

THE GREAT INNOVATION

2nd Generation Aluminum Demountable Flood Barrier

FLOODDEFEND™ NFP-50



As the furthering of the global warming due to environmental pollution, flooding is becoming one of the major threats to urban life and amenities, causing huge property damage and posing a serious threat to life every year.

Since the aluminum demountable flood barrier was born, it has shown unparalleled advantages on traditional sandbags, in terms of convenience, deploy speed, aesthetics and water tightness. We found that most of the individual properties' required flood protection height are always below 1.6 metres (5.3ft), but "faster and easier deployment" and "better watertightness" are pursued all the time. In order to fulfil this general need, we are glad to announce our new innovative and patented 2nd generation--NFP-50 Side Compression Flood Barrier.

It consists of the following:

1. End post permanently installed at wall of building;
2. Removable and stackable flood panel;
3. Removable central post to extend the length (if required).

The full structure is in aluminum alloy in high strength against the water pressure, but light weighted to be lifted and operated by one adult only. The EPDM in the post and panels guarantees the superior water tightness of the system, while the innovative side compression design allow to compress and lock the panels by a simple one-rotation operation. It efficiently improves the small water leakage at the corner of the post on the 1st generation product.

The new design has fully removed the friction between the panel and post gasket on the 1st generation during deploying and dismantling progress, which reduces the operation with hook or lubricant. The flood protection height is covered downwards by the height of the post, any optional flood height changing at every 200mm downwards can be achieved at wish depending on the flood situation. If the site requires, removable central post can be introduced for unlimited system length extension.

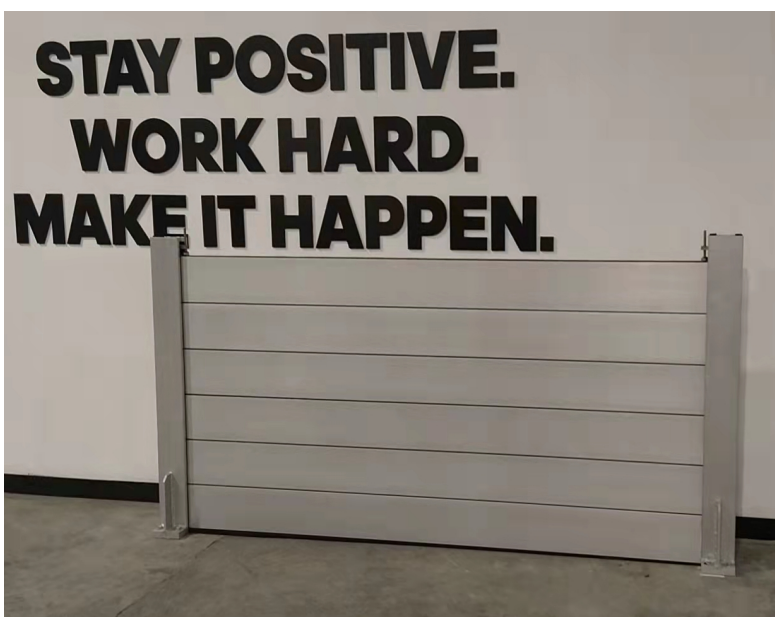
The permanent and pre-installed posts are in gorgeous appearance without any visual intrusion. Both the deployment against flood warning and the dismantling after flood season can be done by one adult in 5 minutes with simple tools.

Unparalleled Advantages

1. The leakage rate complies to British Regulation PAS1188-4 (Updated BS851188-2), the patented one key for side compression gives water tightness more than 95%;
2. Quick deployment and dismantle by one man with simple tools within 3~5 minutes and no visual intrusion after removal;
3. Full aluminum alloy structure for high strength and low weight;
4. Module design with central post introduced for unlimited length extension;
5. Flood height optional at will downwards the post height;
6. Good for individual properties, commercial buildings, factories, shopping fronts as well as government flood mitigation schemes.

