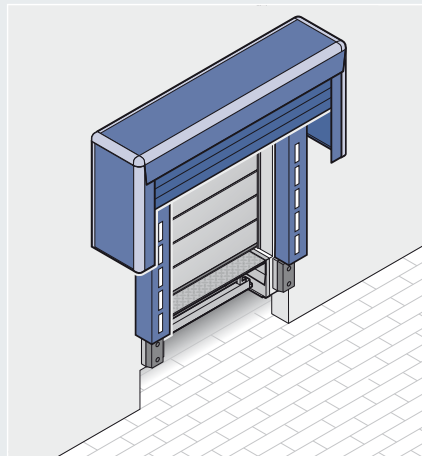


DAS-G-3

Roadway model
As DAS-3,
Standard size:
3600 × 4700 × 850 mm (W × H × D)
Front opening in the home position:
3100 × 4300 mm (W × H)
With inflated cushion:
2400 × 3700 mm (W × H)

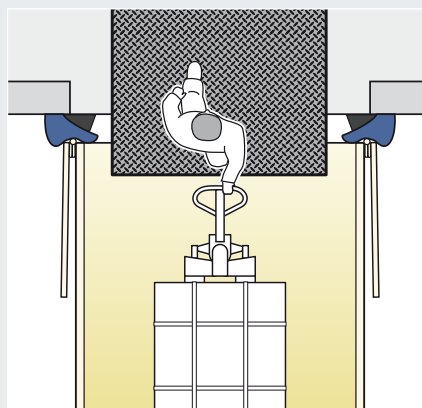
Dock seal DAK-3

DAK-3 is an advantageous combination of fixed side cushions and inflatable top cushion with sandwich cladding. This dock seal is particularly suited for hanging goods. Foam-filled side cushions provide perfect lateral sealing. On top the inflatable top cushions keep the loading opening totally open to directly forward the goods on conveyor systems.



DAK-3

1-sided inflatable dock seal with fixed side cushions
Standard size:
3600 × 3500 × 350 / 850 mm
(W × H × D)
Front opening in the home position:
2400 × 3100 mm (W × H)
With inflated top cushion:
2400 × 2500 mm (W × H)

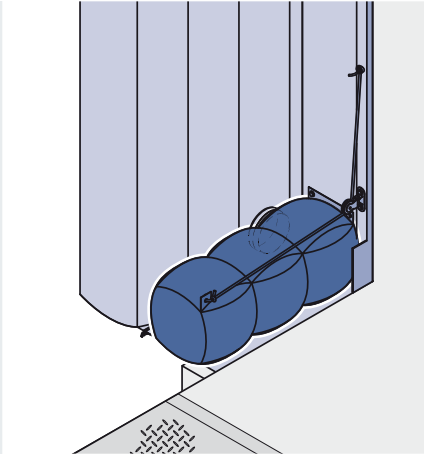


Advantage of fixed side cushions

With cushion dock seals the space between the outside of the container and the open doors is sealed.

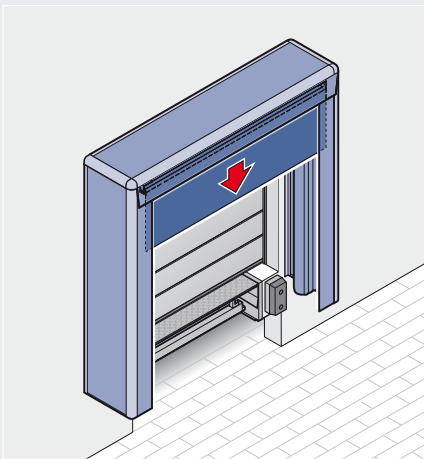
Inflatable dock seals

Optional equipment



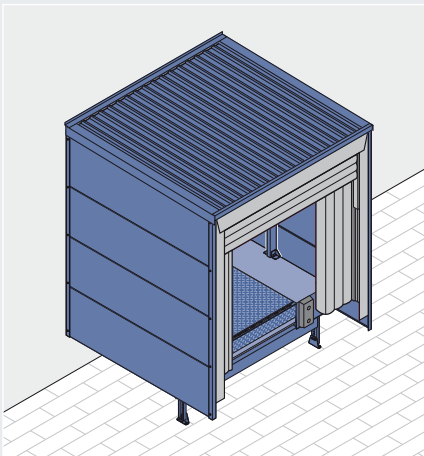
Corner sealing cushion

For versions with 600-mm-wide side cushions, we also offer inflatable corner sealing cushions as an option which provide a better seal with the lorry. Because they are not inflated in their resting state, they do not make any contact during docking, making them less susceptible to wear caused by vertical movements of the vehicle.



