

# ESIDOCK

Environmentally Secure Integrated Docks



**EsiDock:** Revolutionising  
Dock Equipment  
through **Innovation**

# Introducing EsiDock

□ The **EsiDock** philosophy is always to maximise labour efficiency, truck fleet utilisation and energy savings through innovative invention. We aim to deliver new standards in process efficiency and goods handling.

EsiDock have revolutionised the truck loading and unloading process. At EsiDock our customers sought a solution that enabled loading and unloading to take place in a more efficient manner than traditional offerings allowed.

**EsiDock Solution** allows the truck to open its doors once docked and EsiDock are proud to have created the world's most innovative solution to do so.

Conventional loading bays are designed in such a way that the operator must firstly open the truck doors and then reverse into the docked position where the truck rests on rubber bumpers integrated within the leveller assembly. The EsiDock invention allows its users to maximise labour efficiency, truck fleet utilisation and energy savings. The design was driven through our clients' requests. The main brief included:

**EsiDock** provides the ability to streamline the docking process by adding hydraulically retractable bumpers to the loading bay. The *hydraulically retractable bumpers* can be placed within. **EsiDock Solution** not only allows the opening of truck and warehouse doors just before its loading or unloading, but also accommodates the fitting of an underside retractable bumper where energy conservation is critical. Additionally, **EsiDock Solution** was designed to work in conjunction with standard telescopic levellers and can be integrated into an existing building or incorporated in a standalone dock pod.

- Total load and warehouse security
- Faster load/unload turnarounds
- Shunter requirement reduction or removal

“ We required the ability to dock trucks, 24 hours a day, to our facility with minimal movements whilst retaining the security of the load and warehouse ”

Maurice Murphy, Glanbia, Ireland





# Presenting the **key** attributes of EsiDock

What makes EsiDock Solution a revolutionary design is its **hydraulically retractable bumpers**, specially designed to work with standard telescopic lip dock levellers, which creates the ability to open the truck doors after docking.

**EFFICIENCY** EsiDock Solution is a fully automated system enabling the bumpers to retract by hydraulics rams providing efficiency for warehouse operators and for the truck driver. By enabling the opening of docked vehicle doors into the loading dock, EsiDock Solution vastly increases loading and unloading productivity reducing turnaround times.

The conventional loading bays, by their design, requires the driver to get out of his truck, unsecure the load and prepare it for the unloading, whilst also ensuring the building is ready to accept the load. When the process is repeated several times, it represents 10% of an 8 hours shift. This equates a loss of 24 man days per year.

**SECURITY** EsiDock Solution also provides a secure loading dock ensuring the truck can be docked into the loading bay and left there without opening truck or warehouse doors while the operator is preparing to attend the bay.

Once the warehouse is ready, doors can be opened without exposing goods. This also guarantees controlled access to the vehicle ensuring the load is only accessed by authorised personnel within the facility.

**ECOLOGY** Through the introduction of the EsiDock Solution, another world-first has been achieved. EsiDock have been able to create a fourth bottom seal. This secure cold chain solution is flexible to a huge range of truck types and sizes. Also energy costs are vastly reduced through its use as the facility's expensive chilled air remains within the building through EsiDock's invention.

**VERSATILITY** EsiDock Solution is a versatile product as it was specially designed to work in conjunction with standard telescopic dock levellers and can be integrated into an existing building or incorporated in a standalone dock pod. EsiDock are happy to work with all manufacturer dock equipment and doors.

**SAFETY** EsiDock Solution ensures the loading dock is a safe working environment. The system doesn't require the driver to get out of his truck which means less possibility of accidents.



Key attributes

- Efficiency**
- Security**
- Ecology**
- Versatility**
- Safety**





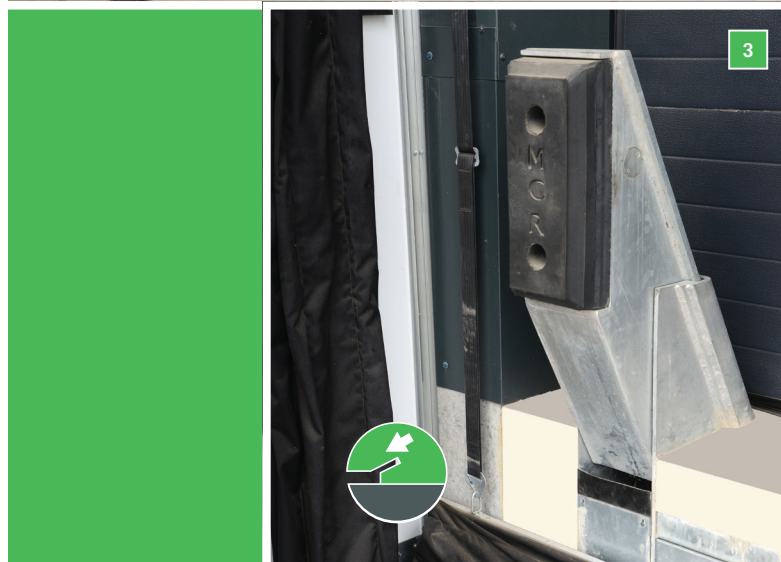
**EsiDock: Revolutionising Dock Equipment through Innovation**



