

INSTALLATION GUIDE

Version 1.7



 **ALIDECK™**
Aluminium Decking

TOOLS REQUIRED FOR INSTALLATION

1. Chop saw with aluminium blade, recommended 60 to 80 tooth
2. Measuring tape
3. Cordless drill
4. HSS drill bits 5mm, 8mm, 10mm
5. No2 Pozi screw driver bit
6. 13mm ratchet socket and driver
7. 4.5" / 5" grinder with thin metal cutting disc
8. Aluminium cutting arbor bit for cutting circles
9. White / non-marking rubber mallet
10. Roofing square
11. Spirit level
12. Masking tape (if cutting and/or painting of cut edges is required)

FIXINGS SUPPLIED AS FOLLOWS:

1. M8 x 16mm bolts for bolting the decking in place when using the Triple Bolt Channel or an AliDeck Joist
2. 4mm No 8 stainless steel domed headed machine screws for fixing the end plates to the boards if required
3. Fine thread and coarse thread self-drilling screws with rubber washers (to fix to steelwork or joists)

FIXINGS NOT SUPPLIED AS FOLLOWS:

We do not supply fixings to screw the decking to timber (you can use any standard wood screws for this)
We do not supply bolts for bolting the Triple Bolt Channel down.
We do not supply bolts for bolting the feet down

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TOUCH UP PAINT SUPPLIED:

Please be aware this paint is just a touch up paint, if boards are damaged any more than 5% please replace boards with a new board rather than coating the whole board.

Application methods;

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

IMPORTANT GUIDANCE NOTES FOR INSTALLATION

1. Care of product on site: Please ensure that, once unpacked, the AliDeck products are protected and stacked in an appropriate way to prevent any damage prior to installation.
2. When installing balcony boards ensure a minimum of 3mm to a maximum of 8mm (we recommend 5mm) is allowed between each board for drainage
3. When installing onto waterproofing, ensure adequate spreader plates or additional padding is added between the underside of the foot plate and the waterproofing. AliDeck cannot be held responsible for penetration or damage to existing waterproofing. If unsure of application please contact us.
4. Fix all boards within the below span requirements allowed, do not exceed the span requirements for each type of board, please refer to the span tables, contact us for further details if unsure.
5. When cutting boards to width, never cut a board less than the centre section of 30mm as the cover clip will not be able to be installed. Consider cutting the first and the last board if required to obtain the desired overall platform width.
6. Please ensure the decking 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 decking immediately to prevent damage.**
7. If installing onto existing timber please ensure you have a clear 150mm of air gap underneath the decking to ensure good airflow and prevent heat build-up.
8. Please note that aluminium can expand, albeit much less than timber or composite, so caution should be exercised in areas likely to be exposed to high levels of direct or reflected sunlight.

PRELIMINARY STAGES AND PLANNING

MAXIMUM ALLOWABLE SPANS

Please ensure the below maximum spans (centre to centre) are adhered to, if unsure please contact AliDeck.

ALIDECK DECKING BOARDS

Senior Board: 1200mm

Junior Board: 800mm

Lite Board: 600mm

XL Board: 1800mm

The maximum span values for AliDeck Decking Boards were determined following deflection testing in accordance with BS8579:2020, with a criteria of no more than 5mm deflection under a 2.0kN point load.

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ALIDECK JOISTS

Supa Joist: 3000mm

Low Joist: 1200mm

Low Joist On Side: 1500mm

Lite Joist: 800mm

Micro Joist: 300mm

The maximum span values for AliDeck Joists were determined following deflection testing in accordance with BS EN 1991-1-1, with a criteria of no more than L/360 deflection under a 1.4kN point load.

GENERAL GUIDANCE:

CUTTING BOARDS TO WIDTH:

Recommended tool: An electric chop saw with an aluminium cutting blade, we recommend 60 to 80 teeth if possible. Ensure Full PPE is worn, including gloves, goggles and ear defenders.

- Step 1:** Fix the boards down to a sturdy base
- Step 2:** Using a fence on the edge of the circular saw, set the fence to the required depth.
- Step 3:** Mark the boards using a sharpie or similar pen that is clearly visible.
- Step 4:** Then cut the board.
- Step 5:** Now use the deburring tool, or sand or file the edge of the board to remove any sharp edges
- Step 6:** Now mask the edge of the board to protect the top surface from over spray.
- Step 7:** Now coat the edge of the board (3 coats) using the colour matched spray can provided.
- Step 8:** Remove the masking tape.

CUTTING BOARDS TO LENGTH:

Recommended tool: Chop saw with a multi material blade.
Ensure Full PPE is worn, including gloves, goggles and ear defenders.

