

SUPPLY ONLY MANUAL

DEMOUNTABLE ALUMINIUM FLOOD BARRIER SYSTEM

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OVERVIEW

The Lakeside Demountable Aluminium Flood Barrier System is a demountable defence system which consists of a pre-installed permanent frame and a series of 300mm H barrier profiles which are temporarily deployed when required.

The system's bespoke interlocking seal mechanism and unique ground U channel ensures a watertight seal when the frame is installed correctly.

The system relies on the following operations in order to effectively reduce flood risk:

- Correct, robust installation of the system's permanent frame
- Flood alert systems and monitoring
- Mobilisation of equipment and manpower and materials
- Deployment and closure of defence system

Lakeside Flood Solutions recommend that the End User creates and follows an Emergency Flood Plan which, if followed correctly, should ensure the timely installation of the barriers. Additional items to aid the creation of a plan, notably Storage Racking Systems and Installation Deployment Guides, are available upon request.

COMPONENTS LIST



SIDE POSTS

With EPDM Waterproof Seal & Accessories

1no. Set Includes:

- 2no. Anodised Aluminium Side Posts (Alum. 6063 T5, Champagne Colour)
- EPDM Waterproof Seal 30 x 5mm
- 2no. Aluminium Top Pressing Clamps
- 2no. Plastic Bottom Caps - *for use when system is not deployed, to conceal & protect gap at bottom of Side Posts adjacent to Ground U Channel Cover Plate*

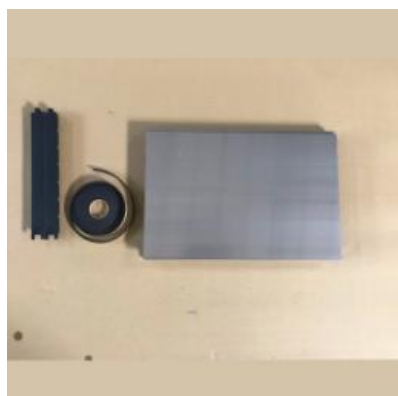


MIDDLE POSTS

With EPDM Waterproof Seal & Accessories

1no. Set Includes:

- 1no. Anodised Aluminium Middle Post (Alum. 6063 T5, Champagne Colour)
- EPDM Waterproof Seal 30 x 5mm
- 2no. Aluminium Top Pressing Clamps
- Supporting Arm(s) with Base Plate(s)
- Thunderbolt Fixings - *should be tightened with 17mm socket and ratchet OR where a threaded sleeve has been installed in the floor, Allen bolts should be tightened with 8mm Allen Key*

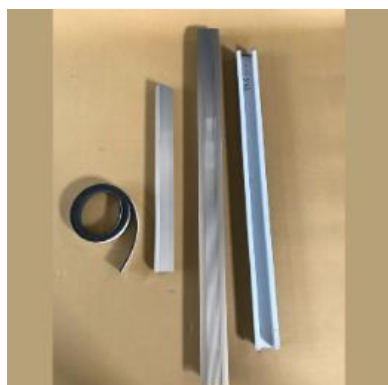


ALUMINIUM BARRIER PROFILE

With EVA Waterproof Seal

1no. Set Includes:

- Anodised Aluminium Barrier Profile(s) 30cm H (Alum. 6063 T5, Champagne Colour)
- EVA Waterproof Seal 8 x 3mm
- Black Plastic End Caps



GROUND U CHANNEL

With EPDM Waterproof Seal

1no. Set Includes:

- Stainless Steel Ground U Channel (S.S. 304)
- Anodised Aluminium Channel Cover Plate (Alum. 6063 T5, Champagne Colour)
- Anodised Aluminium Triangle Pressing Wedge (Alum. 6063 T5, Champagne Colour)
- EPDM Waterproof Seal 30 x 5mm
- Rubber Mallet – *for deployment of Triangle Pressing Wedge*

OPTIONAL ITEMS

FIXING ITEMS

- L-Plate Aluminium Fixing Angles for Face-fix Installation
- Flat Bottom Plate & Larger EPDM Bottom Seal (for system without ground U channel)
- CT1 Waterproof Sealant

BARRIER ACCESSORIES

- Top Lockable Pressing Clamps
- Storage Racking Systems
- Side Post Cover Plates
- Installation Deployment Guide

