

NoWeld

Modular Railing Systems

PRODUCT GUIDE / INSTALLATION PROCEDURE

INDUSTRIAL HANDRAIL



DDA ASSIST HANDRAIL



Recommended Tool/ Equipment/ Hardware:

- Utility Knife
- Chalk for Marking Concrete, Chalk Line
- String Line or Laser
- Tape Measure
- Spirit level
- Hammer Drill with the appropriate Drill bit
- Spanners or Impact Driver with the appropriate Socket
- Allen keys or Hex Bit
- Rubber mallet
- Marker
- Brush/ Vacuum
- Appropriate PPE

As required

- File/ Deburrer
- Angle grinder with cutting & grinding discs
- Packers
- Cold Galv and Touch up paint
- Solvent or cleaner
- Centre punch



Note: These installation procedures assume the substrate is concrete. Depending on the substrate or wall material, supplied fastening hardware may not be appropriate for specific installations. Please contact us if you are unsure whether you have the most appropriate fastening hardware.



Always refer to the National Construction Code (NCC) and applicable Australian Standards for job-specific requirements. The following information is provided as a general information guide only. Please consult with an architect and/or professional engineer for compliance.

The NCC provides the minimum requirements for health and safety, amenity and accessibility, and sustainability in the design, construction, performance and liveability of new buildings (and new building work in existing buildings) throughout Australia.

AS 1657:2018 sets out requirements for the design, selection, construction and installation of fixed platforms, walkways, stairways and ladders intended to provide safe access to places used by operating, inspection, maintenance and servicing personnel.

AS 1428.1:2021 sets out the design requirements for new building work, as required by the National Construction Code (NCC) and the Disability (Access to Premises—Buildings) Standards (Premises Standards), to provide access for people with disabilities.

An external independent NATA accredited laboratory has tested and accredited the typical installation of NoWeld Modular Industrial Handrail system to the requirements of AS 1657:2018.

TECHNICAL INFORMATION - INDUSTRIAL HANDRAIL

AS 1657:2018 Fixed Platforms, Walkways, Stairways and Ladders - Design, Construction and Installation

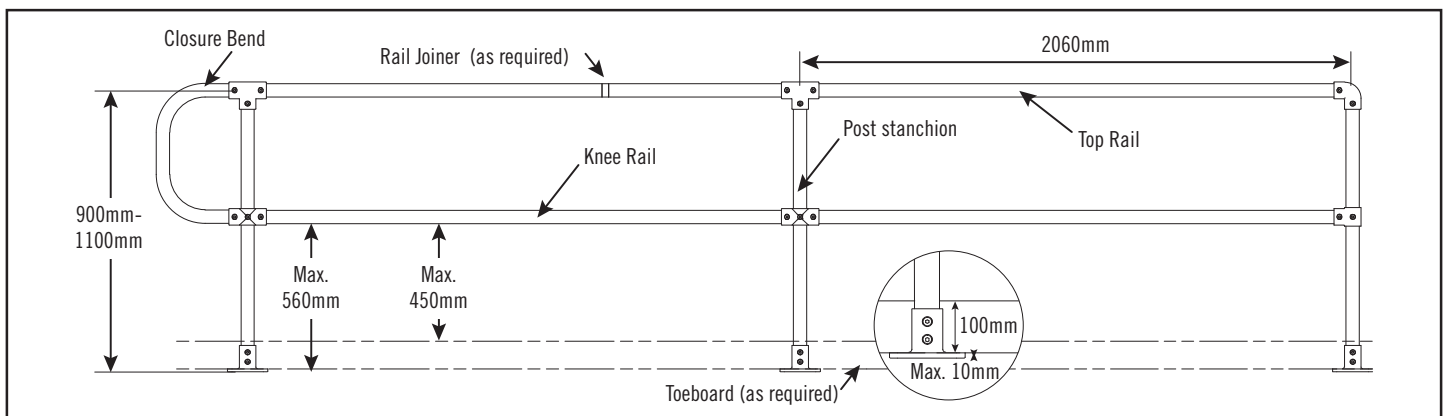


Figure (1) Measurement of NoWeld Modular Industrial Handrail system in accordance with AS1657:2018

Top Rail/ Industrial Handrail:

- The height of the top rail shall be between 900 - 1100mm above the finished floor level.
- The height of the top rail shall be consistent throughout the ramp, stair, and landing.

Kneerail/ Intermediate Rail:

- One or more knee rails shall be provided parallel with the top rail.
- A gap between the rails or between the lowest rail and toeboard, where fitted, shall not exceed 450mm.
- A gap between the lowest rail and the floor, where no toeboard is installed, shall not exceed 560 mm.

Toeboard:

- Provide a toeboard wherever an object could fall from a platform or landings in an accessible area.
- A gap between the underside of the toeboard and the walkway surface shall not exceed 10mm.
- The top of the toeboard shall be no less than 100mm above the finished floor level.



