Supplied and installed by

Flood TECHNOLOGIES

The Ultimate Flood Defence System

Nautilus® 400

Instruction Guide

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About Us

Flood Technologies Ltd have specialised in bespoke flood protection products since 2001, having built a respectable reputation for raising the industry standards in quality and performance.

You will find us at our dedicated factory, in Coventry, where we have designed, developed and manufacture our range of flood barrier systems that are a quick and convenient method of building a watertight flood barrier that can be easily erected and deployed in the event of a river, sea or flash flood...and then quickly dismantled and stored away, once the flooding has passed.

Our unique, innovative, and patented demountable aluminium barrier systems; Nautilus 400 and Nautilus 200, have been developed for use on either a domestic residential property or a commercial business property. With water protection of up to 1.2 metres in height, they are a quality engineered, robust, lightweight, cost effective and best of breed product with PAS 1188-1 & Part 4 Accreditation and have been installed on 1000+ homes and small businesses right across the UK and Internationally.

Working with us you'll have:

- Aluminium and manufacturing that's practical, light and resilient, to last you a lifetime.
- Quick and easy assembly and dismantling so easy to deploy.
- Competitively priced products with speedy delivery.
- 'Made in Britain' quality manufacturing and design.
- Access to special and bespoke solutions.
- An in-house design team.

The systems exceed the BSI British Standard PAS 1188-2009 on allowable leakage rates for demountable flood defence systems.

'TOP 100 UK Manufacturer 2016' Award Winner

The River Severn rises in Shropshire - UK 2017

Introduction

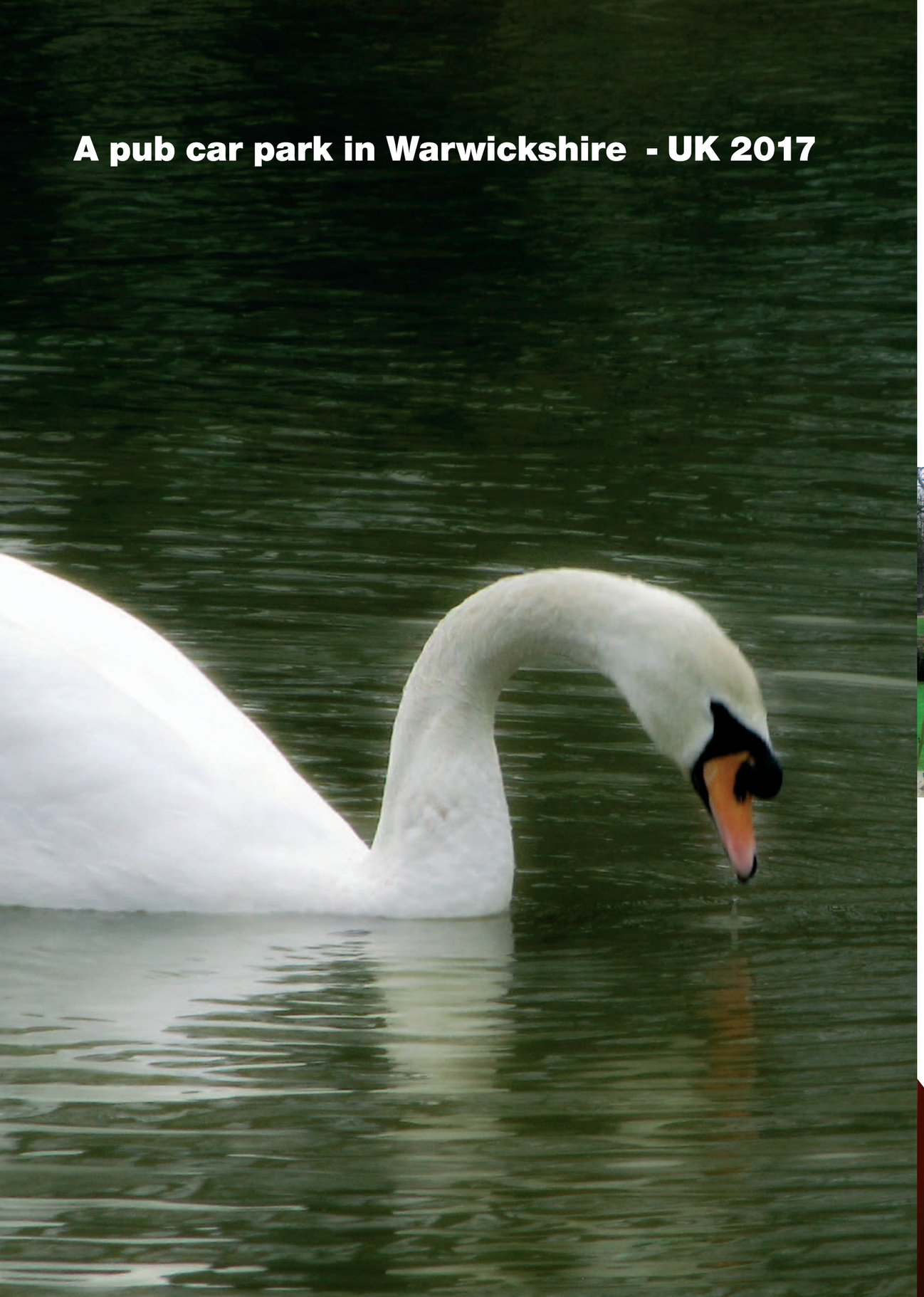
The Nautilus® 400 Flood Barrier System was developed as a quick and convenient method of “building” a watertight flood barrier that can be easily deployed in the event of a flood. It’s then easily dismantled and stored away after the danger has passed.

Nautilus® 400 is a robust and strong flood barrier, which means it can span wide distances and can tackle the most hostile and pounding water environments.

The system has been designed and tested to exceed the BSI ‘British Standard’ PAS 1188 (2009) on allowable leakage rates for demountable flood defence systems.

Suitable for installation on both residential and commercial property, Nautilus® 400 makes use of two permanently-fixed vertical side channels fitted either side of the opening to be protected, along with pre-installed unobtrusive ground fixtures to allow the Patented Twist and Lock post system (Patent No. 2371068) to be put in place.