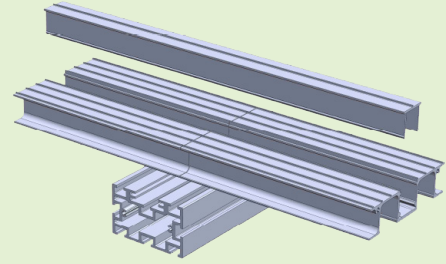
- Step 1:** Using a circular rip saw simply ensure the boards are clamped adequately to a bench or tressle and cut at the angle required.
- Step 2:** Now use a deburring tool, or sand or file the edge of the board to remove any sharp edges
- Step 3:** Now mask the edge of the board to protect the top surface from over spray.
- Step 4:** Now coat the edge of the board (3 coats) using the colour matched spray can provided.
- Step 5:** Remove the masking tape.

CUTTING AROUND DOWN PIPES, OUTLETS AND CABLES ETC:

Recommended tool: A grinder with a thin metal cutting disc, a metal cutting arbor or hole saw.
Ensure Full PPE is worn, including gloves, goggles and ear defenders.

- Step 1:** Using the board to be installed either measure the position of the pipe, cable or obstacle, mark using a sharpie or similar pen that is clearly visible, mark the board.
- Step 2:** Fix the boards down to a sturdy base to prevent it moving.
- Step 3:** Then using the correct size metal arbor or hole saw cut the radius shapes on the board, then cut the straight sections using the grinder with a thin disc.
- Step 4:** Now use a deburring tool, or sand or file the edge of the board to remove any sharp edges
- Step 5:** Now mask the edge of the board to protect the top surface from over spray.
- Step 6:** Now coat the edge of the board (3 coats) using the colour matched spray can provided.
- Step 7:** Remove the masking tape.

GENERAL GUIDANCE CONTD:



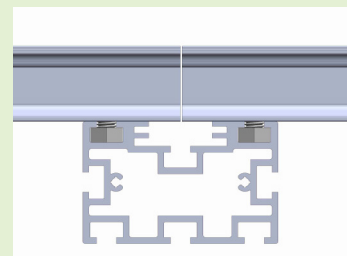
JOINING ALIDECK BOARDS TOGETHER:

Always join a decking board over the top of either a Joist, a Triple Bolt Channel or a steel bearer, and ensure you stagger the top clip in cap if possible.

When joining over the top of a Joist please ensure that both bolt channels on the top of the joist are used, one bolt channel for the left side of the join and the other for the right side of the join, then ensure the two boards are aligned, then clip in the cover across the two boards to help to align the two boards.

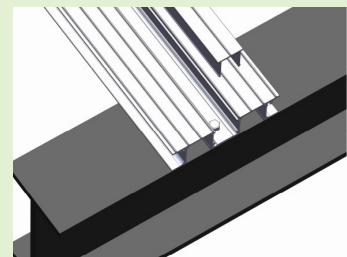
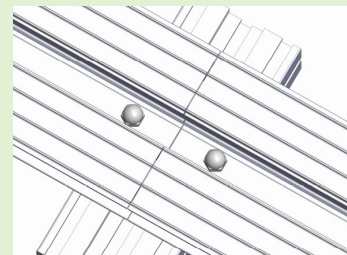
JOINING USING LOW JOIST OR SUPA JOIST:

- Step 1:** Measure from the end of the deck board 30mm into the centre of the board and mark using a sharpie or visible pen, then drill the board using a 5mm HSS drill bit as a pilot, then using a HSS 10mm drill bit drill the hole.
- Step 2:** Repeat the process on the opposite board.
- Step 3:** Bolt the two boards into position and align the two boards.
- Step 4:** Then install the clip over the top of the join so that you stagger the joints between the board and the clip as much as you can.



JOINING ONTO A STEEL BEARER USING SELF-DRILLING SCREWS:

- Step 1:** Drill a 6mm hole into the centre of the board, 20mm from the end of the board.
- Step 2:** Then fix the boards down using supplied self-drilling screws with rubber washer.
- Step 3:** Repeat the process on the opposite board, ensuring the boards are exactly aligned.
- Step 4:** Screw the two boards into position.
- Step 5:** Then install the clip over the top of the join so that you stagger the joints between the board and the clip as much as you can.

