

Installation Instructions

TrueDEK® Classic

2017-2018

ARC
inc.



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Installing a TrueDEK® shower foundation on top of properly supportive framing is an easy, fast process, and the decorative design options are unlimited. When finished, you'll have a custom level-entry shower built on a precisely engineered platform for life-long enjoyment.

TrueDEK structural, pre-pitched, tileable receptors can be installed on wood or engineered joist systems, or on concrete. Unlike a mud bed there's no need for notching or lowering joists to achieve level entry, you don't have to build a box form, and bracing joists like you would for heavy mortar is unnecessary—ARC shower bases are light by comparison. You'll get perfect pitch consistency, predictable, accurate

drain alignment, and seamless, total waterproofing coverage. And with an accessible drain as the lowest point in the room, cleaning couldn't be easier.

This detailed, step-by-step guide will take you through a typical installation on wood joists. While it is only one example, it provides practical, straightforward methods that you can use to install TrueDEK foundations just about anywhere.

Keep in mind that successful installations begin with a well constructed joist structure. You'll be surprised how quickly an installation moves along when the underpinnings are strong and level. With an ARC system, it's possible to install and waterproof a shower base in one day, and tile the next day.



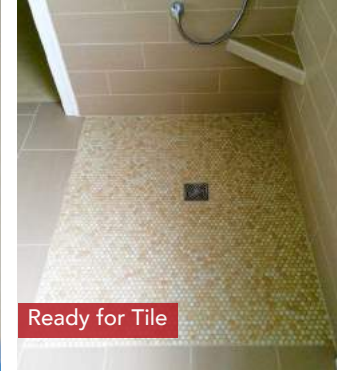
Layout & Blocking



Install Base & Drain



Waterproofing



Ready for Tile

Layout Tips

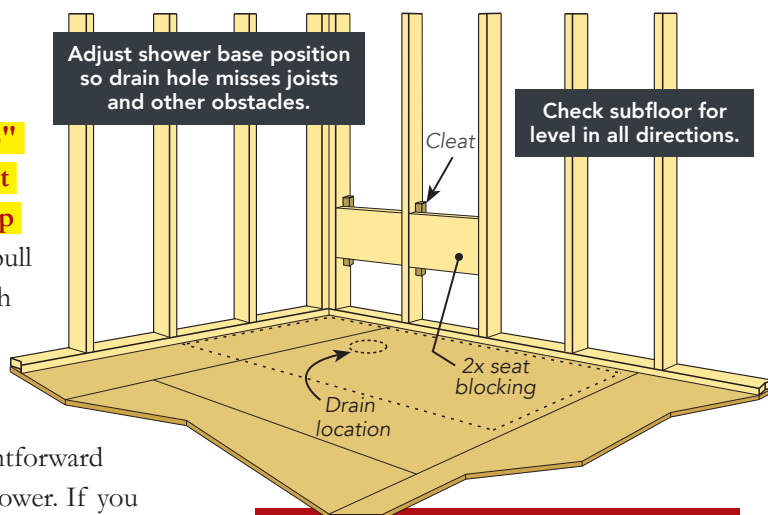
Begin by outlining the shower base location on the subfloor.

Position the base so the **center of the drain hole is 5" to 6" from any joist, which will allow the raised reinforcement ring on the underside of the base to hang freely yet keep support close to the hole where it's needed.** It's okay to pull the base away from the walls a bit—gaps can be covered with tile backer after the shower base is installed.

Keep in mind that you can cut these shower bases to size or shape as needed—cut no closer than 6" from the rim of the drain hole—however, the easiest and most straightforward installations position a factory edge at the entrance to the shower. If you cut off any pre-bored pilot holes, or want to drive additional fasteners, simply drill new countersunk pilot holes as needed.

Once you have the layout established, check the site for level in all directions. If the subfloor is out of level, plan on making alterations to the joists after they're exposed. For high spots, remove material with a belt sander or rasp. Low spots require shims, or better yet, alongside low joists fasten 2x4 sister joists at the appropriate height. The base must be level when installed.

With wall framing exposed, this is the time to add blocking to support a shower seat or grab bars. To support a shower seat, install 2x blocking between studs using cleats. For lighter-duty needs, use cleats to add 3/4"-thick plywood between studs.



