INSTALLATION GUIDANCE

Our Modular Ramp System has been designed with compliance and ease of installation in mind. It consists of several core components in various sizes, which can be combined and configured to suit individual requirements.

It is hoped that this document will provide you with a solid understanding of the main steps of an installation, together with some helpful tips.

Should you require any further guidance, we encourage you to speak to either Jason Hetherington (07974431249) or Paul Pattinson (07734411424), who can talk you through anything specific. Equally, if you wish to send some completed installation photos for comment, or have a specific issue where an image will be easier to talk over, you can email them as follows:

E: jason.hetherington@easiaccess.co.uk E: paul.pattinson@easibathe.com

---

PRODUCT CODES

It is useful to familiarise yourself with the main product and 'Kit' codes and what they mean, for ease of identification against the 'pick sheet' which will accompany your delivery.

Kit codes are split into 3 ranges as follows:

ABC #### (##XY)

e.g. TPK 1210 (10R)

letters denote the **type** of kit

numbers indicate the **size** of kit -
e.g. 1210 = 1200 wide x 1000mm long

numbers and letters primarily indicate either/or:

1. size of ramp section leading off
e.g. (**12**) = **12**00m ramp

2. position of ramp fitted to a platform
e.g. (**10R**) = **10**00mm ramp offset from the **R**ight on approach;

3. turn in the ramp
e.g. (**12TL**) = a **12**00mm ramp that **T**urns **L**eft on approach.

Each Kit code is formed from the initials of its intended use:

Threshold **P**latform **K**it (**TPK**)	e.g. TKP1212(10R)
Rest **P**latform **K**it (**RPK**)	e.g. RPK1010(10)
Platform **T**urn **K**it (**PTK**)	e.g. PTK12(10TR)
Platform **R**eturn **K**it (**PRK**)	e.g. PRK2412(10)
Bridge **S**ection **K**it (**BSK**)	e.g. BSK1010
Platform **E**xtension **K**it (**PEK**)	e.g. PEK105
Hatch **S**ection **K**it (**HSK**)	e.g. HSK105
Ramp **S**ection **K**it (**RSK**)	e.g. RSK1020
Trombone **E**nd **K**it (**TEK**)	e.g. TEK3(10)
Gate and **S**tep **U**nit (**GU**, **SU**, **GSU**)	e.g. GSU1L(P)

Examples:

- **TPK1210(10R)** indicates a **12**00mm x **10**00mm **T**hreshold **P**latform **K**it with a **10**00mm ramp leading off (offset from the **R**ight on approach).
- **RSK1012** indicates a **10**00mm x **12**00mm **R**amp **S**ection **K**it.
- **TEK3(10)** indicates a **3**00mm bolt-on **T**rombone **E**nd **K**it for a **10**00mm ramp.

Please familiarise with the following logic/conventions:

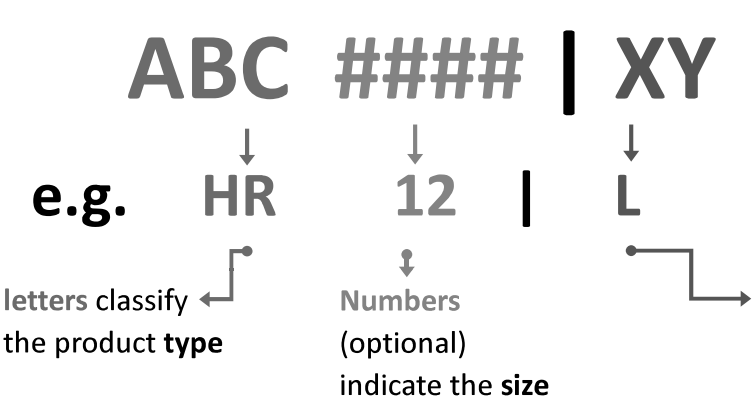
Handedness – as a rule of thumb, Left/Right-handed rails are determined travelling UP the ramp (towards the threshold) i.e. everything on your left is Left-Handed.