INSTALLATION GUIDE – PART A

SIDE POSTS, GROUND U CHANNEL & BARRIERS

1. PREPARATION

1.1. Ensure you have the correct protective equipment to carry out the job safely.



1.2. Ensure you have all the tools and materials required:

Petrol cut-off saw

110v 230mm grinder

Petrol road saw

110v SDS breaker

110v transformer

110v SDS hammer drill

110v extension leads/reels

Battery operated impact driver

110v mitre saw

Battery operated drill/driver

110v 115mm grinder

Cement mixer



2. FIXING TYPE

2.1. Determine whether you are installing the barrier face-fix or reveal-fix. If face-fix, you will need the additional bespoke L-plate aluminium angles to which the side posts are affixed.



3. GROUNDWORKS – PREPARATION & CUTTING THE CHANNEL

3.1. Mark the floor in readiness for cutting. If using L-plate aluminium angles, the outer cut will need to be at least 160mm from the wall.



REVEAL-FIX EXAMPLE



FACE-FIX EXAMPLE



3.2. The floor is now ready to cut. You will need a 230mm grinder/petrol cut off saw for this. The cut should follow the line and be at least 60mm deep.



3.3. Once cut, the area needs to be broken out using an electric breaker or hammer and bolster chisel.



3.4. Clean the area of any loose material and dust.



REVEAL-FIX EXAMPLE



FACE-FIX EXAMPLE

4. GROUNDWORKS – ALUMINIUM L PLATE FOR FACE-FIX INSTALLATIONS

- 4.1. If not using L-plate aluminium angles, proceed to step 12. If using L-plate aluminium angles, the angles should be cut to length, 40mm longer than the side posts.
- 4.2. Angle should be marked and drilled @ 200mm centres. The wall should then be drilled to receive suitable fixings (4.8 x 45mm masonry screws are ideal) ensuring that the angle is set 40mm into the cut out in the floor. The angle needs to be kept plumb using a level.
- 4.3. Once drilled, remove the angle and apply a generous bead of CT1 to the back. Now offer the angle up to the wall and fix. Repeat step 9 on the other angle if required.
- 4.4. Carefully remove any excess CT1 that has been forced out from behind the angle.



5. GROUNDWORKS – CASTING THE GROUND U CHANNEL

- 5.1. Cut the Stainless Steel U channel. It should be cut 10mm smaller than the reveals/measurement between aluminium angles.
- 5.2. We recommend using a fairly wet mix of sand and extra rapid set cement at a ratio of 4:1 to cast the Ground U Channel into the floor.
- 5.3. Fill the void to just below ground level with the mortar before carefully pushing the U-channel into the wet mix. Be sure to keep the U Channel level and flush with ground level.
- 5.4. After 10 minutes, trowel the surface of the mortar to a smooth finish flush with the top of the U channel.
- 5.5. After 15-20 minutes, the mortar should be sufficiently set to begin carefully cleaning the channel of any overspill.



REVEAL-FIX EXAMPLE



FACE-FIX EXAMPLE

6. SIDE POSTS

6.1. After 1 hour, you can offer up the side posts, and using a level to plumb them, you can mark the hole positions and drill the angles/reveals for the fixings. **IMPORTANT:** Ensure that the recess in the post lines up with the U channel exactly.



6.2. A generous continuous bead of CT1 will need to be applied to the back and bottom of the post and to the top of the U channel at each end



REVEAL-FIX EXAMPLE

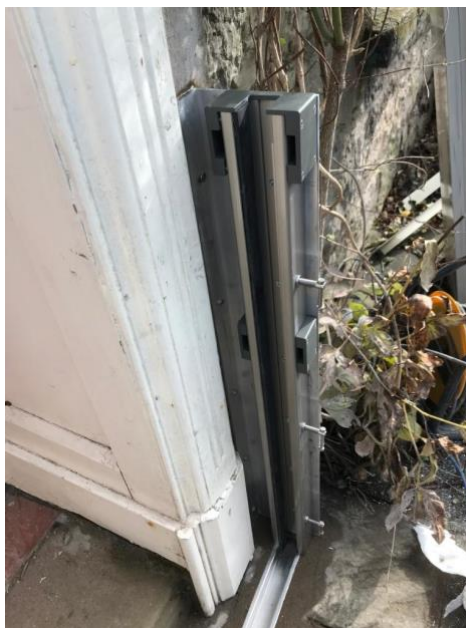


FACE-FIX EXAMPLE

6.3. The post can now be offered into position and fixed. Ensure that the recess in the post lines up exactly with the U channel. Check again that the post is plumb and use window packers if necessary.