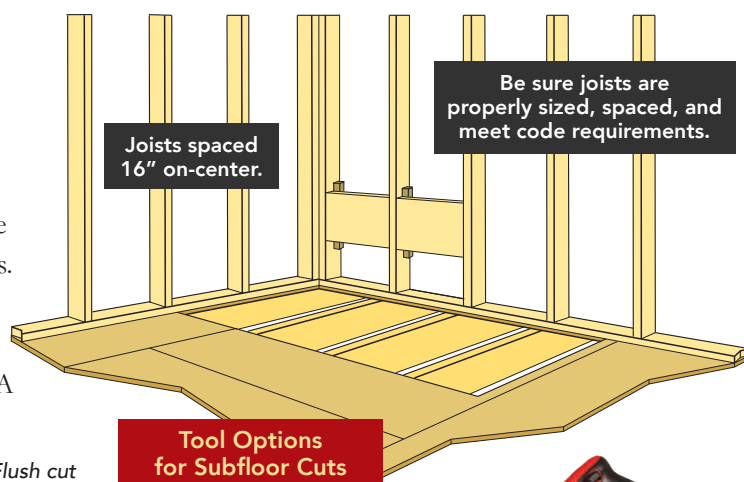
1. The center of the drain hole should be 5" to 6" from any joist.
2. Offsetting the base 1/2" from walls allows for installation of tile backer on walls.
3. The tools you use for the subfloor cuts may influence the base location; some tools require no clearance while others require clearance of 1" to 2".

Cut the Subfloor

For your safety and to prevent accidental damage, check for electric wiring, plumbing, and ductwork before you make any cuts through the subfloor. If you can't view joists or utilities from below, consider cutting out small access holes within the shower layout so that you can reach in to feel for obstructions. Set the depth of the saw blade to avoid cutting into joists.

Use a flush cut saw or circular saw to make the major cuts, and sever the corners with a reciprocating saw or multi-tool. A prybar will come in handy for removing the subfloor waste.

To properly support the shower base, joists must be spaced no more than 14 1/2" apart (16" o.c.). Joist spacing greater than that will require additional blocking to ensure gaps of 14 1/2" or less.



Tool Options for Subfloor Cuts



Reciprocating saw



Flush cut saw



Multi-tool



Circular saw

Add Blocking

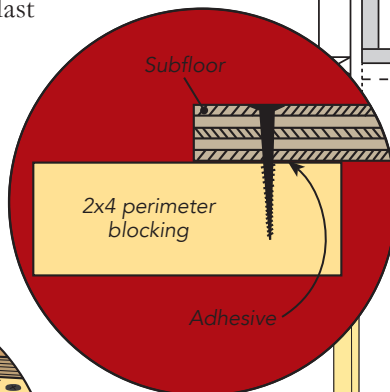
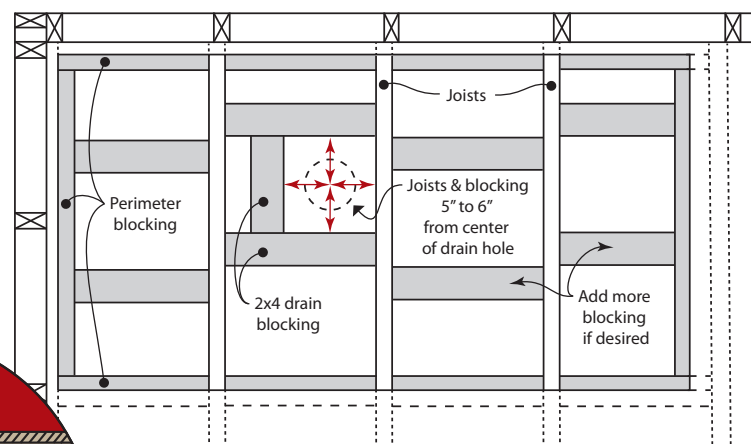
Before preparing the joist framework, notice the raised reinforcement ring around the drain hole on the bottom of the base (example at right). Do not allow any part of that raised area to contact blocking or joists—even slight contact will prevent the base from resting properly on the support framing.

When it comes to prepping the joist framework, every shower base installation is different. Whatever way you do it, the results have to be level and even, and all edges of the base and the adjacent subfloor must be well supported. Use a rigid straight edge to check for evenness (holding a shower base on edge atop the joists is a reliable technique), and spirit levels of different lengths to check for level.

