

INSTALLATION GUIDE

The Porta Handrail System offers a versatile solution for both internal and external applications. Its range of handrail components ensures adaptability across various projects, making it ideal for residential and commercial handrail installations. The system is designed for fast and flexible on-site assembly and complies with Australian Standard AS/NZS1428.1 Design for access and mobility.

Key features:



Easy and quick installation.



Suitable for both internal and external environments.



Manufactured using high-quality stainless steel - 316 grade satin finish and 304 grade matt black.



Wall brackets supplied with both curved and flat timber plates, suitable for round or flat handrails.

BEFORE COMMENCING INSTALLATION

Before starting your installation, follow these important steps:

Compliance Check:

Ensure your project adheres to the national and local building codes.

Materials:

Confirm you have sufficient timber handrails, components, adhesives, and fasteners to complete installation.

Timber Preparation:

Apply a clear coat, stain, or oil to the timber handrails to protect and enhance the natural appearance.

Required Tools and Equipment:

- Measuring tape
- Stud finder
- Drill, drill bits, and screwdriver
- Additional timber screws (verify with box contents)
- Laser or spirit level
- Clamps
- Painter's tape
- Pencil

COMPONENTS



Wall Bracket



Connector Jig



Bend - 90°



Adjustable Bend
0° - 70°



Joiner



End Cap

INSTALLATION OF HANDRAIL AND BRACKETS

Positioning of Brackets

Bracket Placement:

Brackets should ideally be fixed to wall studs, with a maximum spacing of 900mm between them.

Marking:

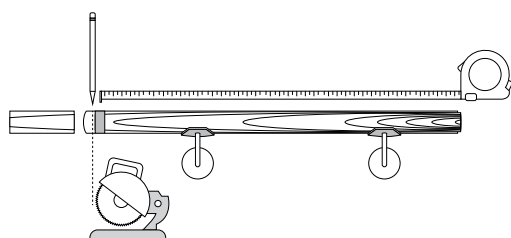
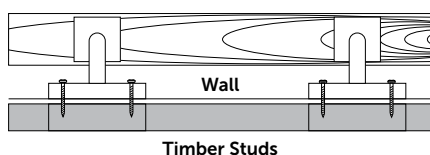
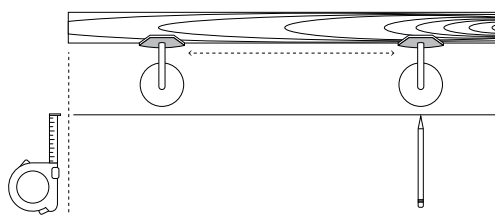
Measure and mark the bracket positions on the wall. Check with local building codes to ensure height requirements are met.

Fixing Options:

It is important that the wall bracket is securely fixed into a suitable substrate, e.g. solid timber or masonry. We recommend using a Pan Head 12g screw when fixing into stud walls or dressed running boards.

- **Wall Studs:** Secure brackets into studs using appropriate fasteners.
- **Masonry:** Use specialist masonry fixing hardware for direct installation onto masonry surfaces. Wall brackets are not recommended for fixing directly to plasterboard.
- **Timber Running Board:** An alternative fixing option is to install a dressed timber running board (DAR) to the wall, ensuring the running board is securely fixed into the studs. This will provide flexibility when positioning the wall brackets. For a stylish interior option, a timber running board (DAR timber) can be fixed to the stud wall, allowing brackets to be installed at any point along the board.

Bracket Installation



1. Measure Handrail Height

Determine the required height of the handrail, then measure 110mm down to align the bottom of the brackets. Mark this position using a pencil or laser level. Locate and install the brackets at a maximum of 900mm centres.

2. Secure the Brackets

Fixings must support a minimum 60kg load. It is important that the wall bracket is securely fixed into a suitable substrate, e.g. solid timber or masonry. We recommend using a Pan Head 12g screw when fixing into stud walls or dressed running boards.