Fixings and Connectors - Not all fixing holes are used when attaching sections; 2 x Platform Fixings (PFXN) are standard, except 1500mm wide which use 3. All Platform Kits have an extra fixing ('spare').
N.B. The combination of some Kits may leave surplus connectors.

Dimensions - Measurements list the width and then length (mm). You can determine this by the direction of the mesh, with the open profiled running across its width.

Legs - All Kits include 500mm legs as standard. Where a different size is required, these will be substituted accordingly i.e. a SUB leg will be provided.
As standard all Ramp Sections have 2 legs, with Platform Sections having 3 or more i.e. not all uprights contain a leg. See our Kit Illustration PDF for suggested leg placement.

Product codes follow a similar convention with each initial denoting the characteristic of the product:



letters (optional) would primarily indicate either/or:

1. **handedness**
e.g. **HR12R** = Handrail Ramped 1200mm **R**ight-handed

2. **degree** of a platform extension
e.g. **PS15D** = 15 **D**egree platform section

3. presence of a **Kerb**
e.g. **SPK93K** = Step Platform 900 x 300mm with **K**erb upstand

The initials link directly to the product itself. There are too many to detail, but some examples to illustrate the logic of our product coding are as follows:

Handrail **V**ertical	e.g. HV12
Handrail **R**amped	e.g. HR5L
Platform **S**ection	e.g. PS1010
Straight **CON**nector	e.g. SCON
Threaded **F**oot **B**rac**K**e**T**	e.g. TFBKT
FiXiNg	e.g. FXN
Universal **G**ate **U**nit	e.g. UGU
Step **H**andrails	e.g. SH2L
Trombone **E**nd	e.g. TE3
Step **P**latform	e.g. SP93
Toe **P**late	e.g. TP103
LeGs and FeeT	e.g. LG5/FT

MAINTENANCE

Please refer to our separate document covering the care/ maintenance of our equipment, but note the following key points:

- our system is fully galvanised to prevent corrosion and requires minimal maintenance other than keeping the surfaces clean and free from debris.
- nylon washers are provided to protect the powder coated finish during assembly.
- avoid damage by dragging handrails and platforms on the ground – try and lift them clear; use the boxes supplied to prevent contact.
- should a handrail or platform become damaged in a way that penetrates the galvanised coating, the affected area should be dried, treated with a zinc rich corrosion inhibitor (and touched up with a RAL matched paint in the case of a handrail) – we can provide all relevant products.

SAFETY

Due to its solid steel construction, ramp components can be heavy and may require a 2-person lift. Remember, safe lifting techniques should always be adopted (and mechanical aids used wherever possible) to avoid the risk of injury. The ramp should always be fully supported during installation, dismantling or reconfiguration.

Care should also be taken when unpacking individual components – handrails can slip inside a box unexpectedly.

Whilst every effort is made to remove all sharp edges during the manufacturing process, due to the nature of the slip-resistant walkway surface and galvanisation process, it is possible that some sharp edges may be present; take extra care and use suitable gloves when handling.

A ramp installation should only be undertaken by suitably competent individuals.

EQUIPMENT

A few essential pieces of equipment are required to install a ramp (not including any groundworks) as follows:

- 2 x Allen keys (5mm) – used to tighten Leg Allen Bolts
- Spanner or socket (17mm) – used to tighten platforms and handrail Fixings
- Power drill – used to drill holes to secure the Feet
- Screwdriver to suit floor/wall fixings used – used to secure the Feet and Wall Connectors
- Rubber mallet – used to knock rails on to preceding connectors and fine tune positioning

In addition, we have found the following items useful to aid an installation:

- SDS drill – used to more efficiently drill into masonry
- Impact driver – used to tighten all Fixings and Screws
- Trolley jack – used to support and raise equipment
- Adjustable wrench – used to turn and fine tune Feet position
- Brush – used to clear dust/debris from masonry holes
- Cutting blade – open boxes/strapping
- Spirit level – check platforms are level and ramps are at the correct gradient
- Tape measure – check heights and distances
- Laser level – useful to check spot heights and ramp falls

GRADIENT OF THE RAMP

Substitute the wooden post with the upright of a ramped rail – if level, you know you have a 1:12 gradient

It is widely accepted that wherever possible, the maximum gradient of a ramp should be 1:12. As such, our system has been designed so that the uprights on our ramped rails, will be vertical when this this is achieved. The easiest method other than visually determining this, is to check with a spirit level.

