

Experts share tried-and-true techniques to ensure a taut vinyl-liner installation

By John Miles



With intricate and vibrant new liner patterns, today's high-end vinyl pools boast colors and aesthetics on par with many gunite projects.

Unfortunately, liners remain subject to surface problems, the most common of which are wrinkles.

Granted, many wrinkles appear years after the liner is installed — the result of age or substandard maintenance. But often the culprit is improper installation.

The trick, then, is understanding how to remove and prevent creases and folds early in the process.

"Prior to filling the pool ... you want to make sure the liner is wrinkle-free because you can't depend on water pressure to remove them," says Kevin Shea, vice president of [Vyn-All Pool Products](#) in Newmarket, N.H.

Indeed, a successful installation requires proper setup, effective vacuuming and subtle adjustments. Following are several tricks of the trade that will help ensure a taut, sturdy liner.

Prep work

First, make sure the pool is ready for liner installation. Maintain a smooth surface for placement, make sure the walls and joints are sealed across the pool, and carefully check the liner's measurements.

"The most important thing is if [the liner] is sized right," says Ginny Mulvaney, co-owner of [Custom Pools](#) in Hopkins, Minn. "If the liner is off measurements, it will never install correctly."

The liner's fabricators should size the vinyl to the pool's dimensions. Then they will consider the pool's location, the estimated temperature during installation, and liner color and gauge. For this reason, it's important to give the fabricator as much detail as possible about the pool.

On a hard-bottomed pool, creating a pristine surface is paramount. Any loose debris will cause wrinkles at best, and punctures at worst. So sweep the pool floor thoroughly, and double-check it before the liner is laid out.

For sand-bottomed pools, you can achieve a level grade by wetting the sand and compacting it.

Sealing the pool also is key to a wrinkle-free liner. All panel joints and top-wall borders (whether with the coping or the liner track) should be sealed with an adhesive.

"Duct tape and silicone caulking are two readily available items that are very useful in helping create an airtight seal," Shea says.

Newer, more powerful vacuums can pull a liner tight in spite of a poorly sealed pool. But they won't save a liner from later wrinkles and premature wear.

For replacement liners, see that all gaskets have been replaced and the skimmer faceplates have been installed. The plumbing also should be pressure-tested prior to the liner's installation.

Vac tactics

When the pool is ready for installation and the liner is set, bring in the vacuum to remove any wrinkles in the material.

Take extra care when using older vacuums. Most older models operate on much higher amperage than newer ones, and may trip the electrical breaker.

If the breaker trips during an overnight garden-hose fill, the liner may very well fall slack and develop wrinkles as the water level rises.

When setting up the vacuum, always place it in a central location away from corners for maximum pull. But there are several options for where to insert the hose. You can place it behind the actual wall of the pool, between the wall and the liner, or insert it into the mouth of the skimmer.

"I usually go behind the liner," says Bob Barci, owner of [Ocean Blue Pools](#) in San Jose, Calif. "With these big vacuums, there's no way you can put it through the skimmer."

To replicate this method, place the vacuum hose 6- to 8 inches down the liner, using duct tape to seal off any air. This will ensure the vacuum draws maximum power and uses all available force to hold the liner in place.

The vacuum should be switched on before any water is added to the pool.

However, to avoid added labor, some installers prefer not to remove the beads on the vinyl to accommodate the hose. Additional concerns: The sealed hose could stretch the vinyl, particularly if it's of a thinner gauge, or the install takes place on an exceptionally hot day.

For these reasons, using the skimmer is effective as well. But this method can slow down some installers.

"If I have the vacuum in the skimmer, I can't cut into the skimmer at that point," says Walter Gilbert, owner of [Affordable Pools](#) in Plymouth, Mass.

Occasionally, jobs will require multiple vacuums. Exceptionally large pools, or those bearing sharp angles in the deep end, may fit into this category. The latter occurs when an inverted 90-degree angle causes the liner to bunch up, stopping the suction from the overhead vacuum.

Liners that don't absorb heat, and are therefore less pliable, may require more than one vacuum, too.

"Multiple vacuums are usually a function of early spring or late fall installations, when the vinyl is a bit more stubborn," Shea says.

Vinyl with a thicker gauge also may require multiple vacuums to hold it in place.

When using two vacuums, place them on opposite sides of the pool. This draws the same pull and equalizes the liner. Use the same type of seal on the second vacuum. And make sure both are operational at the same time to avoid creating off-balance suction and subsequent wrinkles.

Keep the vacuums running during the fill until the shallow end has at least 8- to 10 inches of water. This amount will provide enough lateral pressure to keep the liner in place without the vacuum.

Removing wrinkles

After you've set up your vacuum(s), remove any wrinkles that haven't been alleviated by the suction. On a sand-bottomed pool, you may want to wait until there's water inside, so it's harder to make indentations in the floor.

Address wrinkles on the pool floor first.

"If the wrinkles are at the shallow end, I kick them into the wall," Gilbert says. "If there are any wrinkles

at all in the deep end, we pull the liner from above.”

Gilbert won't even enter the deep end unless it has a main drain that needs to be cut out. Instead, he lifts up on the liner, allowing the vacuum to reach under the deep-end wrinkles, and pulls them taut.

There should be no wrinkles on the pool floor when you start the fill. Still, this is no guarantee that the liner will remain wrinkle-free.

“A lot of times, it looks good when you start to fill it, but as it gets cold, contracts and then stretches again, you might end up with a wrinkle,” Barci says.

If any wrinkles remain during the fill, they can be removed in 3- to 6 inches of water using a plunger.

“You basically use it as a suction cup,” Shea says. “Pull up gently, so it releases a small amount of pressure between the liner and the substrate. It's a really effective way of moving around vinyl wrinkle-free.”

As you lift, knead the material in the proper direction, usually toward the nearest wall. The vacuum, which still should be running, then will pull the air out from beneath the wrinkles.

And watch out when entering the pool to remove wrinkles. Even on hard-bottomed vessels, installers should remove their shoes to avoid scuffing or damaging the liner.

Take special precautions when working out kinks in a sand-bottomed pool.

“You have to be careful because when you kneel down, you can make an indentation with your foot or your knee,” Barci says of sand-bottomed installations.

This is especially imperative in pools with lighting because they tend to show every detail, he adds.

Finally, be alert for wrinkles around the skimmer and on the vinyl where the vacuum hose is inserted. This area can stretch out easily on a hot summer day, especially with lesser gauge material.

The trick is to use boiling hot water to soften the material again, making it more pliable.

“Boil the water on the job site and pour it directly onto the liner so the bead can easily be snapped into the track,” Shea explains.

But never use a hair dryer, he warns, because it can easily burn through the vinyl liner.