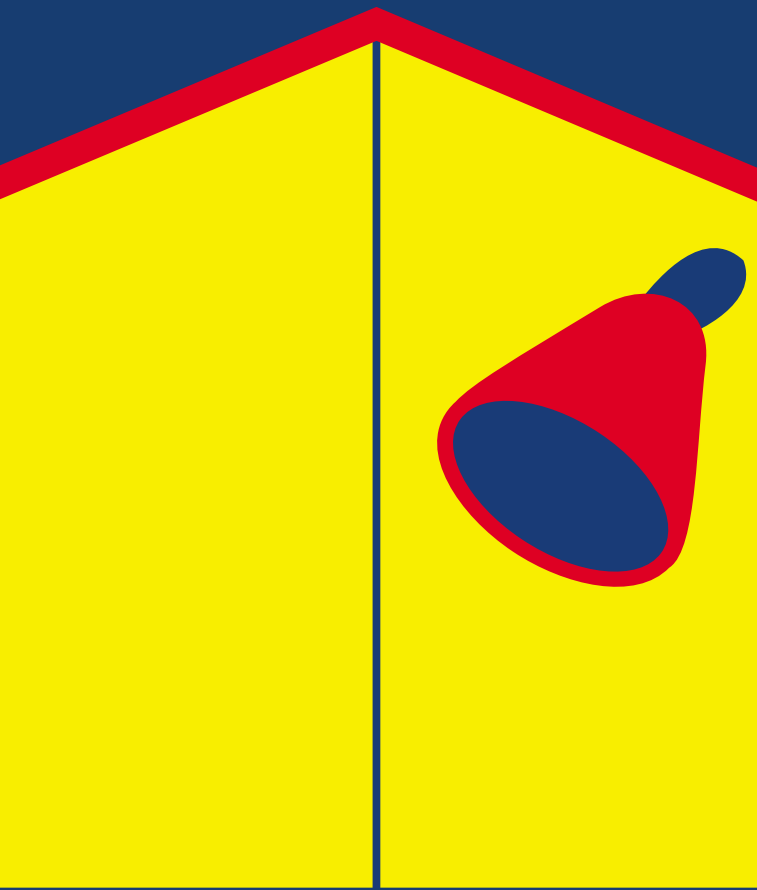


*Know how. Can do.*

# Fitting bathroom panels and shower linings.



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## Fitting shower or bath panels

Fitting a completely new shower box is a job best left to a tradesperson. However, fitting or replacing wet wall panels in a shower or around a bath can be handled by a careful, 'Do it Yourselfer'. A range of colours, patterns and colour matched jointing options make it possible to achieve eye-catching effects with your panels.

### Types of panels available:

- Hardboard with high pressure laminate surface.
- Oil tempered hardboard with a polyurethane paint surface.
- Fibre cement with a polyurethane paint surface.

All need to be fixed to, and supported by, framing or lining. All have glossy water resistant faces, but the backing boards have varying degrees of resistance to moisture.

**Note:** It's crucial to achieve:

- **Accurate cutting and fitting of sheets.** If the sheet is cut small, coverage in the jointers could be inadequate. If cut too large, the panels may not stick to the glue and may bulge or break jointers.
- **Firm gluing** to support the whole panel.
- **Joint and edge sealing** against moisture entry where appropriate. Leaks through jointers or flashings can rot battens, framing and flooring. By the time the problem is obvious, considerable damage may have already been done.

### Tool checklist

- Caulking gun
- Hammer
- Nail punch
- Sharp craft knife
- File
- Pencil
- Fine toothed panel saw, circular saw or router
- Hacksaw (for cutting PVC or aluminium mouldings)
- Paint brush for sealer

### Materials checklist

- Wet wall panels
- Jointers
- Construction glue
- Silicone sealant
- 12mm galvanised nails
- Batten timber and nails if required
- Sealer for hardboard backed panels and brush cleaner

## JOINTING OPTIONS:

There are three main jointing options available for use with wet area panels. PVC jointers, aluminium mouldings and silicone sealant. These protect edges, seal joints and provide flashing where panels meet the bath, other wall linings or cabinets.

