

# INSTALLATION GUIDE: BALCONY DRAINAGE SYSTEM

Version 1.0



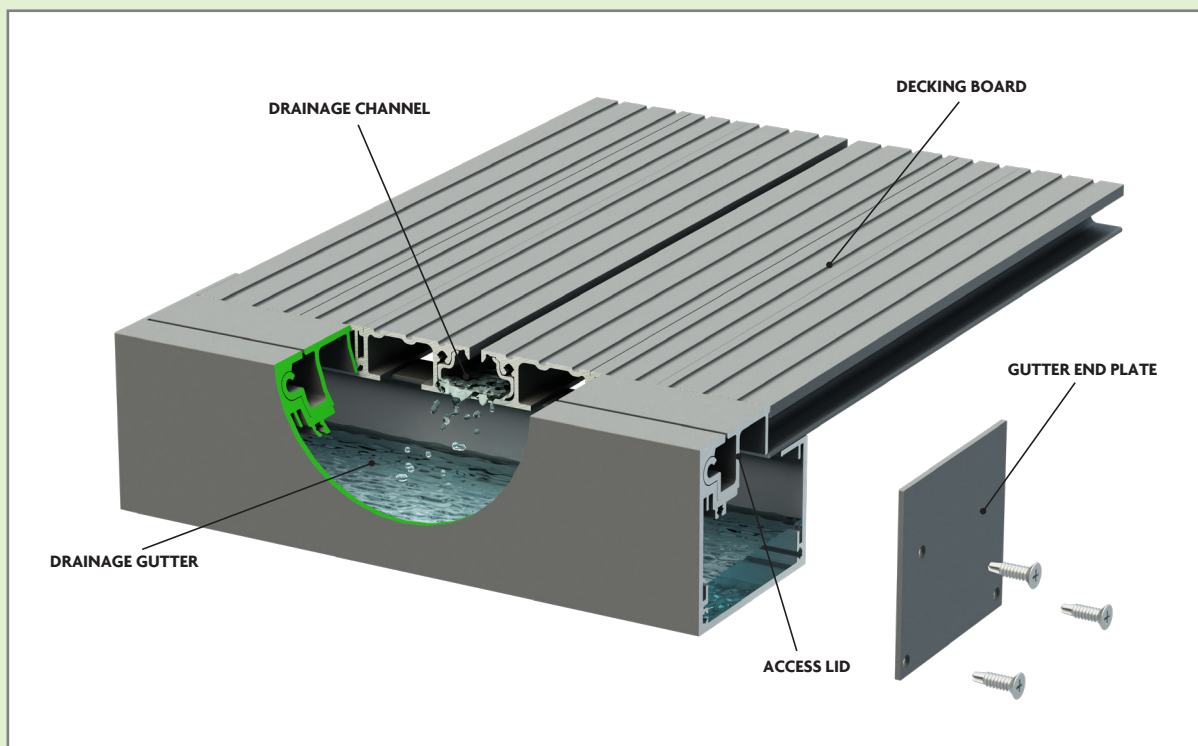
 **ALIDECK™**  
Aluminium Decking

## SCOPE OF THIS GUIDE

This installation guide is intended to provide a broad overview of the installation method of the **AliDeck Balcony Drainage System**. The information provided is, by its broad nature, relatively generic but should cover the essentials.

We are very happy to provide project-specific installation advice. If you supply us with architectural drawings of the areas where you will be installing AliDeck material we will gladly help you create a detailed installation plan. Contact the AliDeck team on **01622 235 672** for further information on this service.

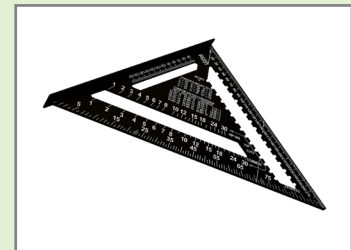
If you are installing AliDeck aluminium decking boards and joists into your deck, please consult the separate installation guide for that system.