DO NOT perform any cutting, pre-drilling, or other dimensionally critical modification before receiving connectors.

TECHNICAL INFORMATION - DDA ASSIST HANDRAIL

AS 1428.1:2021 Design for Access and Mobility, General Requirements for Access-New Building Work

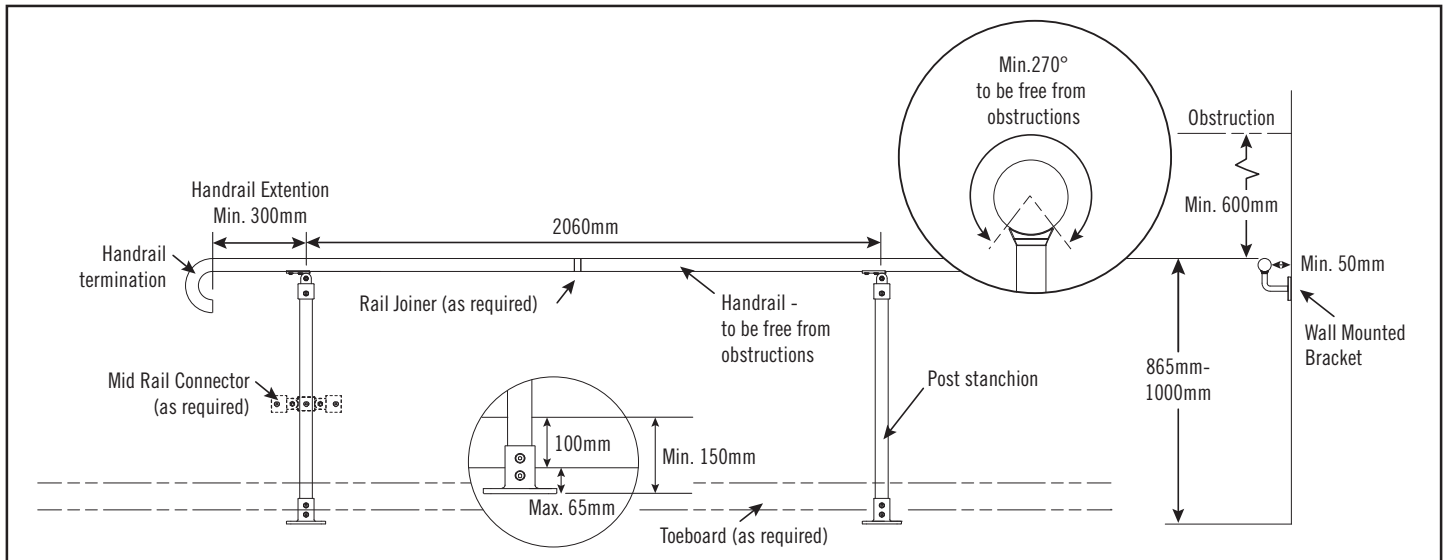


Figure (2) Measurement of NoWeld Modular DDA Assist Handrail system in accordance with AS1428.1:2021

DDA Assist Handrail:

- The handrail shall not encroach into the minimum required unobstructed width of a continuous accessible path being 1000mm.
- The top of the handrail shall be between 865- 1000mm above the nosing of stairway tread or the finished floor level of the walkway, landing or ramp.
- Handrail height shall be consistent throughout the ramp, stair and landing.
- Handrails are to be continuous and must not have any obstruction to the passage of a hand along the rail.
- The clearance between the handrail and an adjacent obstruction shall be no less than 50mm.
- The clearance between the handrail and obstruction above the handrail shall be no less than 600mm.
- Both guardrail and handrail shall be provided if a guardrail as fall protection is required at a height greater than the handrail (AS1428.1).
- **Handrail termination:** Turn the handrail through 180 ° or return to the end post or wall face.

Toeboard or Kerbrail

- Toeboard is required on ramps and their intermediate landings.
- The gap between the underside of the toeboard and the walkway surface must not exceed 65 mm.
- The top of the toeboard must be no less than 150mm above the floor.

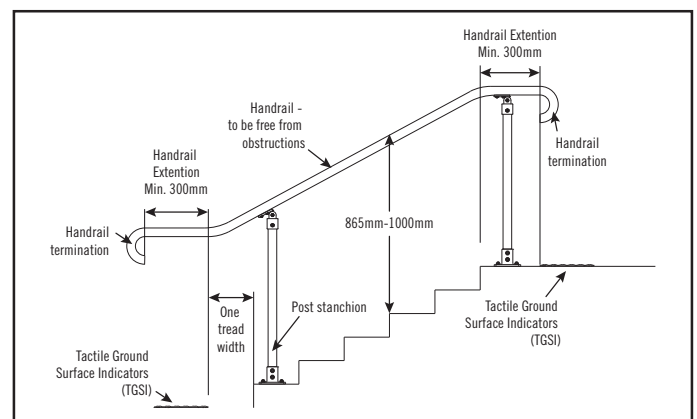


Figure (3) An example of an installation on stair in accordance with AS1428.1:2021

