Product datasheet
Dock leveler
ASSA ABLOY DL6220TA

ASSA ABLOY
Entrance Systems

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Technical facts

Features

Sizes - leveler height	680 mm	
Sizes - nominal length*	2000, 2450, 3000 mm	
Sizes - nominal width	3300, 3500, 3600, 3750 mm	
Vertical working range	Above dock: Below dock:	0 - 530 mm 0 - 470 mm
Platform tear plate	6 mm S355 (6/8)	
Surface treatment	Standard: Option:	RAL 5010 RAL 9005 RAL 3002 RAL 6005 Hot dip galvanised
Control unit	Leveler control Door control Shelter control Fault & service indicator	

* Other sizes are available on request

Performance

Load capacity	6 tonnes (60kN)
Steel grade all steel parts	S355
Max. point load	6,5 N / mm² (6 mm tear plate S355)
Motor hydraulic unit	1,5kW
Mains supply	400V 3-phase, 230V 3-phase
Control unit protection class	IP54
Allowable oil types	ASSA ABLOY standard hydraulic oil (-15°C - +60°C) ASSA ABLOY low temperature hydraulic oil (-30°C - +60°C)
Magnetic valves	24V/DC 18W S1
Surface treatment paint class 1	80 µm Corrosive Category C2 M acc. DIN EN ISO 12944-2
Surface treatment paint class 3	160 µm Corrosive Category C3 M acc. DIN EN ISO 12944-2
Surface treatment galvanised	Hot dip galvanised 80 µm Corrosive category C4 & C5-I M acc. DIN EN ISO 12944-2

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Contents

1 Description

1.1 General

1.1.1 Application

The ASSA ABLOY DL6220TA teledock autodock is a dock leveler based on a smarter design with less single steel components to secure highest quality and performance. The outstanding feature is that all steel parts are made of the high-strength steel grade S355 providing a solid construction without compromises. It is designed for the toughest loading operation with high frequency.

The ASSA ABLOY DL6220TA teledock autodock is an externally installed and self-supporting dock leveler that is ideal for applications where there are insufficient installation possibilities within the building. This model is equipped with a telescopic lip system. The ASSA ABLOY DL6220TA teledock autodock system meets the standard demands of most loading operations and fully complies with rules and regulations of the European Standard EN 1398.

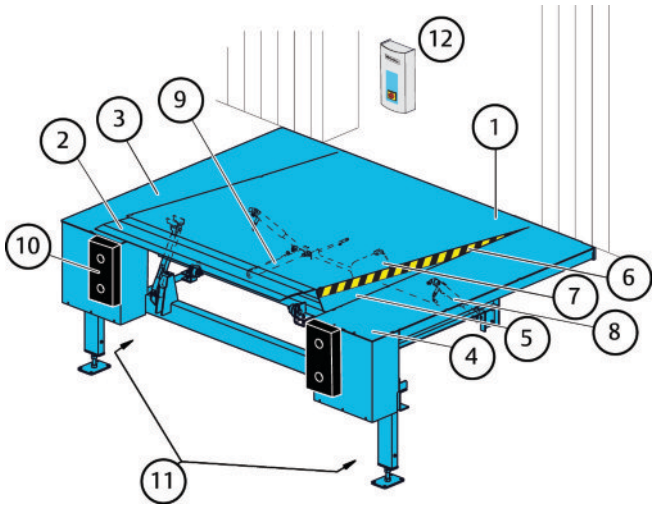
Integrated connectivity is available as an option option to enable monitoring, controlling, and accessing door data via ASSA ABLOY Insight. For more information see: https://www.assaabloyentrance.com/en/service/assa-abloy-insight/.

1.1.2 Mode of operation

The operation of the ASSA ABLOY DL6220TA teledock autodock is based on an electro-hydraulic telescopic lip, controlled by a semi-automatic control unit.

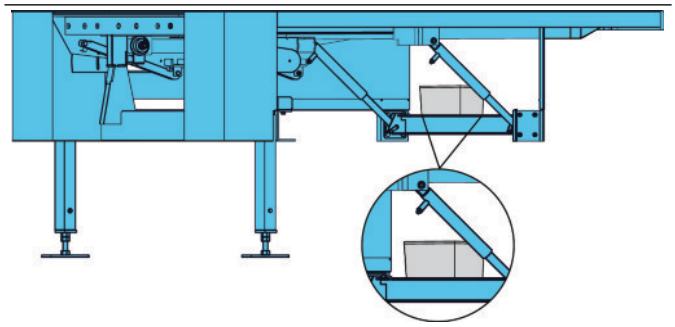
When the dock leveler is raised, the lip extends and the leveler lowers gently onto the lorry bed. After loading or unloading, the leveler is raised again, the lip retracts and the platform returns to its parking position.

1.1.3 Overview



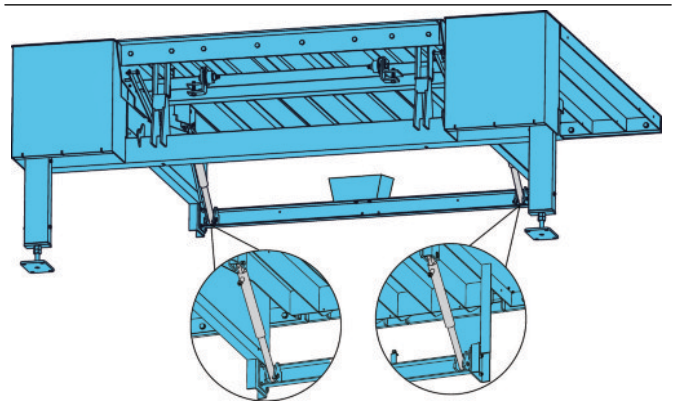
1. Leveler platform
2. Telescopic lip
3. Leveler frame
4. Leveler frame
5. Side plates
6. Warning stripes
7. Hydraulic unit
8. Lift cylinders
9. Telescopic lip cylinder
10. Buffers (optional)
11. Tail lift recess
12. Control unit