It is worth remembering that to achieve the correct gradient, the length of the ramp (not including rest or threshold platforms) needs to be correct. This would have been calculated at the survey stage, taking in to account the threshold height and environment in question; the correct equipment will have been supplied to achieve the required gradient. Separate guidance is available on survey considerations if required.

Unless an even gradient is achieved from the outset, you may find that your last ramp section(s) may be unnecessarily shallow or steep – depending on the size of the ramp, subsequent corrective adjustments can be time consuming.

By plotting out the route the ramp will take, not only will this help you achieve the intended gradient, but also the location and preparation of any groundworks and support pads, providing a visual guide and confirmation that you are proceeding as planned. The finished ramp should always be heading for an end point established at the outset. The 2D and 3D plans will provide you with a reasonably accurate representation to determine this.

Should you require a ramp to be installed at a different gradient, you will not be able to rely on the method described above; instead there are 2 main ways to accurately check this:

a) Using an angle finder you can determine the required angle of an upright against the vertical, however, given the small change in angle compared with the gradient, this may be difficult to establish (e.g. the difference between a 1:12 and 1:15 gradient is less than 1°).
b) The easier method is to determine the height the ramp should have dropped/climbed by, over a set distance. To do this, you need to divide the 'run' (length of ramp in question e.g. 2000mm) by the required gradient (e.g. 1:15). This gives you the height to check against from its highest to lowest point, against the horizontal (e.g. 2000 ÷ 15 - in this example it is 133mm). **N.B.** Be careful when measuring distances from the ground – if not level, this will need to be taken in to account.

PLANNING AND PREPARATION

Key to a successful installation of a modular ramp is the planning and preparation:

- Check all components are available prior to undertaking any installation - call 0800 321 7430 to report shortages or to purchase additional items.
- Consider and clear the route the ramp is to take, starting from the highest platform and finishing with the toe plate. Use supplied 2D plans for this purpose.
- Undertake necessary groundworks as required, such as the positioning of pads for the feet, or the creation of a suitable landing area at the end of the ramp.
- Can you protect the environment during the installation? e.g. consider placing the cardboard packaging over lawns to prevent damage.
- When using a weed proof membrane and suitable aggregate (such as chippings) to prevent plant growth under the ramp, be careful with the placement of any delivered bags – you don't want to accidentally place a 1 tonne bag of gravel where the ramp is destined to pass. The same can be said for the unpacking of a ramp to avoid double handling.

ASSEMBLY INSTRUCTIONS

Given the numerous configurations that may be achieved using the Easiaccess ramp system, it is impossible to detail the installation process for each variation. The following instructions are intended to illustrate how to assemble and attach the main groupings of components to one another e.g. handrail to a platform.

The ramp has been specifically designed to offer a degree of adjustability and 'fine tuning'. It is advised that each 'run' of a ramp be **hand-tightened** in the first instance to allow for any fine adjustment as you go, such as ensuring the handrails line up correctly, the connectors fit and the correct gradient has been achieved.

These instructions are supplemented by an online YouTube video (5 minutes long) which is also helpful in explaining the basic principles (a new video is in development); just search for 'Easiaccess'.

It is difficult to detail the use of all various brackets and ancillary items we provide – should you encounter something unfamiliar, please talk this over with a member of our team who will guide you through its use.

We have placed **useful tips** within a green box to draw your attention to useful reminders, and to avoid common mistakes.

Sequence of an installation

In most circumstances, the ramp will start with the installation of the initial platform section at the threshold. From this platform, the installation should then continue by attaching the ramp/level platform sections together, with their handrails, ending with the toe plate. Please note the following:

- Install the relevant Straight (SCON) and Angled (ACON) connectors BEFORE proceeding with the next section. The Corner (CCON) connectors are less important as the rails can be pulled apart (before being tightened) to allow these to be installed.
- Check the direction of the mesh is correct – on a ramp section the 'peak' on the top of the mesh should be pointing 'up', providing maximum traction.