Roll-up flap

Electrically operated roll-up flaps can also be used instead of a top cushion. They allow for more flexibility with large differences in vehicle heights. A three-metre-long version is available in addition to a two-metre-long version that is lowered and raised via press-and-hold. This function is conveniently operated together with the side cushions in impulse operation, for example via dock leveller control 460 S / T. A special mechanism ensures that the flap follows the vehicle, should it sink. This ensures a constant, good seal.



Recess version

Inflatable dock seals are also available in a recess version. Fitted in a correspondingly equipped loading house, the dock seal is optimally protected against rain water and snow loads.

Cushion dock seals

Best solution for special areas of application



In warehouses where lorries or swap trailers with similar dimensions and designs are without top flaps, cushion dock seals are an excellent choice and offer the best sealing.

Cushion dock seals do not only seal the transition between the lorry's rear side and the building, but also the seam between the lorry and the open door. This reduces the side loading opening. Cushion dock seals are not suitable for lorries with top flaps.

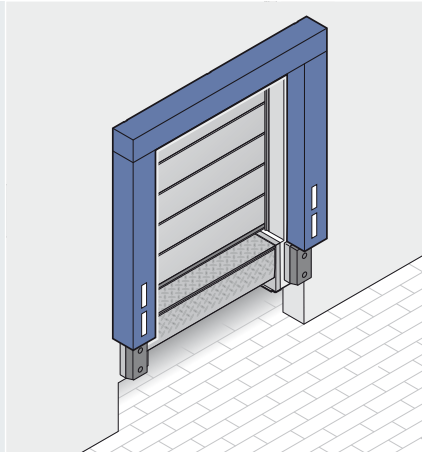
If the yard level is not at right angles to the facade, Hörmann offers special cushion designs that optimally seal the gap to the lorry.

Hörmann practical application tip

During the docking, the cushions may not be pressed-in more than 50 mm. Therefore it is important that the depth of the buffer has the right proportion to the depth of the cushions. With the help of support brackets, the difference can be simply bridged.

DFH dock shelter

For loading and unloading the lorry drives up to the foam cushions with already opened doors.

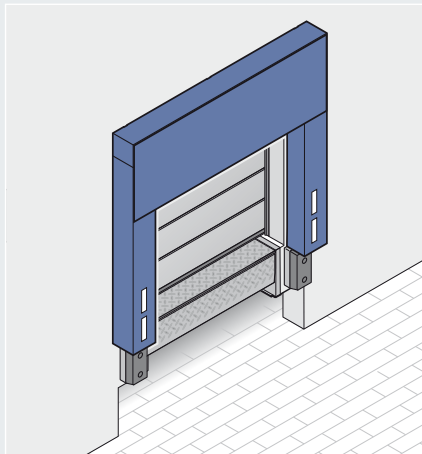


DFH

Dock seal with fixed side and top cushions
Standard size:
2800 x 2500 mm (W x H)

DFC dock shelter

This dock seal with fixed side and top cushions and additionally fixed top curtain is suitable for smaller lorries with varying superstructure heights and for buildings with high loading doors.

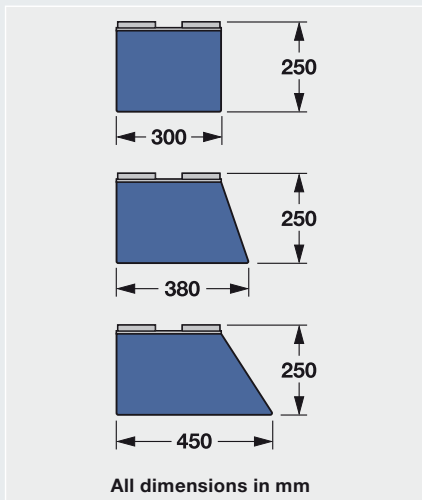


DFC

Dock seal with fixed side cushions.
Top cushion with additional top flap.
Standard size:
2800 x 3000 mm (W x H)

Cushions

The cushions are filled with PU foam. In conjunction with the sturdy base frame and the high-quality encasing made of woven plastic flaps the cushions constitute a durable unit. The contact surfaces of the cushions are additionally reinforced across their entire width by high-frequency welded polyester strips, which makes them low in wear and thus more durable.