### 1. Installing panels using PVC Jointers:

To ensure a neat & waterproof finish:

- Plan before cutting. Always cut the PVC mouldings with a fine tooth panel saw. Mitre corners, or cut away the back of jointers slightly to allow them to fit tightly in front. Otherwise, gaps look unsightly and are difficult to seal neatly.
- To prevent water entry, the traditional one piece jointer provides a very tight fit. If it is difficult to insert the sheet edge, especially the back panel in a shower box, it can be sprung into place. Take great care to get the measurement right, because if the panel has been cut even slightly too wide, it will then be very difficult to remove for trimming. Two piece jointers are easier and more accurate to use than one piece.

### **Fixing procedure**

- Firmly fix the jointer base strips where needed to corners, walls and edges.
- Fit panels dry (without glue) to check size. Trim size if necessary. Use a hand or electric plane for hardboard backed, or a rasp for fibre-cement backed panels.
- Glue one wall at a time. Run a fine line of silicone into the jointers where recommended by manufacturer's instructions to stop water leaking around panel edges.
- Fit panels in place, pressing well onto glue (and silicone if used).
- After all panels are fitted, press capping strips into place (for two piece jointers).

## **2. Installing panels using aluminium mouldings:**

- Aluminium mouldings (jointers) should be screw fixed or glued in place. Countersink screws at 300mm centres.
- For wet areas, apply a thin continuous bead of antifungal silicone into the jointer recess before inserting the panel.
- If you have difficulty inserting panels into jointers, lightly sand the edge on the back of the panel.
- Apply construction adhesive to the framing or substrate as per manufacturer's fixing instructions.
- Insert panel into fixed jointer.
- If fixing using construction adhesive, transfer half the adhesive to the panel, by lightly pressing the panel into place momentarily, then removing. When adhesive is "touch dry", re-insert the panel into jointer.
- Ensure the edge of the panel is plumb and correctly aligned in the fixed jointer.
- Once the construction adhesive is in place, press the panel firmly onto the centre stud, add jointer to trailing edge, then nail or screw fix trailing jointer to stud.
- Wipe off excess silicone sealant with a damp cloth.
- Continue installing by inserting each new panel into the jointer of the previous panel. Nail, screw fix or glue jointers to studs as you go.

- Check for adhesive and silicone spillage, and clean off if necessary.

### **3. Installing panels using silicone sealant:**

Silicone sealant can be used as a jointing method whether the panels are being installed over fully lined walls (eg. plasterboard) or direct to timber framing.

At the starting point

- Determine where the joints will be and fix a bond breaker tape to the framing/substrate (the bond breaker tape allows for movement).
- Fix stop nails (i.e. 2.5mm clouts) in the centre of the framing, through the bond breaker tape - one nail 400mm from the ceiling and one 400mm from the floor.
- Apply construction adhesive to the framing or substrate as per manufacturer's recommendations and fixing instructions. Avoid applying adhesive to the bond breaker tape.
- Transfer half the construction adhesive to the panel by lightly pressing the panel into place momentarily, then removing. When adhesive is "touch dry" as per manufacturer's instructions, reposition the panel against the stop nails.
- Press the panel firmly onto the centre of framing.
- Fix stop nails, as before, to the trailing edge of the panel to provide a 2-3mm gap.
- Hold the panel edges against the stud while the adhesive cures using blocks fixed to framing with small diameter nails.
- Continue the process until panel installation is complete.
- Carefully remove stop nails as you go.
- Clean out any adhesive showing between the panels.
- Once adhesive cures, remove blocking.
- Carefully apply 20mm masking tape to panel edges.
- Cut the nozzle of the silicone tube to create an aperture slightly larger than the gap.
- Apply a consistent bead of silicone in gap so that it is flush with panel surface.
- Once the gap is filled, remove the excess silicone with a clean tool (plastic spoon), or a clean gloved finger.
- Clean any excess silicone off panel front by using a clean cloth and a cleaning agent specified.
- Immediately after silicone is applied, remove masking tape in one continuous movement.
- After tape is removed do not touch the silicone until it is completely cured.
- Once silicone has cured, remove remaining protective film and clean panel surfaces.