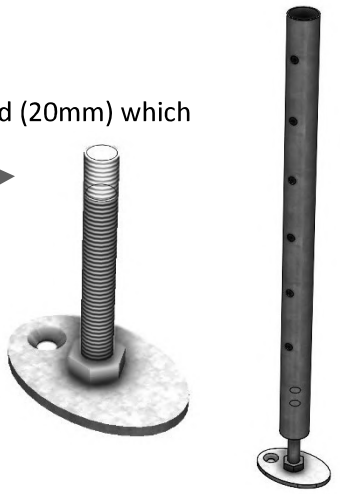
We recommend the initial platform section is fully assembled (it will be freestanding once complete) and then moved into position at the threshold. Following this, subsequent sections may be attached to the preceding section and supported at the required height using a trolley jack or similar.

The handrails, with their legs/feet fitted, can then be added to both sides of the platform and secured with fixings. This will hold the platform section in place, whereby the support (trolley jack if using) can be removed, allowing the fitting of the next section in the same manner.

Minor adjustments are to be carried out before all fixings are fully tightened and feet are secured, but only once satisfied that you have achieved the correct gradient and that the handrails are inline (should they lean slightly, this can easily be correct by pulling/pushing on the rail before the feet are secured to the ground).

We recommend that all feet are 'turned out' with the fixing hole facing away from the handrail – not only does this make it easier to drill the holes and secure the foot with the relevant fixing, but it gives a more professional and tidy appearance.

Assembling Handrails and Legs/Feet



1. Each leg has a pre-inserted foot – there is a yellow 'safety' section of the screw thread (20mm) which should not be exposed. Ensure the foot is sufficiently inserted to allow for subsequent fine adjustment

2. Legs have locating holes positioned 70mm apart, which together with 80mm of Foot adjustment, allows any height to be achieved.

3. Determine the height for the leg/foot and insert it in to upright of the handrail - align the relevant holes and fix into position with the Leg Allen Bolt (LAB) - secure using a 5mm Allen key.

Legs/Feet should be fitted to the handrails before attaching to any platform section. Not all uprights will require a leg. As standard, most level platforms will require 4 legs/feet, whereas ramp sections will require 2, placed at the leading edge. You will quickly run out of legs if you use every upright – see our Kit Installation guide for suggested leg placement.

Attaching Handrails (with Legs/Feet) to a Platform Section

1. Where relevant, insert a Straight (SCON) or Angled (ACON) connector into the open tube of the preceding handrail, and knock this in a little way with a rubber mallet.

The Corner (CCON) Connector is less important as it is possible, before tightening the handrails, to prise them apart in order to install. This is not possible with an SCON or ACON which is why it is important to add them at this stage. Fitting the connectors is covered in more detail later.

2. Offer the open tube of the new handrail to the same connector, and using a rubber mallet and some force, guide the tube in to the connector, far enough so the holes on the handrail kerb line up with the punched slots on the platform (when both are perpendicular). You may need to slightly lift or lower the platform to align - securing the fixings in order is often the easiest way to align each one.

3. Once the handrail and platform slots are aligned, insert the coach bolt so the thread protrudes through the kerb of the handrail. Should the kerb sit away from the platform edge, you can use clamps to pull them together.

4. To fit a handrail to a platform, you need to use a fixing (FXN) set which consists of 4 parts: place a nylon and metal washer over the coach bolt thread (in this order) and hand tighten the domed nut so that the handrail and platform/ramp sections are secure.

The order the FXN is placed is important as this ensures the nylon washer sits against the powder coating, helping to prevent damage when being tightened. Remember the rule as regards handedness – ensure you put the correct ramped rails on the correct side.

Joining Platform Sections

1. Assemble the platform section at the correct height (as determined by the threshold) and offer up the next section to the platform. Tip the platform to be attached and align the end slot.

2. Using the platform fixings (PFXN) insert a coach bolt through the outer edge slot, and hand tighten with the open flanged nut. Lower the platform down to align the other slots and place at least one PFXN on the opposite outer edge. Support the front end of the ramp section at the correct height determined by the gradient to be achieved.