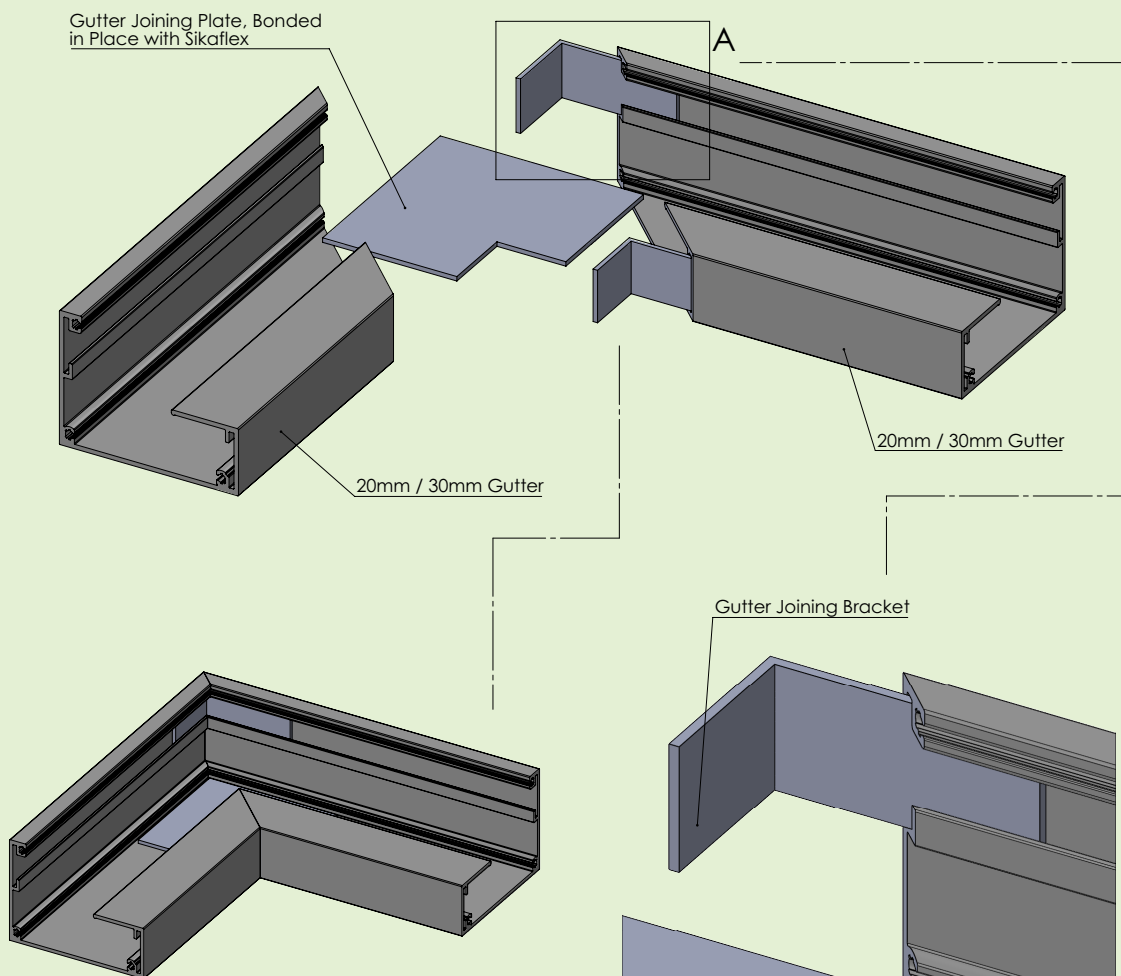


Please Note: In Step 2, the 6mm clearance hole is to prevent the body of the fixing being in direct contact with the aluminium which may otherwise cause corrosion. Please ensure the board is pre drilled so the fixing can be centred to the clearance hole, do not use any self-drillers without first creating a clearance hole in the decking board first.

JOINING GUTTERS AT 45° CORNERS

FOR INSTALLATIONS THAT REQUIRE THE GUTTER TO TURN CORNERS, PLEASE USE THE FOLLOWING METHOD.

- Step 1:** Cut gutters to length and mitre corners. Insert drainage outlet spigot at desired point if required (having taken into account matching to a downpipe through the steelwork).
- Step 2:** Install first mitred gutter to board.
- Step 3:** Install Joining Plates 1 & 2 into appropriate channels as shown using Sikaflex sealer.
- Step 4:** Install second mitred gutter to board, slotting onto Joining Plates, ensuring to apply a continuous bead of Sikaflex sealer around the edge of all Joining Plates and gutters.
- Step 5:** Fix each Joining Plate through the vertical face of the Gutter using an appropriate fixing.



METHOD OF INSTALLATION

Please check all parts are present prior to installation process.