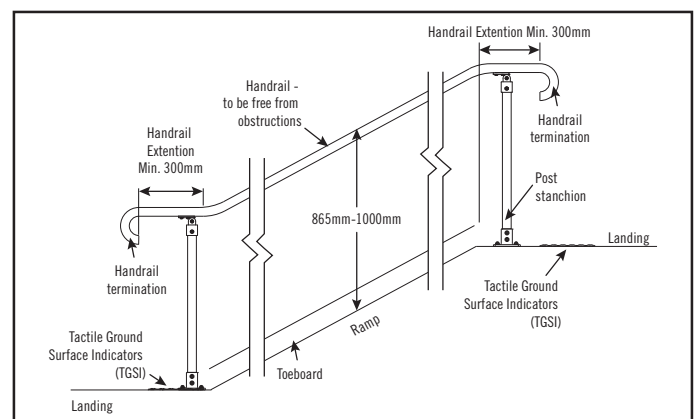


Figure (4) An example of an installation on ramp in accordance with AS1428.1:2021



DO NOT perform any cutting, pre-drilling, or other dimensionally critical modification before receiving connectors.

INSTALLATION PROCEDURE - INDUSTRIAL HANDRAIL TO AS1657 FOR THE TYPICAL SURFACE MOUNTED INSTALLATION INTO CONCRETE SUBSTRATE

1. Mark the layout and positioning of the railing system in the intended install area. Use a chalk line and tape measure to ensure accuracy. Mark the post centre.
recommended post centre for typical industrial railing installation, using a standard 2000mm rail, is 2060mm.

Note: If the No Weld railing system includes any swing gate (BFSG) installation, check the required post centre for swing gate installation.

2. Insert the upright post into the base mounting connector and loosely tighten the fixings.

Note: Insert the upright post to the full depth of the base mounting connectors.

3. Insert the knee rail connector (If the No Weld railing system includes any swing gate (BFSG) installation ,jump to Step 4). Then insert the top rail connector and loosely tighten the fixings at the desired position. **Note: Ensure the top rail and mid rail connectors are parallel to the base mounting connectors.**

4. No Weld Swing Gate installation

If the No Weld railing system includes any swing gate (BFSG) installation, attaching the provided gate mounting spacers (BFSG-NW) onto the post stanchion is essential before the top rail installation. The gate mounting spacers ensure the swing gate is fully supported when installed on the No Weld railing system.

Slide the provided gate mounting spacers onto the post and tighten the gate mounting spacers in position, as shown in Figure (5). Insert the top rail connector and loosely tighten the fixings.

Finalise the gate installation after completing the railing system installation—further steps below.

5. With the string line in place, mark the base flange fixing hole location. Continue down the run, marking the base mounting holes as required. Use a hammer drill to drill 12mm holes as marked, at a minimum depth of 75mm.
6. Install the pre-assembled post stanchion (from Step 2 & 3) with the supplied fastening hardware. Use a spirit level to ensure the post is level. Use packers as required. Tighten down the post stanchion securely.

7. **Continue to the next post** - insert the knee rail and top rail into the rail connectors on the post stanchion and lightly tighten the locking setscrews. Then, install the post stanchion following step 5.

Note: The recommended minimum rail insertion to the rail connector is 30mm.

8. Repeat step 7 until the run is finished.
9. When satisfied that the post and rail are plumb and at the correct height, tighten all connectors' locking setscrews adequately.
10. Complete the installation by finishing all open ends of rails with an end cap.

No Weld Swing Gate installation

Refer to IP55_Installation Procedure - Ball-Fence Swing Gate to complete the gate installation.

No Weld Toeboard installation

Refer to page 6.