### **Maintaining a silicone joint:**

- never wipe sealant with an UNGLOVED finger.
- Tool used to finish sealant surface must be free of soap or saliva.
- Mould can grow in wet or steamy areas if attention is not paid to adequate ventilation.

## **WORKING WITH PANELS**

### **1. Storing the panels**

Store them face to face in pairs to protect the surfaces.

### **2. Cutting the panels**

Always support panels on saw horses and planks when cutting. Read the manufacturer's instructions.

**Fibre cement boards:** Score deeply with a tungsten scoring knife, then break along the line.

**Hardboard and laminate boards when cutting with a:**

**Handsaw:** CUT FROM FRONT OF SHEET. Use a fine tooth saw at a shallow angle.

**Circular saw:** CUT FROM BACK OF SHEET. A large blade with small teeth will avoid chipping. Ensure only 5mm of the blade is protruding through the panel. When measuring and marking on the back, double check which side you are measuring from. Run against a guide for long cuts. The face of the panel should be supported with scrap material.

**Jig-saw:** CUT FROM BACK. Use a fine toothed blade. Run against a guide for long cuts.

Sand cut edges smooth with hand sandpaper. Important: Seal any cut-outs with an oil-based polyurethane or Everdure type sealer. Allow to dry completely before installation.

### **3. What substrates the panel can be glued to:**

Wet wall sheets can be glued to:

- Timber with a moisture content of 18% or less: framing timber straps fixed to brick or blockwork.
- Plasterboard linings
- Old ceramic tiles, as long as they are sound.

## **INSTALLATION INSTRUCTIONS FOR DIFFERENT AREAS OF THE BATHROOM:**

There are three main areas in the bathroom where a competent DIYer might use wet area panels.

### **Lining a shower box**

1. Check the walls you are gluing onto. They should be straight, plumb (vertical) and dry, with no rot.

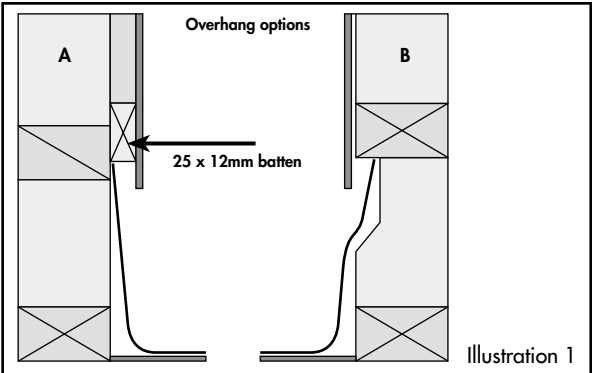
2. To avoid capillary action dragging water up behind the sheets, the bottom edge of shower panels should sit about 12mm out from the shower upstand behind. If you are replacing existing shower panels, that offset may already be there. If not, you need to create it.

- Creating the overhang

Sit the shower tray in place. Check for level. Draw a line around the walls / studs 4mm above its top edge.

On bare studs either

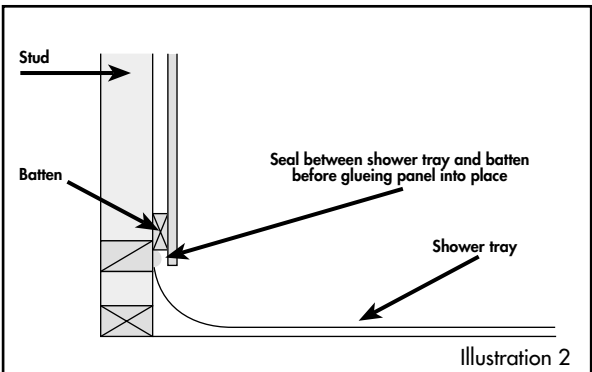
- a) Fix a continuous horizontal H3 treated batten around the walls on that line, and batten the walls above, so the new panels sit out 12mm or more from the studs. (See A on Illustration 1).



