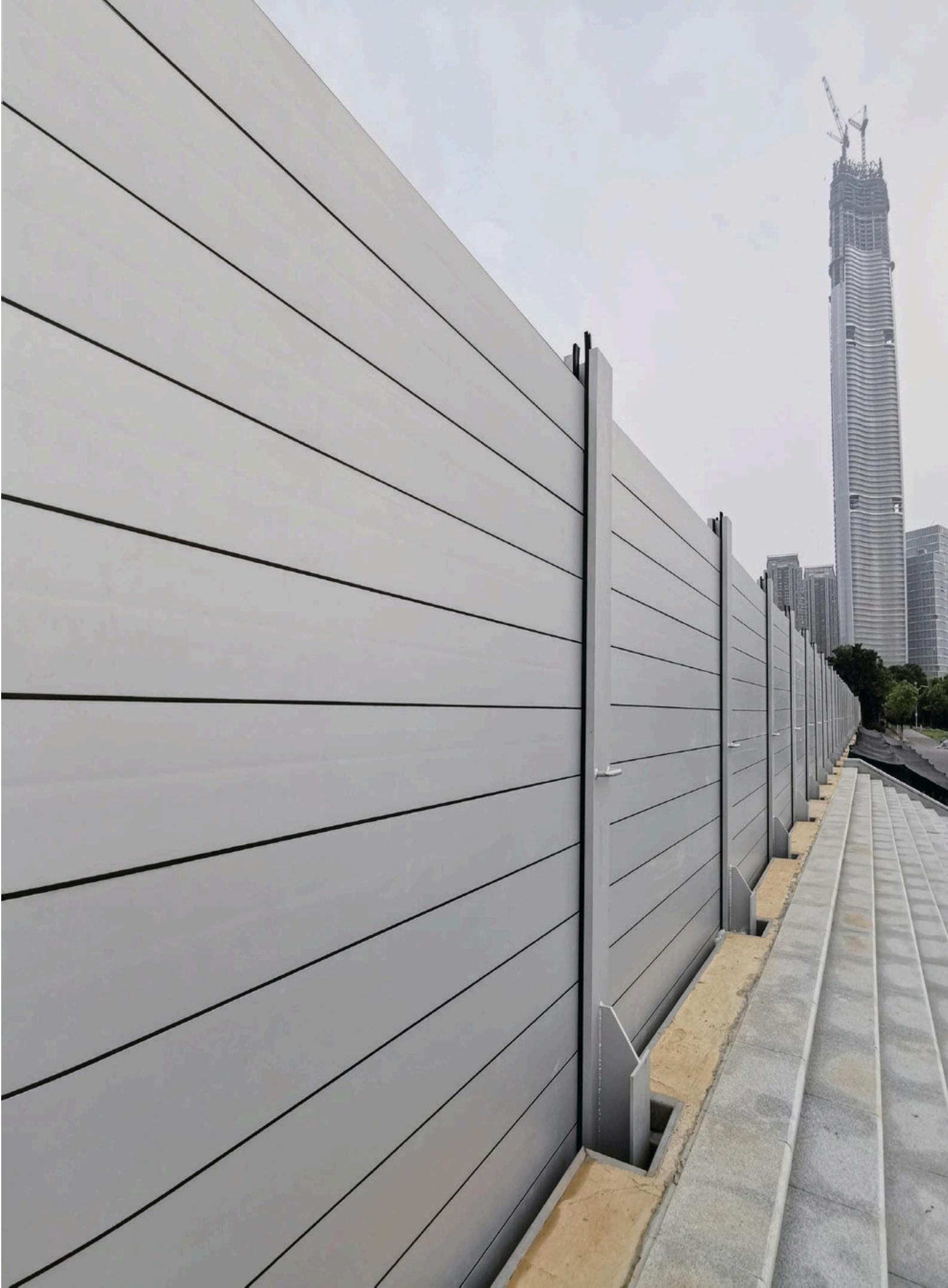




**PT KARYA
EVEREST PACIFIC**

Flood Barrier





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ALUMINUM FLOOD BARRIER

1.1 DESCRIPTION

Meishuo aluminum flood barrier systems allow you to protect doorways and other openings from flooding.

U-Channel posts are installed on either side of the opening to be protected. These unobtrusive posts remain in place and when flooding is expected are designed to receive a series of aluminum panels, which are stacked as needed to the height required.

This flood gate system is also ideal for areas where high wind or debris is expected as the fixed posts and clamped panels are durable, rigid and designed to handle heavy stresses.



1.2 FEATURES

Simple Installation

Meishuo aluminum flood barrier system is designed to fit your specific entryways with minimal adjustments to your property. Once mounting posts are installed, panels are easily slid down to build your optimal height of protection.

Durable Flood Protection

Meishuo panels are made from a durable 6063-T5 Aluminum able to withstand heavy stress brought on by flood water

Rapid Deployment

When a flood is expected, insert panels into the mounting posts on either side of the door opening and tighten down.

3M Wide Width

Meishuo provides panel widths up to 3M wide without additional supports. Unlimited length is achieved with center posts for more protection.



1.3 PRODUCT DETAILS

MSFBA-35 Series Flood Barrier

The panel and fixed post are made of aluminum 6063-T5, the waterproof sealing strip is EPDM, and the embedded parts are made of stainless steel.