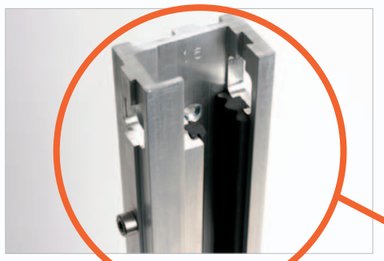
Aluminium flood boards are then dropped into position so that, when deployed, a barrier up to 1,200mm high for any required span is ready to protect your property.



Common components for all Nautilus® 400 applications

Example of single span application

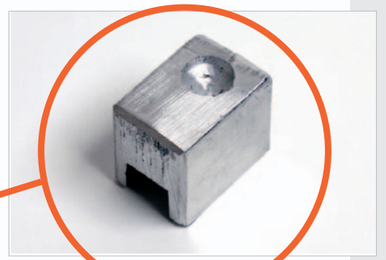
Vertical Side Channel MG_4470/4



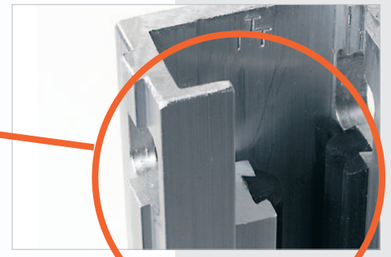
Top Compression Grub Screw MG_4312/4
(Long 12mm grub screws which apply the downward compression)

Compression Bar MG_4299/4

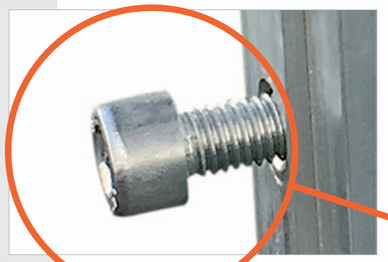
Compression Block MG_4303/4



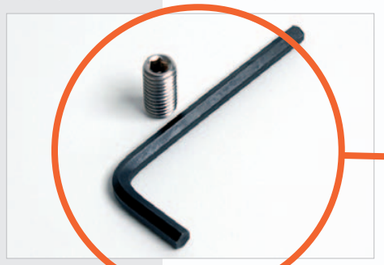
Vertical Clamp Plate MG_4467/4
(Inside the Vertical Side channels)



Cap Head Retainer Screws IMG_6345/4
(**Warning!** Do not adjust these. They hold the vertical clamp plates in position)



Front-Face Compression Grub Screws MG_4307/4
(Short 10mm grub screws which apply the sideward compression)

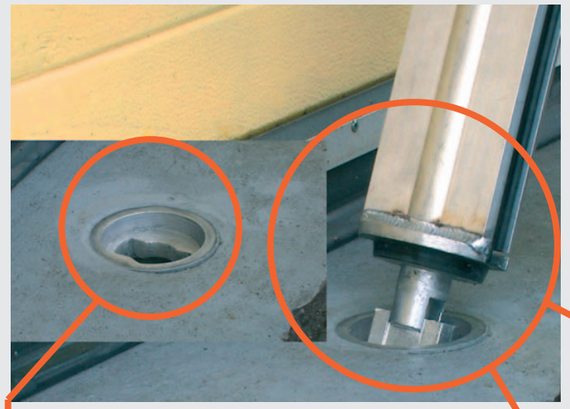


Flood Boards MG_4401/4
Cross section of boards. Each flood board is 400mm high x 25mm thick and is supplied with rubber seals to prevent water ingress.

(Image shows thicker seal which is only fitted to base boards.
Please make sure that this is always the first board used when deploying the system)

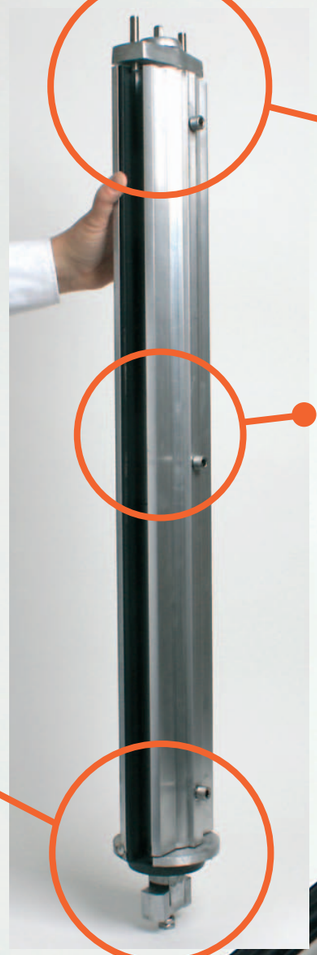
Additional components for use in multi-span applications