3. When a ramped section is leading off from a level platform, you should only tighten the fixings as far as required to maintain the gradient – don't overtighten.

It is important not to place a platform fixing (PFXN) in every hole otherwise you won't have enough to complete the ramp! As standard an extra fixing is included with all level (as opposed to ramped) platforms – as a result, don't be unduly concerned if you have a handful spare fixings at the end of an installation.

3. Fit the handrails (with legs/feet fitted) to the platforms, using the method as described above.

4. Once the handrails have been added, adjust the feet to take the load of the platform/ramp section and remove any support used. Repeat this step to add further platform sections.

Adjusting the height of the Platform Sections

1. We offer 6 leg sizes as standard, which should enable to you achieve any height you require. Each Leg has locating holes 70mm apart, to allow the height of the handrail/section to be fixed close to the required height.

2. Fine adjustment is then achieved by screwing the Foot in or out - up to 80mm of adjustment is available. To do this, you can lift the platform section off the ground and spin the foot, OR, the bolt on the base of the thread can be used to turn the foot when the ramp is in position and difficult to lift.

As mentioned, there is a safety indication on each foot - take care to ensure that the yellow section of the screw thread is not exposed. This will ensure that enough thread is engaged in the bottom of the leg. Should you need more height, you will need to choose the next hole on the leg; don't be tempted to unwind the foot out further.

Gate Unit

Gate units are attached to a level platform. Being universal in design, the posts are attached to either side, with the hinge, latch and keep components fitted to suit the open swing required.

When using a Gate Unit, this is the one instance where a Corner (CCON) Connector will need to be installed in the correct order. Owing to the weight of the Gate itself, the posts need to be fully tightened at the outset making it difficult to pull the rail over to fit a CCON. Try and think one step ahead at all times…

1. Fix one Gate post in position at the outer edge of the platform – hand tighten using the FXN as described above.

2. Using the width of the Gate as a guide, fix the second Gate post to the other side of the platform and hand tighten. Check the level of both posts and fully tighten in position. If the Gate Unit is the same width as the platform, simply secure the posts to the outside platform edge.

3. Attach the Gate as shown overleaf, using all supplied components.

5. Check the gate movement and ensure the latch catches the keep. Adjust the position of the posts if necessary, using the elongated slots along the platform edge.