Panel thickness 35mm

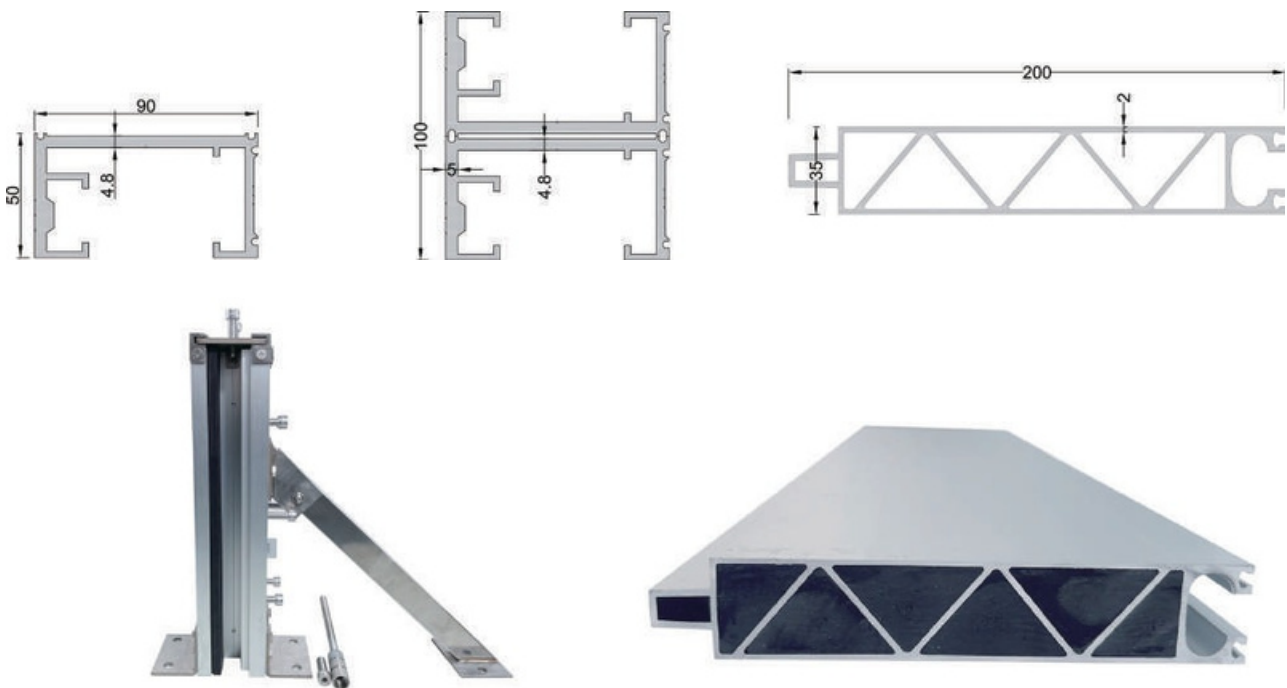
Single panel locked height 200mm

Panel thickness 2mm

Maximum water blocking height 800mm

Maximum distance between posts 5000mm

Scope of application: Emergency use for flood control and flood relief in underground garages, factory warehouses, ground floor shops, underground spaces, shopping malls and hotels, etc. during the flood season.



MSFBA-50 Series Flood Barrier

The panel and fixed post are made of aluminum 6063-T5, the waterproof sealing strip is EPDM, and the embedded parts are made of stainless steel.

Panel thickness 50mm

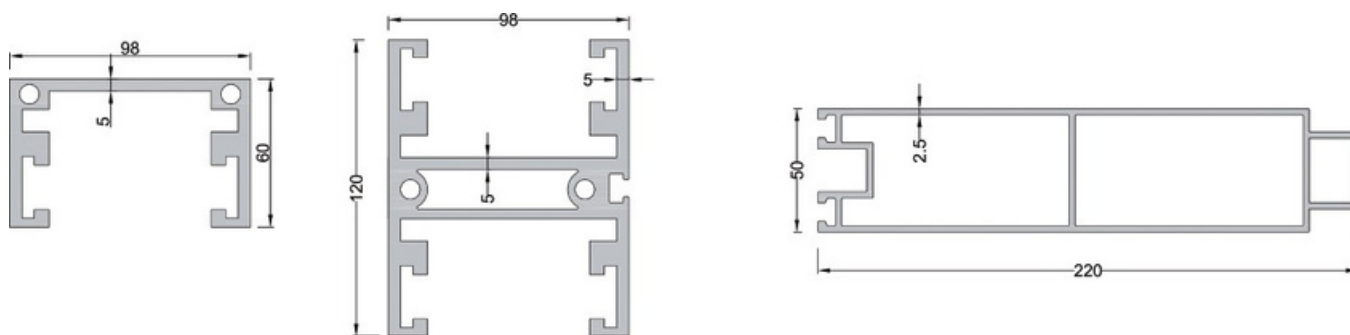
Single panel locked height 220mm

Panel thickness 2.5mm

Maximum water blocking height 1200mm

Maximum distance between posts 6000mm

Scope of application: Emergency use for flood control and flood relief in underground garages, factory warehouses, ground floor shops, underground spaces, shopping malls and hotels, etc. during the flood season.