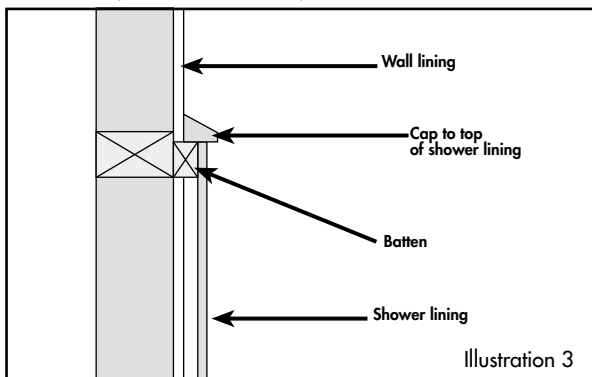
- b) Cut a notch from the studs all round to allow the top of the tray to be set in. This can make it difficult to fit the tray. (See B on Illustration 1).

3. Set shower tray in place:

Tighten drain connection to hold tray steady. Using a mould resistant sealant, seal between top of shower tray and batten/framing. (See Illustration 2). Take care to keep sealant off any surfaces you will be glueing.



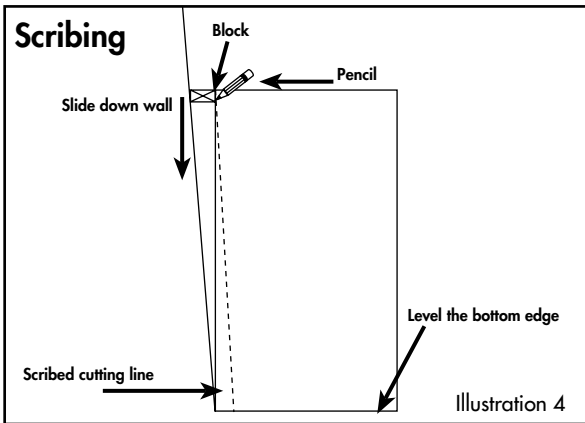
4. Fit back corner jointers. Nail the backing strip into corners using 12mm galvanised flathead nails.
- TIP** Avoid damaging the PVC jointer. Start nails with a hammer, then drive home using a nail punch.
5. Cut back panel to width. Measure between the two back jointers. **Check top AND bottom in case it isn't dead plumb.** Allow room for thermal expansion of the panel on each side: between 0mm and 2mm depending on the type. Check manufacturer's leaflet.
  6. "Dry" fit the panel into place. Check the clearances all around. Check the bottom edge is at the right height and level. The panel should hang below the batten and sit out from the sealant. (See Illustration 3)
  7. Apply glue to the back wall. Check the manufacturer's information leaflet. Usually strips or **splodges** of adhesive at about 400mm centres are advised. Depending on the adhesive, you may need to wait a few minutes for it to go tacky before positioning the sheet.
  8. Run silicone sealant into the jointer gap (if necessary). Seal the panel against the jointer without filling the clip-in channel.
  9. Set panel in place and brace if necessary while glue dries. (See Illustration 3)



10. Fit first side panel (opposite the shower mixer and rose). Fit front edge jointer, and follow same procedure as back panel. Depending on how you finish at the front, you may not need an end cap. Brace the panel in place until the glue dries.
11. Fit mixer side panel. Holes must be cut for mixer and possibly shower rose. Do any necessary scribing before cutting any holes.

### Scribing

If your walls aren't plumb, you may need to scribe one or more of the panels next to them. (See Illustration 4)



Check the sheet is wide enough, with enough cover on the other side. If not, pack the wall out plumb.

How to scribe

Hold the adjacent panel in place at right angles to the off plumb wall. Level the bottom edge in the right position. There will be a gap between either the top or bottom of the panel and the wall it is to butt against. Measure the width of that gap at its widest.

Cut a block of scrap timber that width.

Have someone hold the panel steady against the wall. Slide the block down the panel, with one side running against the off plumb wall. Make a line down the panel with a pencil against the other side of the block. Cut along that line. The panel will now fit the contour of the adjacent wall.