Why Work with US

1. Cost advantage comparing with EU or US product;
2. Produced under reliable ISO9001-2015 quality system and endorsed by SGS water leakage test;
3. Wooden case packing for quick delivery;
4. Quick response on technicals, sales and after sales.
5. Free consultation service to instruct the local construction work;
6. More innovations coming after to extend your product lines.



Sandbags VS. 1st Generation NF-35 (Slot in Type) VS. 2nd Generation NFP-50 (Side Compress Type)

Product	Sandbags	1st Generation NF-35 (Slot in Type)	2nd Generation NFP-50 (Side Compress Type)
Investment	Less	Normal	More
Deploy Time	Long, exhausted in bearing heavy bags again and again	Short, light aluminum structure, but need to overcome friction slotting in and out	Very Rapid, no more friction during deployment and dismantling
Manpower	A lot	2 Man+ is better	1 Man is enough
Deploy Cost	A lot in hiring man power mainly	Almost none	Almost none
After Flood	Mess after flood, spend a lot of time to clean	Removable easily and none visual intrusion left	Removable even easier and none visual intrusion left
Appearance	Bad visual impression	Module design in full aluminum elegant appearance	Module design in full aluminum elegant appearance
System Strength	Good, sandbags stacked well in water is strong	Good, in 35mm thick aluminum alloy panel	Even better, in 50mm thick aluminum alloy panel
Service Life	Single use, need to buy new ones prepared for next flood	Multiple use, aluminum alloy structure can last for more than 20 years	Multiple use, aluminum alloy structure can last for more than 20 years
Water Seepage	Water tightness performance depends on stacking experience	Good, but there is minor leakage along post because it is simple slot-in design only	Terrific, the side compress design along the post gives MIN.95% water seepage
Reliability	Poor reliability, more depending on stacking experience	Very reliable by calculated and tested metal material	Very reliable by calculated and tested metal material
Management	Complicated (massive labor works, sand source, long time)	Easy (Site Storage, less works, short time)	Easy (Storage at site, less works, short time)



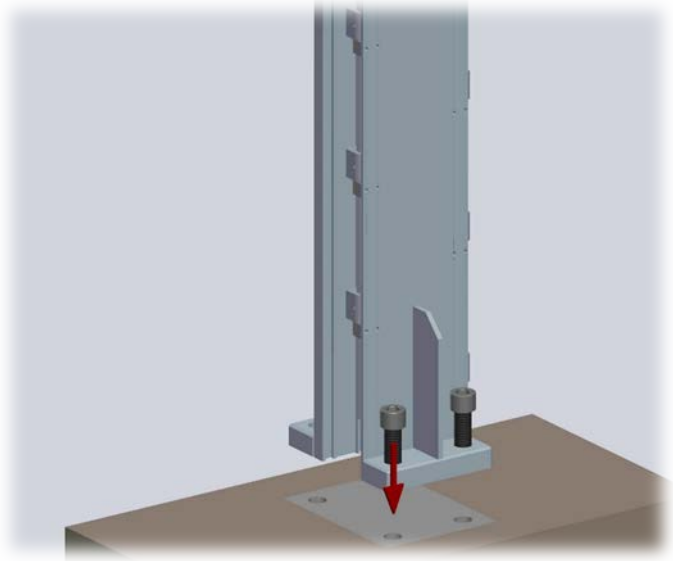
Quick Deploying Demo

1. Install the removable central post (if any):

Align the bolt holes on post base to the ones in anchor plate embedded in ground, insert 4 bolts and tighten them to lock.

***Note:** We will make the design if any removable central post is required in the system, according to the site flood protection requirement.