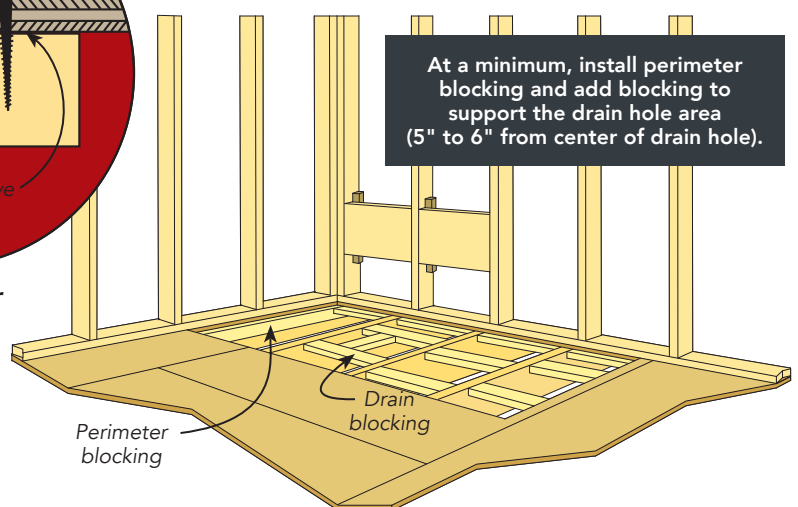
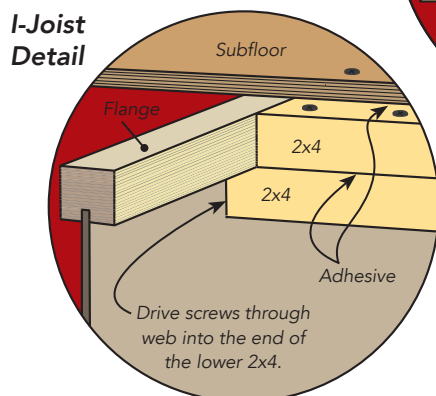
For typical installations, once you know the joists are level and even, adding blocking to support the edges works out well with 2x4s, though you can always use bigger material if you want. Install 2x blocking on edge or flat—for strength and to accommodate fasteners, plan on supports of at least 1" wide under all edges. Flat 2x4s offer enough width to support both subfloor and shower base edges around the perimeter of the installation (see Perimeter Detail below). Always apply construction adhesive between blocking and subfloor, and drive screws through the subfloor to pull the blocking tight underneath. Drive screws, as well, through joists into the ends of all blocking, unless you're working with I-Joists that have laminated flanges—I-Joist manufacturers frown on fastening into the sides of laminated flanges. In these cases, it's best to sandwich two 2x4s per joist bay and install as shown in the I-Joist Detail below.

The drain hole of the shower base also requires 2x blocking. Install drain blocking 5" to 6" from the center of the drain hole, as shown in the drawing at right, to provide support that's close to the hole yet avoids all contact with the raised area of the reinforcement ring.

If you feel it's needed, add more blocking between joists; you can never have too much blocking. Test fit the shower base and use a spirit level to ensure that it's level in all directions—do correct any out of level results now, as this is the last opportunity to access joists and blocking before you set the base with construction adhesive and screws.



Perimeter Detail



Set the Base

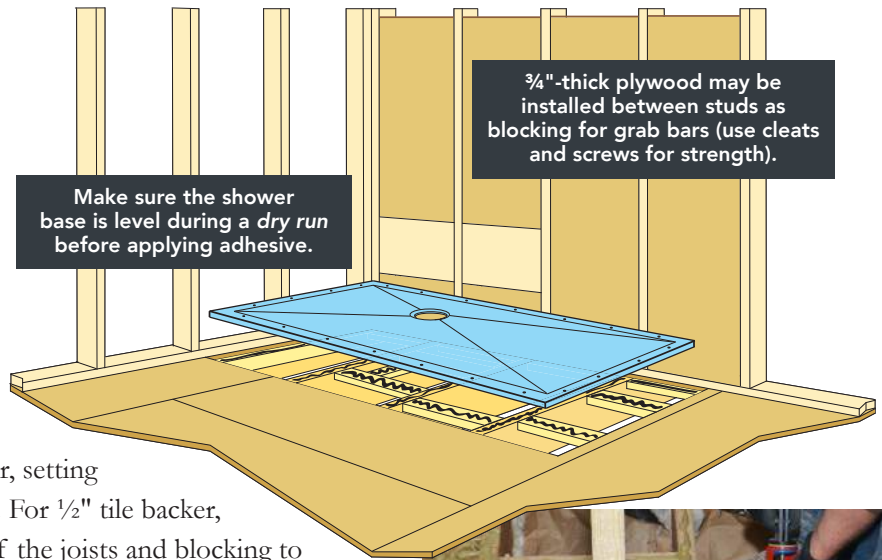
It pays to do a little planning at this point, before permanently installing the base.