## How EsiDock works

EsiDock is cost neutral through its effective energy saving benefits and it provides a practical engineering solution for off-loading vehicles and maintaining the security of your premises.

- 1 EsiDock ready to receive your vehicle.
- 2 Vehicle backs onto dock with buffers in raised position.
- 3 Once vehicle is safely docked dock buffers retract.
- 4 The environmental seal inflates around all 4 sides of the vehicle.
- 4 Once inflated the dock door opens.
- 6 The trailer doors are then opened into the building.
- 7 The dock leveller is then deployed for loading/unloading, with the seal maintained at all times.



Serving the  
**Food**  
**Life Sciences**  
**Technology**  
**Logistics & Warehousing**  
and **Pharma**  
Sectors

### System reset

Once operation is completed, the leveller is parked and trailer doors closed

Once the dock door is closed the shelter deflates, the buffers return to raised position and vehicle is released.



## EsiDock Solution: The Features and Benefits

What makes **EsiDock Solution** a revolutionary design is its **hydraulic retractable bumpers**. Apart from the obvious benefits of installing EsiDock Solution, there are many other advantages and features to this unique docking solution.

The **primary function** of EsiDock is that it allows trailer doors to open into the facility and provides unrestricted access to the back of the vehicle. It is designed to service a full range of different trailer types.

### Unique Benefits

In addition the EsiDock solution allows a full 4-sided environmental seal to be created between the truck and the building, prior to the opening of either.

Provides greater security of goods in warehouse and trailer for operators

Ensures driver and operator safety in docking operations.

Provides labour efficiency with yard operations.

Provides the possibility to create a complete seal between trailer and facility ensuring non contamination of goods and conservation of controlled temperature.

Truck fleet utilisation improvements for fleet operators

### Environmental Benefits

Energy savings with provision for 4-sided seal

Dust prevented from entering warehouse through gaps

Rodent ingress prevented through complete seal when doors are open

Prevents harmful diesel fumes from entering warehouse

### Operational Benefits

Operator retains full control of access to warehouse and trailer

No shunting required – Yard movements drastically reduced

Trailers can be left in position for unloading while the load remains secure

Warehouse remains secure and airtight until operator is ready to unload

No damage to the bumpers during the loading or unloading process

## EsiDock is already *delivering* for Glanbia, Griffols, Nypro and New Cold (UK)

EsiDock have recently been commissioned by Glanbia to resolve a long standing problem in their Virginia plant. This plant is situated on a 23 acre site on the shores of Lough Ramor in Virginia Co Cavan, Ireland. Using whole milk as its basic raw material Glanbia Virginia produces 2 main products: Cream Base & Cream for Baileys Original Cream Liqueur and Milk Powders. The processing capacity exceeds 50 million gallons of milk equivalent per year.

As it is built beside a large lake spread over almost 750 hectares, at certain times of the year there is a mayfly problem. Glanbia had considered some different options to resolve this problem but EsiDock was selected as it was the most cost efficient and practical solution. EsiDock has recently installed and handed over two EsiDock bays integrated with a concrete loading ramp and platform and an insulated cladded building, along with vehicle restraints.