1.1.4 Hydraulic unit fixed to the top of the rear bottom frame



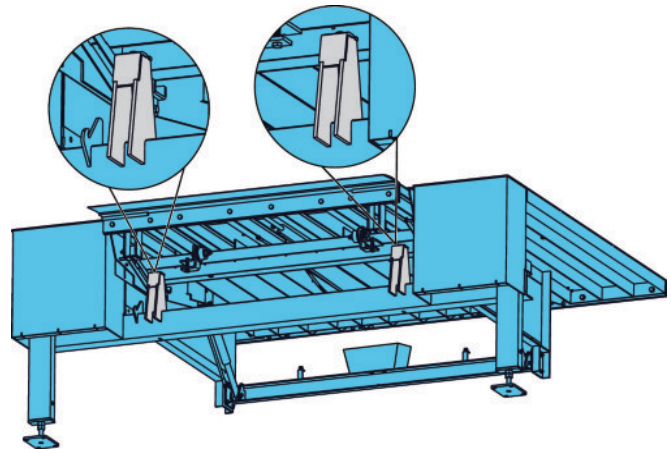
This position protects the hydraulic unit and is suitable for service inspections. During the movement of the leveler, the hydraulic unit is not moving up and down. and during the loading operation, there are fewer vibrations.

1.1.5 Lift cylinders

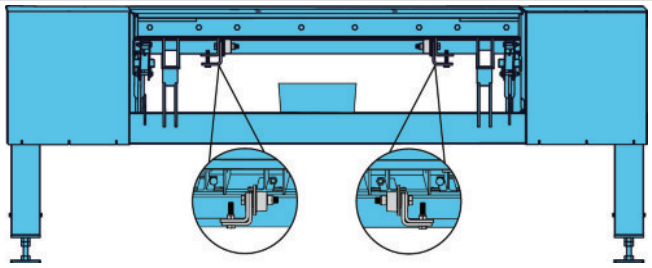


Robust cylinder fixation directly on the shaft to meet highest safety requirements and the lift cylinders are equipped with grease nipples.

1.1.6 Robust resting position support

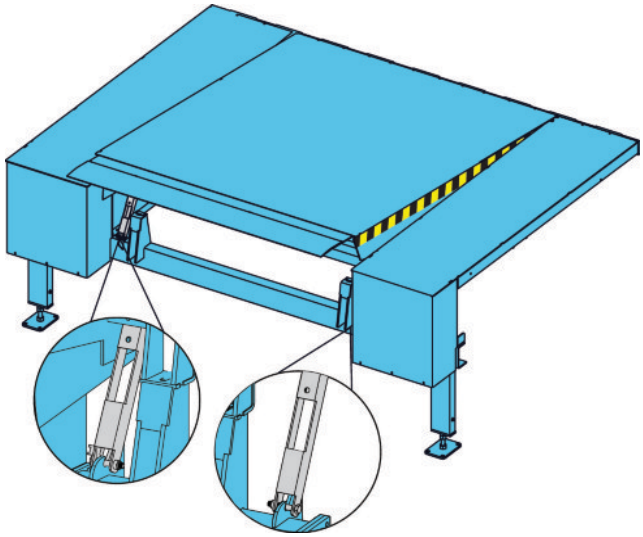


1.1.7 Guidance of the telescopic lip



Robust steel rollers secures smooth movement of the lip during extension and retraction.

1.1.8 Safety-prop left and right



Self-positioning safety-prop that can be put in position by one person in two steps: Move the two safety props, left and right, from the storage position to align them in front of the safety prop support brackets on the front beam. Then push the LIFT button to run the leveler to the top position - when lowering the leveler will be supported safely by the safety props.

1.1.9 Standard

Surface	Painting RAL 5010 or RAL 9005
Hydraulic Equipment	Low noise hydraulic unit Two hydraulic lift cylinders One hydraulic lip cylinder
Lip	Steel lip Bevelled 80 mm Lip length 500 mm
Installation angle	90°

1.1.10 Options

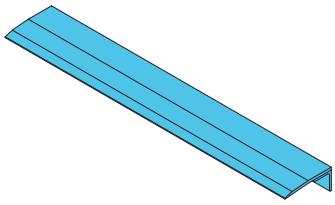
Surface	Painting RAL 3002 or RAL 6005 Hot dip galvanised
Hydraulic equipment	Low temperature oil
Lip options	Lip length 1000 mm Container lip, only for steel lip in the lengths 500 and 1000 mm* Lip length 345 mm - Ergonomic lip Aluminium lip Tapered lip Bevelled lip 2 retracting tongues
Energy & Ergonomics	Slip protection / noise reduction
Installation angles	45°/135°* 60°/120°* 75°/105°*

*Please note that not all options are currently available, please contact your local sales representative for further information.

1.2 Telescopic Lip

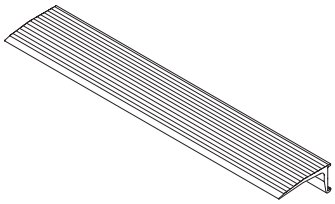
1.2.1 Lip material

1.2.1.1 Steel telescopic lip



The steel telescopic lip provides medium comfort.

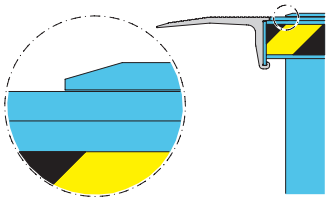
1.2.1.2 Aluminium telescopic lip



The aluminium telescopic lip provides maximum comfort.

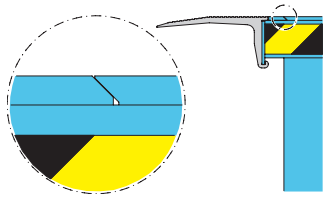
1.2.2 Lip type

1.2.2.1 Standard lip



When the standard lip is extended there is always a bump from the lip to the platform of the leveler. The length of the lip is 500 mm or 1000 mm.

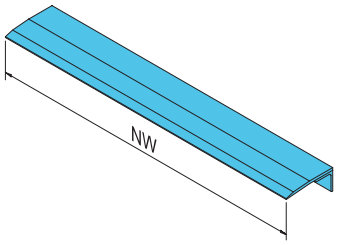
1.2.2.2 Ergonomic lip



When the ergonomic lip is fully extended it is on the same level line as the leveler platform, Due to the smooth bumb free passage shock loads are reduced. Maximal buffer depth is 100 mm.
The length of the lip is 345 mm.