MSFBA-70 Series Flood Barrier

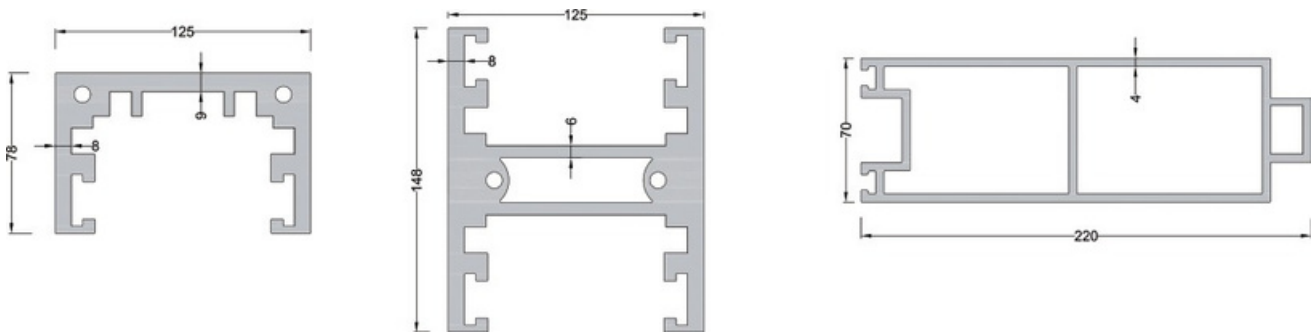
The panel and fixed post are made of aluminum 6063-T5, the waterproof sealing strip is EPDM, and the embedded parts are made of stainless steel.

Panel thickness 70mm Single panel locked height 220mm

Panel thickness 4mm Maximum water blocking height 1800mm

Maximum distance between posts 6000mm

Scope of application: It can be used for flood control at urban street underground passages, buildings, etc. It can also be used to heighten hard embankments to prevent them from overflowing.



MSFBA-100 Series Flood Barrier

The panel and fixed post are made of aluminum 6063-T5, the waterproof sealing strip is EPDM, and the embedded parts are made of stainless steel.

Panel thickness 100mm

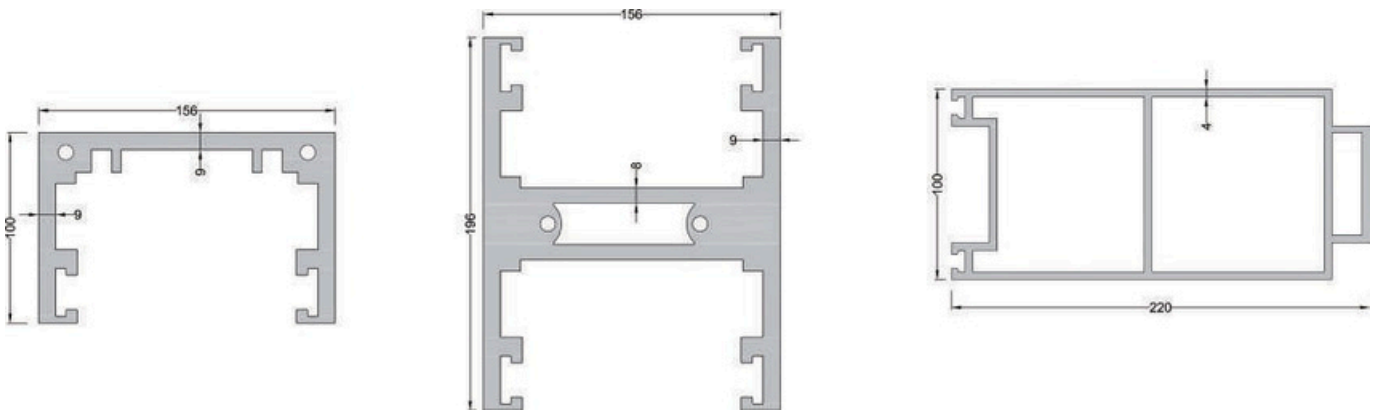
Single panel locked height 220mm

Panel thickness 4mm

Maximum water blocking height 4000mm(According to the water blocking height, it can be divided into three specifications: light, medium and heavy)

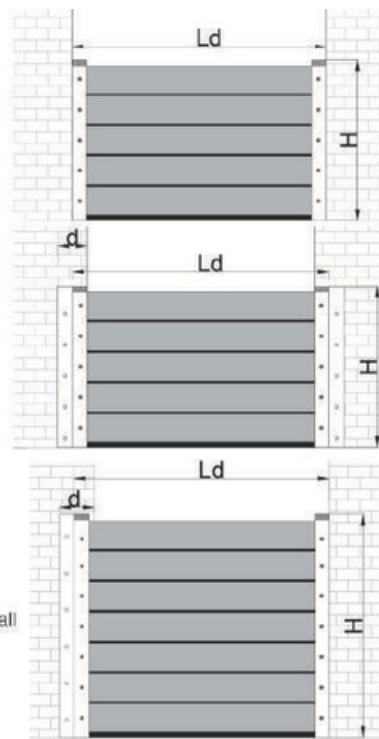
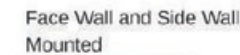
Maximum distance between posts 6000mm

Scope of application: It can be used for flood control at urban street underground passages, buildings, etc. It can also be used to heighten hard embankments to prevent them from overflowing.

