

DeltaTray Trent

Installation Guide With Linear Drain



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DeltaTray Trent shower tray formers have been developed to create elegant and luxurious wetrooms. The versatility of the components satisfies all possible bathroom layouts providing a totally waterproof solution. They are designed for installations that are to be finished with natural stone, ceramic or porcelain floor tiles.

Using DeltaTray Trent for your wetroom project provides versatility of installation. The easy to cut base allows the tray edges to be trimmed to suit site conditions providing complete flexibility, allowing the drain position to be altered avoiding obstruction from the floor joists.

The Trent shower tray formers are 30mm thick. Overlaying the surrounding floor area with DeltaBoard will create a level access, tile ready, waterproof and thermally insulated wetroom floor. Thermal insulation will optimise the performance of any electrical underfloor heating system installed onto your wetroom floor.

It is very important that you fully read through these instructions to familiarise yourself with processes and requirements set out before commencing installation of your Delta Tray Trent.

Tray Depth

Fall to drain -20mm (30mm Tray)



Building Regulations

All information is given as guidance and if adhered to will perform as intended. We fully guarantee the quality of our products, however, as we do not have knowledge of site conditions or the capability of the installer, we cannot accept liability for damage which may arise due to a result of incorrect installation. The information and advice provided by PCS does not override nor supersede building regulations. It is the responsibility of the user to seek professional guidance to ensure PCS products are compatible for their intended use and that the products comply with building regulations.

Important Information:

Mobility Access:

Tiles must be greater than 150mm x 150mm if installing mobility shower chairs and for wheelchair access.

DeltaTray is not designed for:

Tiles that are less than 8mm thick - Tiles that have a surface area less than 20mm x 20mm - vinyl floor coverings - solvent based adhesive - ready mixed adhesive.

Wastewater Connections:

All wastewater drainage connections must comply with building regulations code of practice: BS EN 12056-2:2000.

The minimum pipe gradient fall from the shower trap to the soil or drain, should be minimum 18mm/per mtr.

The maximum pipe discharge run from the shower trap, should be no more than 3 meters max, and sharp bends should be avoided.

If the shower tray is replacing a bath and the same discharge pipe is being used, the waste must be rodded straight through to the drainage final discharge point, to clear any debris which may be in the pipework prior to installation of the shower tray.

Non-return valves or secondary drain traps should not be connected to the wastewater run, as this can significantly reduce the drainage capacity of the shower tray.



Clear the working area from loose debris and grease. Place DeltaTray onto floorboard/chipboard to allow marking out of the tray perimeter onto the floor. When setting out the position of the tray it is important to remove the floorboard/chipboard past the edge of the tray and back to the centre of the next joist. Check that the position of the drain does not conflict with joists below the floorboard/chipboard.



If the drain conflicts with a joist or other obstruction, the tray sides can be trimmed to alter the drain position. Refer to trimming your DeltaTray for details.



With the tray position marked out, the floorboard/chipboard can now be removed. Following the markings on the floor cut through the floorboard using an electric saw. Check the saw blade is set to the correct depth to avoid damage to the existing joists or any pipework/electrical cables which may be concealed below.

NOTE: Check the planned position of the drain body is free of obstruction.



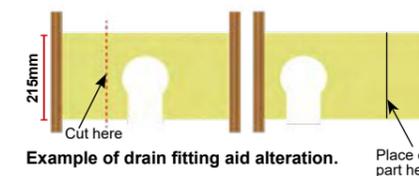
To support the drain fitting aid and the drain body, construct a platform to suit the waste position in the tray. It is important to make the platform 215mm wide to match the width of the drain fitting aid. Using screws and glue, securely fix 50mm x 25mm timber battens to the sides of the floor joists then fix a marine plywood supporting base onto the battens.

NOTE: Minimum 22mm thick plywood must be used to support the DeltaTray throughout the installation.



It is important when setting out the supporting platform to allow for the thickness of the drain fitting aid ensuring that it finishes flush with the top of the floor joists.

The drain fitting aid can be trimmed to suit the drain position of the DeltaTray.



Example of drain fitting aid alteration.



Once the platform is installed, place the drain fitting aid and drain body into position. Using 1/2" fix the waste pipe into the drain body using a suitable solvent weld.

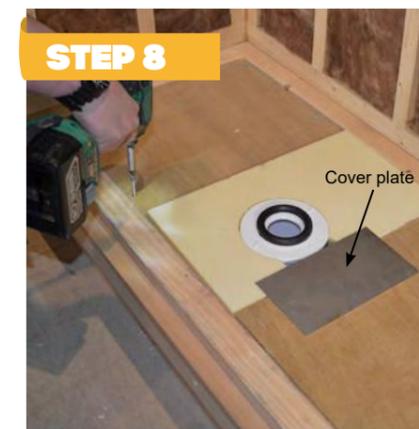
It is important at this stage to check for any leaks, as you may not be able to return to this assembly at a later date.