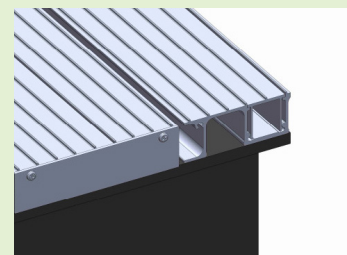
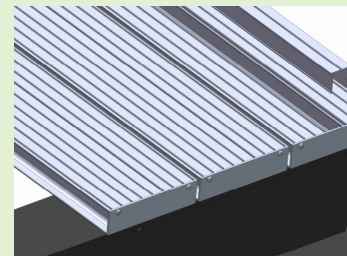
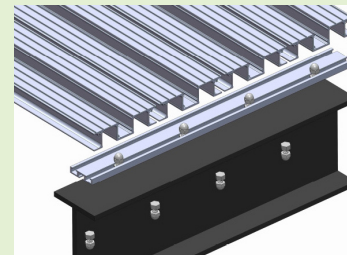
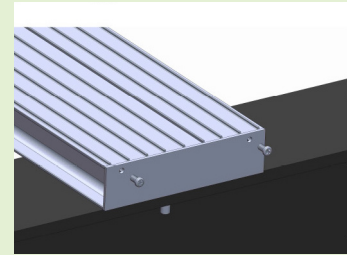
Refer to CAD drawing (if applicable) to ensure you have all materials required. Check all components supplied for damage and for quality. Please report any issues immediately to AliDeck.

Installation of boards onto a steel balcony using self-drilling screws.

As a guide first check the space you have for each board to ensure you can cut the last board to the correct size, (you may need to cut the first and the last board to obtain the correct amount of coverage) the minimum cut width of a board is 30mm but consider a cut on the first board too if required.

Never cut the centre section of the board as the clip will not fit.

- Step 1:** If the balcony edge is open and the edge of the deck boards are seen, before you install the boards now install the optional end plates to the edge of the boards using a No2 Pozi bit in a drill (low speed setting) with the 4mm no 8 stainless steel screws (do not use impact drivers as they can cause the screws to shear).
- Step 2:** Now drill the deck board to align to the underside steel supports using a pilot HSS 6mm drill bit to allow for expansion.
- Step 3:** Once fixed along the board now install the top fix in cover using a rubber non-marking mallet.
- Step 4:** If you have trimmed the last board please follow the cutting guidance note above.



METHOD OF INSTALLATION CONTD:

INSTALLATION OF BOARDS ONTO STEEL BALCONY USING THE TRIPLE BOLT CHANNEL:

As a guide first check the space you have for each board to ensure you can cut the last board to the correct size, (you may need to cut the first and the last board to obtain the correct amount of coverage) the maximum off cut, including saw blade is 30mm, leaving the central fixing channel intact but consider a cut on the first board too if required. Never cut the centre section of the board as the clip will not fit.

Step 1: Cut the Triple Bolt Channel to the correct length, when measuring allow for the number of deck boards and the gaps you require between the boards, make the Triple Bolt Channel the same length as the boards plus the gaps.

Step 2: Then fix the Triple Bolt Channel to the steel work using the single bolt channel facing down and the double bolt channels facing up, bolt to the steel work using the correct length bolts.

Step 3: Now slide the correct number of bolts sufficient to bolt down all full width boards and part width boards into either one of the bolt channels with the treads facing up.

Step 4: If the balcony edge is open and the edge of the deck boards are seen, before you install the boards now install the optional end plates to the edge of the boards using a No2 Pozi bit in a drill (lowest speed setting) with the 4mm no 8 stainless steel screws (do not use impact drivers as they can cause the screws to shear).

Step 5: Now drill the deck board to align to the Triple Bolt Channel using a pilot HSS 5mm drill bit and then a 10mm HSS drill bit, then fix the boards to the Triple Bolt Channel using a socket spanner or nut runner.

Step 6: Once fixed along the board now install the top fix in cover using a rubber non-marking mallet.

Step 7: Repeat the process along the whole deck platform ensuring you leave the required space between each board for drainage (we recommend 5mm gap).

Step 8: If you have trimmed the last board please follow the cutting guidance note above.



METHOD OF INSTALLATION CONTD:

INSTALLATION OF BOARDS ONTO LOW JOIST AND SUPA JOIST USING EITHER ADJUSTABLE PEDESTALS OR ADJUSTABLE BRACKETS:

Step 1: Firstly attach your adjustable pedestals or brackets to the Supa Joist, Low Joist or Lite Joist as shown, be sure to check the span charts. Insert the bolts provided into the pedestals to enable you to tighten them up.

Step 2: Tighten into position as shown using a 13mm spanner.

Step 3: Now insert a screwdriver or suitable tool into the hole in the threaded section of the centre of the pedestal to adjust up or down to level the platform.

Step 4: Now level each of your Joists using a spirit level.

Step 5: Now slide the correct number of bolts into either one of the channels in the top of the joist.

Step 6: Now drill the deck board to align to the joist channel using a pilot HSS 5mm drill bit and then a 10mm HSS drill bit, then fix the boards to the Joist using a socket spanner.