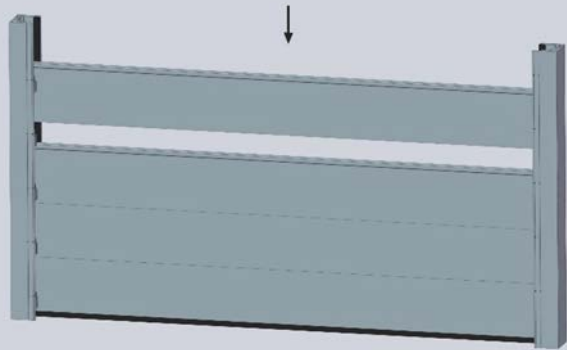
The central post is bolted and sitting on top surface of the anchor plate embedded in ground during the initial installation. The top surface of the anchor plate is flush with the ground with no protrusions after the central post removed after flood season.



2. Stacking the removable barrier panel:

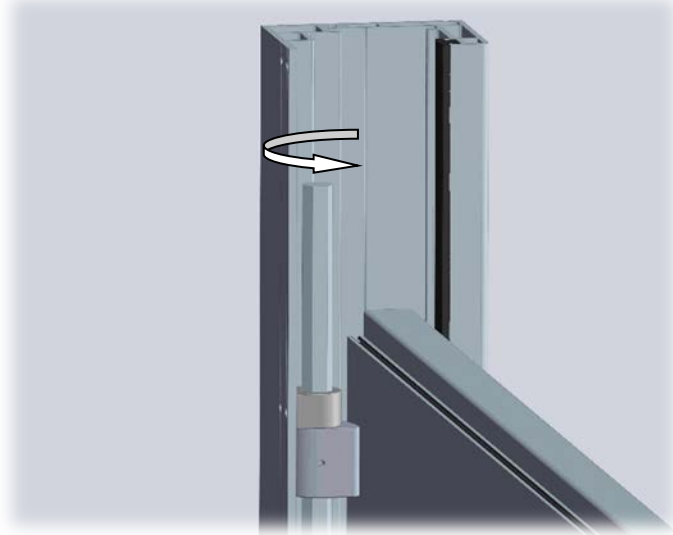
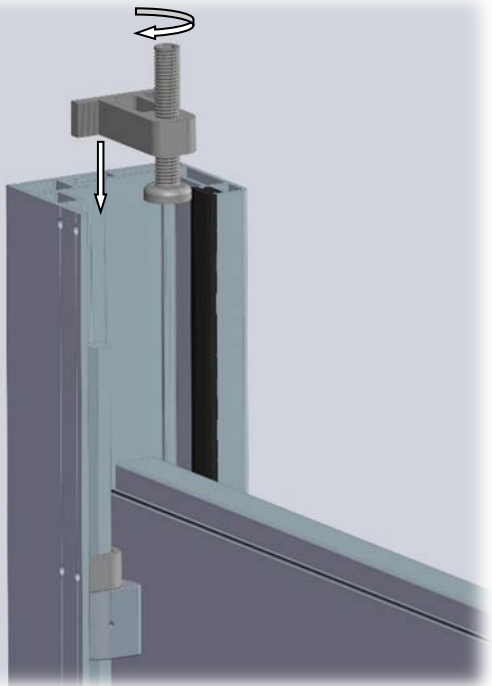
Remove the protective cover on end post and deploy the panels by stacking one by one to the required flood protection height. Try to place the panel contacting the vertical gaskets in post preparing for next side compressing work.

***Note:** The lowest panel contacting ground, should be equipped with the attached EDPM bottom gasket.



3. Apply side compression to the panels:

Rotate the main bar in the posts with tool, to have the locking blocks to give side compression to the panels



4. Apply downwards compression to panels:

Slide in the pressing tools in post's channel and tighten the long bolt to generate the downwards compression to ground.

The full system deployment finishes in short time!