Example of multi-span application



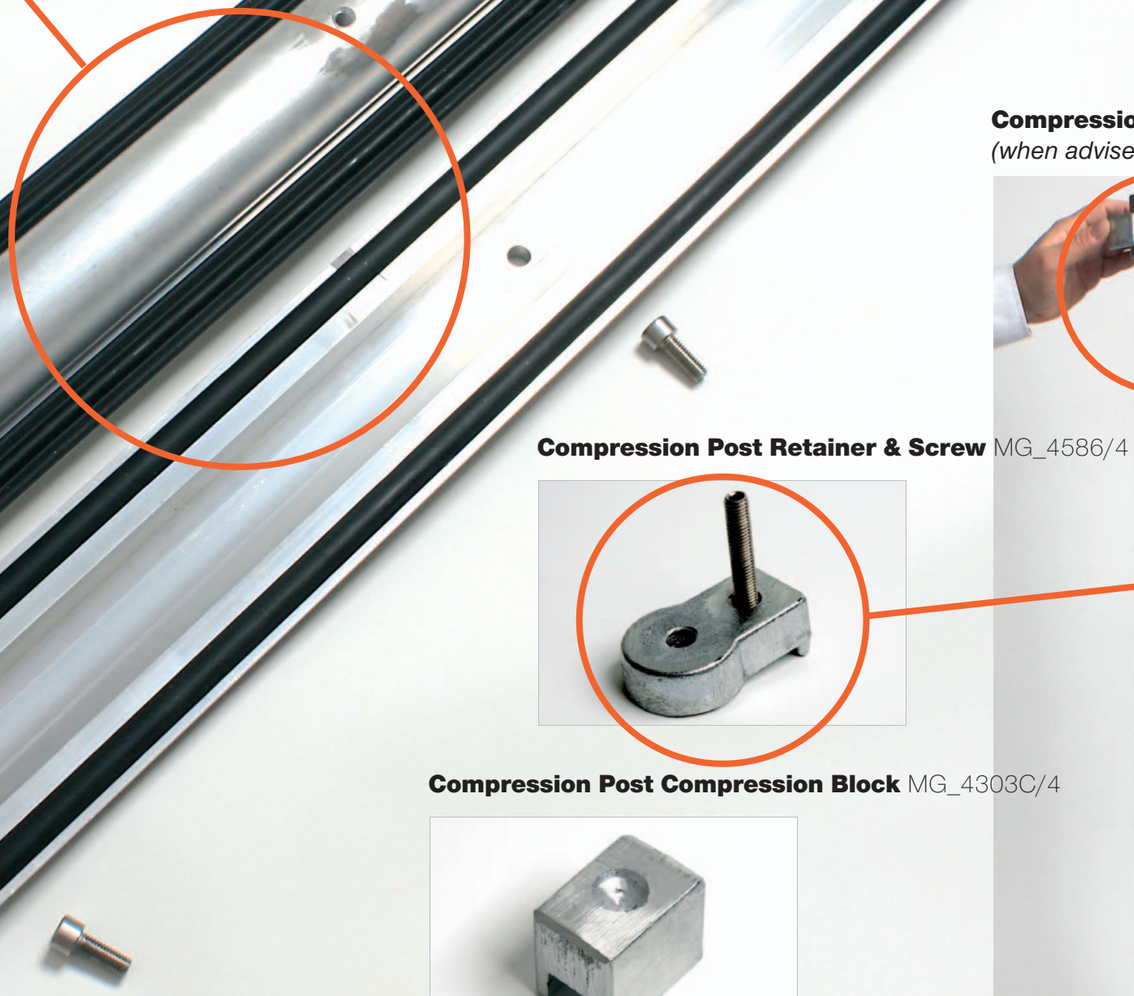
Ground Insert Dust Caps MG_4520/4

Dust Caps Screws MG_4522/4
(10mm cap head screws)



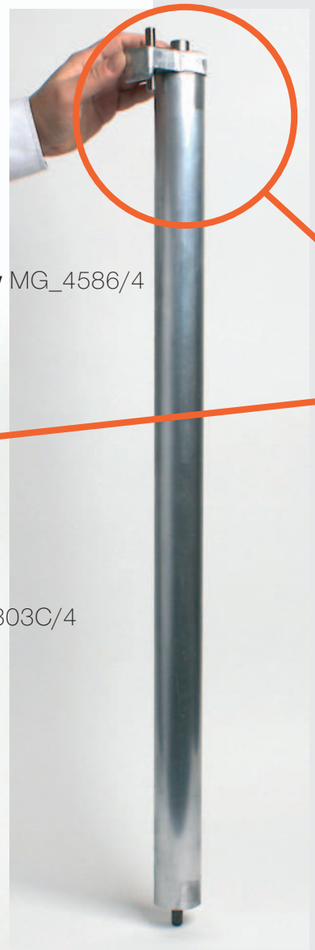
Demountable Post
MG_4510/4
Delivered as complete units directly from the factory.
They should only be disassembled for general maintenance purposes and seal replacement when necessary.

Compression Casting MG_4376/4



Bayonet Fitting Assembley

Compression Post MG_4502/4
(when advised)