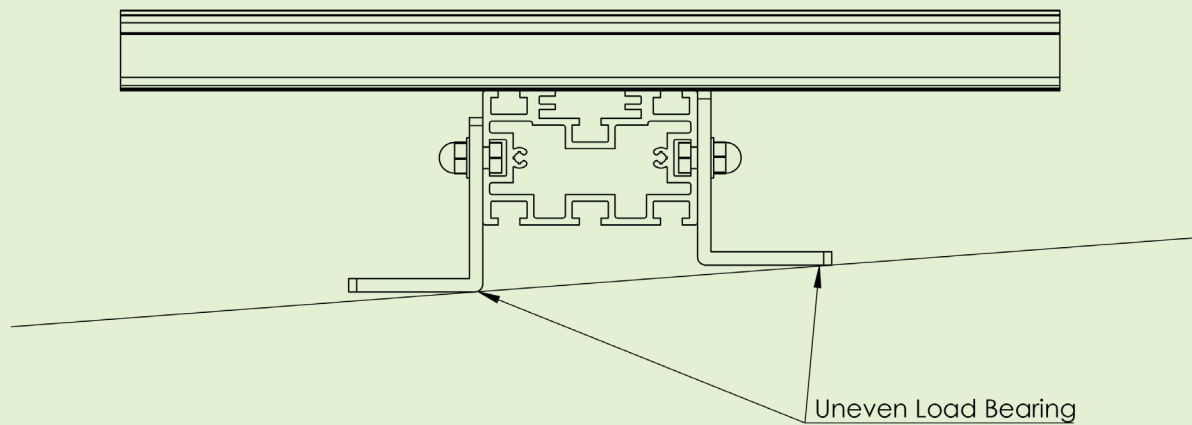
Step 7: Once fixed along the board now fix the top clip in cover using a rubber non-marking mallet.



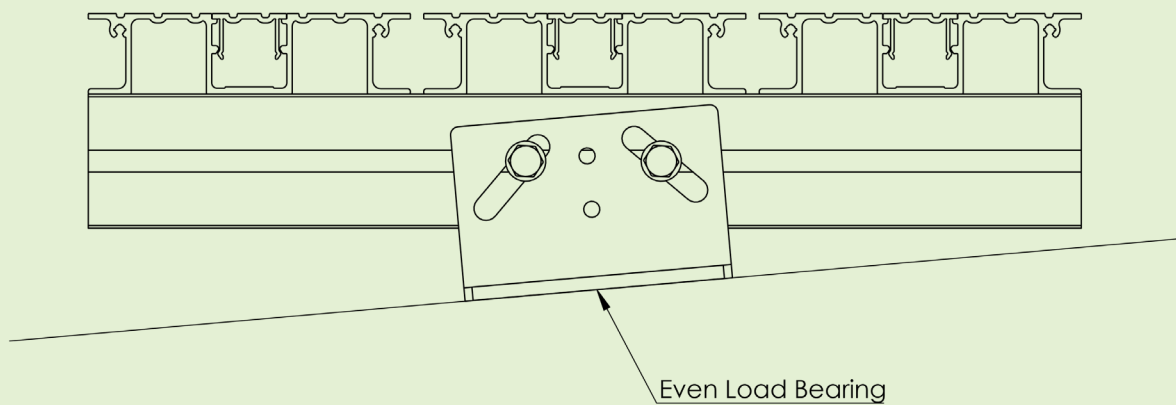
METHOD OF INSTALLATION CONTD:

CORRECT USAGE OF ADJUSTABLE PEDESTAL BRACKETS:

INCORRECT



CORRECT



INSTALLATION OF THE ALIDECK BALCONY DRAINAGE SYSTEM

GUIDANCE NOTES:

1. Please ensure the gutters are clean dry and free from dust and dirt prior to installation.
2. Please ensure you do not exceed the span requirements for fixing points on the boards (see span chart).
3. Ensure you only use approved recommended gutter sealers when sealing the gutters, such as Sikaflex (supplied by AliDeck).
4. Consider that you may require a key stone board in the centre of the platform to remove a board.

Step 1: Install the first deck board.

Step 2: Using the Sikaflex sealer, please apply a liberal bead of sealer along the side of the deck board.

Step 3: Simply push or tap the drainage channel with a rubber mallet until the drainage channel is pushed all of the way into the edge of the deck board.

Step 4: Now add a liberal bead of sealer on to the edge of the next board to ensure you have a continuous bead of sealer and install the board ensuring it is pushed as far into the channel as it will go.

Step 5: Repeat the process ensuring you do not install the centre clips into the boards at this point.