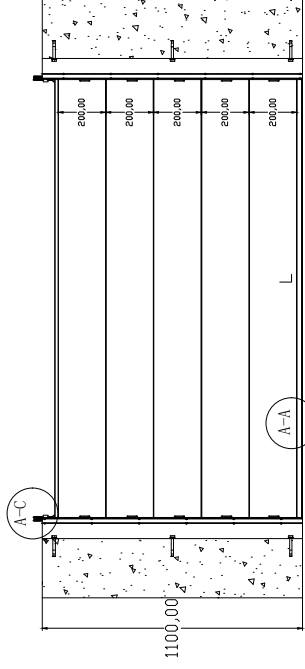
5. Dismantling after flood threat:

Reverse the above steps

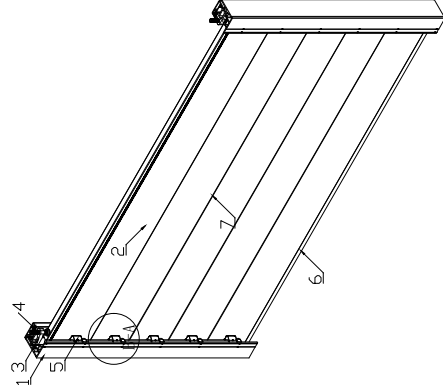
No.	Name	Material
1	End Post	6063-T6 Alu Extrusion
2	Barrier Panel	6063-T6 Alu Extrusion
3	Pressing Tool	304L SS
4	Post Gaskets	EPDM
5	Pressing Nuts	6063-T6 Alu Extrusion
6	Bottom Gasket	EPDM
7	Panel Top Gasket	EPDM



TOP VIEW



FRONT VIEW



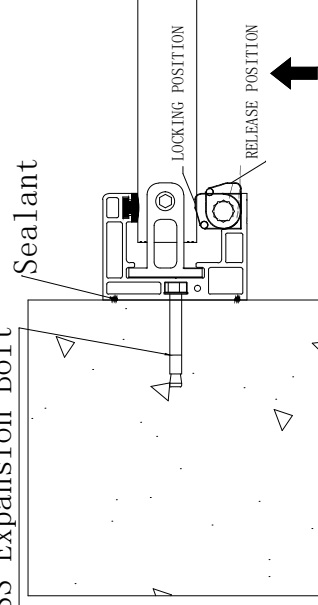
3D VIEW

Confirm the flood height required & clear width of doorway, design the span and select the correct install method, the ground should be as flat as possible and a SS U channel is recommend to be embedded for best seepage.

A-B

INSTALLATION SKETCH
* REVEAL SURFACE FOR EXAMPLE

M14 SS Expansion Bolt



*More installation method available according to site condition

WET SIDE

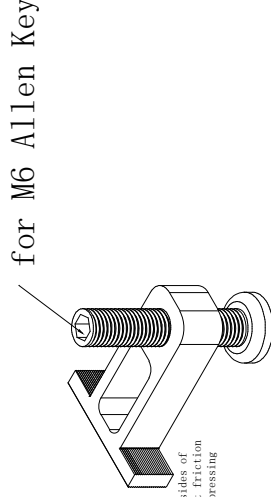
Scale 1:5

C
—
A

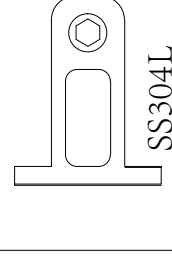
A C PRESSING TOOL

2PCS for each span;

Downwards pressure for best bottom watertight



Zigzag surface on both sides of the sliding block, great friction to hold position after pressing tool tightened.



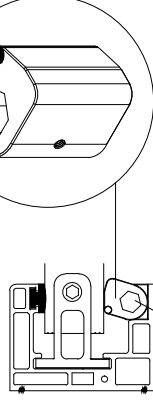
Scale 1:5

$$\begin{array}{c} \text{A} \\ | \\ \text{B} \end{array}$$

LOCKING SYSTEM

(1PC/Panel in one post)


Side pressure for best side watertight



AA7075 Aero Grade Alu Alloy Bar

Eccentric Design. Switch between Release and Locking by twisting the main bar from top, to press the panels tightly to the gaskets in post for superior water seepage; the Nylon rod to prevent the scratch and damage to panel surface during operation.

Scale 1:5



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SCALE: 1:1

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CHECKED

DRAWING NO.

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纽锋科技
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Aluminum Demountable Flood Barrier

1-CA-514

A-A
BARRIER PANEL