## RECOMMENDED TOOLS FOR INSTALLATION

1. Chop saw, circular saw, and/or jig saw, with blade suitable for cutting aluminium (recommended 60 to 80 tooth)
2. 4.5"/5" grinder with thin metal cutting disc
3. Cordless drill
4. HSS drill bits
5. Arbor saws
6. Spirit level
7. Roofing square
8. Ratchet sockets
9. Sikaflex sealant and gun
10. White/non-marking rubber mallet
11. Measuring tape

These should be all that's required for most Balcony Drainage System installations. If your project has any particularly bespoke aspects that prove a challenge, though, please call us for advice on **01622 235 672**.



## FIXINGS

We supply the following fixings:

1. M8 x 16mm bolts (for bolting Wide Access Gutters to decking boards)
2. 4mm No 8 stainless steel screws (for fixing end plates to the Gutters)
3. Fine thread and coarse thread self-drilling screws with rubber washers (for fixing Access Gutters to decking boards)



## TOUCH UP PAINT

Colour-matched touch-up paint can be supplied on request. This is useful for coating cut edges and for repairing minor scratches or nicks. Please be aware this is just a touch up paint, though, and if the products are damaged over any more than 5% of the surface area, they will require replacement.

1. Spray touch up paint, recommended for spraying cut edges.
2. Brush-on touch up paint, recommended for touching up scratches.

## IMPORTANT GUIDANCE NOTES

1. Please ensure that, once unpacked, the AliDeck products are protected and stacked in an appropriate way to prevent any damage prior to installation.
2. The Balcony Drainage System is not intended to be a water-tight solution and there remains the possibility that water may track back or around the installed parts. Careful installation can significantly mitigate this risk. Please contact the AliDeck team for advice if unsure.
3. The closed-cell foam bungs we supply can be used to block the recesses in the decking board profiles to eliminate the risk of water tracking back on the board undersides.
4. It is essential that the sides of Drainage Channels are sealed with Sikaflex sealant during installation. AliDeck cannot be held responsible for problems that arise on installations where this step has been overlooked.
5. It is vital that all Drainage Channels terminate fully into the Drainage Gutters. Do not notch into Drainage Channels as this will allow water to freely escape.
6. Please ensure the completed deck is covered with a barrier (plywood or plastic material) once installed to prevent any third-party debris, swarf, or waste material from potentially damaging the surface finish. Please remove any swarf from the products immediately to prevent damage to the powder-coating.
7. We recommend that all balcony designs are submitted to any relevant building control organisation for verification as early as possible in the design process. This is so that any objections to the proposed drainage can be understood and overcome, which we are happy to help you achieve.
8. Please note that aluminium can expand, albeit much less than timber or composite. Caution should be exercised in areas likely to be exposed to high levels of direct or reflected sunlight. Contact us for further advice if in doubt.
9. It is essential that an overflow provision that is **equal to or greater than** the capacity of the main outlet is provided to each Drainage Gutter. We have developed our **Elevated Overflow** part as our standard and recommended compliant overflow provision.
10. Always follow site health and safety procedures and always wear appropriate PPE when installing AliDeck material.
11. Care should be taken to minimise the risk of galvanic corrosion by avoiding contact between dissimilar metals. Bare steel and aluminium should never be in contact. Simple steps such as coating cut edges, using plastic washers, drilling pilot holes for fixings, etc., can mitigate this danger. Contact us for advice if unsure.

## FLOW CAPACITY

The **AliDeck Balcony Drainage System** is a water management system, integrated within the decking level of a balcony. The system is composed of two main parts; the **Drainage Gutter** and the **Drainage Channel**.

Water can flow from the decking surface into the Drainage Channels and then travel to the balcony ends where it falls into the Drainage Gutters. Once in the Gutters, water is evacuated to the RWP via a standard outlet. We have also produced an Elevated Overflow which can be sited in the Gutters at the furthest point possible from the building to provide overflow provision matching the capacity of the main outlet.