REVEAL-FIX EXAMPLE



FACE-FIX EXAMPLE

7. MIDDLE POSTS

7.1. If the barrier being installed requires a middle post, please refer to Appendix A

8. BARRIER PROFILES

- 8.1. Once both posts are installed you will need to measure the distance between each post recess. The barrier panels need to be cut 20mm smaller than this measurement. Ideally panels should be cut on a mitre saw with suitable blade.
- 8.2. Once cut, the barrier panels will need the 6mm EVA seal applied to the rebate either side of the raised centre section. The seal should be left to overhang each end of the panel, the ends can then be folded inside the hollow panel.



REVEAL-FIX EXAMPLE



FACE-FIX EXAMPLE

- 8.3. Now the end caps need to be fitted to the panels. These should be carefully knocked into the end of the panel using a rubber mallet.

9. GROUND U CHANNEL SEAL

- 9.1. Finally, you need to carefully cut to size the 30mm wide EPDM seal to stick to the back face of the U Channel. Be sure to cut it accurately so it abuts the vertical seal in each post.

Please refer to the O&M Manual for instructions on how to correctly operate the flood barrier.



INSTALLATION GUIDE B – MIDDLE POST

1. Choose a suitable point for your centre post, remembering to take into account the support arm and where the base plate for it will be. Both the post and the support arm need an adequate, substantial substrate to fix to.
2. Position the centre post over the U-channel and ensure that the back face of the centre post recess is flush with the back face of the U-channel.
3. Mark the two holes in the base plate.
4. Drill a pilot hole on both of the marked points then re-drill each hole with a 15mm bit to a depth of 90mm.
5. Insert an expanding anchor in each hole and hit with a drift and hammer to secure them.
6. Place the base of the post over the holes and fix with two M12 Allen head screws. Using a spirit level tighten either front or back to get the post plumb. NOTE: do not fully tighten at this stage.
7. Lower the support arm/s and mark the base plate fixing holes on the floor, before drilling and fixing as described in step 4, 5 & 6.
8. Once the support arm/s base plate is fixed to the floor the centre post can be fully tightened.
9. Check the seal on the centre post abuts the seal on the rear face of the U-channel.
10. The centre post is now installed.

WARRANTY RENEWAL



We recommend an annual Maintenance Check of your flood barrier to include a thorough maintenance, installation and storage check. Following the Maintenance Check, your warranty is extended for a further year.

To book a Maintenance Check, to order any replacement parts or for any queries regarding system functionality, please contact Lakeside directly:

Phone: 01792 561117

Email: sales@lakesidefloodsolutions.co.uk

Please note that the Manufacturer's Warranty is honoured on the basis of the product(s) being installed correctly by the Installer.

PROTECT YOUR HOME OR BUSINESS

Register site at: <https://www.gov.uk/sign-up-for-flood-warnings>

SIGN UP FOR FREE FLOOD WARNINGS BY PHONE, TEXT OR EMAIL

Floodline (Flood Response): 0345 988 1188

Life-threatening Emergency: 999



FLOOD ALERT

FLOODING IS POSSIBLE. BE PREPARED



FLOOD WARNING

FLOODING IS EXPECTED. IMMEDIATE ACTION REQUIRED.



SEVERE FLOOD WARNING

SEVERE FLOODING. DANGER TO LIFE.



DANGERS OF FLOOD WATERS



Don't walk through flowing water. Currents can be deceptive and 15cm of fast moving water can knock you off your feet!

Don't drive through a flooded area. You may not be able to see abrupt drop-offs and only half a metre of flood water can carry a car away! Most cars and vans are unstable in still flood waters of 0.5m depth or more.

Don't swim through fast flowing water. You may get swept away or struck by an object in the water! If you have to walk in standing water, use a pole or stick to ensure that you do not step into deep water, open manholes or ditches!

Avoid contact with flood water wherever possible. It may be contaminated with sewage, oil, chemicals or other substances.

Safe Refuge is possible within all buildings at first floor level and above until such time as emergency services are able to undertake a rescue operation.

CONTACT DETAILS

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