NOTE: Before any glue is applied, the position of the drain fitting aid must be checked by placing the DeltaTray in place.



With the drain body and waste route now installed and tested, a structural platform to support the DeltaTray must be fitted. This is achieved by securely fixing 50mm x 25mm timber battens to the sides of the floor joists. Position the battens below the top of the joists so that the Plywood platform finishes flush with the top of the joists. The battens should be fixed using glue and screws to the supporting joists.

NOTE: Minimum 22mm thick plywood must be used to support the DeltaTray throughout the installation.



With the battens secured, the plywood support platform must be fixed between the joists to support the entire base of the DeltaTray. The plywood should be screw fixed to the 50mm x 25mm timber battens and should now finish flush with the top of the floor joists. Place the stainless steel cover plate over the void in the drain fitting aid.



With the structural platform complete it is important to check the alignment of the drain body and the drain aperture in the DeltaTray. Make sure they are perfectly aligned and if necessary adjust accordingly. The DeltaTray should now fit onto the newly created platform but sit slightly proud of the remaining floor area. During preparation of the floor area, excess floorboard/chipboard may have been removed back to the next joist centre. This can be backfilled using marine plywood at the necessary thickness to suit.

Depending on the DeltaTray thickness, the height difference between tray and the surrounding floorboards can vary. This difference will be made level at a later stage by fixing DeltaBoard over the surrounding floor area.



STEP 10

With the installation of the supporting platform fully prepared and all checks complete, the DeltaTray can now be fixed into place. DeltaTray is permanently fixed in place using a good quality, cement based rapid setting flexible tile adhesive. Apply the adhesive with a thick bed notched trowel to the area where the DeltaTray is to be placed.

Be sure to apply adhesive over the stainless steel cover plate. When applying the adhesive around the drain it is important to leave a 10mm gap between the adhesive and the main rubber seal of the drain body.

NOTE: Should any adhesive come into contact with the rubber seal of the drain body, remove seal immediately and clean thoroughly with water before continuing.



STEP 11

With care place the DeltaTray into the adhesive. Make sure the rubber seal of the drain remains firmly seated on the drain body. Apply moderate pressure to the entire surface of the tray and around the drain aperture, making sure there are no hollow spots beneath the tray.

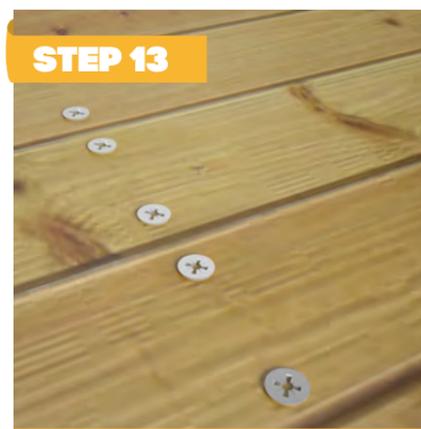
Using a spirit level make sure the DeltaTray is perfectly flat and level around perimeter. If the DeltaTray is set out of level, water will not flow to the drain correctly.



STEP 12

Using the securing tool supplied with the drain, screw the threaded waste collar into the drain body before the adhesive hardens. Care must be taken to fully tighten the assembly to ensure a watertight seal is achieved.

The securing tool should be left within the drain body at this stage to protect against debris falling into the drain during tiling and grouting.



STEP 13

With the DeltaTray fixed into the adhesive, the surrounding floor area can now be overlaid with DeltaBoard. It is very important that the existing floorboard/chipboard must be securely fastened to the joists using suitable screws. If previously fixed with nails, additional screws should still be used.

DeltaBoard is available in a wide range of thicknesses, however 6, 10 or 12.5mm DeltaBoard is usually sufficient to level the surrounding floor to the tray. DeltaBoard can be dry fixed directly to wooden floors using 35mm diameter PCS washers or if preferred, using cement based rapid setting flexible tile adhesive.



STEP 14

If the DeltaBoard is to be installed using a dry fix method, PCS washers should be positioned at approx. 200mm centres. It is important to use the correct length of screw to avoid penetration of the floorboard/chipboard when fixing the DeltaBoard in place.

The boards should be positioned in a brick bond fashion to stagger joints and checked to ensure there are no hollow spots beneath the boards. Hollow spots can be corrected by adding additional PCS washers and screws. We recommend levelling any unevenness of the surface using a cement based, flexible self-levelling compound prior to tiling.



