Among the many attributes of an ARC shower base, #1 is having code-compliant slopes for drainage in such a thin and strong structure. This is the key to building level-access showers without the expense and risk of altering joists. But what about installing a curbless shower in concrete? As you might guess, that #1 attribute is a virtue here, too. By excavating a shallow cavity in a concrete slab, you can build a level-entry shower for decades of ease and enjoyment.

Excavating concrete is a messy job, but the reward is well worth the effort. Let’s emphasize, though, that this excavation process is suitable for slab concrete only; cutting into pre-stressed concrete is risky and poses challenges that only a qualified professional should tackle.

You will have to adapt the techniques described here to suit the ARC shower base you choose and the specific conditions at your project site. Keep in mind that you will need to allow for the drain line and the drain connection. Depending on where the existing drain is located, you may get lucky and have just a little work to do, or you may have a big job ahead of you to extend the drain line and install a P-trap in the new drain location. Be sure to consult local building and plumbing code authorities before beginning your project.

Typically, concrete slabs measure 5" to 7" thick, which offers plenty of depth for fitting ARC shower bases that are around 1" thick. Of course you’ll need to make sure your slab is in good condition and thick enough to accommodate the shower base you plan to install — some linear shower base models require a secondary, deeper cavity for the drain gulley. A good rule of thumb is to plan to excavate a cavity that is ¼" deeper than the thickness of the shower base. This extra depth allows for adjustments during installation and plenty of space for the modified thinset mortar you’ll use to bond the base to the concrete.
Layout the Base location

It's a good idea to offset the base from the walls a few inches to allow enough room for operating a saw while cutting into the concrete. Saws vary, so you may want to figure out which tool you will use early on. Skilsaw offers the Medusaw, a concrete-cutting saw that works well for this application. With it, you can use water to keep down the dust and cool the blade, or, if you prefer, connect the saw to a shop vacuum and dry-cut the concrete.

With your shower base overturned so it’s steady on the slab (right-side up, the base would rock on the drain ring), position it as you like while making sure it’s square to the walls, and outline it with a carpenter’s pencil or heavy black marker.

Now, set aside the shower base so that you can cut along the layout lines. Ultimately, you want the cuts to reach a depth that equals the thickness of the base plus \( \frac{1}{4} \). Powerful saws will cut to full depth in one pass, but lighter duty saws require several passes, each one about \( \frac{3}{8} \) deep, until the full depth of cut is achieved.

Set the cutting depth of the blade as appropriate for your saw and proceed with the outline cuts. Wear a quality dust mask, hearing protection, and eye protection. Overcutting the corners will ease the chip-out process later on. When cutting in a small bathroom space, you won’t regret spending the money on a saw that limits the mess and gets the job done efficiently and easily.
Now that you’ve outlined the cavity with four saw cuts, make a series of parallel kerf cuts to the same depth within the shower base layout area. To a point, the closer the kerf cuts are to each other, the easier it will be to chip out the waste afterward, but you don’t want the kerf cuts so close that the resulting concrete ridges crumble. Cutting kerfs 1” apart is a pretty good target; ¾” apart is even better.

Be patient and progress through this step slowly and methodically. A good saw and diamond blade make all the difference here. As you work, take a moment now and then to vacuum debris from the site. Concrete dust and chips are going to go everywhere; keeping the jobsite clean will help with the operation of the saw and allow for straighter, more consistent cuts.

Once you complete the parallel kerf cuts you can chip out the waste. It’s definitely a chore doing this by hand using a mallet and cold chisel. A much faster and easier method is to use a rotary hammer/drill equipped with a chisel bit for concrete demolition. Rotary hammer/drills are commonly available at tool rental stores.

Position the tip of the chisel in a kerf and begin dislodging the concrete ridges. You should see the ridges breakaway easily, though the cavity floor will remain irregular. Pay special attention to the cavity corners, chipping them as square as possible before trying to test fit the base in the recess. You’ll know your done when the base fits the recess and the top surface of the base is flush or slightly below the surrounding concrete slab.
Install the Base

When you’re certain that the fit of the base in the cavity is just right — the surface of the base is flush or a little below the surrounding slab — use your rotary hammer/drill to bore pilot holes for flathead concrete screws. Most ARC shower bases have prebored holes or dimples, so use them for your drilling pattern. If the base has no holes or dimples, bore countersunk pilot holes around the perimeter every 8” to 11” (this isn’t a critical measurement). Using 3/16” diameter x 2¼” long Tapcon screws work well for this application. Drill 5/32” diameter pilot holes about ¼” deeper than needed for the 3/16”-dia. screws.

Remove the base from the cavity and mix modified thinset mortar for use as your adhesive. Follow the manufacturer’s directions for mixing the mortar. Apply the mortar with a trowel, first spreading it loosely throughout the cavity, then using a ½” x ½” x ½” notched trowel to refine the amount.

Set the base into position and begin to gently drive the screws until the base is flush with the surrounding slab. Do not overtighten the screws as you may force the base too deeply into the cavity. If the shower base gets too deep in the cavity, remove it and and insert shims of the correct thickness into the cavity to keep the base flush with the concrete slab. As you proceed, check the base for level. The base must be installed so it is level.

Keep in mind that you need to accommodate the drain connection for each type of ARC shower base.

Waterproof the base, walls, and floor as described in ARC’s videos and installation instructions.