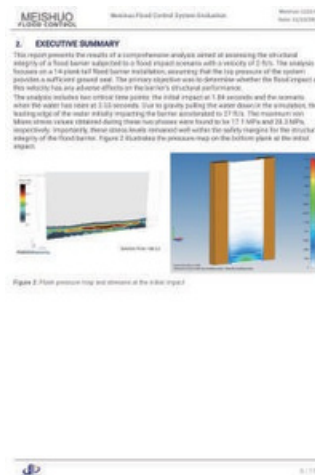
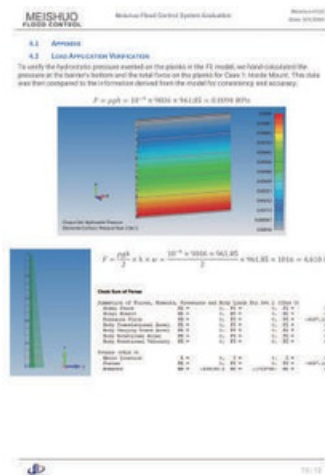
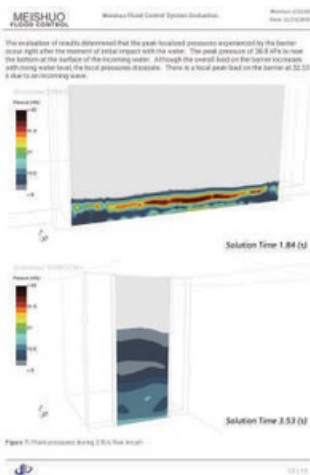
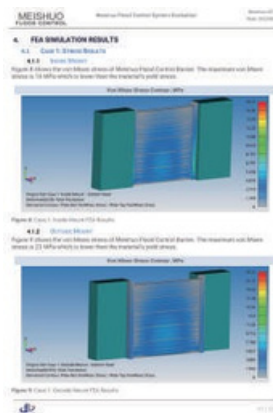
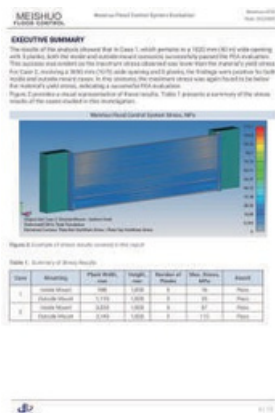


1.4 INSTALLATION

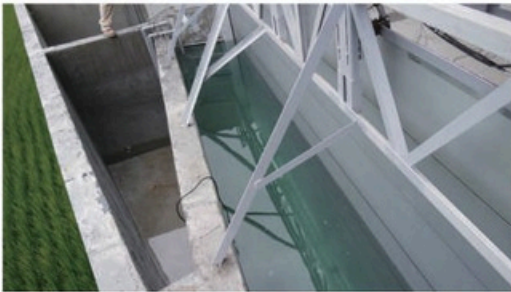
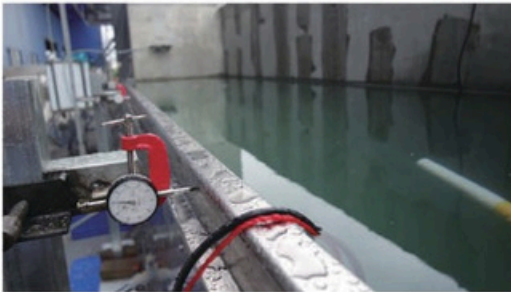
Decide if you prefer to install posts inside or outside your opening and measure the opening accordingly. Precise measurements should be made for internally mounted posts. Use a hammer drill to drill mounting holes into concrete, cinder block, cement walls or metal frames. Place posts and insert and tighten mounting bolts. Posts remain in position permanently.



1.5 STRESS ANALYSIS & WATER LEAKAGE REPORT



Flood Testing – PAS 1188-4:2014



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Testing to PAS 1188-1 - Static Head of Water Testing

Product: Meishuo Aluminum Flood Barrier

Date of test: July 2014

Place of test: Building Research Establishment, Garston, Watford, WD25 9XX

Specimen Description: ASTM 6063-T5 removable aluminum flood barrier. 1m wide and 1.6m high for outward opening

The Design Maximum Water Depth (DMWD) for these tests was 1460mm

The maximum allowable leakage rate in these tests = 7.1 litres per hour

Water depth (mm)	Maximum leakage rate (l/hr)	Maximum door deflection (mm)	Result
487mm	0.24	1.04	Pass
973mm	0.49	5.18	Pass
1460mm	0.58	15.51	Pass
Overall Result			PASS

1.6 TEST REPORT

**National Polymer Materials Quality Supervision and Inspection
Center (Anhui)
Anhui Functional Polymer Materials Analysis Research Co., Ltd
Inspection Report**