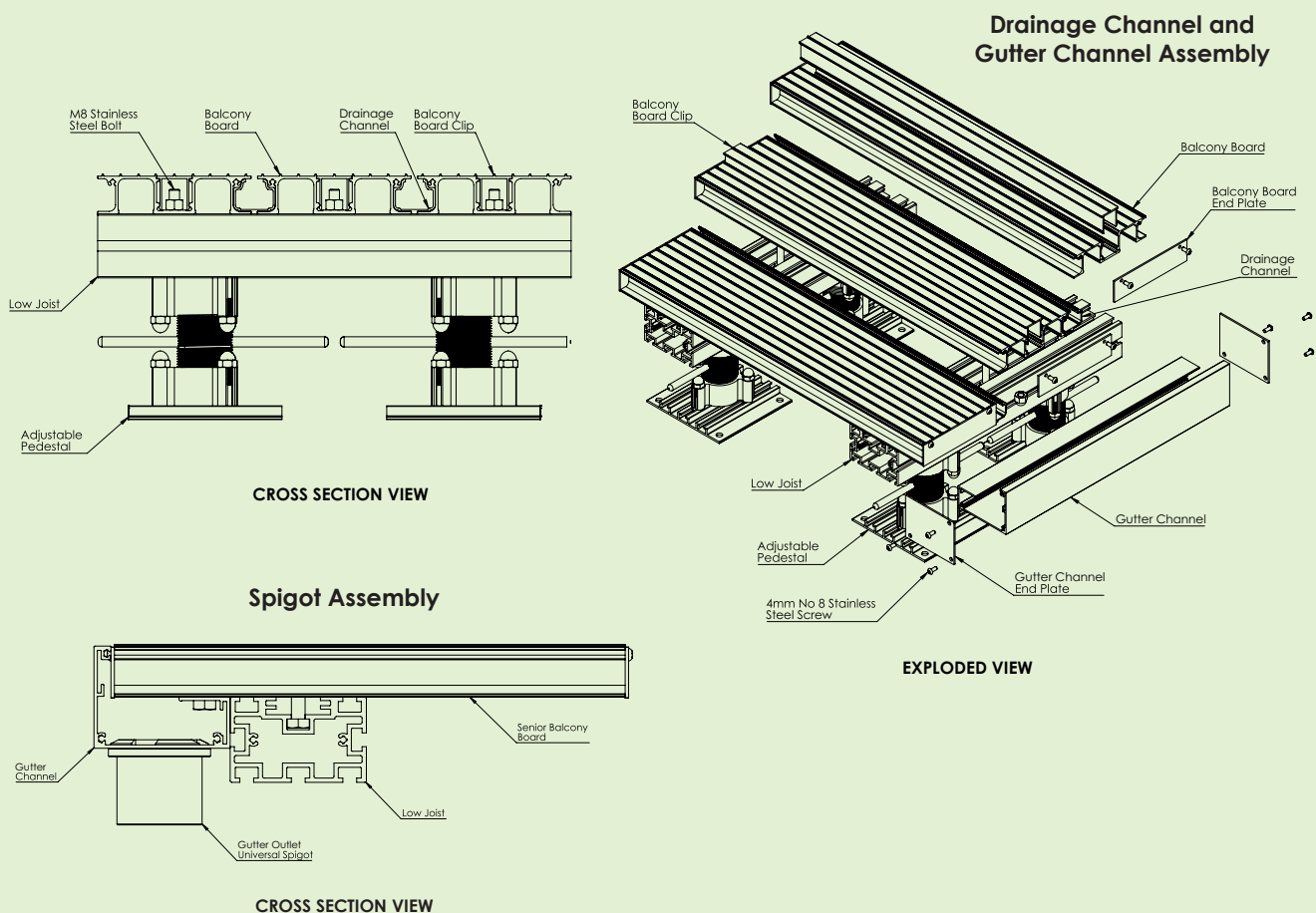
Step 6: Once all of the drain channels are installed now it's time to install your drainage gutter at the ends of the boards.

Step 7: Once you have cut your gutter to the correct length you need to add the end caps and the spigot outlet (using a 55mm arbor) and seal all corners using the Sikaflex sealer we supply.

Step 8: Then you need to fix your gutter into position, to do this simply clamp the gutter channel onto the end of the boards and drill a 3mm hole through the centre of the board and through the horizontal lip on the gutter and using a self-driller fix into position, or a 8mm hole if using Access Gutter and bolts.

Step 9: Repeat the process on both ends of the deck platform if required.

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MAINTENANCE SECTION:

Section 1 - General Product Information and Advice

Section 2 - Health and Safety

Section 3 - Materials and Processes

Section 4 - Maintenance and Repair methods

Section 1

General Product Information and Advice

AliDeck aluminium decking is constructed from high grade aluminium to ensure it is fit for purpose and that it functions for many years. To help the maximum life expectancy to be achieved, we have created this manual to help you understand the maintenance requirements along with important instructions which should be followed at all times.

AliDeck products are supplied to designs and specifications that have been proven through years of installation and development.