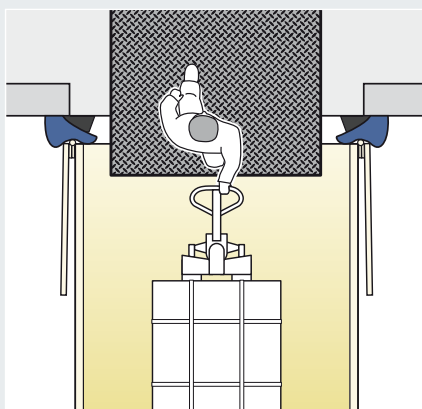
Cushion shapes

Straight shape

Chamfered shapes (w)
(with side cushions)

Colours

Top and side flaps	DFH	DFC
Graphite black, similar to RAL 9011	●	●
Marker stripes		
White	●	●
Yellow	●	●
Orange	●	●
Red	●	●



With cushion dock seals, the seam between the lorry and the open door is also sealed.

Hörmann industrial doors

The complete programme for your logistics



By offering the widest range of products in Europe with numerous versions for all door styles, Hörmann is able to provide you with the perfect door for your specific requirements.

Cutting-edge door and operator technology from a single source ensures perfect function and the highest level of safety.



Hörmann practical application tip

High-speed doors are suitable not only as individual doors, but also in combination with sectional or rolling shutters to quickly close the opening after the forklift has passed through.

Industrial sectional doors

These space-saving door systems can be adapted to different industrial facilities using various track applications. This gives you planning reliability when building a new facility or renovating. Hörmann offers you customised solutions for every type of application, such as thermally insulated, double-skinned ThermoFrame doors with a U-value of up to 0.5 W/(m²·K).



Rolling shutters and rolling grilles

Thanks to a simple construction with just a few components, rolling shutters are both economical and sturdy. Depending on your requirements, you can choose from different curtain and equipment variations. For example, the manual rolling shutter with innovative tension spring assembly technology is suitable for loading bays with low docking frequencies. The insulated rolling shutter Decotherm S with full-hard steel profiles is the correct choice for rough logistics operations.



High-speed doors

Hörmann high-speed doors are used both inside and as exterior doors to optimise traffic flow, improve room air conditions and save energy. Your advantage: SoftEdge technology with built-in crash-protection makes high-speed doors extremely safe and economical.



Further information can be found in the Hörmann brochures

Buffers



Buffers protect the ramp and the building from damage. They absorb the dynamic forces of the lorry during docking and are both sturdy and flexible. Depending on the requirements, different mounting plates and mounting brackets are available.

Hörmann practical application tip

A mounting plate allows the simple replacement of the buffers.

Buffer made of rubber or PU effectively dampen the start up forces

They are available in different sizes and shapes. Buffers made of polyurethane (DB 15 PU) have a much longer service life compared to conventional rubber buffers.



Buffers in various sizes and shapes

Polyurethane buffers are particularly long-lasting

Steel buffers for particularly high requirements

The steel buffer consists of a full-surface dampening interior core and a robust external steel plate that is placed on the ramp edge for static relief.



Steel buffers for particularly high requirements

Flexible bumpers

Flexible bumpers follow the up and down movements of the lorry during loading and unloading. In addition, height-adjustable versions offer the opportunity of driving the bumper up to 250 mm upwards and lock it there. They are indispensable for the DOBO system. Flexible bumpers are available as rubber, PU or steel buffers.



Flexible bumpers follow the movement of the lorry during loading and unloading

Mounting plates and mounting brackets

Mounting plates

For particularly secure fitting of the buffer to the building. For renovation, when the building structure is already damaged, mounting plates are indispensable in most cases.

Mounting brackets

With the help of mounting brackets, a buffer can be placed above the pedestal level or be given more depth, for example with tail lifts or for the protection of cushion dock seals. To fit mounting plates by welding, we recommend a steel bracket at the ramp edge.



Mounting plates / mounting brackets for safe and flexible fitting

On-site sufficiently dimensioned steel profiles and angle plates effectively transfer the acceleration forces into the building structure

Dock levellers with integrated RFID technology

Non-contact reliable recording of the transport goods when crossing the dock leveller



RFID Technology on the upswing

The share of euro-pallets equipped with RFID technology is steadily increasing, in line with the increasing demand for the automated flow of goods.

The RFID readers and antennae required for this process are often elaborately installed as a gate around the loading bay. Disadvantages of this installation: valuable space is used up, collisions with an industrial truck can lead to damaged equipment, undesired screening effects and excessive operating range may occur.

The shortest path is the best

When the transponder is fitted onto the pallet, the antennae should also be installed nearby. The solution: The antennae are fitted directly underneath the dock leveller, which is permeable to RFID radio signals. This way, the transponder data reliably reaches the reader along the shortest path when crossing the dock leveller.