Most code authorities require installation of tile backer over subfloor for tile or stone floors. 1/4"-thick tile backer on 3/4"-thick subfloor is common, and so is 1/2"-thick tile backer on 3/4"-thick subfloor. Whichever thickness is required, you will want the shower base flush or slightly lower than the surrounding tile backer once everything is installed. For 1/4" tile backer, setting the base directly on joists will work out just fine. For 1/2" tile backer, however, you'll need to raise the shower base off the joists and blocking to achieve the correct elevation. One easy remedy is to cut 1/4"-thick plywood to fit the cutout and fasten it to the framework with construction adhesive and screws, then install the shower base on top of it—**be sure to cut a hole for the drain that is slightly bigger than the raised area of the base's reinforcement ring.** **Once you know the shower base rests solidly and evenly when in position on the framework, that it is level all around, and you're certain that the raised area of the reinforcement ring hangs freely,** you can proceed with the TrueDEK installation.

With your caulking gun loaded, apply thick, continuous beads of polyurethane construction adhesive to the floor framing. The construction adhesive must be a type that bonds with plastic and wood. Be generous with the adhesive. It will fill gaps and ensure continuous bonding and support of the shower foundation. Use a minimum of five 10 oz. tubes of adhesive for the installation of any TrueDEK foundation that's 15 sq. ft. or more in size.

Set the shower base into the adhesive and press it downward. Drive #9 x 2" ceramic-coated screws into the pre-bored pilot holes around the perimeter. If you've cut away any of the pre-drilled holes, simply drill new 3/16"-dia. countersunk pilot holes about 8" apart. If necessary, you can drill countersunk pilot holes and drive screws anywhere in the base.

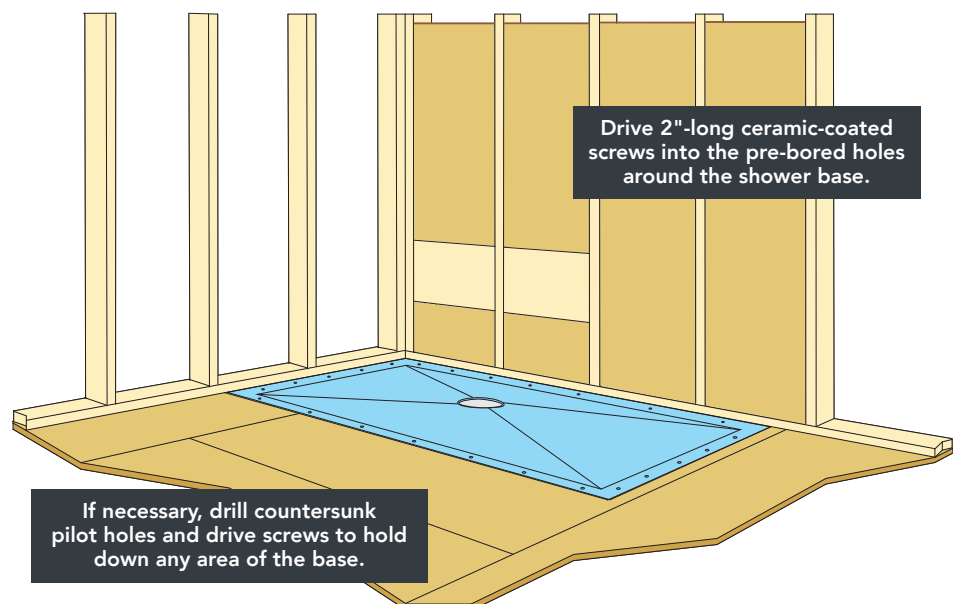
As you drive the screws, check the installation for level all around. You may need to back off a screw here and there to keep the base level. **THE SHOWER BASE MUST BE LEVEL.** Once the base is set you can install parts of the drain assembly.