Compression Post Retainer & Screw MG_4586/4

Compression Post Compression Block MG_4303C/4

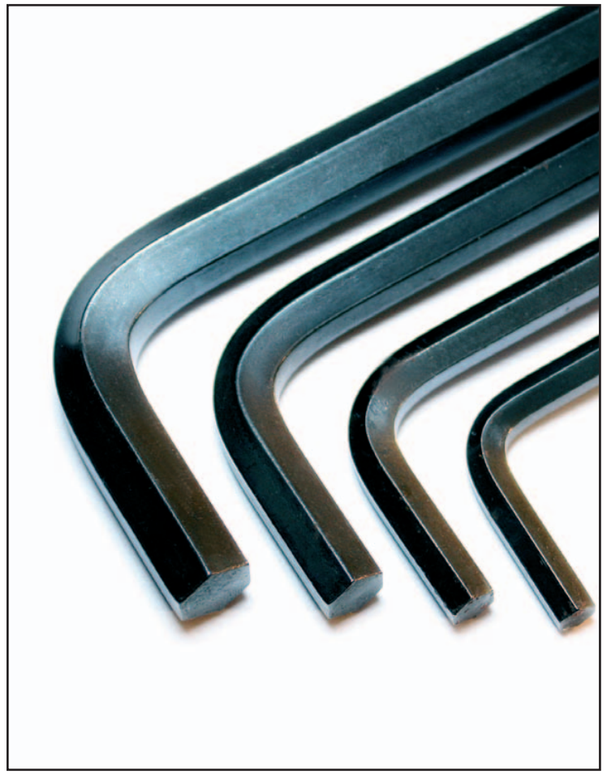
Tools

10mm Allen Key

08mm Allen Key

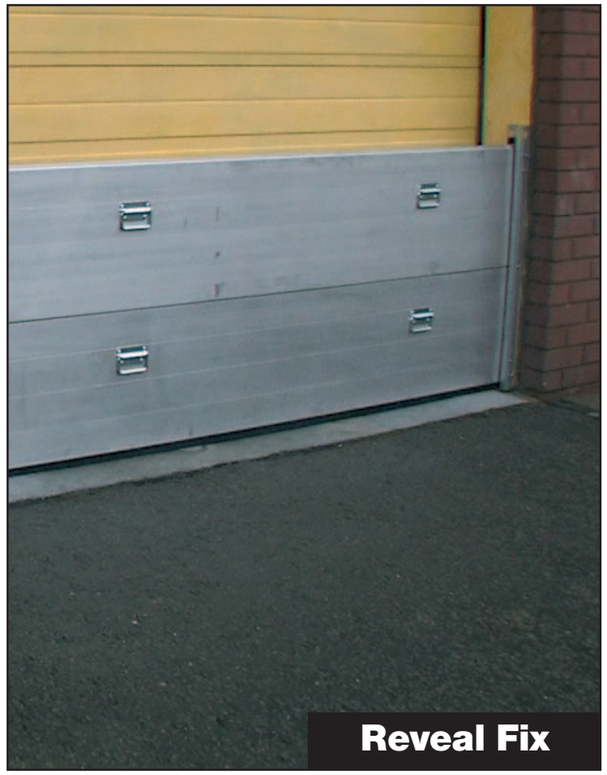
06mm Allen Key

05mm Allen Key



10mm Socket and Torque Wrench

Preparation



1 When the barrier is not deployed, the opening remains unobstructed allowing full and uninterrupted access to any opening, with vertical side channels permanently fixed to both sides of the adjoining walls.

2 When the flood warning arises, commence the deployment process by cleaning out any debris, leaves, etc. from both the permanently fixed vertical side channels and along the ground surface/ baseplate, using a soft brush.

(The rails will either be in the form of a "Reveal Fix" which means they are fixed in between the reveals [brickwork] of the doorway, or they are in the form of a "Face Fix" which means they are fixed onto the outer face of the brickwork.)

3 Gather common components and tools.
You will require between one and three flood boards (each 400mm high) depending on the height of your vertical side channels and demountable posts.

4 If the compression bar and 10mm horizontal grub screws are already in the vertical side channels, please remove them all. This is to ensure they do not obstruct the deployment of the flood boards.

5 If applicable, ensure the demountable posts' 10mm screws are loose to allow the flood boards to be slotted in easier.

6 If the black rubber seals inside the vertical side channels and/or on the flood boards are very cold, ideally pour warm water on the seals to soften them up.

7 In addition, to make the deployment easier, apply a little Vaseline® on the black rubber seals and the grub screws.

You are now ready to deploy your barrier.

Deployment

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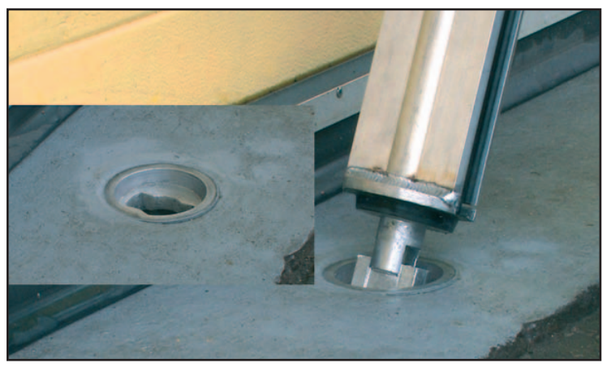
1 When the threat of flooding becomes apparent, commence the deployment process by unfastening the 120mm diameter ground insert dust caps with the 8mm Allen key provided.

2 Once the caps have been loosened (along the entire barrier span of the opening) lift the caps out to prepare each insert for deployment of the demountable post(s).

3 Before inserting the demountable post, please ensure that the insert, and its immediate surroundings, are free from any debris

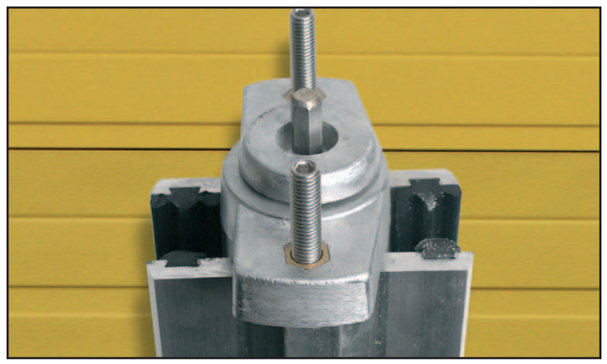
Note: If the ground insert dust caps have been fitted properly, then there should not be any debris inside the ground insert chamber. However, if for some reason there is debris inside, insert a domestic hosepipe into the insert and give it a blast of water to force any debris out.

4 Insert demountable post into ground inserts..

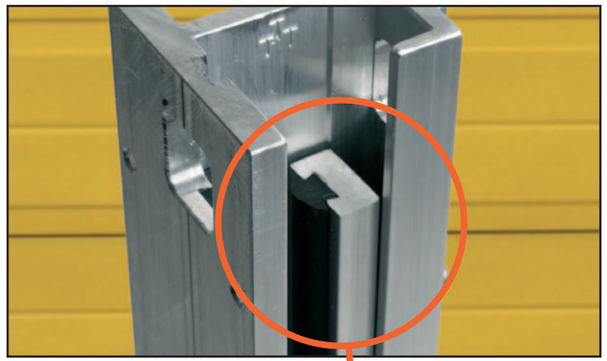


5 Twist demountable post, clockwise, 90-degrees into position to accept the flood board, with the cap head screws facing outwards, the same face as the vertical side channels. Note – there is no need to tighten the posts in place at this stage.

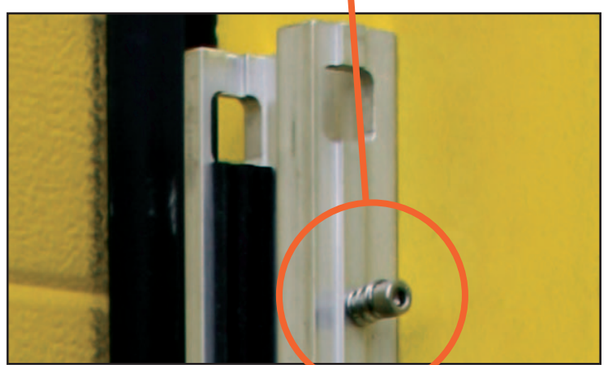
Where applicable, continue this process along the entire barrier span until all posts are deployed.



6 Ensure the compression casting, on top of each demountable post, is 90-degrees to the post's channels so that it does not obstruct slotting in the flood boards.



7 Ensure the vertical clamp plate inside the vertical side channels are pulled to the front of the channel to ensure it does not block the channel, ready to insert the flood board.