No. 2023-GC-0437

page 2 of 2

NO.	Test items		Limit	Test result	Single evaluation	Test method
1	Exterior inspection		/	Full molding, complete structure, no cracks, bubbles, impurities, and uniform color	---	Range estimation
2	Dimensions	Size	/	705 mm	---	GB/T8806-2008
		Width	/	680 mm	---	GB/T8806-2008
		High	/	529 mm	---	GB/T8806-2008
3	Thickness		/	5 mm	---	GB/T8806-2008
4	Weight		/	4.12 kg	---	Weigh
5	UV aging (48 hours)		/	After the test, there is no significant change in the appearance of the sample	---	GB/T16422.3-2022
6	Tensile strength		/	41.6MPa	---	GB/T1040.2-2022
7	Tensile yield strength		/	41.6 MPa	---	GB/T1040.2-2022
8	Elongation at break		/	15 %	---	GB/T1040.2-2022
9	Bending strength		/	68.2 MPa	---	GB/T9341-2008
10	Shore hardness		/	79 HD	---	GB/T2411-2008
11	Notched impact strength of simply supported beams		/	42 kJ/m ²	---	GB/T1043.1-2008
12	Material quality		/	PC+ABS	---	GB/T6040-2019

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ABS FLOOD BARRIERS

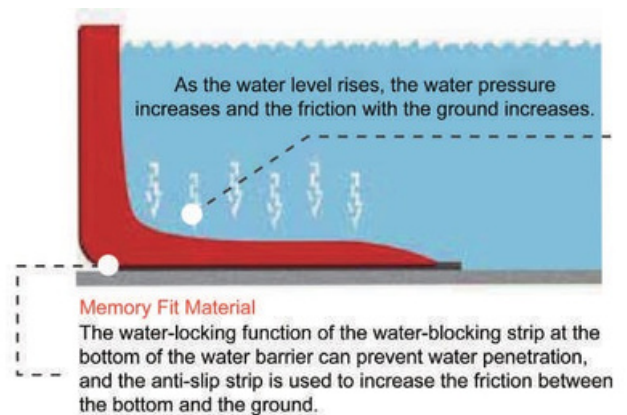
2.1 INTRODUCTION

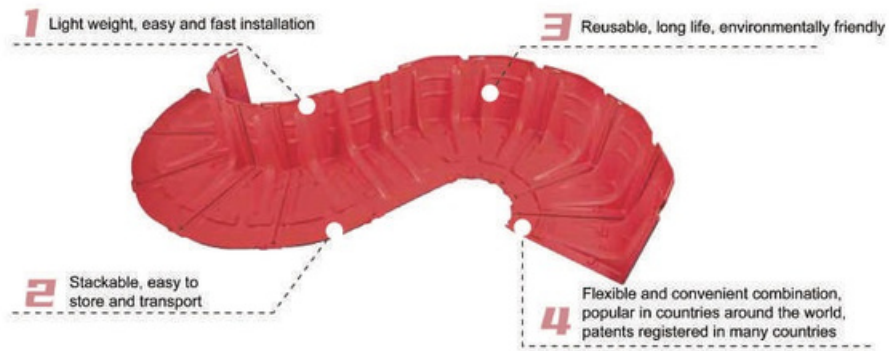
The MEISHUO ABS flood barrier is a versatile and efficient solution designed to address flood control and water diversion. Whether facing sudden heavy rains or floods, this movable, temporary water barrier provides protection for critical assets and effectively redirects water flow. Its quick installation, compact storage, and unique connection system make it an ideal choice for safeguarding against flood threats. Additionally, the MEISHUO ABS flood barrier's adaptive contouring allows it to adapt to varying ground conditions, while its foam seal prevents slippage and water penetration. Beyond flood protection, it can also create containment pools for water and chemicals. After use, simply hose it down and stack it for future deployment.



2.2 L-SHAPED BOOKEND PRINCIPLE

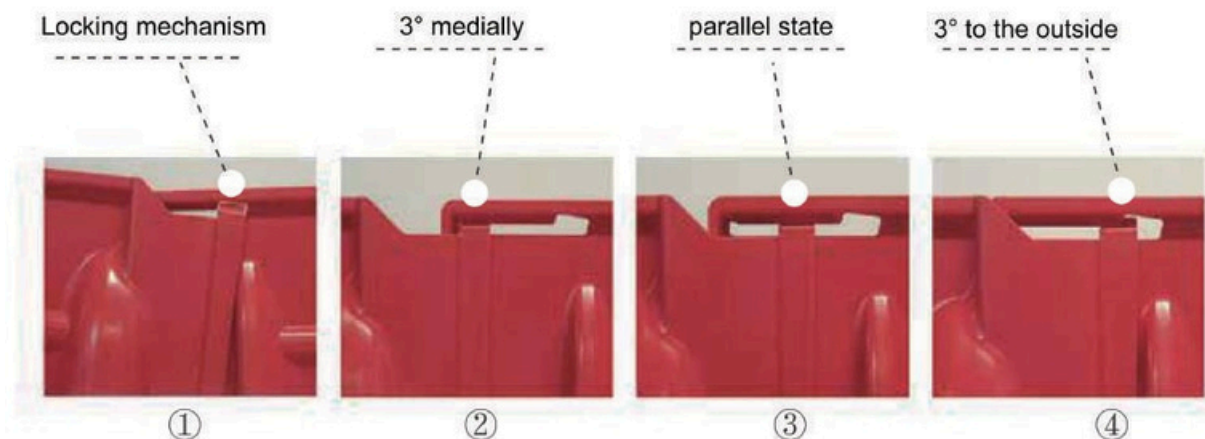
The weight of water presses on the bottom of the baffle, converting the weight into pressure. Even if the flood reaches the top of the baffle, it will still be very stable and will not tip over. The higher the water level, the more reliable the water-blocking effect.