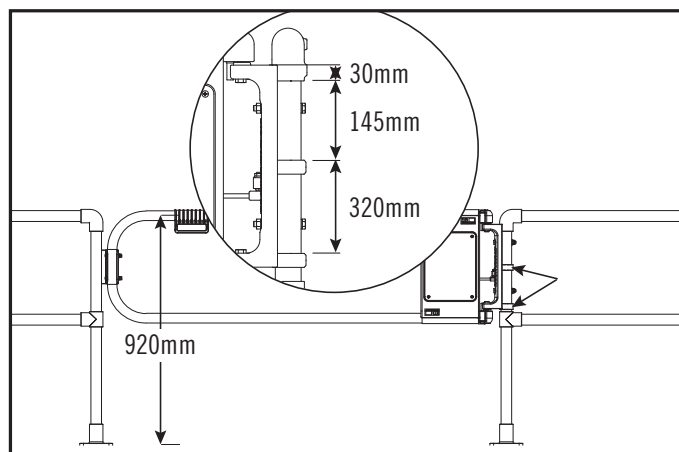
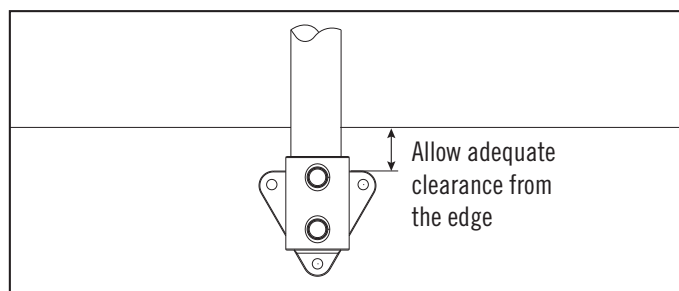
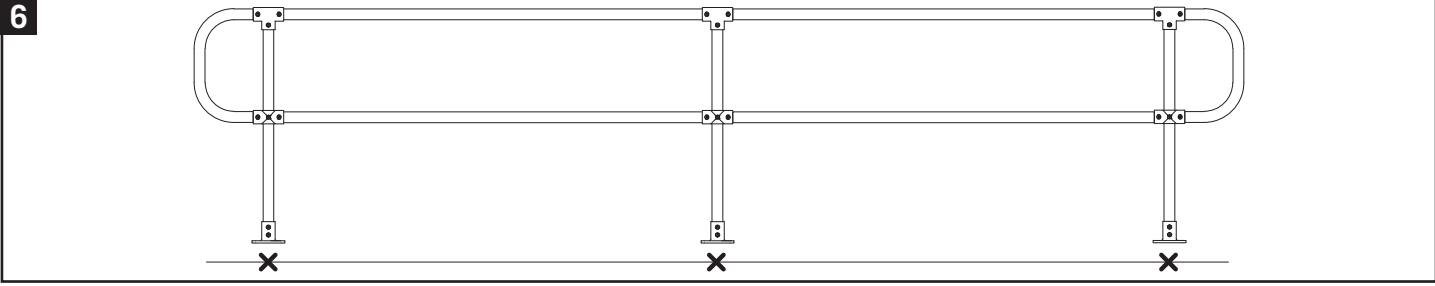
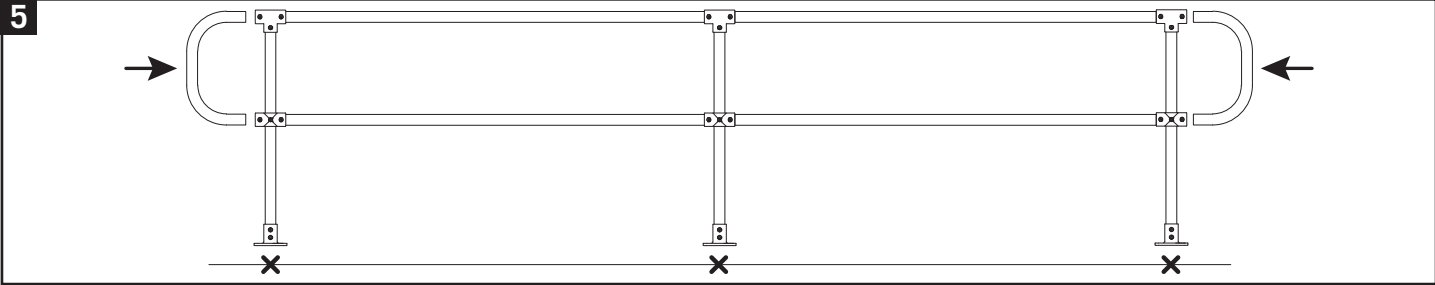