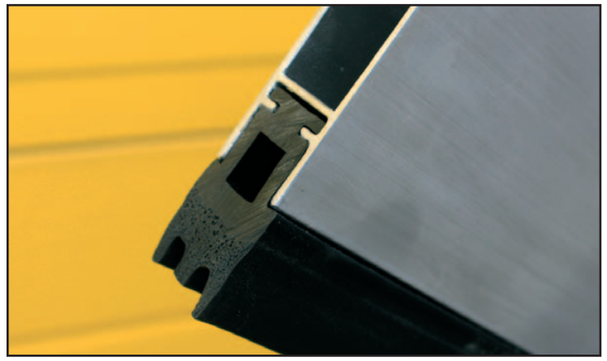


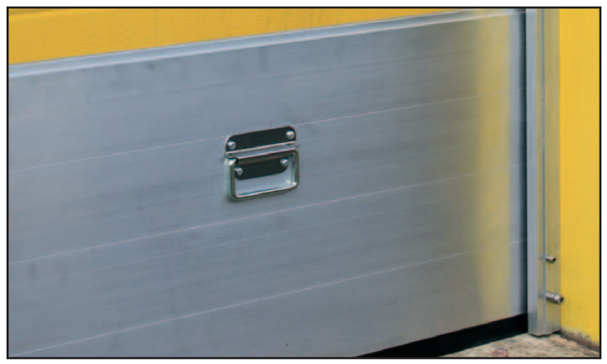
This can be done by pulling the retainer screws towards you.

Deployment

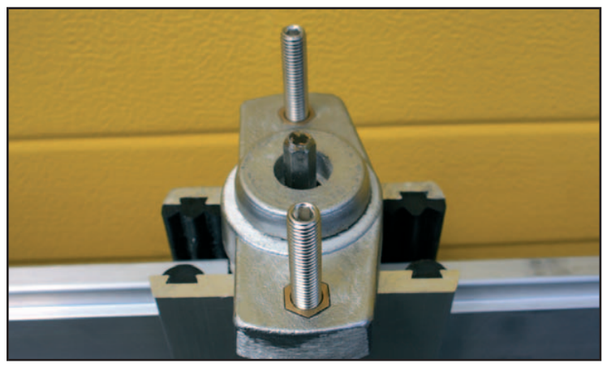
SINGLE Height Board: (Height 400mm x 25mm thick)

1 Take your single aluminium flood boards, and with the black rubber seal along the bottom, slot it in between the vertical side channels and demountable posts, until resting against the ground surface/baseplate.





2 Continue this process of inserting all flood boards along the entire barrier span, between each demountable post, until you reach the opposite vertical side channel.



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Deployment

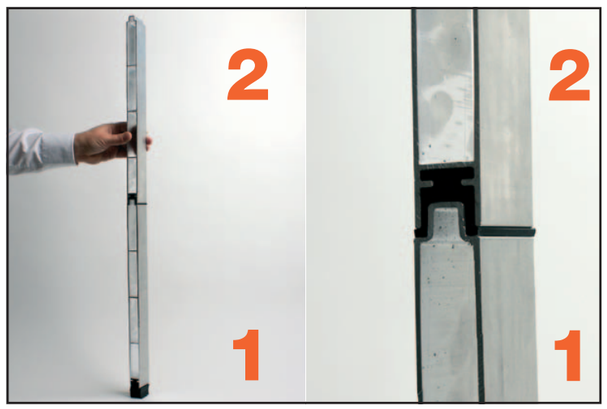
DOUBLE Height Boards: (Height 800mm x 25mm thick)

1 Take your two types of flood boards and identify the ones with the thicker black rubber seal along the bottom.

With the thicker seal along the bottom, slot this in first, between the vertical side channels and demountable posts, until the thicker seal rests against the ground surface/baseplate.

2 Continue this process of inserting all bottom flood boards along the entire barrier span, between each demountable post, until you reach the opposite vertical side channel. Follow with the second type of flood boards, with the thinner black rubber seal along the bottom of the flood board and raised profile along the top.

*(Image shows cross section of flood board with thicker seal **(1)** which is only fitted to base boards. Please make sure that this is always the first board used when deploying the system)*



Deployment

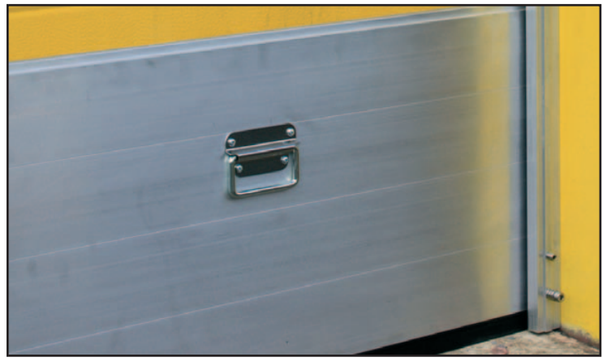
TRIPLE Height Boards: (Height 1,200mm x 25mm thick)

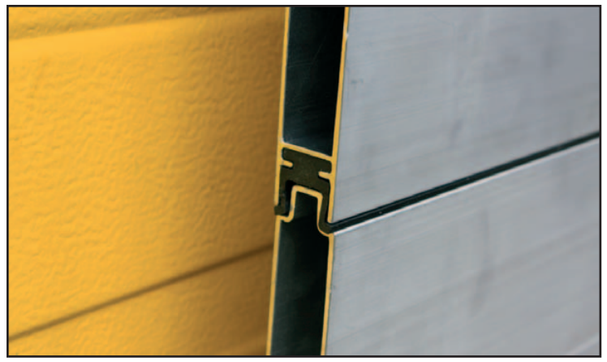
1 Take your three flood boards and identify the ones with the thicker black rubber seal along the bottom.

With the thicker seal along the bottom, slot this in first, between the vertical side channels and demountable posts, until the thicker seal rests against the ground surface/baseplate. Continue this process of inserting all flood boards along the entire barrier span, between each demountable post, until you reach the opposite vertical side channel.

2 Now, take the flood boards with the thinner rubber seals along the bottom, and slot in the second level flood boards, all the way along.