2.3 INSTALLATION METHOD

Install the MEISHUO L-shaped flood barrier from left to right, insert the connecting mechanism first, and then buckle the locking mechanism. If you need to adjust the angle, as shown below, you can use the locking mechanism to fine-tune the placement angle $\pm 3^\circ$. You can also use internal and external bending plates to make adjustments. Each piece can adjust the bending to 30 degrees (if you need to bend 90 degrees, you need to use 3 bending plates. boards are used when spliced together).



2.4 PRODUCT SIZE

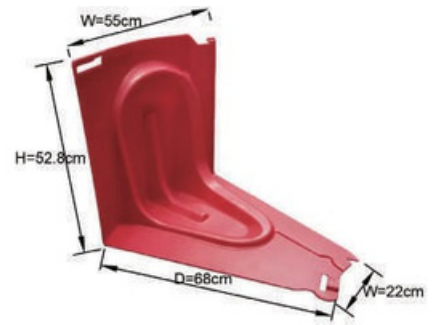
MS50Z straight



MS50W external curved



MS50N inner curved



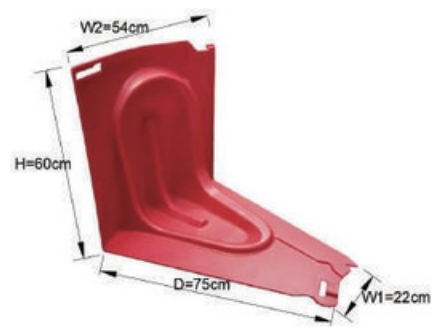
MS60Z straight



MS60W external curved



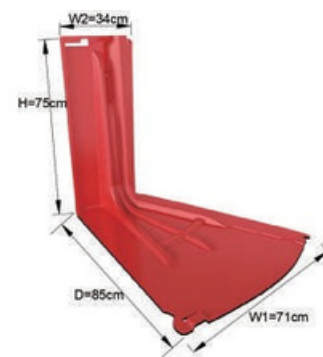
MS60N inner curved



MS75Z straight



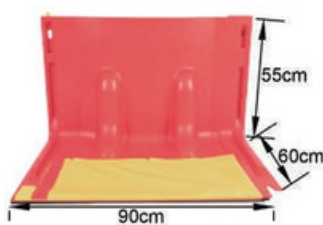
MS75W external curved



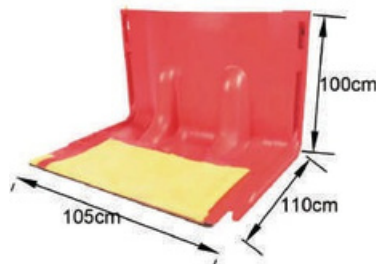
MS75N inner curved



MSF90 shark fin



MSF105 shark fin



MS50/60/75 edge sealing



2.5 TECHNICAL SPECIFICATIONS

Water retaining height	50cm	60cm	75cm
Weight	3.8kg±5%	7.2kg±5%	9.7kg±5%
Dimensions(cm)	70cm*68cm*50cm	95cm*75cm*60cm	100cm*85cm*75cm
The average thickness	4.2mm	6mm	5.4mm
Installation speed	One person installation, over 10m/min		
Camber	Adjustable ±3 degrees		
Material	High polyester composite		
Withstand temperature	-40°C to +95°C		
UV test	Irradiance 0.76W/M2@340nm BPT: 60°C, 8H (reference ASTM G154-2016)		

2.6 APPLICATIONS



INFLATABLE FLOOD CONTROL TUBES

3.1 DESCRIPTION

Inflatable Flood Control Tube is an inflatable flood control system that deploys quickly and provides flood protection. Each flood control tube incorporates an inflation valve that allows inflation of a 9m length of tube in 12-18 minutes. To prevent water seepage and to create a continuous

flood section, barriers placed side by side and fastened together. Meishuo flood control system can be placed in front of and around sensitive infrastructure or buildings and property, protecting them against water damage from rising flood waters. Two sizes are available, depending on your specific requirements: 30ft Tube and 15ft Tube. The inflatable flood control tube is reusable. Once a flood event is over, it can be simply deflated, rolled up and put back in storage for future use. Meishuo tubes are stored compactly on pallets and may be transported to a flood site quickly, or between sites for evolving.



3.2 FEATURES

Deploys & Inflates Quickly

Once Meishuo tubes are unrolled, they can be inflated in 5 minutes, using a simple hand-held blower. Sections can be staked to the ground in back for greater strength, while integrated skirting on the water facing side is ballasted by rising water levels. Sections can be deflated with the reverse setting on the inflater.

Sections Connect

Meishuo inflatable tubes are placed adjacent to each other and when inflated, are sealed together using a seaming sheet with velcro strips to prevent water seepage. This allows for water dams to be created in nearly any configuration (i.e. around a property, etc.)

Available in 2 Lengths

The Meishuo inflatable flood control tube is available in 2 lengths: 15ft and 30ft.

Stores Compactly

The Meishuo inflatable tube stores compactly on a pallet when deflated and can be moved onsite and rolled out into position for inflation. Meishuo barriers are ideal for remote or onsite storage and are ideal for use in rapid emergency response type scenarios.