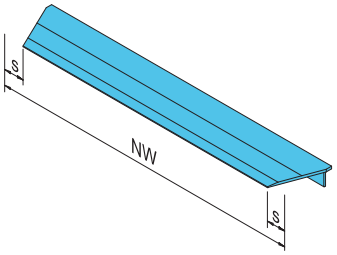
1.2.3 Lip shapes

1.2.3.1 Standard telescopic lip



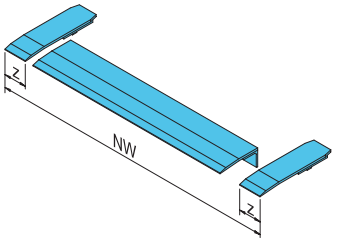
The standard telescopic lip is a single rectangular lip for use with a fleet of vehicles that is a standard size.

1.2.3.2 Tapered telescopic lip



A tapered telescopic lip ensures that the lip reaches the lorry bed, even when the lorry is not parked in the exact centre position. Avoids damage to the truck and interruptions of the dock-in procedure.
s = 100 mm

1.2.3.3 2 retracting tongues

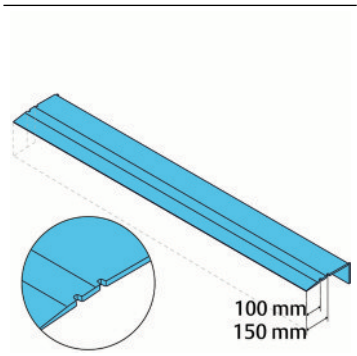


For applications with vehicles of different widths, the telescopic lip can be provided with 2 retracting tongues. On each side a 140 mm wide segment is pushed inside when a smaller vehicle docks.

1.2.4 Bevelled lip

The standard steel lip is 80 mm bevelled, designed to provide maximum comfort and smooth transition from the lip.

1.2.5 Safe contact area



Notches on both sides at 100 mm and 150 mm shows the safe contact area of the lip on the truck bed.

1.3 Platform

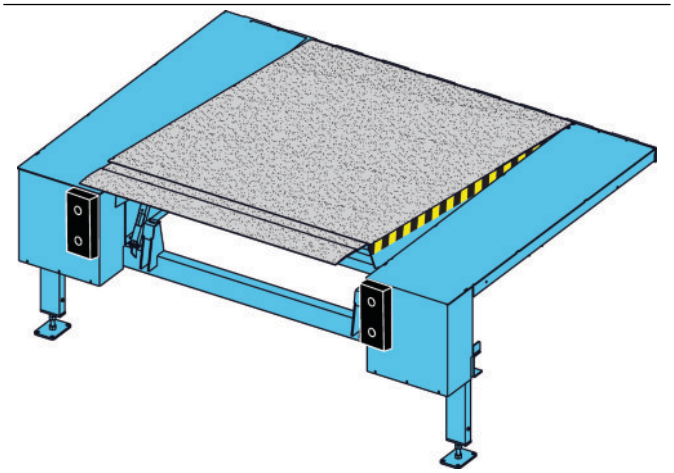
1.3.1 Platform tear-plate thickness

The 6 mm S355 (6/8) tear-plate is designed for loading and unloading with typical 4 wheel pneumatic-tired fork-lift trucks, and is also suitable for handling equipment with high point loads, such as electric pallet trucks.

1.3.2 Slip protection / noise reduction

Applying a polyurethane slip protection coating on the lip and platform ensures a durable non-slip (R11 according to DIN 51130) and noise reduction surface. The effect is a smooth and comfortable surface for handling equipment that is less receptive to wear and tear.

The PU coating material is resistant to impact, to thermal impact and most types of chemicals and it has a high loading capacity.



1.4 Surface

1.4.1 Painting

1.4.1.1 Colors

The dock leveler standard finish is painted. The standard colors are:

	RAL 5010
	RAL 9005

Colors available as option are:

	RAL 3002
	RAL 6005

1.4.1.2 Standard paint class

If the dock leveler is to be used in a rural area, the standard finish is:

- Paint class 1; 80 µm factory painted for corrosive category C2 M

1.4.1.3 Paint classes

If the dock leveler is to be used in an urban or industrial atmosphere, or in a coastal area, it may be appropriate to select an alternative paint class with increased resistance to corrosion C3 M.

- Paint class 3; 160 µm factory painted for corrosive category C3 M

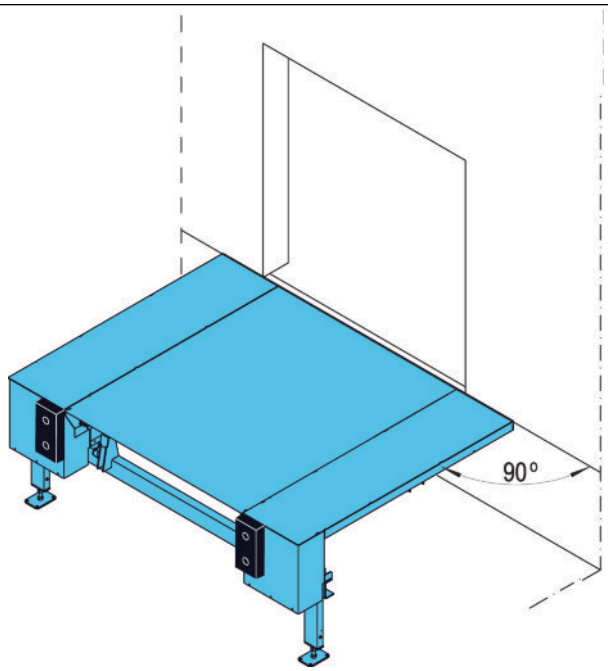
1.4.2 Hot galvanising

To increase corrosion protection to C4 for saline coastal areas or C5-I for aggressive or humid atmospheres, the dock leveler can be delivered with hot dip galvanised (80 µm) steel parts.

1.5 Installation angles

Because of its external installation construction, the ASSA ABLOY DL6220TA teledock autodock can be installed in an angle, to reduce the required vehicle parking space in front of the building. For dock levelers with NWAD = 3750 mm only the 90° installation is available.