QUALICOAT– Protective Powder Coating

The AliDeck system uses a powder coating process called QUALICOAT which is a quality label organisation committed to maintaining and promoting the quality of coating on aluminium and its alloys for architectural applications.

BS 6496:1984: Specification for powder organic coatings for application and stoving to aluminium alloy extrusions, sheet and preformed sections for external architectural purposes, and for the finish on aluminium alloy extrusions.

AliDeck extrusions are finished using the following EN standards:

- EN 12206-1:2004: Paints and varnishes. Coating of aluminium and aluminium alloys for architectural purposes. Coatings prepared from coating powder.
- EN ISO 2409:2013: Paints and Varnishes, Cross Cut Test.

The QUALICOAT quality department also performs the following tests on powder coated profiles:

- QUALICOAT 2.1: Visual inspection at 3 metres for internal and 5 metres for external extrusions (Their Inspectors visually inspect at 1 metre as standard) QUALICOAT 2.2: Gloss level check to within 5% +/- of the manufacturers stated level. [EN ISO 2813] QUALICOAT 2.4.1: Cross Hatch cuts are made at 2mm spacing with one being at 90° to the other cut, tape is then applied, left for 2 minutes and removed to check for Adhesion of paint. [EN ISO 2409 2013]
- QUALICOAT 2.3: Thickness checks to see that the material is coated with at least 60 microns of powder, average. [EN ISO 2360]
- QUALICOAT 2.6: Cupping test is carried out to check for adhesion with the substrate [EN ISO 1520]
- QUALICOAT 2.8: Impact test with an energy of 2.5Nm to ensure that the coating adheres to the substrate [EN ISO 6272 / ASTM D2794]
- QUALICOAT 2.7: Bend test on a 5mm Mandrel to ensure adhesion after bending [EN ISO 1519]
- QUALICOAT 2.11: Machu test (Accelerated corrosion test) in a solution made up of Sodium Chloride, Acetic Acid and Hydrogen Peroxide at 37°C. Duration 48 hours
- QUALICOAT 2.14: Polymerisation test (Wipe with MEK for 30 seconds)
- QUALICOAT 2.16: Resistance to boiling water in a pressure cooker. Duration 1 hour 100Kpa
- QUALICOAT 2.18: Sawing and drilling to ensure that there is no flaking after cutting (using sharp tools)

MAINTENANCE SECTION CONTD:

Curing oven temperatures are checked and recorded daily. External checks are carried out by the powder suppliers and the laboratory in Belgium on random samples of extrusion:

- ISO9227: Acetic Acid Salt Spray Test
- EN ISO 3231: Resistance to Humid atmospheres containing Sulphur Dioxide
- EN ISO 11341: Accelerated weathering test
- EN ISO 2810: Natural weathering test (Florida Test) (Carried out on Powder type)
- EN ISO 12206-1: Resistance to mortar (Carried out on Powder type)
- EN ISO 6270-2: Constant Climate Condensation Water test

The aluminium is sent through a variety of pre-treatment chemical baths that remove a very fine layer off the surface before powder coating.

Section 2

Health & Safety

Your installed/supplied structure has no particular operating instructions after or during installation, however the following Health and Safety advice should be followed at all times:

1. It is the sole responsibility of the maintenance person and/or customer to make sure that all training needs, safety precautions and supervision are undertaken and utilised correctly when training needs, safety precautions and supervision are undertaken and utilised correctly when undertaking inspections, maintenance and repairs.
2. AliDeck cannot accept any responsibility whatsoever for any injury or damage to property or individuals as a result of the nature of personnel or equipment that is used, or if individuals do not follow correctly, or disregard, health and safety regulations.
3. If the decking is installed at a height, it is essential that balustrades or appropriate edge protection and working at height precautions are used as a safety precaution to prevent persons falling. We also advise that persons do not climb onto the decking at any time and we cannot be held responsible for injuries that are caused by persons doing so. Structures that involve working at height, that are incomplete 'work in progress' are to be suitably marked to prevent unauthorised access.
4. When undertaking routine maintenance/inspections, and access is needed via a ladder (if the decking is installed at a height), AliDeck has identified that it is the responsibility of the customer to make sure that full care and attention is taken when working at height and your organisation's health and safety regulations should be followed as a minimum.
5. We also recommend regular cleaning to reduce potential slip hazards due to the build up of foliage, dirt, grime, etc
6. In the event of product failure or any structural concerns, questions on the subject of the quality of the product or issues in relation to repair of the product please contact AliDeck immediately on 01622 235672.