3.3 SPECIFICATION

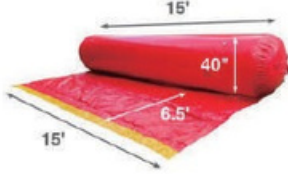
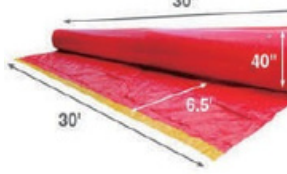
The Inflatable Flood Control Tube is manufactured using high-quality composite PVC mesh material that is 0.9mm +/- 0.02% thick. Material is UV treated, anti-static, waterproof, and chemical and oil resistant. Each tube has incredible tear and tension strength.

Material: Composite PVC Mesh

Material Thickness: 0.9mm +/- 0.02%

Construction: Whole Thermal Bond Molding

Usage Temperature: -22°F to 158°F

Inflatable Flood Tube - 15ft	Inflatable Flood Tube - 30ft
	
MS-1 Flood Tube (Small) • Main Tube: 15ft L x 40" D • Skirt (extends tube on water side): 6.5ft L x 15ft D • Weight: 60lbs. +/- 5%	MS-2 Flood Tube (Large) • Main Tube: 30ft L x 40" D • Skirt (extends tube on water side): 30ft L x 6.5ft D • Weight: 115lbs. +/- 5%

3.4 HOW FLOOD TUBES WORK

Pressure Creates Support

Flowing water over the skirt will create pressure, keeping the tubes positioned securely when protecting against flooding.

Damming Ability

We recommend damming to within 2" of the top height of the barrier, such that each 40" tall barrier is suitable to protect against floods of roughly 38".

Ability to Connect

Meishuo tubes can be fastened together using the tube connector sheet for added protection length.

3.5 DEPLOYMENT & INSTALLATION & STORAGE

Meishuo Inflatable Tube Barriers are designed to deploy quickly. Two people could position and roll out each tube for inflation.

Tubes can be inflated in 12-18 minutes at 6psi using a standard electric pump (electric (AC), or car lighter powered (DC)).

Meishuo tubes can be anchored to the ground surface, using integrated tie down loops and stakes positioned on each tube, and the skirting. Once inflated, it takes 10 minutes to position and install the splicing sheets, to seal the space between tubes creating longer barriers.

To deflate, use the reverse setting on the air pump. Once deflated, Serpent tubes store compactly on a pallet, remotely or onsite; ideal for rapid emergency response.

WATER FILLED FLOOD TUBES

4.1 DESCRIPTION

Meishuo Water Filled Flood Tube is an easy to fill and deploy water barrier that will redirect water and provide protection for homes, municipal buildings, infrastructure and equipment. Each water filled flood control tube becomes heavy with water when filled, creating a durable berm that protects against rising floodwaters. Flood Tube is available in 6" and 12" diameters and in 10ft, 25ft, 50ft and 100ft lengths. Choose the right Guppy size, depending on your specific water diversion requirements. Each water filled tube is reusable. Once a flood event is over, it can be simply drained of water, rolled up and put back in storage for future use.



4.2 FEATURES

Stores Compactly

The Water Filled Flood Tube is lightweight and stores compactly. Several hundred feet of tube can fit in a standard backpack and thousands of feet can be transported in the bed of a pickup truck.

Rapidly Fills with Water

Once Guppy Flood Tubes are unrolled, they can be filled with a standard garden hose in 3-5 minutes.

Simply unroll each Guppy Tube and use the integrated fill-port to fill with water. Each port has backflow protection, preventing water from flowing out of the tube when removing the hose.

Combine Sections

Various lengths and heights available to accommodate your needs. Achieve your optimal length of protection by staggering the seam by placing one barrier tube in front of the other, overlapping just the ends.

Meishuo Tubes can also be stacked and placed back-to-back for even greater flood protection.



4.3 DAMMING ABILITY

We recommend damming to within 2" of the top height of the barrier, such that each 12" tall barrier is suitable to protect against floods of roughly 10".

4.4 SPECIFICATIONS

The Meishuo Water Filled Flood Control Tube is manufactured using high quality composite PVC mesh material that is UV

protected, antistatic, waterproof, chemical and oil resistant. Each tube has incredible tear and tension strength.

- Material: Composite PVC Mesh
- Material Weight: 18oz. / 610 GSM
- Construction: Whole Thermal Bond Molding
- Usage Temperature: -32°F to 158°F (RV anti-freeze is recommended for below freezing temperatures. Tubes should be no more than 3/4 full if freezing is expected).

Flood Tube Sizes	Item Number	Length	Color Option
 6" Flood Tube	M S 6-10	10ft	Yellow
	M S 6-25	25ft	Yellow
	M S 6-50	50ft	Yellow/White
	M S 6-100	100ft	Yellow/White
 12" Flood Tube	M S 12-10	10ft	Yellow
	M S 12-25	25ft	Yellow/White
	M S 12-50	50ft	Yellow/White
	M S 12-100	100ft	Yellow/White
 24" Flood Tube	M S 24-50	50ft	Yellow
	M S 24-100	100ft	Yellow