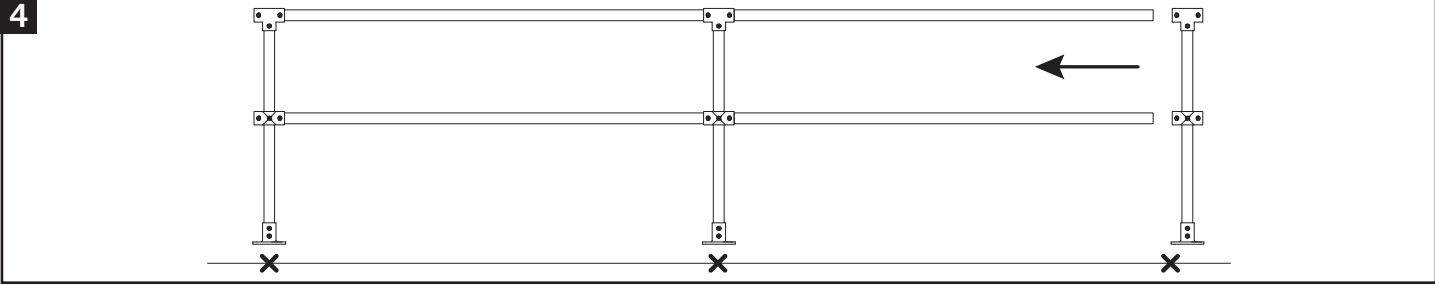
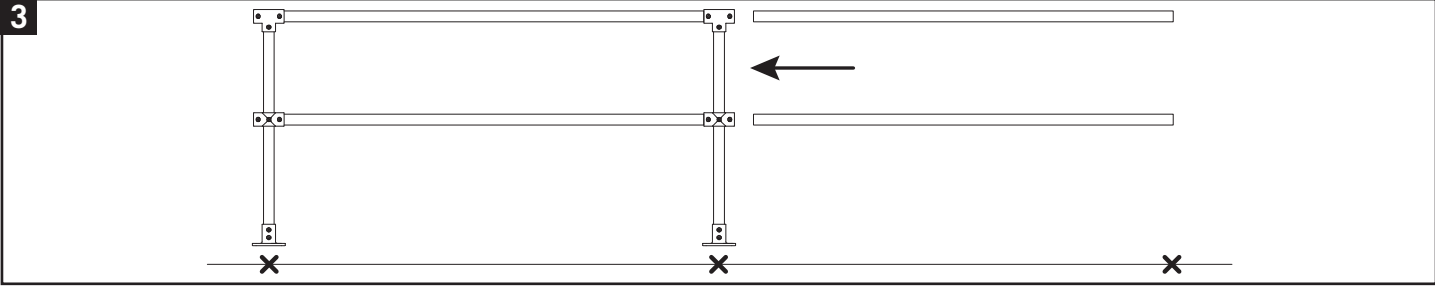
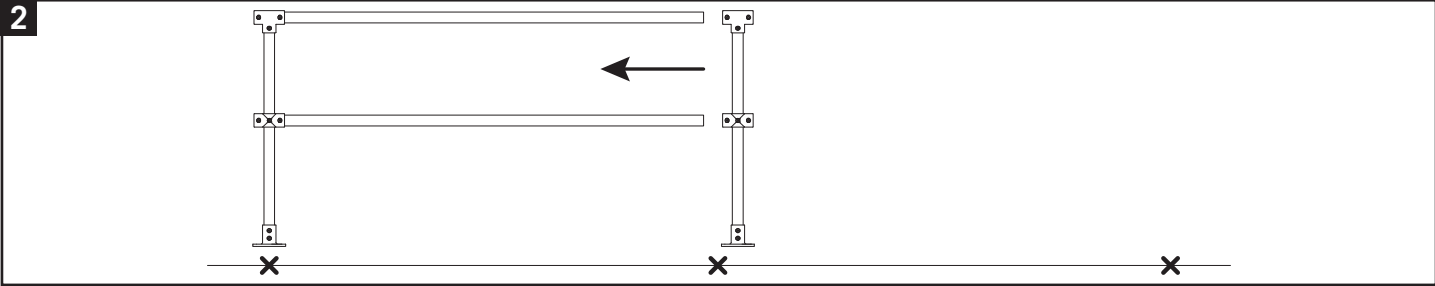
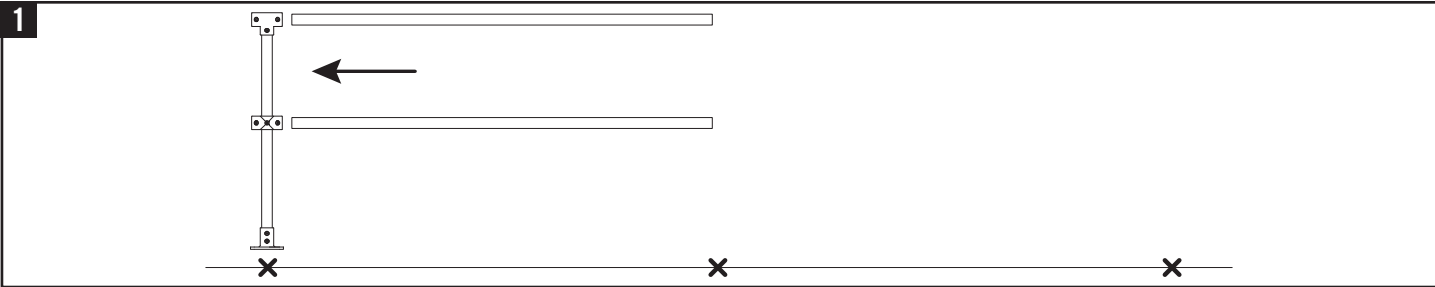