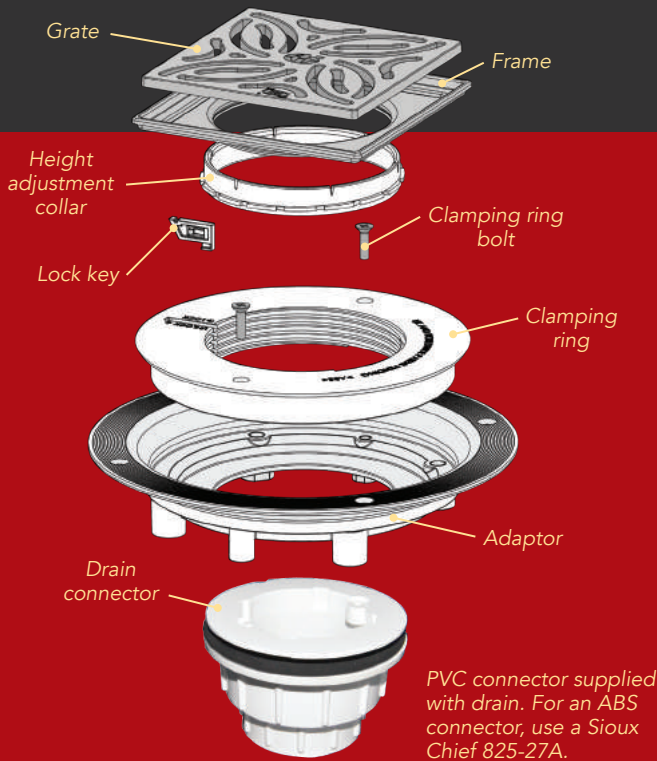
Make sure the shower base is level (bubble centered) all around. Check as you go.



Drive perimeter screws so they are snug, but not so tight as to unlevel the base.



Install the Drain



The instructions below will guide you through the drain connector and adaptor installations—all other drain assembly parts will be added later, after completing the waterproofing. Store all drain parts securely, especially the clamping ring bolts since they're easy to lose (just in case you do lose them, they're flat head, 70 pitch, 4mm x 15mm stainless steel).



If you need to prepare the drain line before installing a shower base, cut the pipe 2 3/8" to 2 1/2" below the shower base's support structure.



The drain connector includes a female-threaded tail, polyethylene and rubber gaskets, and a male-threaded top.



When assembling the connector onto the adaptor, the polyethylene (clear) gasket goes underneath the rubber (black) gasket.



Solvent weld the PVC tail to the PVC drain line. Local code may require that a licensed plumber complete this step.



Put a bead of acrylic caulk (not silicone as it prevents adhesion of waterproofing) on the shower base and position the adaptor.



Drill the four pilot holes, then drive the stainless steel screws (supplied with the drain) so they're snug—do not overtighten.



Wet the end of your finger and spread the squeezed out caulk to fill the gap around the adaptor.



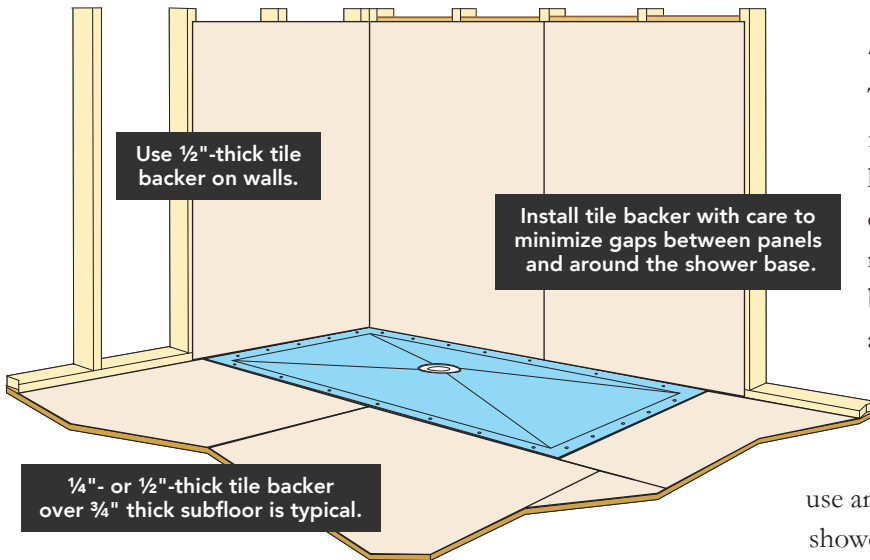
Apply caulk to the top's flange. Here, you can use acrylic or silicone caulk, since there's no contact with waterproofing.