1.5.1 90° angle (standard)

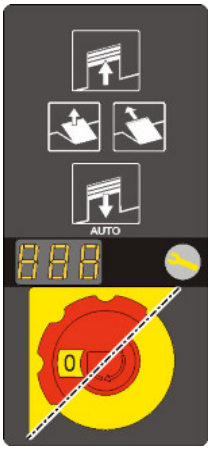


1.6 Docking control systems

1.6.1 950 Docking LA TD

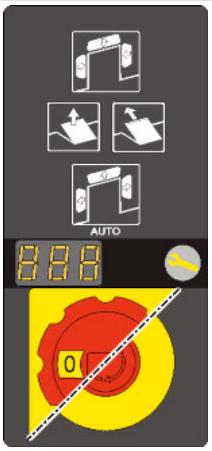
- Hold-to-run button to lift platform.
- Hold-to-run button to position the lip on the truck bed.
- Impulse auto button to put the leveler back in parking position.
- Mains isolator or emergency stop button.
- Interface to incorporate ASSA ABLOY wheel chock.

1.6.2 950 Docking DLA TD



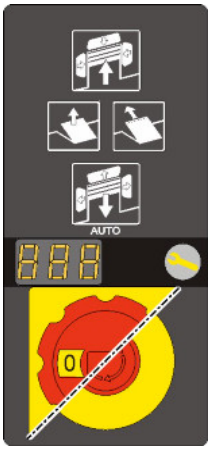
- Hold-to-run button to lift platform.
- Hold-to-run button to position the lip on the truck bed.
- Impulse auto button to put the leveler back in parking position.
- Mains isolator or emergency stop button.
- Interface to incorporate ASSA ABLOY wheel chock.
- Designed to operate an overhead sectional door in the docking station.

1.6.3 950 Docking LSA TD



- Hold-to-run button to lift platform.
- Hold-to-run button to position the lip on the truck bed.
- Impulse auto button to put the leveler back in parking position.
- Mains isolator or emergency stop button.
- Interface to incorporate ASSA ABLOY wheel chock.
- Designed to operate an inflatable shelter in the docking station.

1.6.4 950 Docking DLSA TD



- Hold-to-run button to lift platform.
- Hold-to-run button to position the lip on the truck bed.
- Impulse auto button to put the leveler back in parking position.
- Mains isolator or emergency stop button.
- Interface to incorporate ASSA ABLOY wheel chock.
- Designed to operate an overhead sectional door and an inflatable shelter in the docking station.

1.6.5 950 Docking power cable

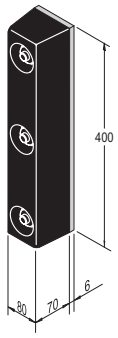
- Standard: 1,1 m power cable to connect to mains switch on the wall.
- Option: 1,5 m power cable with CEE-plug, pre-mounted.

1.7 Equipment

1.7.1 Buffers

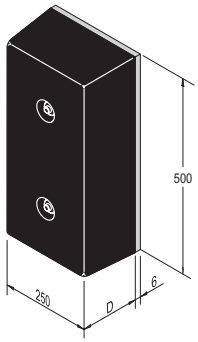
Buffers placed in front of the dock leveler absorb the energy of a vehicle that accidentally or intentionally hits the building. Buffers are available in various sizes, in fixed or moving models, and with rubber finishing or steel plate and spring function.

1.7.1.1 RS



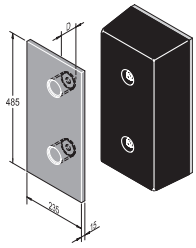
Application
The RS buffer is the economical solution for docking stations where vehicles of equal sizes load and unload.

1.7.1.2 RB



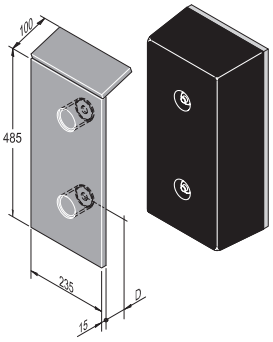
Application
The RB buffer is a large fixed rubber. It is the universal building and vehicle protection solution.
Available depths:
- 90 mm
- 140 mm

1.7.1.3 RB with steel front plate



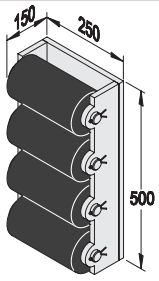
Application
The RB buffer with steel protection front plate increases the building protection and the buffer service life.
Available depths:
- 90 mm
- 140 mm

1.7.1.4 RB with steel front and top plate



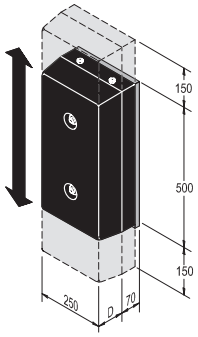
Application
The RB buffer with steel protection front and top plate is designed for vehicles with high lorry beds like interchangeable open bodies and containers.
Available depths:
- 90 mm
- 140 mm

1.7.1.5 Roller buffer



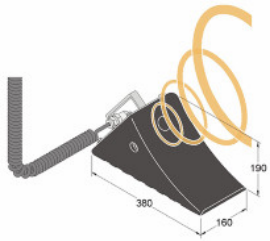
Application
The Roller buffer is a robust solution for docking stations where vehicles make notable vertical movements when loading or unloading. The Roller buffer is designed for vehicles without protruding elements below the rear door.

1.7.1.6 EBF



Application
The EBF buffer is the ideal solution for docking stations where vehicles are expected to make notable vertical suspension changes when loading or unloading.
This buffer follows vertical movements of the vehicle.
Available depths:
- 90 mm
- 140 mm

1.7.2 ASSA ABLOY DE6190WC Wheel chock



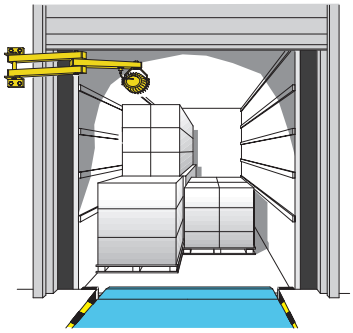
The wheel chock has a sensor to detect the presence and position of the vehicle and is connected to the dock leveler control panel. If no vehicle is detected, the docking station is blocked for safety reasons. Furthermore, the wheel chock prevents the vehicle from moving during loading/unloading.