Figure (5) Positioning of the gate mounting spacer (BFSG-NW) for swing gate (BFSG) installation



SIDE MOUNT: For installation using side mounted flange, ensure to allow for adequate clearance from the edge.

INSTALLATION PROCEDURE - INDUSTRIAL HANDRAIL TO AS1657 FOR THE TYPICAL SURFACE MOUNTED INSTALLATION INTO CONCRETE SUBSTRATE



INSTALLATION PROCEDURE - DDA ASSIST HANDRAIL AS1428.1 FOR THE TYPICAL SURFACE MOUNTED INSTALLATION INTO CONCRETE SUBSTRATE

1. Mark the layout and positioning of the railing system in the intended install area's surface. Use a chalk line and tape measure to ensure accuracy. Mark the post centre. recommended post centre for typical assist handrail installation, using standard 2000mm rail, is 2060mm.

2. Insert the upright post into the base mounting connector and loosely tighten the fixings.

Note: Insert the upright post to the full depth of the base mounting connectors

3. If required, insert the mid rail connector and loosely tighten the fixings at the desired position.

Note: Ensure mid rail connectors are parallel to the base mounting connectors.

4. With the string line in place, mark the base flange fixing hole location. Continue down the run, marking the base mounting holes as required. Use a hammer drill to drill 12mm holes as marked, at a minimum depth of 75mm.

5. Install the pre-assembled post stanchion (from Step 2 & 3) with the supplied fastening hardware. Use a spirit level to ensure the post is level. Use packers as required. Tighten down the post stanchion securely.

6. **Continue to the next post** - If required, insert the mid rail into the mid rail connector on the post stanchion and tighten locking setscrews lightly. Then, install the post stanchion following step 5.

7. Repeat step 6 until the run is finished.

8. Install the adjustable angle post saddle connector on the post stanchion. Position the adjustable angle post saddle connector to be parallel to the ground surface and securely set the angle position by loosely tightening the bolt on the adjustable angle post saddle connector.

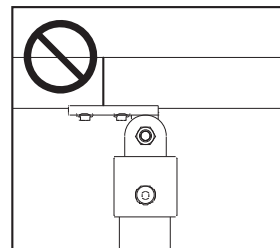


Figure (6) **DO NOT** join two lengths of railing at the adjustable angle post saddle connector

9. If handrails are required joining - assemble two lengths of the 2000mm rails with a joiner.

Note: Position the handrail joiners away from the mounting flange. DO NOT join two railing lengths at the adjustable angle post saddle connector, as shown in Figure (6).

10. Place the rail onto the flange of the adjustable angle post saddle connector. Mark the position of the inner and outer screw locations on the rail with a marker.

Note: Ensure the handrail terminations are positioned at both railing ends. Ensure the grub screw for all joiners is facing the ground.

11. Centre punch the outer screw hole if required and drill the outer hole with a suitable size drill bit from under the rail. Using the supplied self-tapping screw, install the first mounting screw. Remove the rail section and the rail fitting from the post.

12. Centre punch the now accessible inner fixing hole on the rail and drill to the correct size. Secure the rail with the inner fixing and ensure both fixings are tight. Re-install the rail section on top of the post.