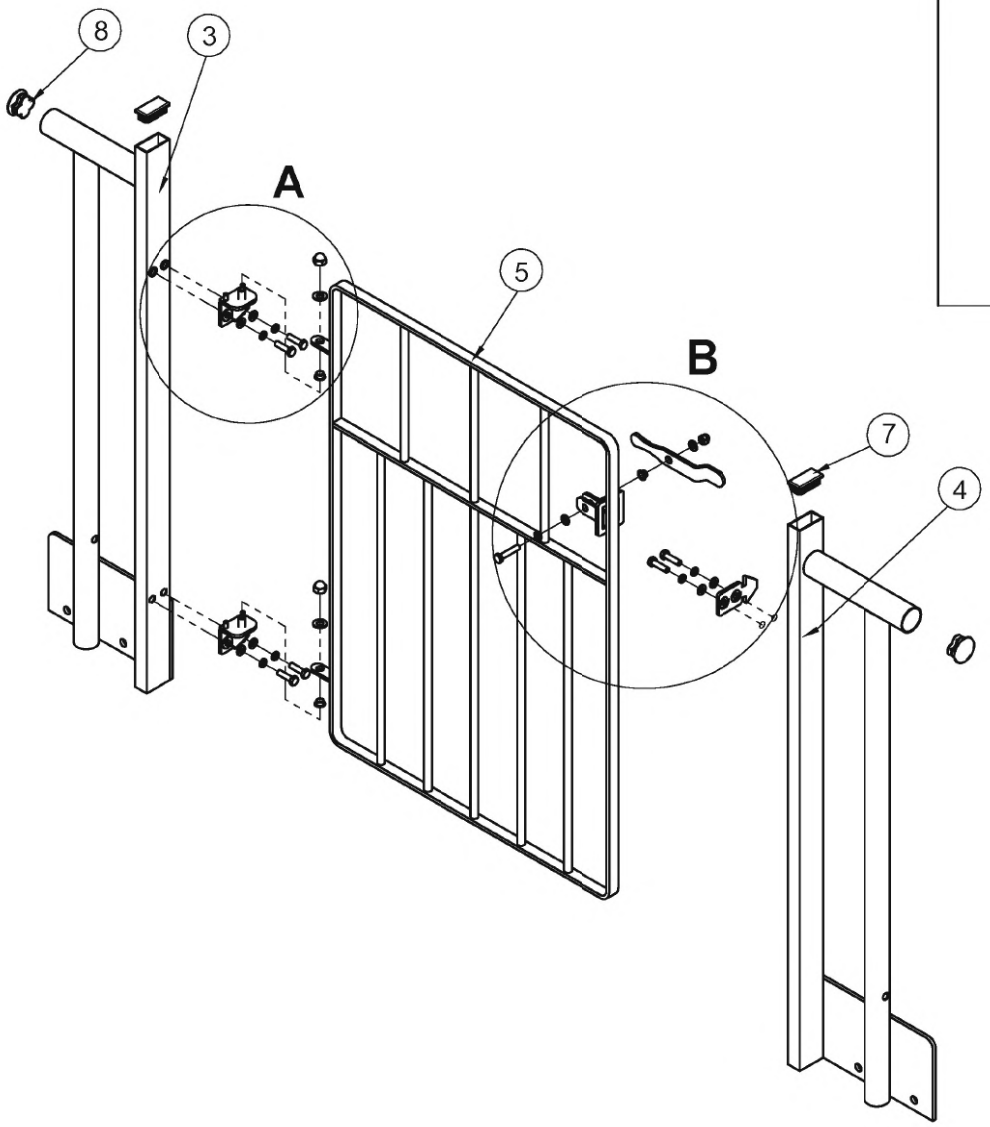
6. Place the End Caps into the rectangular posts to complete the installation.

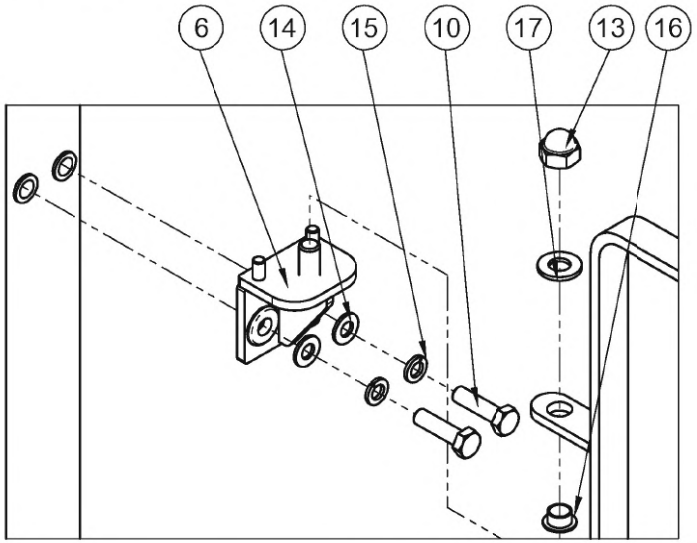
The various washers included with the Gate Unit should all be used as illustrated – this helps to protect the Gate Unit components which would otherwise wear over time upon repeated opening/closing.

Universal Gate Unit (UGU)

The Universal Gate Unit (UGU) is provided disassembled and can be quickly configured within minutes using the supplied fixings as detailed.