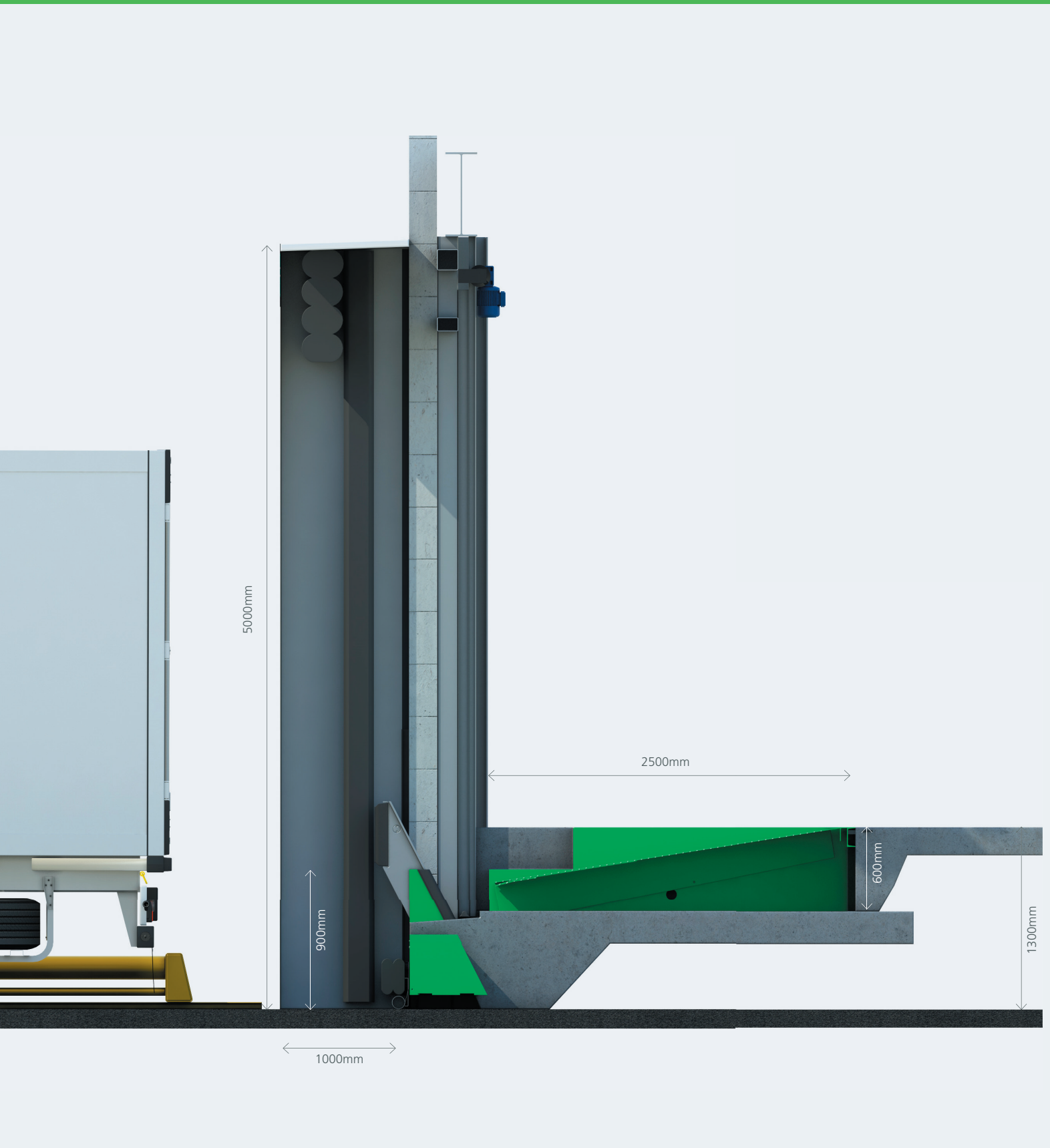


*We are delighted with our two new EsiDocks. These have proved a very practical solution to resolving the issue we had at our plant in Virginia. I see the EsiDock becoming industry standard before long. For Glanbia, it has provided us with industry leading hygiene standards in our warehouse operations. We have also noticed turnaround times are vastly improved and our shunter has become almost redundant."*

**Maurice Murphy,**  
Glanbia Ingredients Engineering Manager







## EsiDock Solution

**Efficiency** EsiDock Solution is a fully automated system enabling the bumpers to retract by hydraulics rams providing efficiency for warehouse operators and for the truck driver. By enabling the opening of docked vehicle doors into the loading dock, EsiDock Solution vastly increases loading and unloading productivity reducing turnaround times.

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**Security** EsiDock Solution also provides a secure loading dock ensuring the truck can be docked into the loading bay and left there without opening truck or warehouse doors while the operator is preparing to attend the bay.

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**safety** EsiDock Solution ensures the loading dock is a safe working environment. The system doesn't require the driver to get out of his truck which means less possibility of accidents.

### Primary function

Allows trailer doors to open into facility.

### Unique benefits

Provides greater security of goods in warehouse and trailer for operators.