13. Repeat step 9 through to 12 until the run is finished.

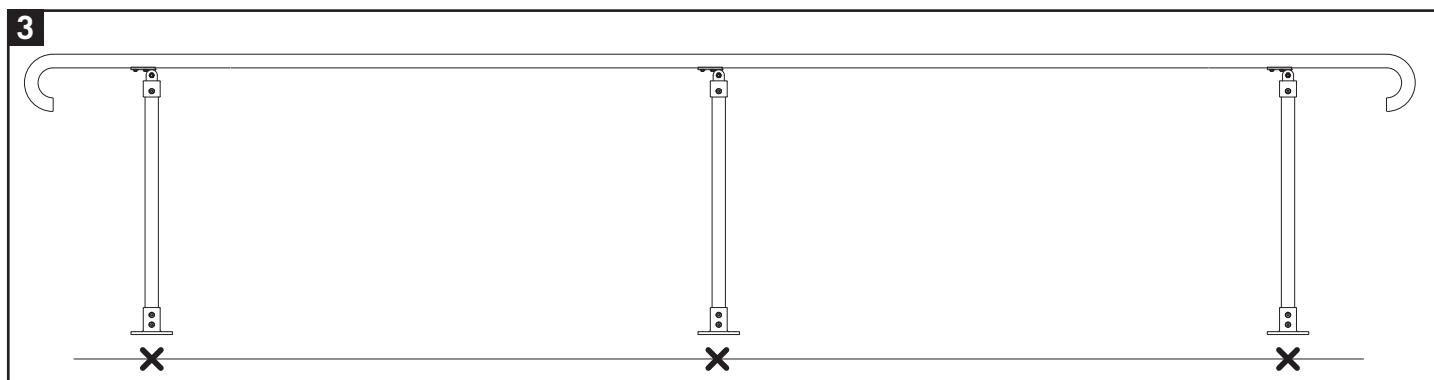
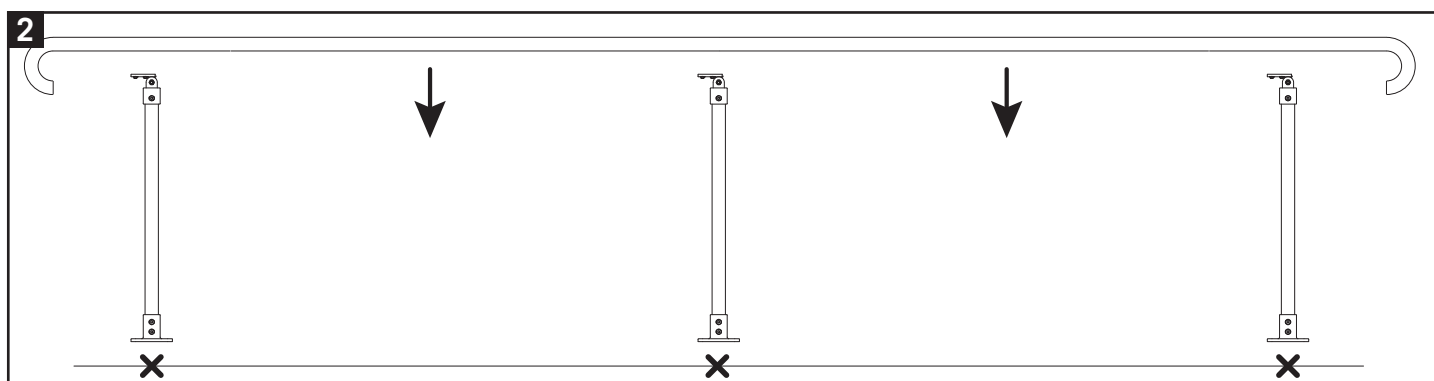
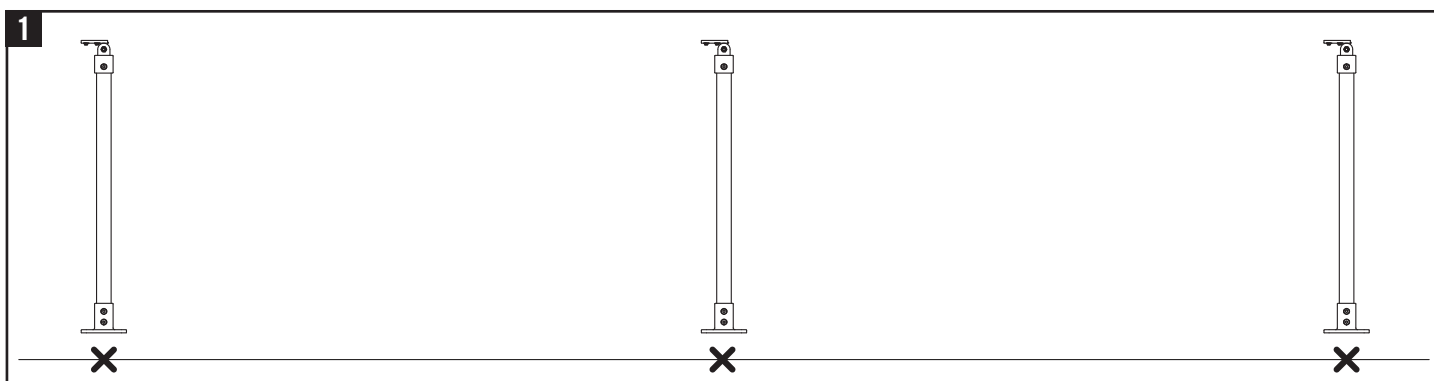
14. When satisfied that the post and rail are plumb and at the correct height, tighten all connectors' locking setscrews adequately.

15. Complete the installation by finishing all open ends of rails with an end cap.

No Weld Toeboard installation

Refer to page 6.

INSTALLATION PROCEDURE - DDA ASSIST HANDRAIL AS1428.1 FOR THE TYPICAL SURFACE MOUNTED INSTALLATION INTO CONCRETE SUBSTRATE



INSTALLATION CHECKLIST

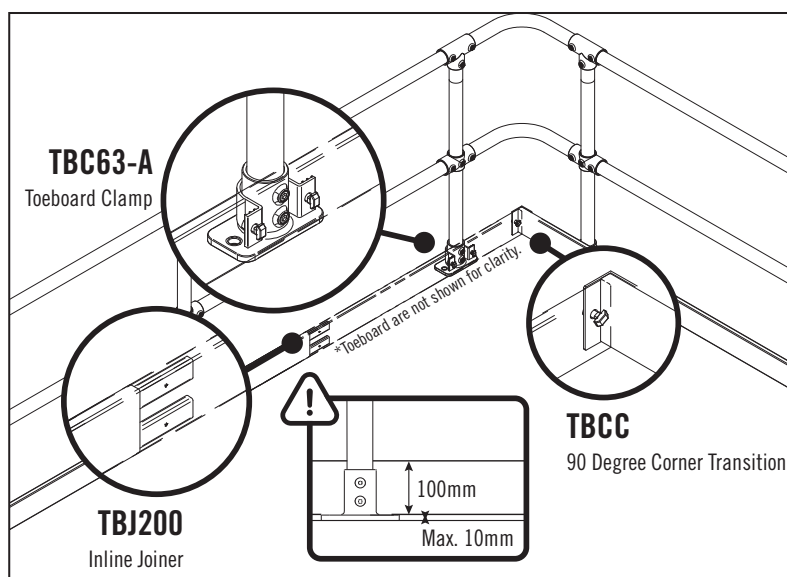
- Remove any exposed/ sharp edges from cut pipe ends.
- Treat all cut, and unprotected pipe ends with Cold Galv or rust inhibitor paint.
- Install the post and rail in compliance with applicable Australian Standards/ Building Code.
- Ensure that the post and rail are levels, plumb and rigid.
- Tighten all locking setscrews adequately.