Reach into the hole with the gaskets and set them on the tail flange (clear gasket under black), then thread the top in by hand.



To seal the drain connection, gain leverage by inserting a "speed square" into notches in the top, and turn the top until tight.



Add Tile Backer

Tile backer goes on the walls and over the subfloor in preparation for tile or stone—consult local codes for specific requirements. Install your choice of tile backer material according to the manufacturer’s instructions. Fiber cement tile backer is shown here because it’s easy to handle and cut, and when sanding edges it holds its shape and doesn’t crumble. Remember to pitch any pieces that fill gaps on the floor between the shower base and walls. Some installers like to use an uncoupling membrane on the floor outside the shower base, which is fine.

Prepare for Waterproofing

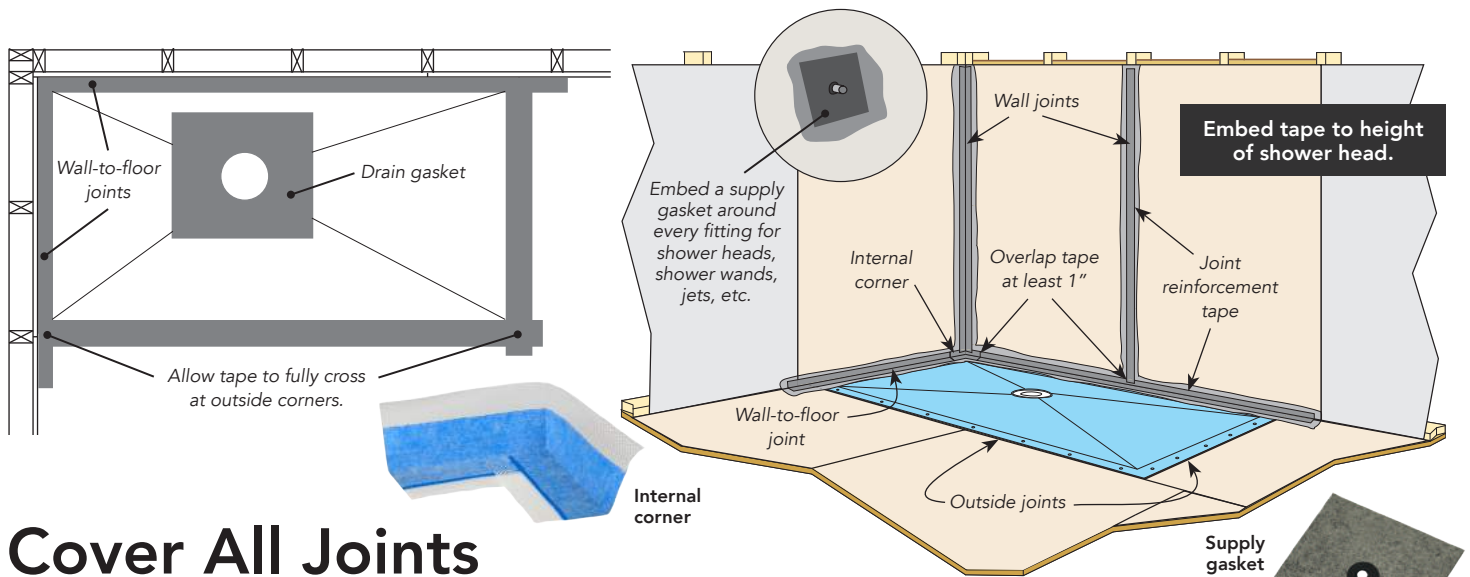
After securing tile backer over the subfloor and against the stud walls you’ll want to take care of a few details before moving on to the waterproofing steps.