We have performed capacity calculations for the Balcony Drainage System. As the components of the system are not hydraulically linked, the calculations were performed in two parts; an analysis of the Drainage Channel at varying lengths and gradients, and an analysis of the Drainage Gutter at varying lengths and gradients. The resultant data allows us to quickly understand the performance of the full system on any designed balcony.

The calculations were performed to **BS EN 12056-3:2000**, using the 1 in 50 year return period rainfall intensity for London of 0.06 litres per second per square metre.

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## MANUFACTURER RECOMMENDED INSTALL METHOD

It is important that all balcony designs using the Balcony Drainage System are verified with AliDeck's flow capacity data. We can perform an analysis to confirm the compliance of the design if supplied with detailed architectural drawings. This should be done at the earliest design opportunity. Contact us on **01622 235 672** for more information.

Drainage Channels **must** be sited between every decking board and **must** run the entire length of every decking board. Sealant **must** be applied to both sides of Drainage Channels as they are installed. Drainage Gutters **should** be positioned at both ends of the decking boards when the deck is laid level and each Gutter **must** have an outlet and overflow installed.

If the Drainage Channels are only guttered at one end, due to being laid to a suitable fall to facilitate self-cleaning, the un-guttered end of the Drainage Channels **must** be blocked with the closed-cell foam bungs we supply to prevent water freely escaping.

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## GENERAL GUIDANCE

### CUTTING GUTTERS AND CHANNELS TO LENGTH:

Recommended tool: Chop saw with a blade suitable for cutting aluminium, we recommend 60 to 80 teeth. Ensure Full PPE is worn, including gloves, goggles, and ear defenders.

- Step 1:** Fix the Gutter or Channel to be cut to a sturdy base
- Step 2:** Measure and mark the products using a sharpie or similar pen that is clearly visible
- Step 3:** Cut the Gutter or Channel
- Step 4:** Use the deburring tool or sand/file the cut edges to remove any sharp edges
- Step 5:** Mask the edge of the Gutter or Channel to protect the top surface from over-spray
- Step 6:** Coat the cut edges (3 coats) using the colour-matched touch-up spray
- Step 7:** Remove the masking tape

### CUTTING HOLES INTO GUTTERS FOR THE OUTLET AND OVERFLOW:

Recommended tool: Arbor/hole saw with blades suitable for cutting aluminium. Ensure Full PPE is worn, including gloves, goggles, and ear defenders.

- Step 1:** Fix the Gutter or Channel to be cut to a sturdy base
- Step 2:** Measure and mark the products using a sharpie or similar pen that is clearly visible
- Step 3:** Using the correct size metal arbor or hole saw cut the radius shapes on the Gutter underside
- Step 4:** Use the deburring tool or sand/file the cut edges to remove any sharp edges
- Step 5:** Mask the edge of the Gutter to protect the top surface from over-spray
- Step 6:** Coat the cut edges (3 coats) using the colour-matched touch-up spray
- Step 7:** Remove the masking tape

**IF IN DOUBT, PLEASE CALL THE ALIDECK TEAM ON 01622 235 672 FOR ADVICE.**

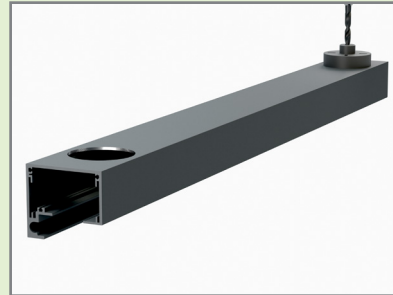
# INSTALL METHOD - STANDARD ACCESS GUTTERS

**Before you begin:** Check all parts are present prior to installation process. Check all components supplied for damage and for quality. Please report any issues immediately to AliDeck.