INSTALLATION PROCEDURE - INDUSTRIAL TOEBOARD TO AS1657 FOR THE TYPICAL SURFACE MOUNTED INSTALLATION

1. Position the toeboard in the required installation area on the walkway-side face, 10mm above the floor level.
2. Mark and trim the toeboard as required.
3. Position the toeboard clamp around the base flange or post. Secure the toeboard to the toeboard clamp using the Tee-bolts. Repeat this process until you've attached all toeboards to the post using the toeboard clamp.

Use the inline joining or corner transition bracket as required.

4. Once satisfied, tighten all fixings adequately.



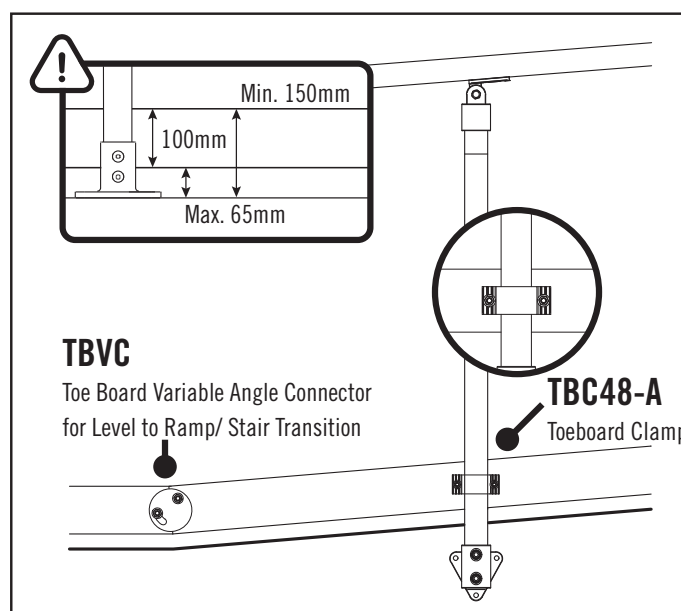
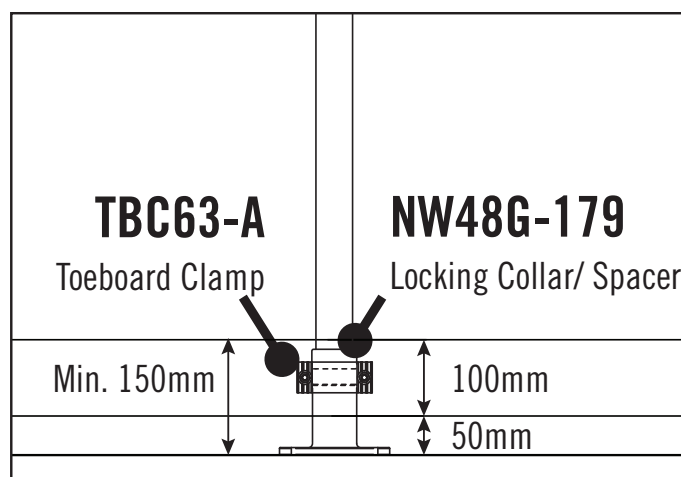
INSTALLATION PROCEDURE - DDA ASSIST TOEBOARD TO AS1428.1 FOR THE TYPICAL SURFACE MOUNTED INSTALLATION

1. Position the toeboard in the required installation area on the walkway-side face, 50mm above the floor level.
2. Mark and trim the toeboard as required.
3. Position the toeboard clamp around the base flange or post. Secure the toeboard to the toeboard clamp using the Tee-bolts. Repeat this process until you've attached all toeboards to the post using the toeboard clamp.

For the Surface Mount Flange, we recommend using the NW48G-179 locking collar as a spacer at the desired height to ensure the TBC63-A aligns level with the toeboard.

Use the inline joining or corner transition bracket as required.

4. Once satisfied, tighten all fixings adequately.



INSTALLATION CHECKLIST

- Remove any exposed/ sharp edges from cut pipe ends.
- Treat all cut, and unprotected pipe ends with Cold Galv or rust inhibitor paint.
- Install the post and rail in compliance with applicable Australian Standards/ Building Code.
- Ensure that the post and rail are levels, plumb and rigid.
- Tighten all locking setscrews adequately.