Ensures driver and operator safety in docking operations.

Provides labour efficiency with yard operations.

Provides the possibility to create a complete seal between trailer and facility ensuring non contamination of goods and conservation of controlled temperature.

### Operational Capability

Designed to service the full range of containerised and refrigerated vehicles and trucks.

Compatible to work in conjunction with telescopic lip dock levellers.

Truck fleet utilisation improvements for fleet operators.

### Operational Benefits

Operator retains full control of access to warehouse and trailer.

No shunting required – Yard movements drastically reduced.

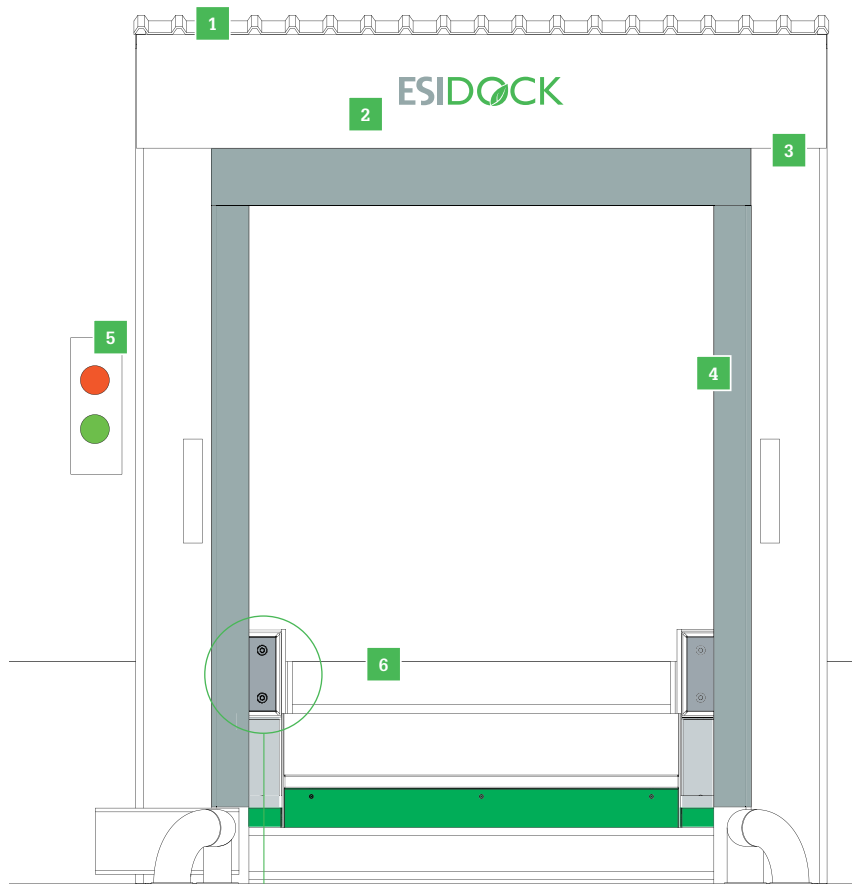
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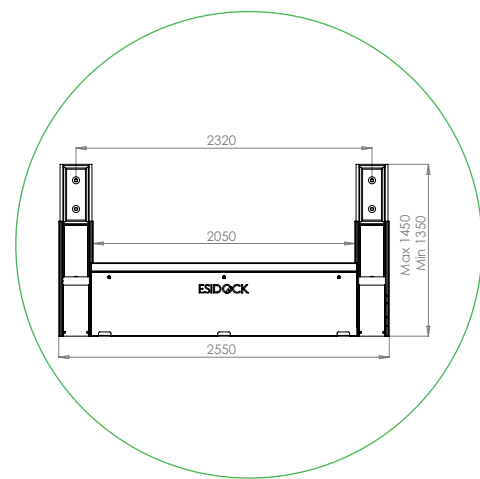
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# EsiDock Solution: General Arrangement



- 1 Pod**  
Standard shelter  
Color coded shelter  
Fully insulated
- 2 Branding**  
Area reserved for branding.
- 3 Dock Management System**  
Sequential control  
Single/constant Impulse
- 4 Seal**  
sided inflatable seal  
4 sided environmental seal.
- 5 Stop/go traffic lights**  
Safety feature for drivers
- 6 Dock leveller**  
1m telescopic lip  
Vertically stored leveller  
Painted finished  
Galvanized finished
- 7 EsiDock retractable bumpers**  
Double bumper system  
Galvanized finished  
Painted finished