First, to remove residue from handling, footprints, dirt, etc., clean the shower base with coarse sandpaper—80 or 100 grit. This takes just a minute and can be done by hand or with a power tool. Next, with a belt sander or orbital sander, sand the tile backer edges butting into the base so they slope to the shower and blend with the base. Close is good enough here; you’ll fine-tune these transitions with thin set mortar when you lay tile.

After sanding, vacuum all dust and debris from the site. Make sure you clean all cracks and crevices to remove every bit of debris—you don’t want anything to prevent the waterproofing tape from laying flat on the joints. Followup with a damp sponge to wipe off the area thoroughly, **then let it dry completely.**

When you’re satisfied with the clean up, fill all voids ($1/8$ " and wider) to provide solid backing for the waterproofing tape and compound. This typically includes covering screw heads and filling screw holes in the shower base, and filling gaps around the shower base and between tile backer panels. Acrylic caulk does a good job as a void filler and it skins over in 30 to 60 minutes. You do not need to wait for the caulk to cure or harden before moving on to the waterproofing steps.





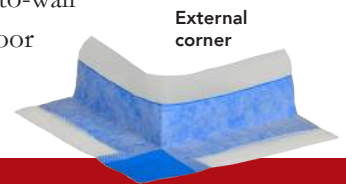
Cover All Joints

Cut tape to length for each joint—batching saves time and it's best to do now, with clean hands. Some installers mark every piece and its corresponding location. Allow for 1" overlaps where tape pieces meet, except at outside corners, where pieces must completely cross. Cover wall joints to the height of the shower head.

Embedding tape follows the same procedure everywhere: 1) brush waterproofing compound generously onto the surfaces along a joint to coat an area that's a little bigger than the tape itself, 2) set the tape into position and press it into the compound with the brush (or lightly with a putty knife) to ensure uniform contact and eliminate air bubbles, and 3) brush waterproofing compound over the tape. Some installers butter the back of the tape before setting it into place to guarantee 100% coverage. **All surfaces must be clean and dry before embedding any tape.**

Generally, it's best to work from the back of the shower to the front. Start by embedding internal corners at the back, and cover all wall joints in the shower area. While you're working on the walls, also embed the supply line gasket(s)—every water supply fitting requires a gasket. Next, cover all wall-to-floor joints, and finally, embed tape over the outside joints. Many installers like to put tape over tile backer joints 12" or so beyond the base to enlarge the waterproof zone.

For a full wet room treatment, continue by embedding tape over all floor joints, floor-to-wall joints, and corners throughout the room. A wet room will protect all subfloor and framing from water penetration, and also help prevent the growth of mold below the tile.



Embed the Drain Gasket

Embedding the drain gasket follows the same sequence as all other tape reinforcements. Brush waterproofing generously onto the shower base in an area a bit larger than the gasket. Make sure you get waterproofing over the rim of the adaptor. Use the brush to gently press the gasket into position, then brush waterproofing over the gasket. Position the clamping ring and drive the two bolts by hand to ensure a snug, but not too tight, fit (do not power drive these bolts as you may strip the threads). And lastly, brush compound onto the clamping ring, taking care to avoid getting waterproofing into the ring's height adjustment threads and lock key (clean it out with damp rag if it happens).



“Tanking” the Shower

With the tape and all gaskets embedded, tank the shower with two full coats of waterproofing compound. Waterproofing applied earlier does not have to be dry before applying the first full coat. Roll the waterproofing everywhere, going outside the base by 12" or so. For a wetroom, coat the entire floor and up the walls 3".

Allow the first full coat to dry (typically 1½ to 2 hours, depending on humidity, air flow, and temperature) before applying a second full coat. To encourage faster drying, run a dehumidifier or fan in the room. Allow the second coat to dry at least 12 hours before doing a water test or installing tile.

Prior to tiling, test fit the drain grate, frame, and height adjustment collar subassembly—make sure the collar threads into the clamping ring and the lock key slides easily (clean out any waterproofing that interferes with the operation of either component). You can adjust the grate elevation right up to the moment you tile around it—ideally, set the grate frame so that it's slightly below the surface of your tile.