1.7.3 ASSA ABLOY DE6090TLS Traffic light system

The traffic light system either has a sensor above the dock leveler that measures the presence of the vehicle or it is a wheel chock that detects the vehicle.

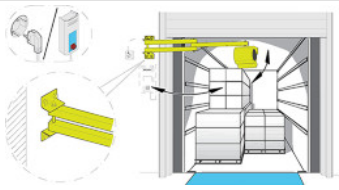
If there is no vehicle (dock leveler is free), the traffic light inside is red, outside is green.
The traffic light can also be combined with a wheel chock or door/leveler interlocking.

1.7.4 ASSA ABLOY DE6090DL Dock light Heavy Duty LED



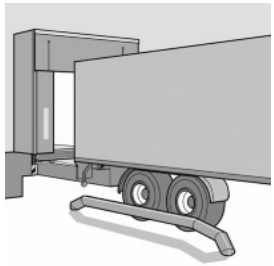
Where dock lights are often a vulnerable object in the docking area, the virtually indestructible Dock Light Heavy Duty LED is the perfect solution to bring light in the truck and docking area. It is designed for the most demanding environments and can withstand possible hard hits from a moving forklift without being damaged.

1.7.5 ASSA ABLOY DE6190FL Fan light



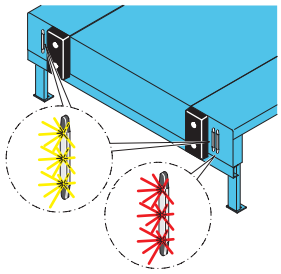
The compact fan light is a combined solution of a fan and a dock light in one system. The fan creates a continuous stream of fresh air that refreshes and cleans the air inside the trailer or container and the integrated dock light provides extensive light. It has a flexible solid arm that fits general industry and logistics applications, for an easy and fast docking process.

1.7.6 Parking guides



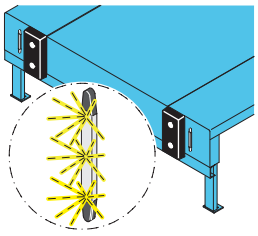
This visual aid makes it easier to park the vehicle and reduces the risk of collision. Especially advantageous for docking stations with wide leveler lips and cushion shelters. Parking guides can be bolted or cast in concrete on the floor before the leveler.

1.7.7 ASSA ABLOY DE6190DI Dock-IN Autodock



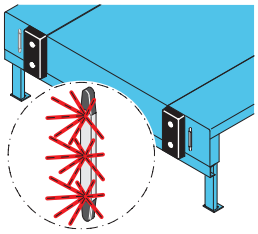
ASSA ABLOY Dock-IN offers a complete line of guide- and traffic lights that align the truck with the docking bay to make the dock-in procedure easy and safe. ASSA ABLOY Dock-IN is based on modern LED technology and stands for high reliability and low energy consumption.

1.7.7.1 Dock-IN White



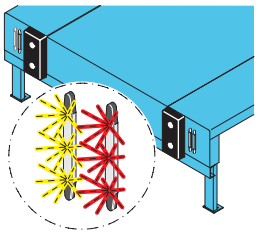
ASSA ABLOY Dock-IN White consists of two white LED light bars. It is designed to help guide a truck to the dock. ASSA ABLOY Dock-IN White offers much more visual aid than white stripes on the shelter or asphalt. Mounted on the wall they are always clearly visible, less exposed to wear and tear and not hidden by dirt and snow!

1.7.7.2 Dock-IN Red



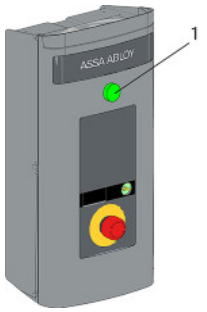
ASSA ABLOY Dock-IN Red is a traffic light system consisting of one red LED light bar, a sensor for truck detection and a traffic light control box. The sensor detects the truck when it is in the right position, very close to the dock. The red LED turns ON to give the signal to the truck driver to break and let the truck roll against the buffer at the lowest speed, without the risk of damage. The system includes interlocking of the loading bay control box functions which are only released when the truck is in place and the red LED is ON.

1.7.7.3 Dock-IN White & Red



ASSA ABLOY Dock-IN White & Red is the optimum combination of both systems for easy and safe docking. The white LEDs provide the visual target and the red LED positions the truck at the right distance to the dock. The white guiding LEDs turn off when the truck is detected and at the same time the red LED turns ON. Before the truck is leaving, the operator push the RESET button on the control box inside the building. Then the white LEDs turn ON and the red LED turns off as a signal to the truck driver that the loading is finished.

1.7.7.4 Standard



1. Indication light inside and RESET button

Indication Light Inside.
A Green LED light on the 950 control box to indicate that the control box functions are released. The operator of the loading bay equipment knows exactly when he can start loading or unloading. The green LED light will help to save energy and to control the complete loading process.

RESET button
The RESET function is activated from a push button on the control box inside the building before the truck is leaving. The white LEDs turn ON and the red LED turns OFF as a signal to the truck driver that loading is finished. For this function, the leveler must be in parking position, the sectional door closed and the inflatable shelter retracted.
For the activation of the RESET function, you push the button for 1 second. If you push the button for 3 seconds before the truck drives off, then the red LED turns ON again the white LEDs turn OFF. When the truck is leaving, the white LEDs turn ON and the Dock-IN system is ready for the next truck.

1.7.7.5 Available Options

- Dock-IN Green and Red.

Green LEDs instead of White. This version has the same function as Dock-IN White and Red.

- Indication Light Inside, built into the 950 control box

A Green LED light on the control box to indicate that the control box functions are released. The operator of the loading bay equipment knows exactly when he can start loading or unloading. The green LED light will help to save energy and to control the complete loading process.

- Second Red LED

A second Red LED bar can be added to have the red LED traffic light on both sides of the docking bay. This is an option for terminals with left and right hand drive international trucks.

- Wheel chock connection

To increase the safety it is possible to connect the ASSA ABLOY wheel chock to the traffic light function ASSA ABLOY Dock-IN Red or ASSA ABLOY Dock-IN White and Red. The control box will be interlocked until the truck is detected and the wheel chock is in place.

Note:

Make sure the LED bars will not be covered by the Dock shelter.

Lowest possible truck is max. 2000 mm below the sensor position.