Repeat for the third and final level flood boards, again with the thinner rubber seal along the bottom and with the raised profile along the top.



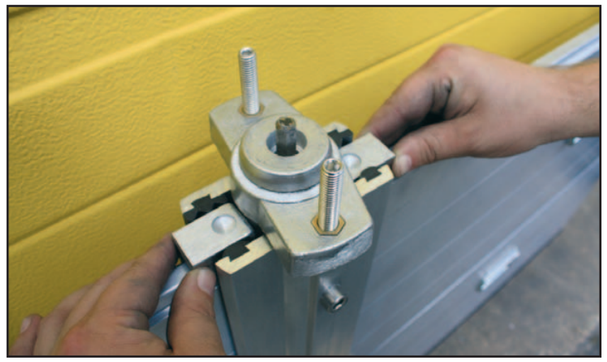


Deployment

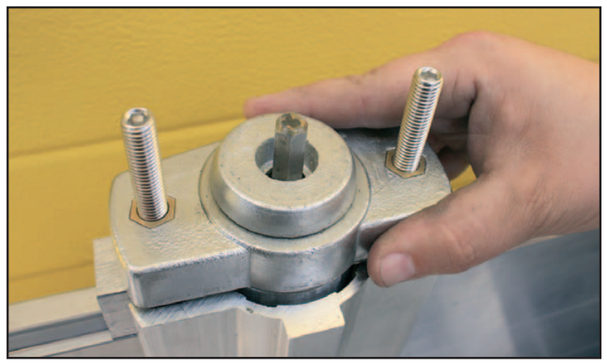
Deployment continued for all barrier heights:

1 When using the demountable post, secure each post by using the 10mm socket and torque wrench provided, by turning the top central hexagon, clockwise, until the post is firmly secured to the ground.

2 Secure the flood board(s) by inserting the compression blocks (on the top of the flood board and inside the vertical side channels), with the profile slot at the bottom (over the flood board) and the countersunk indent on top, towards the outside wall.



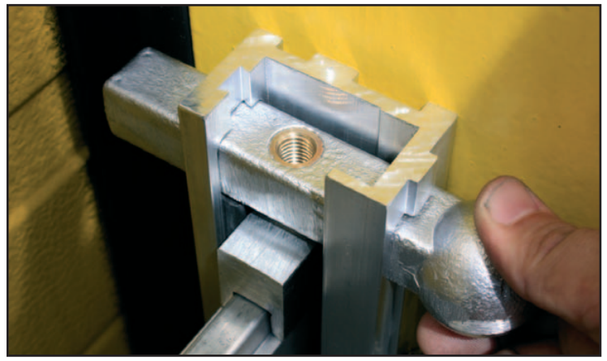
3 When using the demountable post, secure the flood board(s) by inserting the compression blocks (on the top of the flood board and inside the demountable post vertical channels), with the profile slot at the bottom (over the flood board) and the countersunk indent on top, towards the centre of the post.



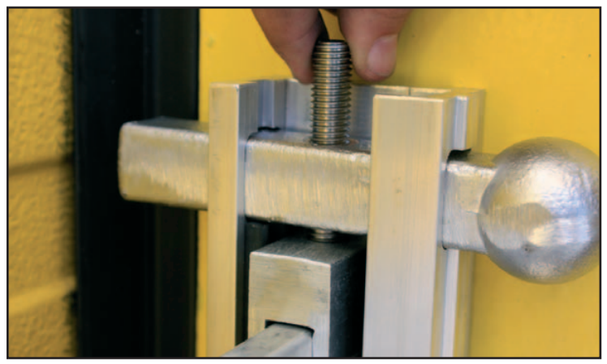
4 Twist the compression casting, on top of each post, 90 degrees, so that the screws are over the channels.

Deployment continued for all barrier heights:

5 Insert the fixed end compression bars horizontally into the top of both vertical side channels, with the screw hole facing up.



6 On top of each compression bar, and top of the post compression casting, by hand, start turning each 12mm grub screw, clockwise, until finger tight.



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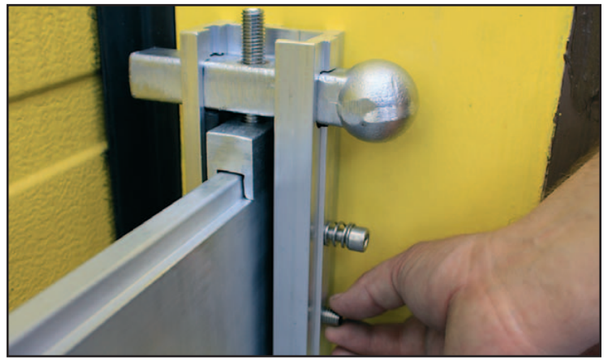
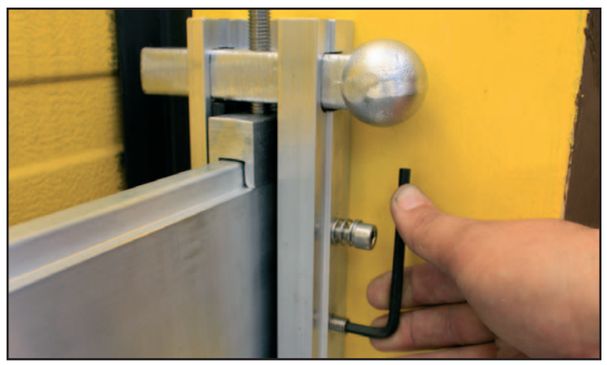
Deployment continued for all barrier heights:

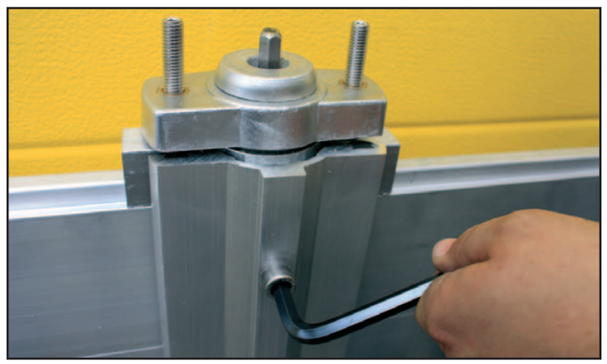


7 On the front face of the vertical side channels, by hand, start turning the horizontal 10mm grub screws, clockwise, until they are finger tight.