Section 3

Processes and Materials

Please find below a list of all processes and materials which may have been utilised during manufacturing or processing your product:

Materials

- Extruded Aluminium
- Rubber/composite inserts (for the slip resistant decking only)

Processes used

- Bending, forming, fabrication in a workshop environment
- The use of stainless-steel fasteners and fixings
- QUALICOAT powder coating

MAINTENANCE SECTION CONTD:

Section 4

Repair and Maintenance Methods

GENERAL OVERVIEW

The product installed, and all its fixings, coatings, and materials should be inspected visually regularly, and at least every 6-12 months (depending on your environment) for:

- Breakdown of surface finish
- Loose fixings
- Loose ground anchors
- Damage

If anything arises which is a concern please refer to the following pages for the appropriate repair and maintenance methods for the material concerned.

We would recommend that all structures are cleaned at regular intervals and at least twice a year as a build-up of dirt can cause damage and create an increased risk of injury due to slips and trips by potentially resulted from badly maintained surface. The frequency of this clean down is dependent on your environment – in a harsh coastal or industrial environment it is recommended that a clean is performed at least every 3 months. Where the surroundings are considered to be non-coastal and non-industrial, the frequency can then be at six-month intervals.

AliDeck recommend cleaning your structure with a solution of soapy warm water and a lint free cloth. The structure should then be thoroughly rinsed with a plain warm water solution. No form of abrasive should be used at any time. All concentrated cleaners should be diluted as per the manufacturer's instructions. Never use bleach, solvents, abrasive paste or cream cleaners as they could damage the surface of your decking. It is advised to perform a test prior to applying any chemical-based cleaner.

If in doubt, please call us on 01622 235 672.

To maximise the life of a painted surface, it is highly recommended that no cleanser that contains chlorinated solvents, ketones or esters is used. These will cause the paint to soften and a further issue will be created that will require a major refurbishing project to be undertaken.

AliDeck do not advise the use of pressure washers or steam cleaners on any part of the decking. Unlike timber decking, a yearly protective coating is not required, simply following the cleaning instructions above.

At all times with any of the steps detailed in this document please follow Health and Safety regulations, and manufacturer's instructions and precautions carefully for any repair products used, to ensure safety and the best finished results.

Aluminium Frameworks

To clean Aluminium:

1. Firstly, remove loose dirt/dust with a soft brush/broom.
2. Using a solution of warm, soapy water and a lint free mop, wash the structure
3. Then wash with plain warm water to rinse off the soapy water.

QUALICOAT Powder Coating

Powder coating involves the application of a powder finish onto aluminium or shot blasted substrate. Once this has been done the material is then oven cured to form a hardwearing outer layer. However, in an attempt to preserve the appearance as purchased, in conjunction with ensuring the life expectancy, it is required that all powder coated surfaces are subject to a regular visual inspection.

MAINTENANCE SECTION CONTD:

The frequency of inspection should be judged based on the product's environment. For harsh environments such as industrial, coastal or where products have high usage, inspection should be every 3 months. For areas which have low usage, are non-industrial, non-coastal or not near any water these are classed as general environments and the inspection can be every 6 months.

General - at six-month intervals Harsh - at three month intervals

At inspection take care to look for any visual defects and damage to the powder coated surface where it has broken through to the original base metal (aluminium) underneath.

If any defects are noted the following advice should be adhered to as a minimum:

- For light chips or scratches which have exposed the base metal apply an appropriate Zinc Rich primer carefully to the defective area followed by a topcoat finish in a matching acrylic based spray paint. Ensure all areas are cleaned with PW3 panel wipe to remove any grease wax and debris prior to re-coating.
- For large areas of damage, coating breakdown or vandalism, the area should be sanded as such so that the edges are smoothed to allow for feathering in using P320 grade fine sandpaper (to create a smoother transition from the old paint to the new). A Zinc Rich primer should be brushed or sprayed onto the area and a topcoat should then be applied, in a similar manner.

At all times with any of the steps above please follow the manufacturer's instructions and precautions carefully to ensure safety and the best finished results. If repairs are carried out using spraying it is strongly recommended that the surrounding area is fully protected and masked off.

15 At the time/frequency of inspection a thorough clean of the powder coated surface should also be carried out.

It is recommended this clean down is done by washing with mild, warm soapy water using a soft cloth; then it should be rinsed with clean water and then dried.

If graffiti is present this should be removed by a specialist contract cleaner or by using a car "TCutting" compound. It is not recommended to use any solvents, abrasive cleaners or other chemicals to clean the surface at any time. Below is a list of some of the products which you should not use (this list is not exhaustive):

Nylon scouring pads, Thinners, White Spirits, Methylated spirits, Cream household cleaners etc
Whichever repair technique is used, AliDeck highly recommends that the instructions of the manufacturer are followed all the time whilst taking into account the safety and health requirements of the products and individuals undertaking the task as well.

Other General Maintenance

A full annual check should be made of all fixings present on the structure and all ground fixings to ensure that they have retained the tightness required and are providing the required support.

If you would like to discuss any of the details in this document please call us on 01622 235672.



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