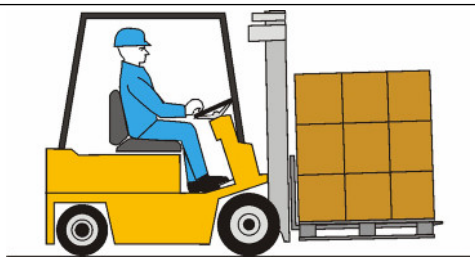
2 Selection guide

2.1 Load capacity according to EN 1398

The EN 1398 describes 3 key definitions about loads.

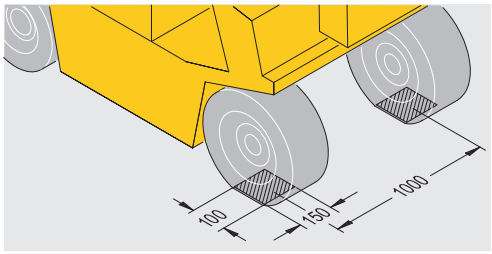
2.1.1 Rated load

The rated load is the total weight of the goods, the forklift truck and the driver.



2.1.2 Axle load

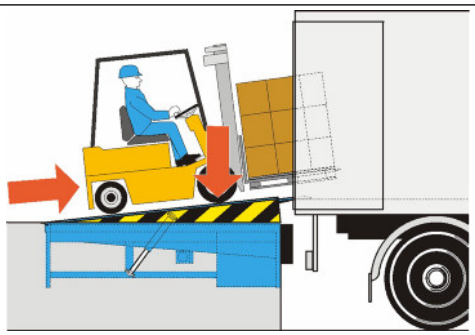
Axle loads shall be taken acting over two rectangular contact areas at 1 m lateral distance. These areas shall only apply if the actual conditions do not call for more severe loading. The size of the footprint [mm²] is derived from the wheel load [N] divided by 2 [N/mm²]. The ratio of the rectangular print is W:L = 3:2.



In the drawing measures for a leveler with a load capacity of 100kN or 150kN are shown.

2.1.3 Dynamic load

The dynamic load is the movement of the rated load and is the pressure on the leveler platform caused by the moving forklift truck.



2.2 Select the load capacity

The load capacity of a dock leveler must always be higher than the rated load.

2.2.1 Example

Weight of forklift truck	3600 kg
Weight of goods	1500 kg
Weight of driver	100 kg
Total weight/rated load	5200 kg
Suitable load capacity of the leveler	6000 kg/60kN

The 6 tonnes (60kN) DL6220TA teledock autodock is as a standard equipped with a tear plate of 6 mm S355 (6/8). It is designed for loading and unloading with typical 4 wheel pneumatic-tired fork-lift trucks, and is also suitable for handling equipment with high point loads, such as electric pallet trucks.

2.3 Select the leveler length

When determining the leveler length, measure the maximum height difference between the truck bed and the dock level. Next, determine which vehicles will be used and lookup the maximum gradient the vehicles are allowed to be used on.

Vehicle	**Max gradient**
Roll cage	3%
Hand pallet truck	3%
Electric pallet truck	7%
Forklift truck (battery)	10%
Forklift truck (gas / petrol)	15%

2.3.1 The calculation

Minimal leveler length = height difference / gradient (%)

2.3.2 Example

Vehicle:	Electric pallet truck (max 7% gradient)
Truck height:	1325 – 1000 mm
Dock height:	1150 mm

The difference between Truck height and Dock height = 175 mm

175 mm / 7% = 2500 mm leveler length

2.4 Nominal width

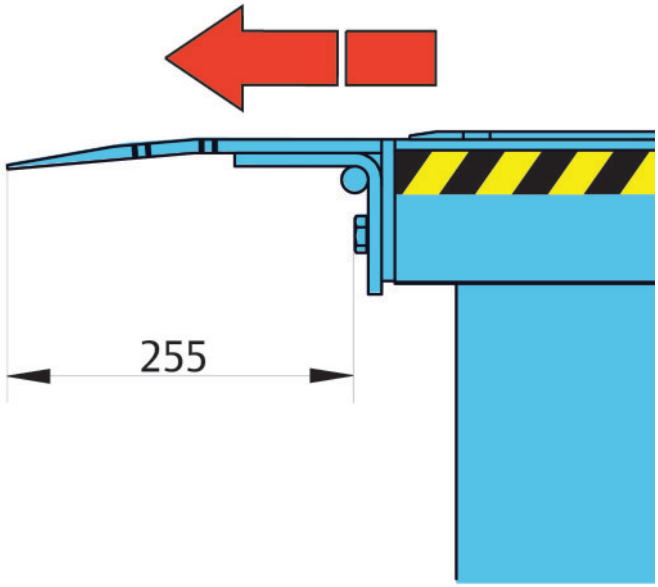
The ASSA ABLOY DL6220TA teledock autodock is available with a nominal width of 2000 or 2200 mm. The correct nominal width must exceed the widest loading vehicle by at least 700 mm.

2.5 Free space under lip

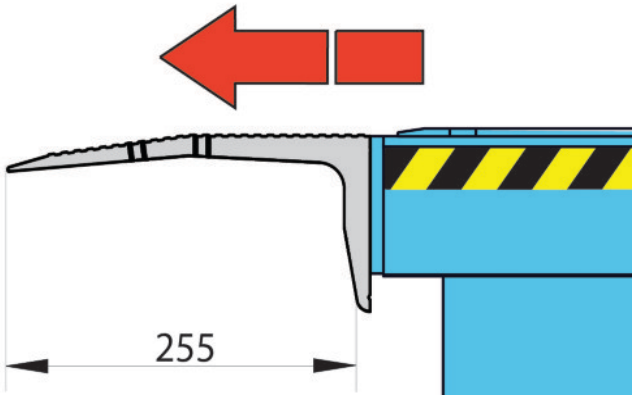
According to the safety instructions of the EN 1398, while loading or unloading, the lip has to lie firmly with a minimum of 100 mm and over its whole width on the vehicle bed.