8 On the front face of the demountable posts, by hand, start turning the 10mm cap head screws, clockwise, until they are finger tight.



9 Using the 5mm Allen Key, turn each grub screw and cap head screw, clockwise, one full turn (360 degrees)..

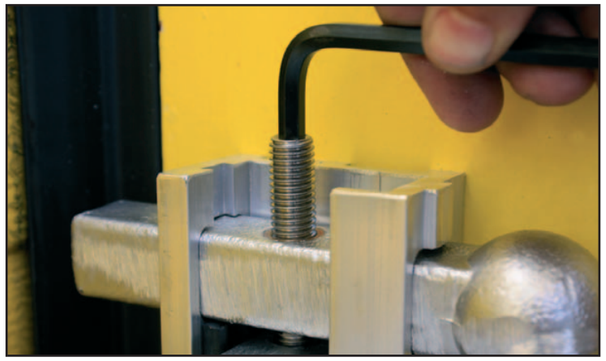


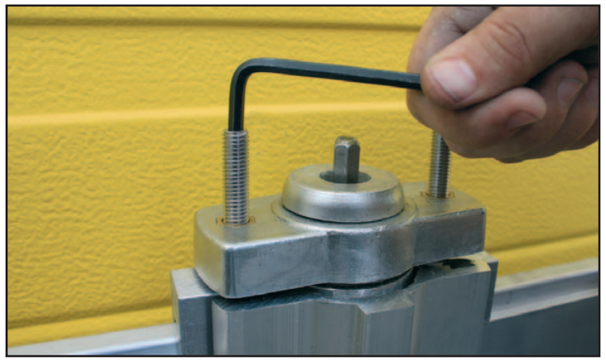
Deployment continued for all barrier heights:

9 Using the 6mm Allen Key, turn each compression bar and compression casting 10mm grub screw about three full 360 degree turns.

(***Warning!*** *You do not need to over tighten them*)

This seals the flood board's bottom rubber seal against the ground surface/baseplate.





Deployment

Deployment with a Compression Post:

The compression post is utilised for the Nautilus® 400 barriers that spans over 1,500mm but less than 2,500mm for heights up to 1,200mm.
This component ensures that adequate downward pressure is applied in the centre of the flood board and along the entire barrier span.

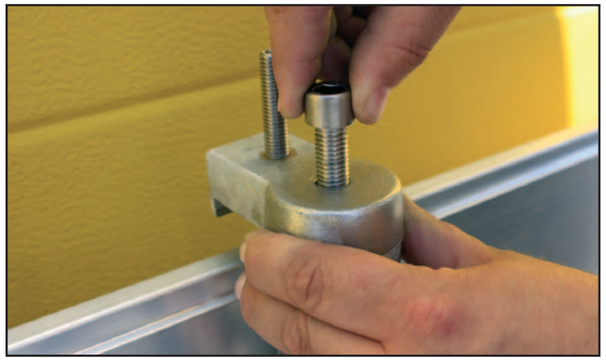
1 Remove the 12mm nylon grub screw from the compression post ground insert (usually in the centre of the flood board span.)

2 Now, screw the compression post into the same ground insert hole.

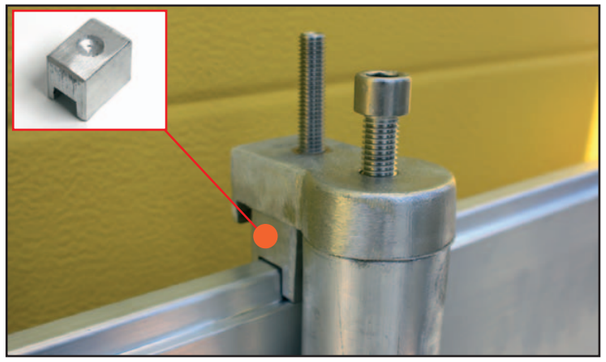
3 Screw the retainer compression block onto the top of the compression post, with the lip covering the flood board

Deployment with a Compression Post continued:

4 On top of the compression post retainer, turn the 12mm cap screw, clockwise, by hand, until finger tight.



5 Position the compression block between the top of the board and the compression retainer of the compression post, then turn the 10mm grub screw, clockwise, by hand, until finger tight.



6 Using the 10mm Allen Key, turn the 12mm cap screw, clockwise, three full 360 degree turns.

7 Now, using the 5mm Allen Key, turn the 10mm grub screw, clockwise until tight.

This ensures a strong seal along with entire span of the flood board against the ground surface/base-plate.

Deployment is now complete.

Dismantling

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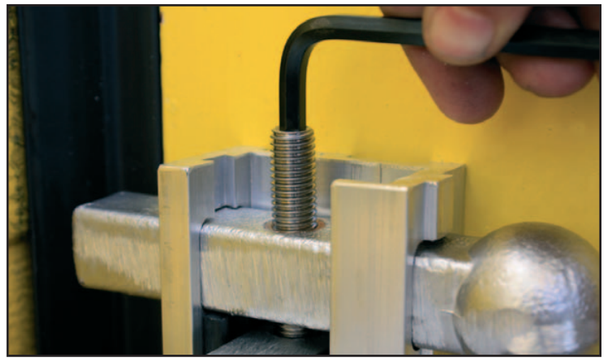
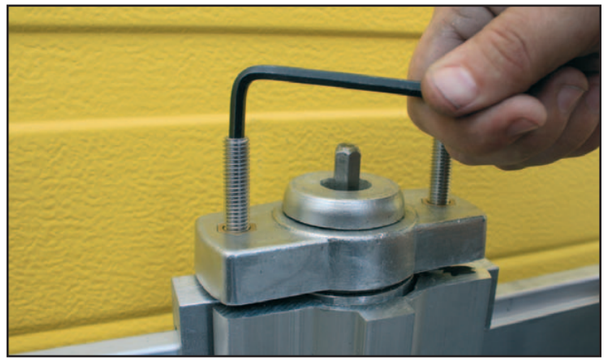
After Short Term Use:





Once the flood has subsided, and there are no further flood warnings:

1 Should compression posts have been fitted to your system please reverse the deployment instructions and remove the post assembly completely.