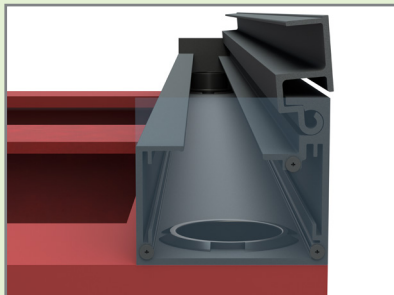
**STEP 1:**  
Cut your Drainage Gutters and Channels to the length required, ensuring to paint the cut ends



**STEP 2:**  
Using an arbor saw of the appropriate size, cut holes for the outlet and overflow in the Gutters



**STEP 3:**  
Place your Drainage Gutters into position on the balcony sub-structure and fit the outlet and overflow



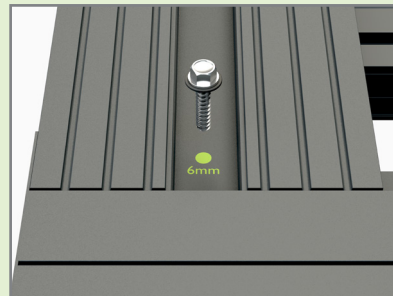
**STEP 4:**  
Fix the End Plates to both ends of the Drainage Gutters and seal internally with Sikaflex sealant



**STEP 5:**  
Lay the first decking board, overlapping the Gutters but allowing 1-2mm clearance to the Access Lid



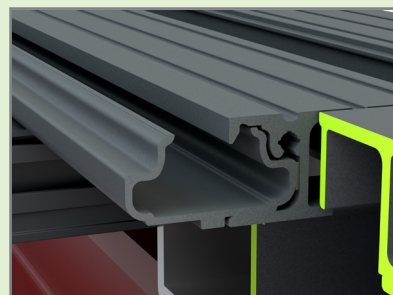
**STEP 6:**  
Fix the board to the Gutters using self-drilling screws through pre-drilled 6mm pilot holes in the board



**STEP 7:**  
Run a bead of Sikaflex sealant along the side of the Drainage Channel that will meet the decking board



**STEP 8:**  
Place the Drainage Channel into the side of the decking board and align the ends

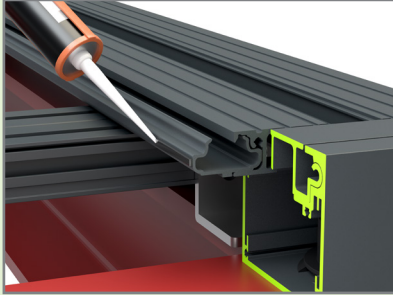




## INSTALL METHOD - STANDARD ACCESS GUTTERS

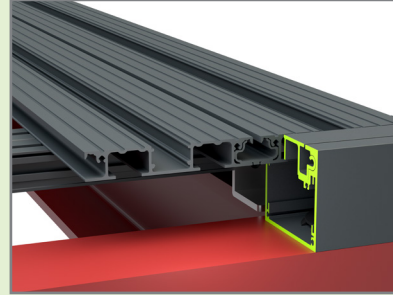
### STEP 9:

Run a bead of Sikaflex sealant along the exposed side of the Drainage Channel



### STEP 10:

Lay the second decking board, ensuring a tight fit between the boards and Drainage Channel



### STEP 11:

Repeat until the deck is complete



**Important note:** Refer to aluminium decking installation guide for further detail on installing boards and joists.



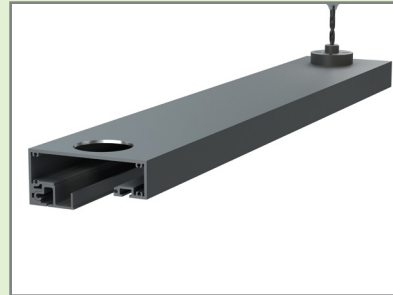
## INSTALL METHOD - WIDE ACCESS GUTTERS

**Before you begin:** Check all parts are present prior to installation process. Check all components supplied for damage and for quality. Please report any issues immediately to AliDeck.