### Cutting holes

Measure and mark the holes on the front face of the panel.

Cut them using a drill and saw (holesaw, jigsaw or keyhole saw).

Undercut the hole rather than overcut.

Enlarge and smooth with a file.

On hardboard backed panels, seal all cut edges with a priming paint.

Silicone and/or glue in place as for other panels.

Clean up any glue or sealer on the panels with kerosine or recommended cleaner before they dry.

### Lining around a bath

Largely the same process as with a shower but the mixer/tap end panel can need up to five holes cut in it. (taps, spout, mixer and rose). Measurements MUST be

accurate. Scribe before cutting any holes.

You will need:

1. Two panels in the back and a central vertical flat jointer.
2. Bath flashings to prevent water running down the wall and under the bath. They must be fitted and sealed properly.
3. To lay several layers of drop cloth in the bottom of the bath to protect the surface.

## Installing bath flashing

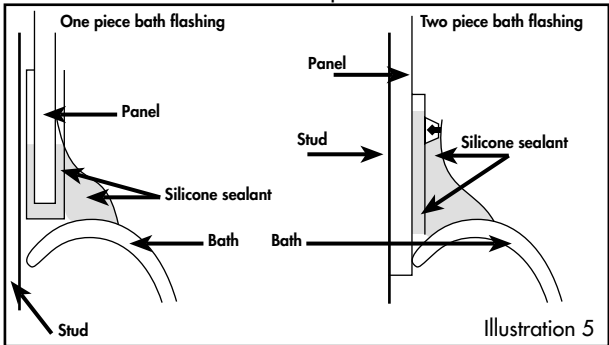
Bath flashing has to be fixed to studs or battens. Check there's adequate fixing at flashing height around the top of the bath BEFORE fixing any panels.

### Bath flashing types

One piece flashing is fixed to studs or wall lining on top of the bath rim. The panel is slipped in as it is glued to the wall. This means the panel has to be cut to exact length.

Two piece universal flashing allows the panel to be glued to the wall, running below the top of the bath.

The flashing base strip is fixed to the face of the panel. The bath flashing edge is pressed in and covers the nail heads. This means the panel does not have to be cut to an exact fit. Universal flashing is easier to use, but not always possible. Where a bath is set into the studs, there's no room for the panel to fit behind it.



### Installation:

1. Apply Silicone with plenty of mould resistant sealant between flashing and panel, and between flashing and top of bath. (See Illustration 5).
2. Where bath flashing meets in an internal corner, it should look mitred. Mitring both pieces can leave a gaping joint. Therefore it is better to scribe.
3. For two-piece flashing: Fit and glue all panels in place. Cut the back flashing to fit neatly between the

- two end panels. Cut away back slightly where necessary to accommodate corner mouldings. Don't mitre.
4. With a fine toothed saw, mitre the end of the side flashing at a 45° angle.
  5. Cut away the back of the flashing until it sits neatly over the back flashing: creating a mitred appearance.
  6. When it fits perfectly, hold in place and mark cutting length at other end.
  7. Cut and fix, sealing the mitre with silicone sealant.
  8. Repeat with flashing at other end.
  9. When finishing the front, sometimes there is nothing to finish flashing against at the front of a bath. In this situation there are 2 options:
    - a) Cut the flashing off at a slight angle, round the edges with fine sandpaper, then fill and smooth with matching colour silicone; or
    - b) Mitre the end in an external mitre. Cut another mitred wedge of moulding and fix it in place with matching silicone. Smooth off while the silicone is wet.
  10. In high moisture areas, it's important to finish everything properly before making prolonged use of the room. Finish all paintwork around the shower or bath. Run silicone sealant in any joints that might allow moisture to sit or seep through, eg between top edge of shower panel capping and wall. Ensure your plumber seals behind tap, rose and mixer flanges with silicone sealant.

A variety of other mouldings and jointers are available eg between plasterboard lining and shower panels.

Produced in association with



The Building Research Association of New Zealand

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