Advantages at a glance:

- Reliable transmission due to short distance between the reader and transponder
- The RFID reader is securely fitted underneath the dock leveller, preventing collision or mechanical impact damage
- Minimal soiling due to the protected location of the readers
- Cable-based, stable and reliable data transfer from the reader to the follow-up IT station
- Very economical because only the dock leveller must be equipped with the RFID technology, and not industrial vehicles such as forklifts

Seek individual consultation. On request, real loading tests can be performed with your returnable containers and special loading units on a test ramp. Consultation and project design takes place in co-operation with experienced IT logistics experts.



Automatic recording of goods movements, simply while crossing the dock leveller.



Reliable data transmission along the shortest path between the RFID transponder and the reader.



9/9 Objekte

99,8kg

The delivery note with the information on the goods and the linked transponder number is displayed. The completely loaded goods are then marked (Fig.).

Accessories

Safety equipment and external control for loading houses



Wheel chock

A wheel chock prevents the lorry from leaving the safe docking position during the loading process, e.g. by braking of the forklift when driving in or out

Wheel chock with sensor

To ensure that the wheel chock is used properly, we recommend the version with a sensor. This can be connected to every Hörmann dock leveller and releases the dock leveller with the correct contact. In addition to the optical sensor, Hörmann wheel chock WSPG features an additional location sensor that prevents manipulation, for example by turning of the wheel chock.



Warning lights / signal systems

They signal, for example, when loading can take place or whether the driver can move away from the loading area. They also warn from safety risks.

Accessories

Wheel guides

Docklight

Docklights provide a safe and bright work environment and good illumination of the loading area. The energy-efficient LED docklight is recommended above all in addition to the halogen version DL 1300. With 30 W power input, it ensures uniform, good illumination.



Button DT 1

In most cases mounted to the ramp, button DT 1 is used for functions such as driver registration. In this way, the driver is first ordered to check the docking position, in order to then put the dock leveller into operation at the press of a button.



External control DTH-T

Due to the distance between the main control and the loading edge in loading houses, we recommend the optional external control DTH-T. This allows for the dock leveller telescopic lip to be positioned exactly onto the loading house. The external control is particularly useful in DOBO systems. If the opened doors impede visual contact with the dock leveller, the employee can move up to a max. distance of 5.50 m away from the control (see also page 35). The control can be simply placed on metal surfaces thanks to a magnet on its rear side.



Control 420 T with connected external control DTH-T

Accessories

Wheel guides, protection bollards



Light guide

The LED lights attached to both sides of the dock leveller help guide the lorry driver, even in the dark or if visibility is impaired due to heavy precipitation. There is no hindrance to cleaning vehicles or snowploughs.

The light guide is based on energy-efficient LED technology.



Wheel guides

Wheel guides are used to support the driver in docking. At the same time, they guide the lorry straight into the loading bay or dock seal / shelter. This prevents damage to vehicles, ramps and dock shelters and ensures efficient sealing. Wheel guides are available in straight and curved versions.



Protection bollards

Protection bollards are a useful investment indoors and outdoors. Outdoors they prevent expensive collision damage to driveway dock shelters or to buildings. Indoors they protect door tracks from collision damage during loading by forklifts.

Hörmann product range

Everything from a single source for your construction project

1 Sectional doors

These space-saving door systems can be adapted to different industrial facilities using various track applications. Hörmann offers you tailored solutions for every application.

2 Rolling shutters and rolling grilles

Thanks to a simple construction with just a few components, rolling shutters are both economical and sturdy. Hörmann supplies rolling shutters in widths and heights of up to 11.75 m and 9 m respectively, or as special doors which are even larger.

3 High-speed doors

Hörmann high-speed doors are used both inside and as exterior doors to optimise the flow of traffic, improve room conditions and save energy. The Hörmann programme includes vertically and horizontally opening transparent doors with flexible curtains.

4 Loading technology

Hörmann offers you complete loading systems for the logistics sector. The advantages: reliable planning, dependable execution of construction work and high functionality thanks to precisely matched components.

5 Fire sliding doors

Hörmann can provide you with single or double-leaf sliding door solutions suitable for all areas and required fire protection classes.