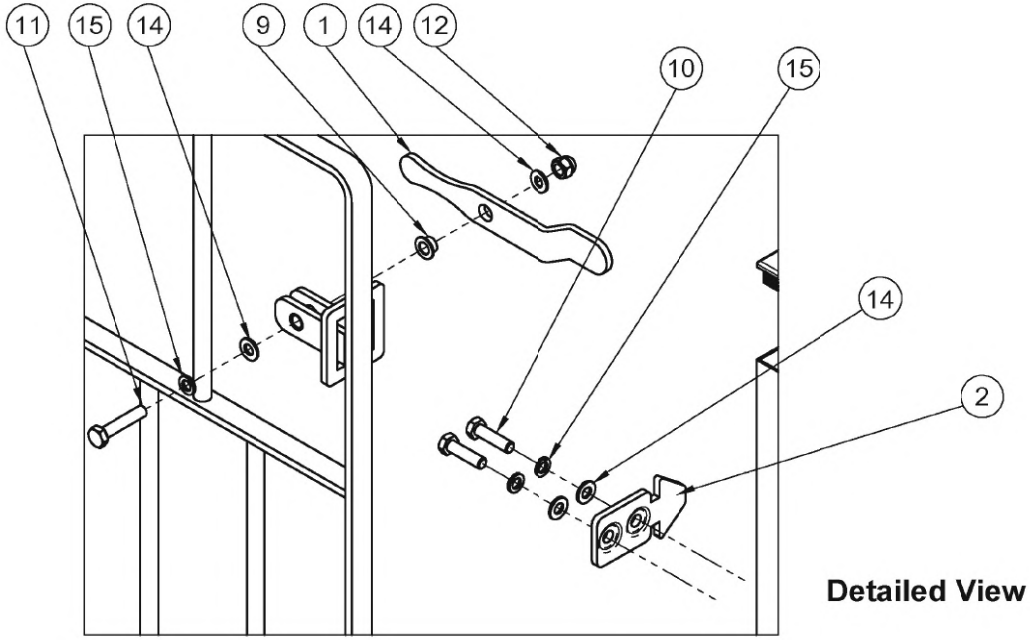
It is possible to easily switch the post from which the Gate is hinged (left or right handed), as well as allowing the Gate to open either inwards or outwards.





Detailed View A

NO	DESCRIPTION
1	Latch x 1
2	Keep x 1
3	Left Hand Post x 1
4	Right Hand Post x 1
5	Gate Frame x 1
6	Hinge x 2
7	Post End Cap x 2
8	Handrail End Cap x 2
9	Top Hat Washer (M8) x 1
10	Hex screw (30mm) x 6
11	Hex screw (40mm) x 1
12	Nut (M8) x 12
13	Nut (M10) x 2
14	Washer (M8) x 6
15	Spring Washer x 5
16	Top Hat Washer (M10) x 2
17	Washer (M10) x 2



Detailed View B

Step Unit Assembly

1. Step Units comprise Step Platforms (with or without a Kerb) and Step Handrails which are bolted together and can be either wall fixed independent of ramp, or 'hung' from a platform when used in conjunction with a ramp (for the purpose of this guide, we will focus on the latter).

2. The handrails have 13 punched 'zigzag' holes to enable each step to be move independently so that the distance between the floor and the platform can be more equally divided.

3. Insert a Leg/Foot into the bottom upright of the Step Handrail at a suitable height exactly as described for attaching the handrails to the platform/ramp sections.

4. Determine the height of the bottom step (keeping in mind that each step should be equally distanced) and offer the Step Platform to the handrail kerb and align holes.

5. Place the coach bolt through the step platform so that the thread protrudes through the outside of the handrail kerb. Place a nylon, and then metal washer over the exposed thread and secure with the domed nut.

6. Repeat this step for the other handrail and for all additional steps.

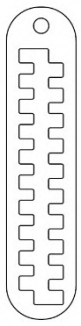
7. Subsequent adjustment can be made once the Step Handrails have been attached by slackening the bolts and moving the Step Platform to the desired position along the zig-zag slots, keeping it horizontal and whilst supporting both handrails. Once in the correct position, simply re-tighten the bolts.

It is important that the bolts used to fasten the Step Platforms to the Handrails, locate into the 'zig-zag' and not on the central line, to ensure a secure fixing. The slots on the step platforms enable you to slide the steps back and forth if require, so the kerb sits behind the front edge of the above step.

Attaching the Step Unit to a platform

1. Universal fixing brackets are used to attach the Step Unit to the Platform, using the Platform Fixing (PFXN).

2. The positioning of steps, whether centralised or to the left or right, will determine the location of the Universal Bracket (UBKT) on the platform section.