4.5 DEPLOYMENT



Unroll the Tube in Desired Location



Fill the Tube with Garden Hose



Drain the Tube After Flood Event

AUTOMATIC FLIP-UP FLOOD BARRIER

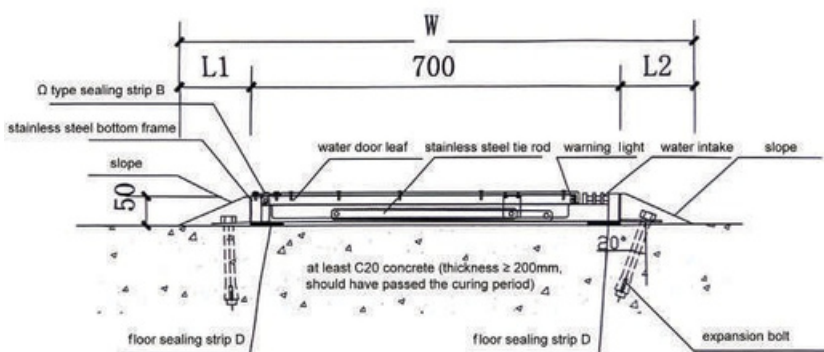
5.1 INTRODUCTION

The MEISHUO Automatic Flip-Up Flood Barrier offers unparalleled flood protection, integrating effortlessly into walkways and driveways. It's built to endure heavy vehicle traffic, complying with AASHTO H-20 / HS-20 standards. When flooding occurs, the barrier automatically rises due to hydrostatics pressure, providing up to eight feet of defense. It can also be manually or electronically deployed, making it suitable for various commercial settings such as driveways, walkways, storefronts, doorways, and loading docks. The MEISHUO barrier operates passively, requiring no power, human, or mechanical assistance, ensuring continuous protection with minimal maintenance. Its self-closing, automatic mechanism is designed for long-term reliability, offering peace of mind and safety 24/7.

5.2 SURFACE MOUNTED MSFAS

Model	Water retaining height	installation mode	Longitudinal width	bearing capacity
MSFAS- 6C	620	surface mounted	1020	heavy duty (small and medium sized motor vehicles, pedestrian)
MSFAS- 6D	620	surface mounted	1200	(pedestrian only) light duty
MSFAS- 6E	620	surface mounted	1200	(pedestrian only) metro type

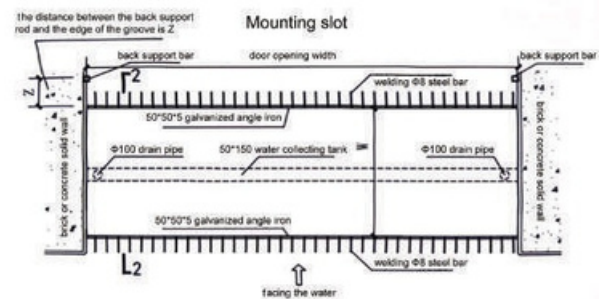
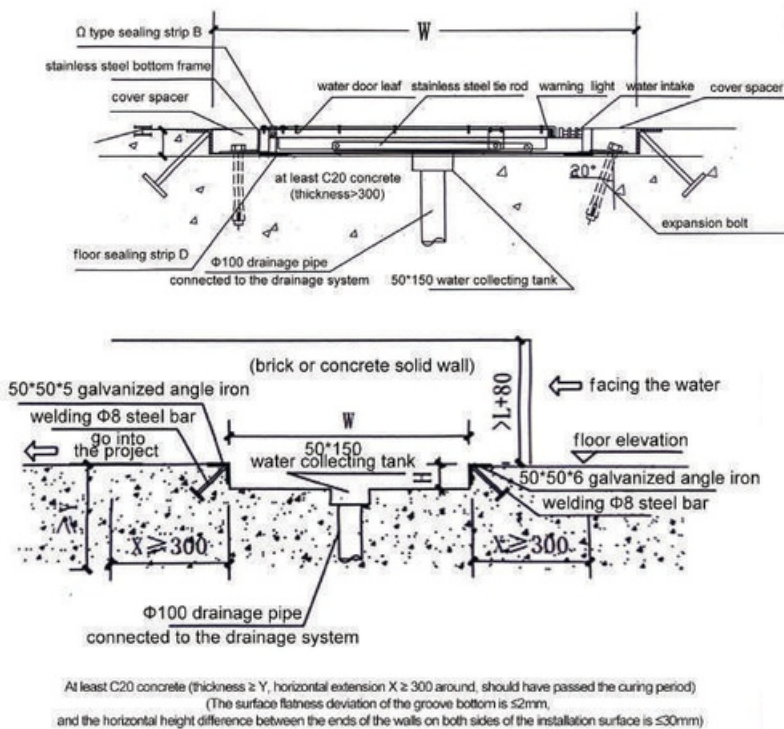
Surface MSFAS Installation Diagram (only applicable to 600 model)



5.3 EMBEDDED INSTALLATION MSFAR

M odel	Water retaining height	installation mode	Longitudinal width	bearing capacity
M SFAR- 6C	580	Embedded installation	width 900*depth50	heavy duty(small and medium sized motor vehicles, pedestrian)
M SFAR- 9C	850	Embedded installation	1200	heavy duty(small and medium motor vehicles, pedestrian)
M SFAR- 12C	1150	Embedded installation	w idt h: 1540* dept h: 105	heavy duty(small and medium-sized motor vehicles, pedestrian)

Embedded MSFAR-6C, MSFAR-9C, MSFAR-12C Installation Diagram



5.4 APPLICATION