## EsiDock 4-Sided Seal

|                       |   |
|-----------------------|---|
| <b>Equipment Type</b> | <b>MCR Engineering 4-Side Environmental Dock Seal</b>   |
| <b>Model:</b>         | MCR 4sided inflatable dock seal   |
| <b>O.A.L. Width:</b>  | O.A.L. Width: 3500mm  |
| <b>O.A.L. Height:</b> | O.A.L. Height: 5200mm   |
| <b>Vehicle Range:</b> | From 3600mm up to 4800mm high   |
| <b>Construction:</b>  | 2 no. inflatable side seals profiled to extend and return to connect with side of vehicle<br>1no. retractable head seal, travel 1200mm<br>1no. retractable under-dock seal<br><br>The inflatable seal components are designed to provide a comprehensive, flexible environmental seal around the top, sides and underside of vehicle. |
| <b>Construction:</b>  | The inflatable seal material is high-quality PVC Polyester, tear strength 20kp and breaking strength 250kp. All materials are corrosion resistant. Counter weights are incorporated in head and side bags to retract when deflated.   |
| <b>Blower:</b>        | The blower is capable of supplying an inflation pressure of 3.5" water gauge manometer point is located at bottom of side bag   |
| <b>Specification:</b> | Max flow rate 1000cu.M/HR   |
| <b>Power Supply:</b>  | 220 volt single phase   |
| <b>Controls:</b>      | Controls are incorporated in dock management system   |

## MCR Dock Management System

The MCR Dock Management system integrates the loading dock operational sequence. It is designed to enhance loading dock operational efficiency and provides a safer working environment for the loading dock operatives.

- Combined control cabinet
- Programmable sequential interfaced control
- User-friendly operation
- All loading dock functions located and controlled in a single cabinet

## Insulated Sectional Door Specification

### BUMPER SPECIFICATION

**Dimensions** W2550mm x H900mm/1000mm x D580mm

**Gap between bumpers** 2050 mm standard (can be tailored)

**Trailer Floor Range** 900 x 1350mm or 1000 x 1450mm

**Finishes** Galvanized steel or paint

**Bumpers** Rubber bumper  
200 x 450 x 100mm  
Retractable hydraulic system (Power Pack included)

**Drive System** Electro hydraulic drive system

**Operating Voltage** 230 Volt, Single phase/3 phase (country dependent)

**Control System** Dock management system constant/single impulse

**Auxillary Components** 1000mm Telescopic lip dock leveller  
Alternative bridging device

All conventional door types

Standard shelter or environmental sealing device

**Note:** Dock management system available  
Single source hydraulic operation available

### HYDRAULIC DOCK LEVELLER WITH TELESCOPIC LIP STEP VERSION

Nominal length: 2000mm – 4500mm

Nominal width: 2000mm – 2250mm

Tear plate thickness: 8/10

Leveller height: 600mm – 800mm

Frame: box / pit

Lip length: 1000 mm

Tear plate thickness: 13/15

Material: steel

Finish: RAL paints / hot-dip galvanization

Safety features: 2 separate lift cylinders

2 lateral toe guards

Capacity: 60 kN







# ESIDOCK

## EsiDock UK Office

Chester Business Park, Herons Way  
Chester CH4 9QR, United Kingdom.

t: +44 (0) 1244 893149

f: +44 (0) 1244 893101

## EsiDock Irish Office

Unit 1 The Capel Building,  
Dublin 1, Ireland.

t: +353 1 889 9105

f: +353 1 4811500

e: [info@esidock.com](mailto:info@esidock.com)

w: [www.esidock.com](http://www.esidock.com)

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**ESIDOCK SYSTEM**

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**CONSTANT CONTACT SEAL**

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**DOUBLE DECK LIFTS**

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**AFIM AIRDOORS**

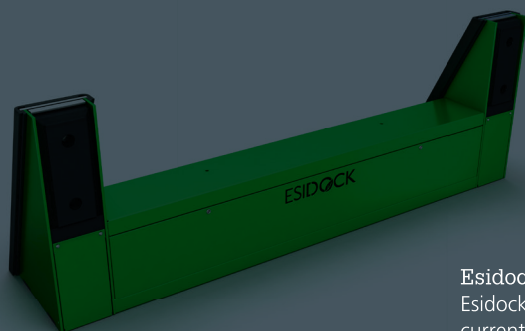
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**GOODS LIFTS**

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**DOCK EQUIPMENT**

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### Esidock Intellectual Property Rights

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