Attach the UBKT to the closest slot in line with the slots on the rear of the step platform – this will minimise the UBKT leaning at an angle. The thread of the Coach bolt should be on the inside with the domed head of the bolt 'on show', flush against the platform edge.

3. In the back of each Step Platform there are two locating slots; to fix the Step Unit to the UBKT, offer the assembled Step Unit to the platform and align the holes on the rear of the top step with the elongated 'zig-zag' slot on the Universal Bracket.

4. Push a coach bolt through the step platform so that thread protrudes through the UBKT and secure with an open flanged nut and hand tighten.

7. The 'zig-zag' slot on the UBKT allows you to adjust the final position of the Step Unit; fully tighten when you are satisfied with the position, and proceed to secure the front Feet to the floor.

Attaching the Connectors

1. The 3 main connectors (Corner (CCON) Connector, Angled (ACON) Connector and Straight (SCON) Connector) are designed so that the inner sleeve sits inside the handrail. The outer sleeve is designed to slide over the handrail.

Two people are likely to be required when working with handrails larger than 1m in length. A rubber mallet can be used with enough force to knock the handrails together, by hitting the uprights between the top handrail and midrail. The connectors have been designed to provide a 'friction fit' and so will require a degree of force to insert.

2. The connectors should be placed into position on one handrail, BUT NOT PUSHED FULLY ONTO THE RAIL. The next handrail is offered up to it and inserted into the connector. The process of pushing the handrail into position to locate the fixing holes along the bottom will ensure the connector is engaged equally on each rail.

3. The Wall (WCON) Connector has been designed to provide a continuous handrail all the way to the wall of the adjoining building. Fitted at the end of the vertical handrail, the Wall Connector (with the screw cover removed) is simply pushed against the wall, and the fixing locations marked. The WCON (and handrails/platform) is then removed, holes drilled, and the whole unit is repositioned and fixed to the wall before the flanged cover is replaced.

Timing is essential when using a WCON – you must ensure this is considered when installing the first threshold platform against the building. Also, don't forget to slide the cover back on BEFORE you insert the rail!

Attaching the Toe Plate

1. The Toe Plate is the last component to be attached to the ramp (unless bridging up to surface). Wherever possible it is recommended that the Toe Plate is bolted to the preceding platform section before it is installed

It is often difficult to secure the bolts of the Toe Plate to the preceding section given the limited space between the platform section and the ground – it is therefore important to remember to do this at this stage as forgetting, will mean either dismantling, or potentially attempting to lift a long ramp run to gain access, which is not recommended!

2. Once the ramp has been adjusted and its final position determined, screw down the front edge of the Toe Plate using all available holes along the front edge. Suitable fixings should be used so that the head of the fixing does not protrude, causing a potential trip hazard.

Attaching Trombone Ends

Two main groups of Trombone Ends exist, one which bolts on to the end of a Ramped Handrail, and one which is incorporated directly into a handrail itself. The latter is installed in the same way as a standard handrail as described above. A bolt-on handrail is installed using 2 x leg allen bolts (LAB) and a Straight (SCON) Connector as follows:

1. Place the SCON on the preceding rail and using a rubber mallet, knock the Trombone End on to the connector, stopping when the curved plate sits against or very close to the upright of the handrail. The holes on the plate should line up with the holes on the upright.

3. Use 2 x LAB and secure the plate to the upright so that it sits flush and repeat on the other side.

Three options of bolt-on Trombone End are available for use when a ramp descends, ascends, or bridges. Double check that you have the correct one before installing.

Finishing touches

1. Once the ramp is in its final position, you should always go around the ramp in a logical order ensuring each bolt is fully tightened.

2. All feet not already secured to the ground, should be secured using appropriate fixings.

We recommend the use of concrete screws as these do not require plugs – you can simply drill through the hole in the foot and screwed into position to secure.

3. Finally, wipe down all handrails, brush away all debris (especially where you have drilled into any concrete/masonry) and step back and take pride in the access installation you have just installed.

INSTALLATION COMPLETE!