STEP 15

If using a cement based adhesive to fix the DeltaBoard, the existing floor surface must be primed with a suitable floor primer (refer to adhesive packaging for instruction.) Apply a solid bed of adhesive using a thick bed notched trowel and firm down the DeltaBoard into the adhesive bed.

The boards should be laid in a brick bond fashion to stagger joints and checked to ensure all boards are level.

NOTE: It is important to apply joint bridging mesh or waterproofing tape to all joints and abutments prior to tiling. Ready mixed or solvent based tile adhesive MUST NOT be used.

Waterproofing & Joint Bridging

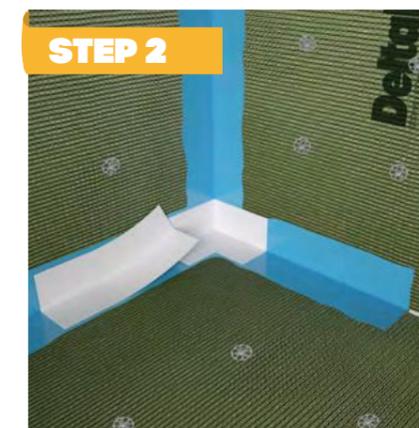
DeltaTray and DeltaBoard are waterproof elements manufactured ready to receive the application of tiles and do not require additional surface preparation. However it is essential that all joint and abutments in areas subject to moisture and water ingress must be bridged with a suitable waterproofing system prior tiling.



STEP 1

We highly recommend that all walls in the shower area are lined with DeltaBoards, creating a completely insulated, waterproof solution ready for the application of tiles.

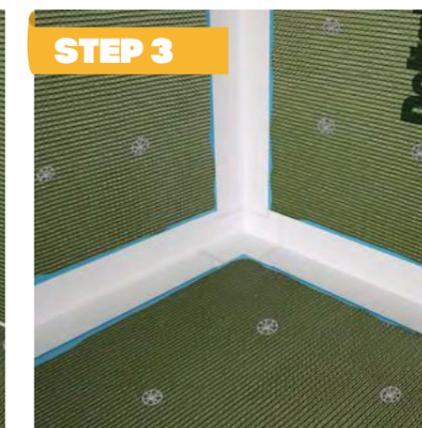
Apply a 5mm bead of DeltaSeal where the DeltaTray meets the walls, and also at internal wall to wall joints within the shower zone. If there are any joints or gaps greater than 5mm wide we recommend filling the gaps with a cement based tile adhesive before applying DeltaSeal.



STEP 2

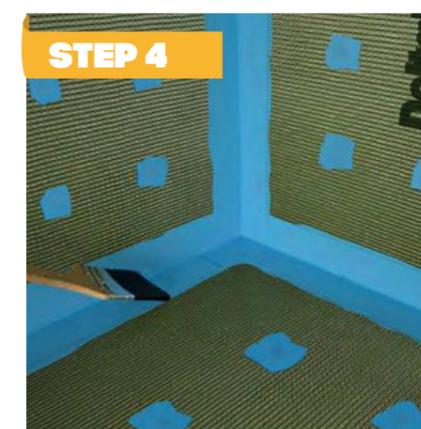
Using a suitable brush or roller, apply a thin coat of PCS Waterproofing Paste no thicker than 1.5mm to all joints to be sealed. The special pre mixed paste is designed to be applied sparingly so avoid applying this paste in heavy layers.

The paste should be applied approximately 15mm wider than the waterproofing fleece tape. Bed the fleece tape into the wet paste starting with the pre-fabricated corner tape first. Make sure that no air pockets remain under the tape.



STEP 3

For all remaining joints, cut the tape roll to the required length allowing the tape to overlap any previously fitted tape by a minimum of 50mm.



STEP 4

Make sure that all tape is bedded into the wet paste. When the first coat of paste has dried (10-30 minutes) a second and final coat of paste must be applied over the taped to ensure a watertight seal is created.

It is important that all screw fixings within the shower area, are also made waterproof by applying the tape and waterproofing paste.

Delta Waterproofing Kit Contents



Internal Corners x2 Pipe Collar x2 DeltaSeal Fleece Tape Waterproofing Paste

How To Guide Trimming Your DeltaTrayTrent

Your **DeltaTray** can be trimmed enabling the tray to be altered slightly to suit installation tolerances and also to overcome issues that may arise if the drain position becomes obstructed by joists under the floor. Trimming the tray will reduce the thickness of the tray on the sides that are to be trimmed. It is very important that after trimming, the cut sides of the tray are not reduced by more than 2mm of the original tray thickness.



The maximum length that the tray sides can be trimmed varies greatly and is dependent on factors such as tray thickness, tray size and drain position. Using the chart and following the example set out below you will be able to calculate the maximum cut length that can be trimmed off each side of your **DeltaTray**.