2.5.1 Suitable lip options for trucks with conventional vehicle beds that have no step at the rear

2.5.1.1 Steel lip

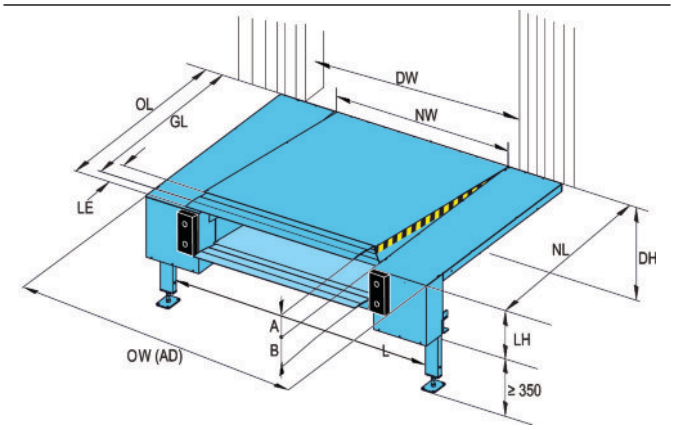


2.5.1.2 Aluminium lip



3 Specifications

3.1 Dimensions



NL	Nominal length
OL	Overall length
GL	Gradient length
NW	Nominal width
LE	Leveler extension
LH	Leveler height
A	Working range above dock level
B	Working range below dock level
DH	Dock height
DW	Door width
NW (AD)	Nominal width Autodock (incl. side tread panels)
L	Distance between plinths
OW (AD)	Overall width Autodock = NW(AD) - 20

Dimensions			Vertical working range		
NL	**LH**	**Measures**	**500 mm**	**1000 mm**	**ERGO**
2000	680	A	440	530	400
		B	400	470	370
2450	680	A	450	530	420
		B	380	430	350
3000	680	A	430	490	400
		B	360	410	340

Nominal width (NW): 2000, 2200 mm

Nominal width (NW AD): 3300, 3500, 3600, 3750 mm

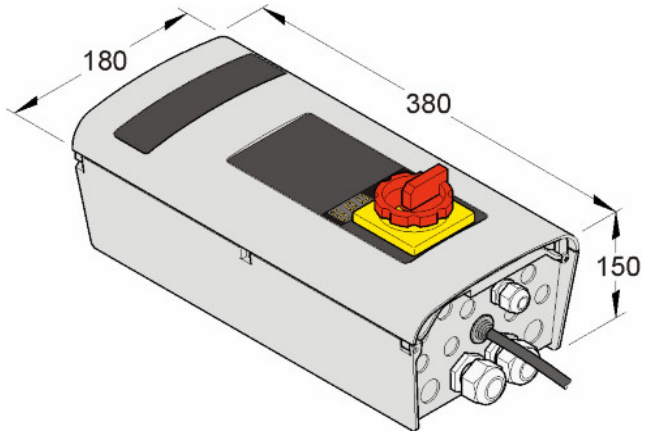
** In accordance with the EN 1398 standard, the leveler must not be used beyond the permissible gradient range of ± 12.5% (around ± 7°). The limits may only be exceeded if the operator ensures that the danger of slipping has been eliminated (e.g. due to dry and clean surfaces).

3.2 Platform thickness

Thickness	Max. point load
6 mm S355 (6/8)	6,5 N / mm^2

3.3 Control units

3.3.1 Dimensions



950 Series

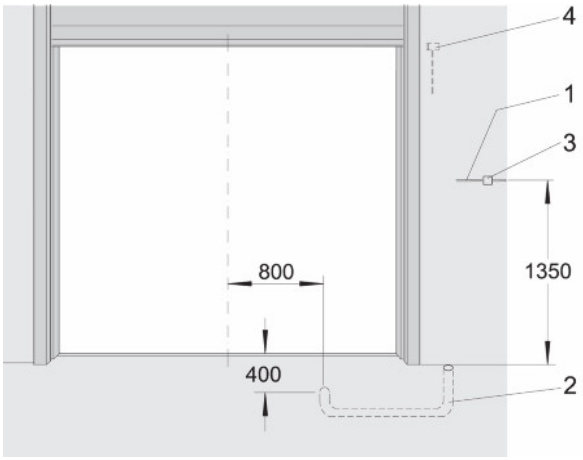
4 CEN Performance

4.1 Safety according to the European Standard EN 1398

- Emergency Stop Function.
  - Safety valves block lowering movement after max. 6% of the nominal length of the leveler.
  - Two lift cylinders make sure the leveler stops in a horizontal position.
- Free floating position.
- Platform torsion. Lateral deflection of at least 3% of nominal width.
- Toe guards cover gap between platform and pit in leveler´s highest position.
- Working range gradient max. 12,5% (~7°).
- Warning stripes on side plates and on frame (black/yellow).

5 Building and space requirements

5.1 Electrical preparations

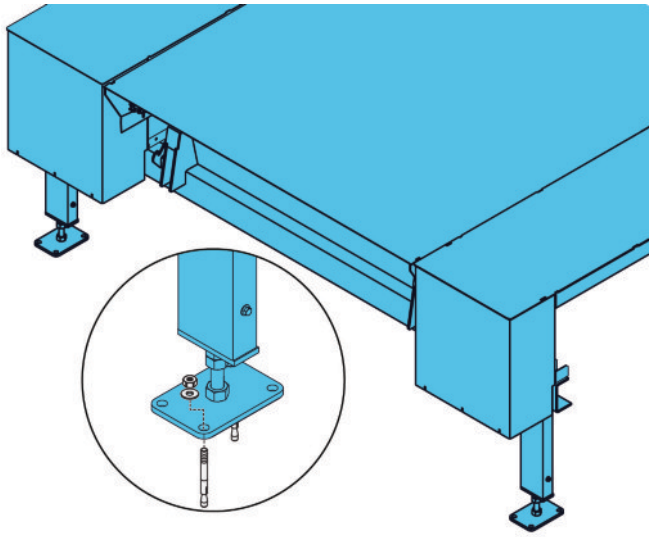


1	Mains supply: Mains fuse: Motor power:	3/N/PE AC 50 Hz 400V 3-phase, 230V 3-phase D0 10 A gL 1,5kW
2	Conduit for wiring internal diameter 70, angles <45° (by others)	
3	Mains isolator*:	Only for control box with emergency stop
4	Optional safety switch on sectional door to disable leveler when door is closed*	