**STEP 1:**  
Cut your Drainage Gutters and Channels to the length required, ensuring to paint the cut ends



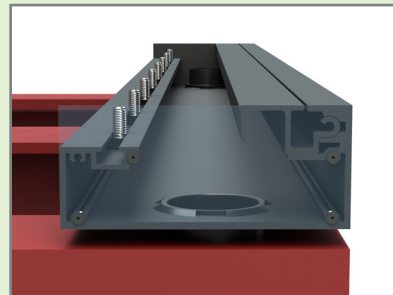
**STEP 2:**  
Using an arbor saw of the appropriate size, cut holes for the outlet and overflow in the Gutters



**STEP 3:**  
Slide M8 bolts into the Gutter bolt channels, enough for each decking board



**STEP 4:**  
Place your Drainage Gutters into position on the balcony sub-structure and fit the outlet and overflow



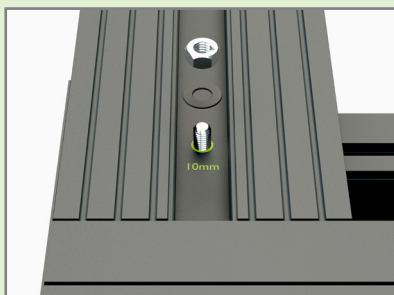
**STEP 5:**  
Fix the End Plates to both ends of the Drainage Gutters and seal internally with Sikaflex sealant



**STEP 6:**  
Lay the first decking board, overlapping the Gutters but allowing 1-2mm clearance to the Access Lid



**STEP 7:**  
Fix the board to the Gutters using the M8 bolt through pre-drilled 10mm holes in the board



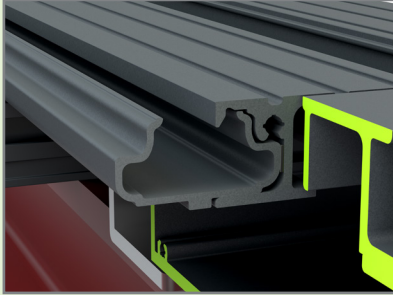
**STEP 8:**  
Run a bead of Sikaflex sealant along the side of the Drainage Channel that will meet the decking board



## INSTALL METHOD - WIDE ACCESS GUTTERS

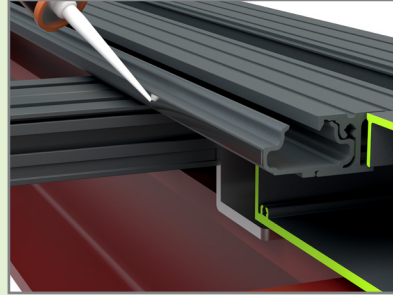
### STEP 9:

Place the Drainage Channel into the side of the decking board and align the ends



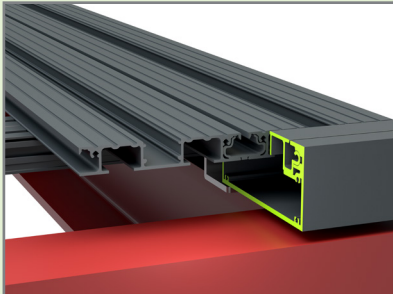
### STEP 10:

Run a bead of Sikaflex sealant along the exposed side of the Drainage Channel



### STEP 11:

Lay the second decking board, ensuring a tight fit between the boards and Drainage Channel



### STEP 12:

Repeat until the deck is complete



**Important note:** Refer to aluminium decking installation guide for further detail on installing boards and joists.

# INSTALL METHOD - GUTTERS AROUND 45° CORNERS

**Before you begin:** Check all parts are present prior to installation process. Check all components supplied for damage and for quality. Please report any issues immediately to AliDeck.