3. Handrail Preparation

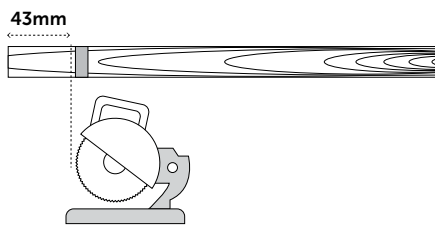
- Place the handrail on the brackets and mark the desired length.
- Cut the timber handrail using an 80-100 tooth saw for smooth cutting.

⚠ To protect the cut area, apply masking tape before cutting.

- Sand the Edges: Sand the cut edge with fine sandpaper (220 grit) to create a slight bevel.

CONNECTING FITTINGS

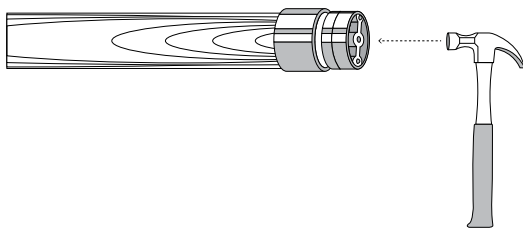
When building a handrail system using 43mm dowel, the Connector component is essential for attaching different fittings to the timber handrail. Connectors are provided with all connecting fittings. The Connector Jig is used in conjunction with the Connector to accurately position the Connector on the 43mm dowel.



1. Prepare the Handrail

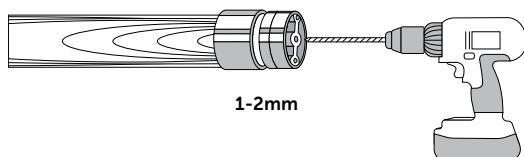
Ensure the end of the 43mm timber handrail is cut square using a fine-tooth saw (80-100 tooth).

⚠ Apply masking tape over the cut area to achieve a smooth finish. Remove tape once cut.



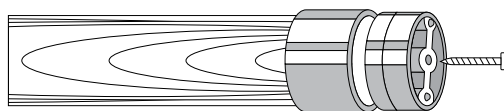
2. Positioning the Connector Jig

Place the Connector Jig on the end of the handrail, with the two bumps facing the timber dowel. Tap the Jig with a hammer to create small indentations in the timber, which will help position the Connector securely.



3. Drill Pilot Hole

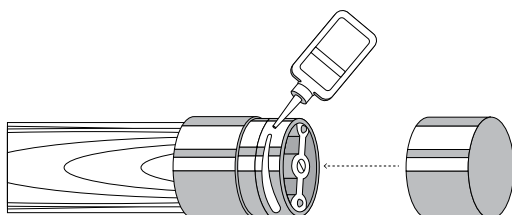
Use a 3.0mm drill bit to create a shallow pilot hole (1-2mm depth) at the center of the handrail. This step will help align the Connector screw accurately.



4. Attach the Connector

Attach the Connector using a #10 gauge x 50mm countersunk screw.

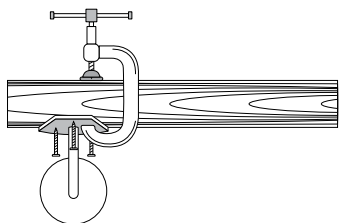
⚠ A small amount of candle wax on the screw will help secure the Connector position as you drive the screw into place.



5. Apply Adhesive

- Apply a high-strength adhesive (e.g. Loctite® 680™) to the Connector and inside the chosen fitting (e.g. End Cap, Adjustable Bend).
- Attach the fitting to the Connector and make any necessary alignment adjustments before the adhesive cures.

FINISHING



Bracket Installation

Rest or clamp the handrail onto the brackets and secure it with countersunk head screws.

1. Attach the handrail onto the brackets and secure it with countersunk head screws.
2. Once installed, inspect the handrail for any touch-ups needed to the clear coat, stain, or oil. Before applying the finish, cover the fittings with masking tape to protect them from overspray or drips. Apply the finish sparingly to maintain consistency if required.
3. Carefully remove the masking tape, ensuring no residue remains on the handrail or fittings.

Positioning of Corners

For bends or height changes in the handrail, install a fixed or flexible bend component as needed. Ensure additional brackets are placed near the bend junction for extra support.