6 Multi-function doors and reinforced internal doors

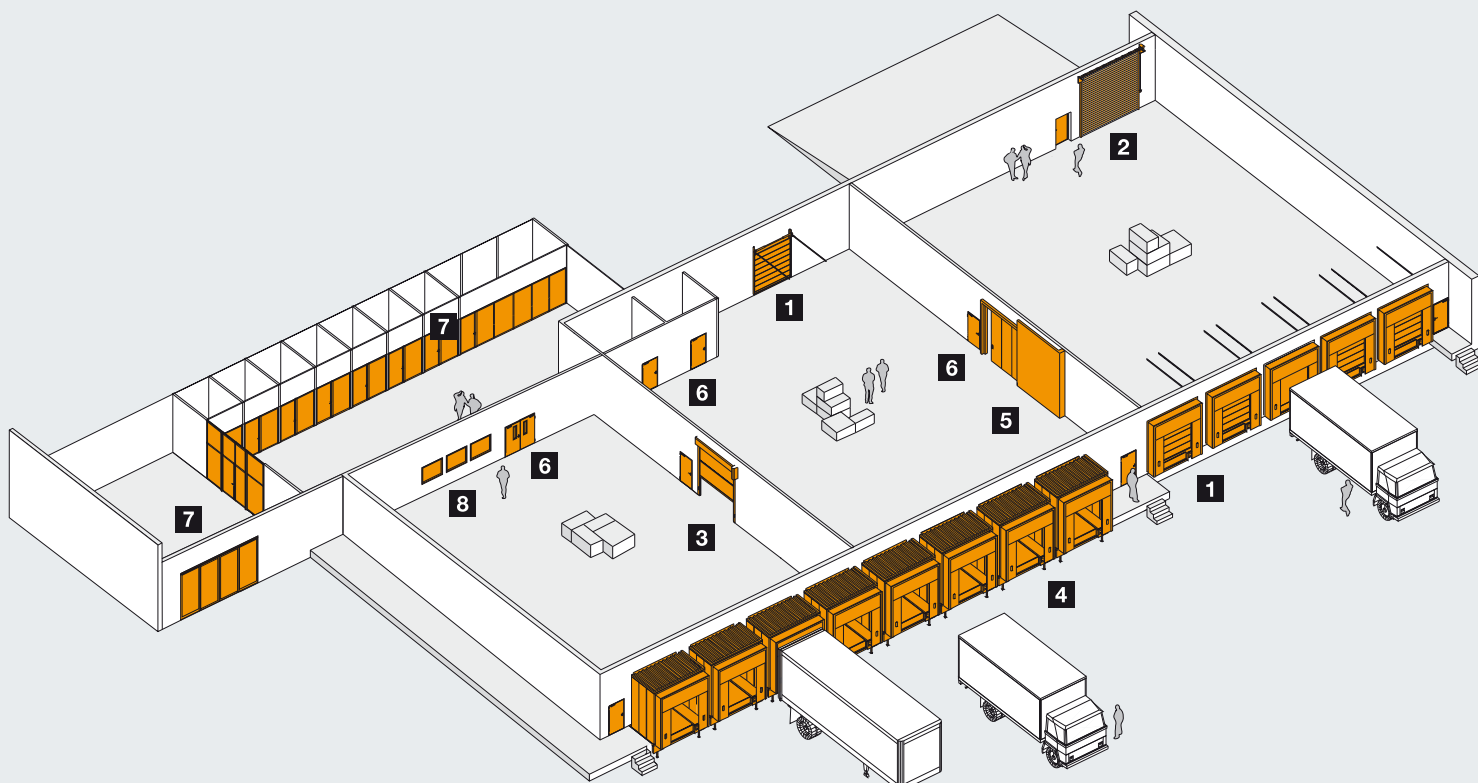
Hörmann multi-function doors and reinforced internal doors are suitable for indoor and outdoor use. Our single and double-leaf doors can be used wherever robust door elements are required. With numerous additional functions, such as fire and smoke protection, acoustic insulation or burglar protection.

7 Box frame parts

For areas in which appearance is important, such as administrative buildings, Hörmann offers you fire and smoke protection doors as well as steel and aluminium fixed glazing and automatic sliding doors, also suited for special fire protection requirements.

8 Visibility windows

Hörmann visibility glazings are used as windows or room-high elements to provide more light and better visibility.





**Quick service with testing,
maintenance and repairs**
Our extensive service network
means that we are always nearby
and at your service around the clock.



Hörmann: Quality without Compromise



Hörmann KG Amshausen, Germany



Hörmann KG Antriebstechnik, Germany



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Hörmann LLC, Montgomery IL, USA



Hörmann Flexon, Leetsdale PA, USA

Hörmann is the only manufacturer worldwide that offers you a complete range of all major building products from one source. We manufacture in highly-specialised factories using the latest production technologies. The close-meshed network of sales and service companies throughout Europe, and activities in the USA and China, make Hörmann your strong partner for first-class building products, offering “Quality without Compromise”.

GARAGE DOORS
OPERATORS
INDUSTRIAL DOORS
LOADING EQUIPMENT
HINGED DOORS
DOOR FRAMES