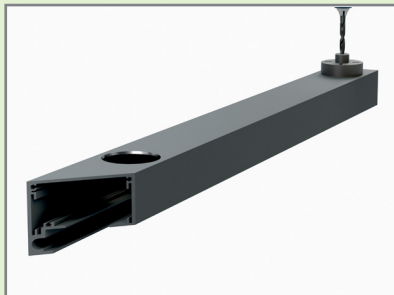
**STEP 1:**  
Cut your Drainage Gutters to the length required, ensuring to paint the cut ends



**STEP 2:**  
Mitre cut the ends of the gutters that will turn the corner, ensuring to paint the cut ends



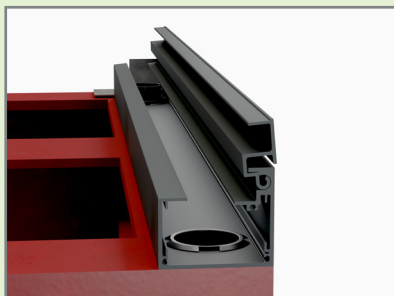
**STEP 3:**  
Using an arbor saw of the appropriate size, cut holes for the outlet and overflow in the Gutters



**STEP 4:**  
Install Joining Plates 1 & 2 into the channels on the Gutter and seal internally using Sikaflex sealant



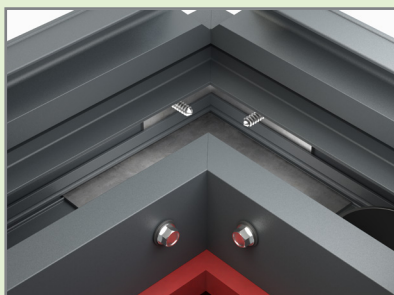
**STEP 5:**  
Place your Drainage Gutters into position on the balcony sub-structure and fit the outlet and overflow



**STEP 6:**  
Connect the second Gutter onto the Joining Plates on the first Gutter, seal internally using Sikaflex sealant



**STEP 7:**  
Fix each Joining Plate through the face of the Gutters using pop rivets or self-drilling screws



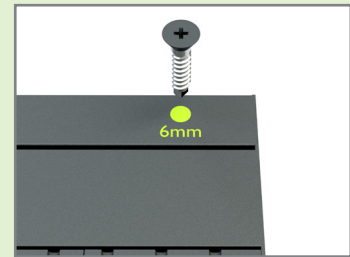
## ADDITIONAL INFORMATION

### SECURING GUTTER ACCESS LID:

It is important to secure the Gutter Access Lids after installation to prevent them being easily removed by children. This can be achieved as follows;

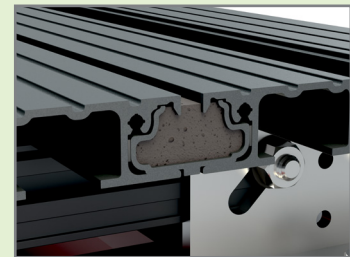
- Step 1:** Drill a 6mm pilot hole through the rear part of the Access Lid at the building end
- Step 2:** Counter-sink this pilot hole and paint the exposed metal with colour-matched touch-up paint
- Step 3:** Use the supplied counter-sunk self-drilling screw to secure the Access Lid to the Gutter profile
- Step 4:** Apply colour-matched paint to the screw head to finish

When the Gutter needs to be cleaned, simply removing this screw will allow the Access Lid to be opened.



### USING THE FOAM BUNGS:

The Drainage Channels and Board recesses can be blocked with closed-cell foam bungs. These are supplied slightly oversized and are simply inserted into the area to be bunged.