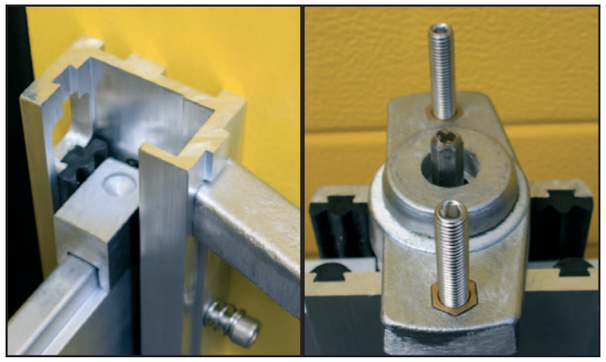
2 Using the 5mm Allen Key, turn and loosen, anti-clockwise, each 10mm grub screw in the top compression bars until the compression is fully relieved.

3 Using the 5mm Allen Key, turn and loosen, anti-clockwise, each 10mm grub screw in the top of the demountable post compression casting until almost fully removed. Twist the compression casting, on top of each post, 90 degrees, so that the channels are open and accessible, with the screws away from the channels.

4 Using the 8mm or 5mm Allen Key (as appropriate), turn each grub screw on the front face of vertical side channels, and each cap head screw on the front face of demountable post/s in an anti-clockwise direction until all side pressure on the boards is released. The grub screws may be removed for safe keeping or retained lightly in position.

Dismantling continued:

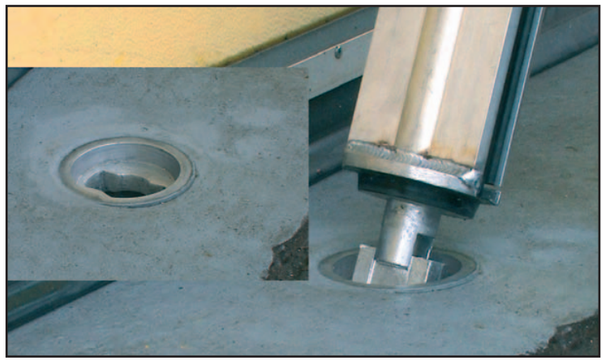
5 Now, remove both the compression bars from the top of the vertical side channels and all compression blocks from side channels and demountable post/s.



6 Now, with the flood boards relieved of any retention/compression, remove each of the flood boards by sliding them up through the vertical channels.

If you have followed the short-term usage dismantling instructions and find that the black rubber seals are stuck to the aluminium flood boards, pour warm water onto the seals to soften them and make the boards separate more easily.

7 Once all boards have been removed and secured safely, you may now remove the demountable post/s by using the 10mm socket and torque wrench provided, turning the top central hexagon, anti-clockwise, until the post is loose enough to twist 90-degrees anti-clockwise and be withdrawn from the ground inserts.



8 Replace dust caps and secure with the 8mm Allen key.

Cleaning

Nautilus® 400
Instruction Guide

Cleaning After Use:

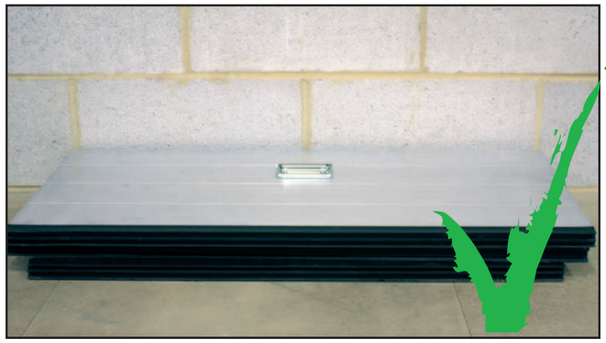
Should the flood barrier equipment, flood boards and vertical side channels be contaminated during use, they will need to be cleaned.

1 Clean using household detergent and warm soapy water.

2 Allow to dry thoroughly

3 Store away.

Storage



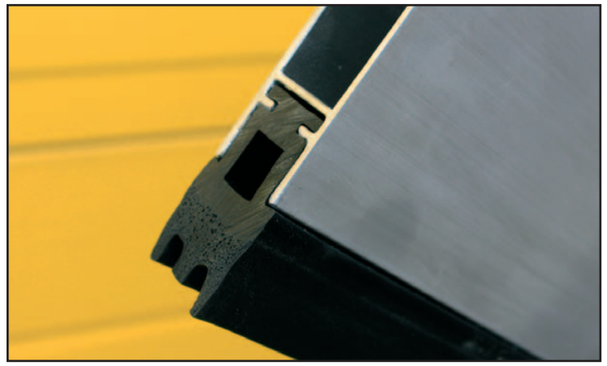
1 Store the flood boards flat, so the board is not resting on the rubber seals either on the floor or against a side wall/surface.

2 Ensure the flood barrier equipment is stored in such a way that it is not a hazard to any persons either by falling on them or as a trip hazard.

Planned Maintenance

The following steps should be undertaken regularly on all barriers:

1 Check all the rubber seals for signs of decay and make sure all the rubber seals are on the barrier, and none have come loose, or been removed.



2 Apply lubricating release spray to all flood boards' seals to ensure ease of installation and dismantling, and to prevent seals from adhering to the aluminium during prolonged deployment.

(Additional cans of silicone lubricant can be obtained online through Amazon).

3 Ensure that all screws, and necessary tools, are present.

Ensure all other barrier components are present (See 'common components' illustration).
If anything is missing, replacement parts can be ordered through your supplier.

Warranty

The Supplier warrants that, for a period of 24 months from the date of delivery ('warranty period'), the metal components of the Goods shall:

Conform in all material respects with the Specification;

Be free from material defects in design, material and workmanship; and

Be of satisfactory quality (within the meaning of the Sale of Goods Act 1979).

The Supplier warrants that, for a period of 12 months from the date of delivery ('seal warranty period'), the rubber components of the Goods shall:

Conform in all material respects with the Specification;

Be free from material defects in design, material and workmanship; and

Be of satisfactory quality (within the meaning of the Sale of Goods Act 1979).