

No Boundaries

More than 20 years ago, vanishing-edge pools began appearing in backyards nationwide. Here's a look at the journey this design trend has taken.

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Sometimes a little inspiration can go a long way. In the early '80s, Lew Akins thumbed through some magazines featuring award-winning pools and came across a design that had been popular in Europe for years. It was called the vanishing-edge pool, an optical illusion that made the vessel's boundaries seem to disappear.



"It was beautiful," says Akins, president of Ocean Quest Pools by Lew Akins in Belton, Texas. "The water appeared to almost reach out and touch the horizon."

Akins carefully studied photographs of the pool and, drawing from his own knowledge of hydraulics, got to work building one in his own backyard. His determination, along with the innovations and ingenuity of other builders, essentially jump-started one of the single most important design trends in the pool industry.

Diving in

A forerunner of the vanishing-edge pool became popular in Europe in the late 1800s. The design then made a big splash with American moviegoers in the 1971 James Bond classic "Diamonds are Forever." The film featured a vanishing-edge pool built by California architect John Lautner.

"A lot of the reason the design took off the way it did was because clients saw these pools overseas or in the movies and wanted their own," says Skip Phillips, president of Questar Pools and Spas Inc. in Escondido, Calif., who built his first vanishing-edge project in 1990.

Though the design was tricky, builders such as Akins and Phillips spent a lot of time fine-tuning the mechanics. Akins says he ran into a couple of hitches when he set out to design his pool in 1982. He discovered that the water level in the catch basin fluctuated, sometimes dropping below the skimmer. So he threw the skimmer out altogether. In addition, he removed extra pumps to reduce excessive water flow over the edge of the pool.

"I didn't want to underguess, so I used a lot of pumps on my first pool," Akins says. "I made a couple of mistakes, sure, but I was able to ascertain what they were, and plunged forward and began building for customers."

To date, Akins has built hundreds of vanishing-edge pools. For the past 13 years, he has taught courses on the subject and routinely draws more than 100 students per course.

The exact number of pools built with the vanishing-edge design is hard to come by, say industry experts. But the increasing demand speaks for itself. Akins believes that out of the thousands of pools built each year in the United States, 300 to 400 of

those are vanishing edges. Many builders say they expect that number to sizably increase in the next 10 years.

"We're going to be building more and more [vanishing-edge] pools," says John Jacobs, construction manager at Vaughan Pools in Jefferson City, Mo. "Used to be, we'd do one a year; now we'll do five. The interest is coming from word-of-mouth [referrals] or people seeing a design, liking it and asking us, 'Can you do that for me in my backyard?'"



Jacobs typically charges approximately \$1,000 more per foot for vanishing-edge projects. "So customers are looking at about \$20,000 extra," he says. "Of course, that's just a starting number. It depends on what the customer wants. Do they want a waterfall that people can see? Do they want the total perimeter [to overflow]?"

The business of vanishing-edge pools has become more mainstream in the past five years, say experts. "The people putting in pools are looking at landscaping more than they were a few years ago, when projects mainly had a deck and a couple of lounge chairs," says Loren Brown, an analyst at PK Data in Duluth, Ga., a market research firm that has tracked the pool and hot tub industry since 1992.

"Now the pool has become part of an overall landscaping design with rocks, trees, fountains and, in many cases, a vanishing edge to show off a view of the city or mountains," Brown adds. "The [vanishing-edge pool] designers and builders are becoming landscape architects in a sense."

The trend is expected to continue its strong surge, making way for new advancements such as perimeter overflow — that is, the effect of water spilling over the entire edge. The design, popular in Europe for decades, is just now catching on in the United States.

"If we put America with the rest of the world, we'd get our butts kicked," says Phillips, also co-founder of Genesis 3, a Murfreesboro, Tenn.-based organization dedicated to design education.

Meeting the demand

As far as anyone knows, Tommy Johnson was the first designer who decided to stray from the typical gunite vanishing-edge pool and try something different. The president of Johnson Pools and Spas in Huntsville, Ala., is credited with building the first vinyl-liner vanishing-edge pool in 1994.

The demand came after minor vibrations from rocket experiments at the nearby NASA Marshall Space Flight Center began cracking the foundations on houses and pools. "The whole city is on a limestone rock formation, so when the rockets went off, the ground would shake all over Huntsville," Johnson says. "The vibrations were similar to what you'd have during an earthquake."

Johnson eventually got a call from a customer who was repairing cracks in his gunite pool on a yearly basis. "He wanted a structure that would withstand the vibrations and requested a vinyl liner so that, if it did crack, it wouldn't leak," he says. "So, we got to work."

However, the process took some refining. Johnson met with Akins and Phillips for help with the 15-month project, which had a poured-concrete shell for durability. He still fields two to three calls per week from industry insiders inquiring how to install

the vinyl-liner version. Though concrete remains the most popular material for vanishing-edge pools, more package-pool builders are finding ways to add vanishing edges onto their products.

It was also customer demand for a sturdy product that prompted Pier Garneri, president of San Juan Pools of Monterey (Calif.), to create what was reportedly the first fiberglass vanishing-edge pool in 1998. "My customers liked the design of the vanishing edge," Garneri recalls. "I told the factory to drop the coping on the shell so I could build one."

Making mistakes

Missouri builder Jacobs remembers the first blunders he encountered with the construction of a vanishing-edge pool as the result of uneducated builders.

"For the most part, we've been lucky, but I consulted on a couple of other projects and there were some problems," Jacobs says. "With one of the projects, for instance, the pump wasn't big enough.

"A lot of guys think it doesn't take that much water to flood the edge, so they'll guess at it instead of doing the actual calculations — and that's going to lead to problems,"

Jacobs adds. "The pump has to be big enough, and the weir line has to be perfectly level."

He urges builders to study the mechanics of the vanishing-edge pool before tackling the project. Failure to do so, Jacobs cautions, could be costly and time-consuming.

Phillips agrees, noting that many of the people building vanishing-edge pools lack the knowledge and experience necessary to get the job done. "Most of the pictures [of vanishing-edge pools] that we see in magazines are mechanical nightmares," he asserts. "So, now there's a backlash where the consumer response is, 'We don't want one because they've failed.'"

To avoid problems in the design of vanishing-edge pools, builders must ensure the calculations are correct, and survey soil makeup and slope. This will guarantee that the final product looks and functions the way it should.

"People don't tend to make the same mistakes," Akins says. "Still, there are people guessing and, if you do, you'll guess wrong."

Builders may have experience with the vanishing edge and not know it, he says. Many spas in which water spills into the pool produce the same effect. "People might not know it, but that's essentially a vanishing edge," Akins says.

Designers and builders should follow the simple laws of hydraulics, he adds. "There's not going to be a lot of difference in the way we do these now and in the future if we do them right," Akins says. "People are always coming up to me at the seminars and saying, 'Does this include the newest ways, the latest technology?' And I tell them that water is water."

But the effect of the vanishing-edge pool takes the backyard environment to another level. "When you build something like this, it's awesome," Akins says. "That's what I love about it. There are few businesses where you can create artwork and make people's dreams come true all at the same time."

Phillips adds, "It's the feeling of walking into a backyard with a bottle of wine and knowing that the vessel in front of you blows everything else away."

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