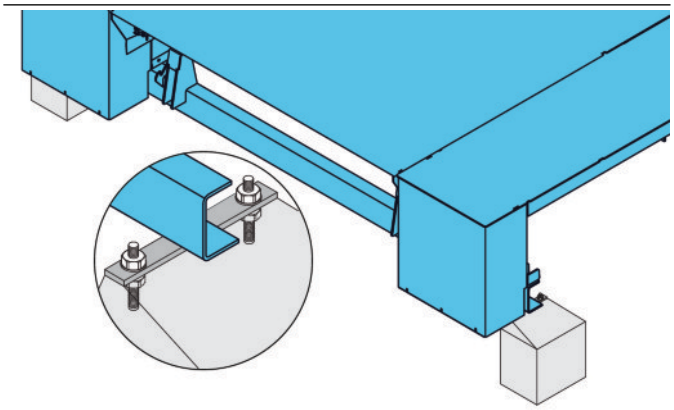
* non-standard

5.2 Ways of installation

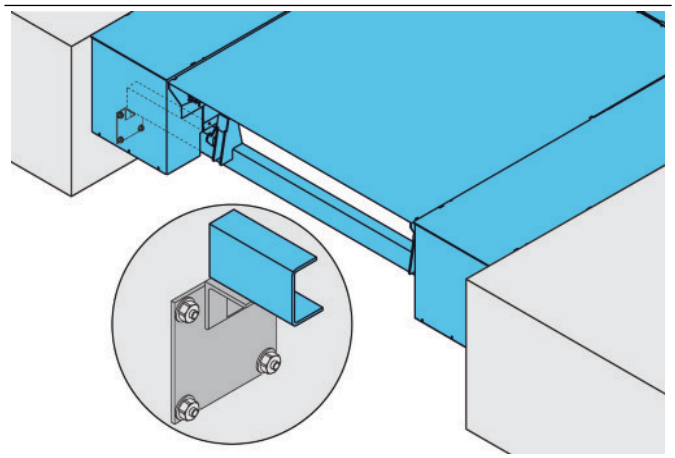
5.2.1 Steel plinths



5.2.2 Concrete plinths



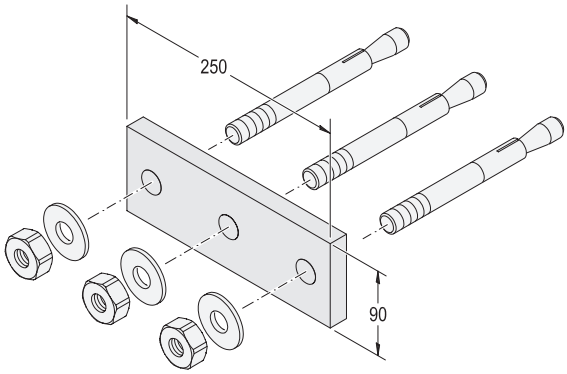
5.2.3 Wall connection brackets



5.3 Additional equipment of installation

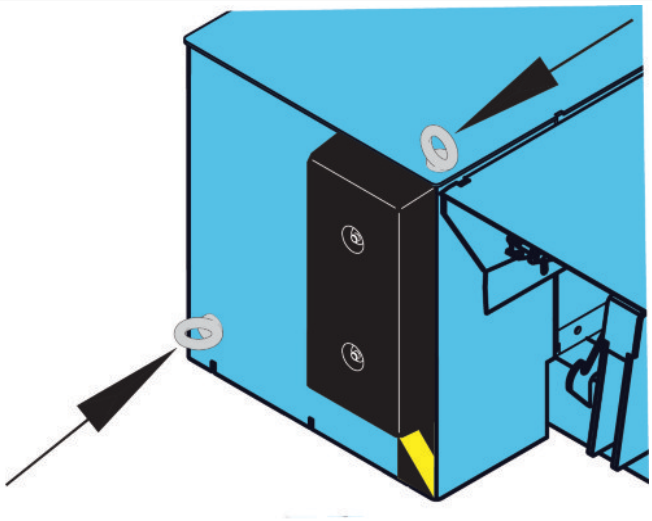
5.3.1 Support brackets

The optional brackets have to be used if it is not possible to weld the autodock side units on the whole width on the dock edge. The brackets support only the autodock side units. Chemical anchors M16 are delivered together with the brackets.



5.3.2 Eye bolt

The optional eye bolts are used to secure a demountable container or any other truck at the autodock with the aid of a tension strap.



6 Service you can rely on

Gold

The ultimate protection

With full coverage, Gold Service enables you to plan and budget your expenses annually.

- Spare parts for emergency calls
- Labor and travel costs for emergency calls
- Replacement of components according to preventive maintenance schedule and to fulfill legislative and safety requirements

Silver

Added advantages

With cover for all service calls during business hours, Silver Service offers you peace of mind.

- Labor and travel costs for emergency calls
- Preventive maintenance

Bronze

Scheduled Service

With scheduled on site visits, Bronze Service means you know that your doors and docking systems will be regularly serviced and inspected.

- Preventive maintenance

Included in all packages			
1-4 scheduled maintenance visits per year	24/7 priority service hotline and fast response	Safety, compliance and quality control checks	Documentation reports provided on site

Expert service you can rely on

A healthy business enjoys a steady flow of goods, services and people through its entrances every day. But heavy traffic puts entrances under pressure as every component works to keep them running.

ASSA ABLOY Entrance Systems offer the industry's most complete, flexible service solutions. Because even something as robust and well-engineered as an ASSA ABLOY door or docking system needs to be serviced to stay in great working order.

Pro-active care packages

An ASSA ABLOY service agreement gives you service you can rely on. We have specialized local service technicians on call to take care of your service needs. Equipped with a wide range of spare parts and expertise, to keep your industrial doors and docking systems running.

With an ASSA ABLOY service agreement you can ensure reliable, safe and sustainable operations at every entrance under your agreement, including doors and docking systems, independent of brand.

ASSA ABLOY e-maintenance™ (optional add-on)

For an online overview of your entrance systems and history, add ASSA ABLOY e-maintenance™ to your service package for:

- Easy access to real-time data on all your doors
- Planning, order and service information
- Overview that helps you control lifecycle costs

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Every day, we help billions of people to experience a more open world.

ASSA ABLOY
Entrance Systems

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