Identify the tray thickness, measure the side to be trimmed from the tray edge to the edge of the grate housing frame, multiply this measurement by the corresponding figure in the chart below. This calculated figure is the maximum length that can be trimmed from the tray.

Tray Thickness	Multiply Your Measured Distance By
30mm	x 0.10

Example 1

- Side 1 can be trimmed up to 21mm ($210 \times 0.10 = 21\text{mm}$)
- Side 2 can be trimmed up to 15mm ($150 \times 0.10 = 15\text{mm}$)
- Side 3 can be trimmed up to 121mm ($1210 \times 0.10 = 121\text{mm}$)
- Side 4 can be trimmed up to 15mm ($150 \times 0.10 = 15\text{mm}$)

Example 2

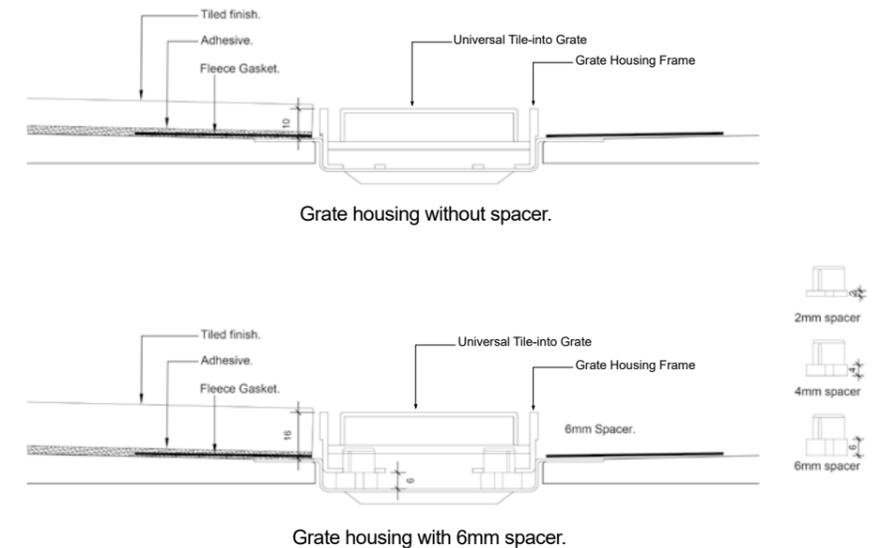
- Side 1 can be trimmed up to 21mm ($210 \times 0.10 = 21\text{mm}$)
- Side 2 can be trimmed up to 47mm ($476 \times 0.10 = 47\text{mm}$)
- Side 3 can be trimmed up to 61mm ($610 \times 0.10 = 61\text{mm}$)
- Side 4 can be trimmed up to 47mm ($476 \times 0.10 = 47\text{mm}$)



Fixing The Stainless Steel **Frame & Grate**

DeltaTray Trent shower tray formers have been designed with a height adjustable grate housing frame that provides great flexibility for the installer when applying tiles and installing electric under tile heating.

The adjustable grate housing frame can be easily modified to suit tiles as thin as 8mm and up to 15 mm thick. The frame can also be adjusted to accommodate electric under tile heating systems.



DeltaTrayTrent : Universal Grate

Brushed Stainless Steel Finish



Tile-Into Finish



Supplied with a universal tile-into grate finished in satin brushed stainless-steel, the grate can be fitted with the brushed stainless face showing or if preferred the grate can be rotated and "tiled-into" reducing the visibility of the drain location providing a modern minimalistic look.

Tiling Notes: Under Tile Heating

DeltaTrays and **DeltaBoards** are perfectly suitable for use with *electric under tile heating systems. We highly recommend the installation of electric heating systems into your newly created wetroom floor including installing the heating element directly onto the DeltaTray and into the "Shower Zone" adding that extra special touch of comfort. Heated floors will also speed up the drying of the floor after showering. *Only use electric heating systems that are rated IPX7 in wetroom environments, and connected to an electrical supply that is protected by a 30 milliamp RCD, installed in accordance with electrical standards and regulations.

Fix tiles using a good quality, cement based, rapid setting, flexible tile adhesive. If using large format tiles, we recommend that you start by laying the tiles working from the corners of the fitted frame to the external corners of

the tray carefully cutting the tiles to match the inbuilt falls in the Delta Tray. Consideration must be given to the following when choosing tiles: For wheelchair access, tiles with a surface area no smaller than 150mm x 150mm should be used, for bare foot traffic, tiles should be no smaller than 20mm x 20mm mosaics. Complete the tiling of the floors and walls and grout the joints. Grouting should be carried out using a suitable waterproof cement or Epoxy grout.

Note: Ready Mixed or Solvent based adhesives must NOT be used.

Take care when installing shower screens and shower hardware which will be required to complete your wetroom area.





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