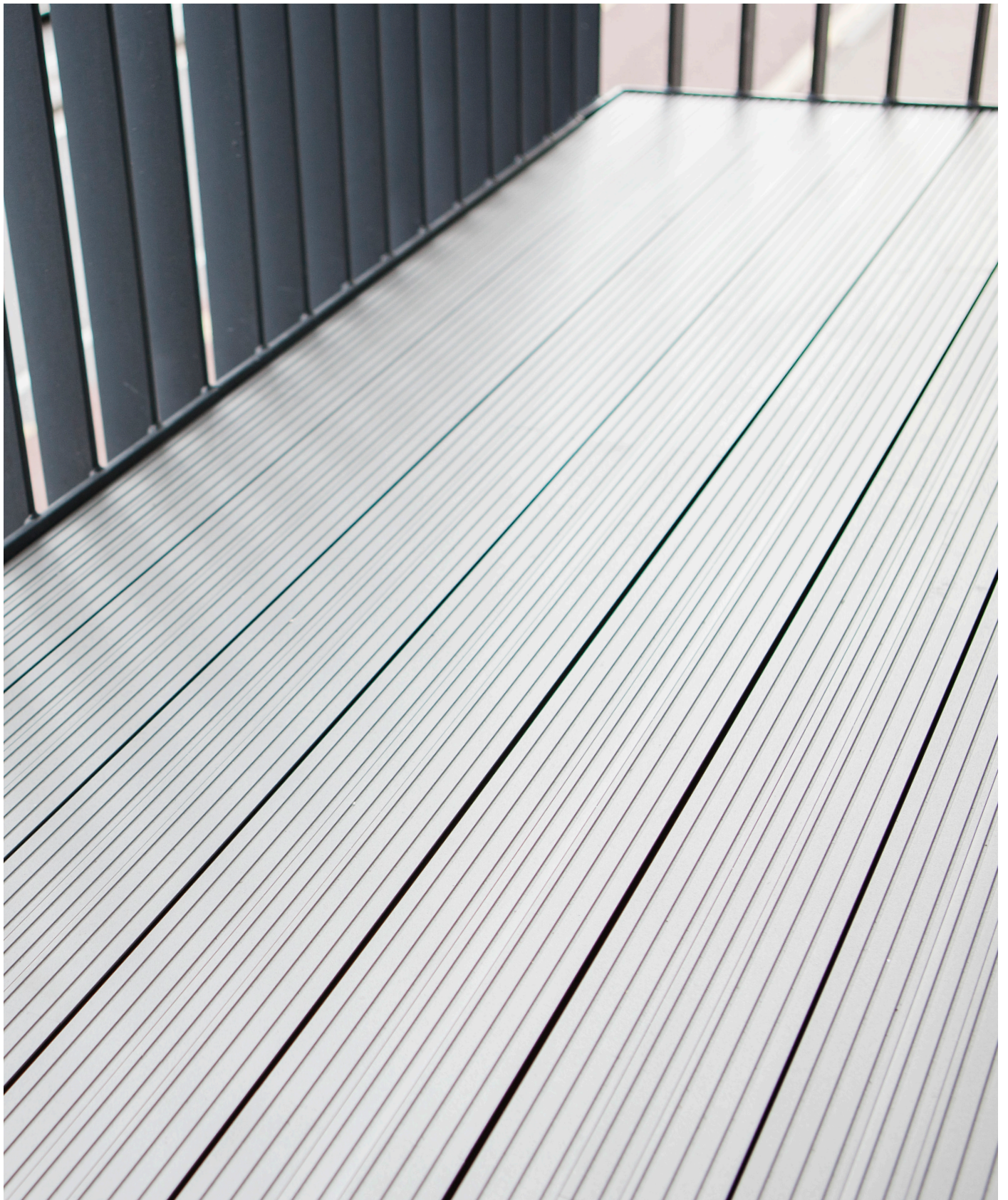


### ELEVATED OVERFLOW:

Our standard Elevated Overflow has been designed to provide a compliant overflow that is equal to the capacity of the main outlet. It is to be used at the point in the Gutter furthest from the building and the outlet must evacuate any water away from the building.







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