

Is commercial saline a viable alternative?

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No one questions the tremendous value of installing salt systems on residential pools. It is really perfect. There is no other way to trickle-feed ounces of relatively pH neutral chlorine to tens of thousands of residential pools on a daily basis. It is simple enough for most homeowners to understand and not too expensive. All in all, it is a great win-win situation for the pool company, the homeowner and the pool industry in general.

But, what about commercial saline? If Mr. Gallup would take a national poll, he might find that the majority of the U.S. thinks that commercial saline does NOT work, and has a terrible track record and reputation. There are many hundreds of failed and abandoned commercial installations, a.k.a. wall ornaments, strewn throughout Florida alone.

However, there are also thousands of ecstatic commercial saline customers that have been making 90 percent or more of their annual chlorine requirements using saline chlorinators for more than 10 years.

Why the wide disparity? Here are a couple of thoughts and observations.

Oversold and underdesigned = Unhappy customer: One of the first problems observed comes from high expectations that can't be met. Many customers are told that their new system will provide ALL the chlorine they need, meanwhile the system is wildly undersized in relation to DOH requirements. Why heck, some customers who buy saline systems don't even think that they are using chlorine at all. Yikes!

How large of a system do you need?

Department of Health (DOH) codes require a chlorination capable of providing 6 PPM to the recirculation rate of the pool. Simply put, the chlorinator must be sized to provide 7.2 lbs a day for every 100 GPM of flow. Many think that this is overkill, but it's really not. While one may not need 7.2 lbs of chlorine (gallons of bleach) every day, there are many hours where they probably will need 4.8 ounces of chlorine to keep pace with the bather load. If the system doesn't keep up with bather loads, many bad things happen

that further inhibit the saline system's future ability to keep up.

Saline, DOH codes, and permits: An alarming number of saline systems are installed illegally. Yes, saline installations constitute a modification per DOH code, and must be designed, engineered, registered with DOH, and permitted with the local building department. Yes, it is a hassle, but so is flossing. Illegal installations cause a huge liability risk for both owners and pool companies. A surprising number of these illegal installations don't work anyway; go figure.

Is there a real difference in system design?

There are two distinct saline cell designs. One is bi-polar, and the other is mono-polar. One design has output limitations of only 2.5 lbs per single cell, normally housed in a smaller 2-2.5" housing. The other design can produce single saline cells up to 25 lbs per day output with as little as 20 GPM flow in an 8" housing. So to get up to our theoretical 7.2 lb per day example, one would need one larger cell or three smaller cells. But, will three (2.5 lb) cells run in series (in a row) give you 7.2 lb output per day? Maybe not. Stand by, as NSF® is now testing multi-cell systems as a complete "system," and the results should be out shortly.

What the heck do you do with the backup feeder?

If one does not provide the DOH

required sizing (noted above), DOH will require them to provide a backup feeder that is capable of that output. Regardless, a redundant feeder has historically been a good idea anyway. Many have installed a bleach pump or cal hypo feeder to handle this, but how does one integrate the backup into the overall feed regimen? Some folks keep the backup plugged in and turn the output really low, but how much is the saline system really saving them then? Others wait until their saline system doesn't keep up and then plug it in, but by then the chlorine and ORP levels have plummeted and bad stuff can happen.

There are some systems that seamlessly integrate the backup feeder into the feed regimen, only coming on periodically and only during times when the ORP is below a certain point. This works great and helps the overall operation of the system.

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as a balance sheet line item. They are lost productivity to care for the injured worker, the juggling of duties to cover for them while out of work, the rearranging of jobs, work sites and routes, and on and on.

OSHA believes that indirect costs can often run as high as 150 percent of the actual monetary cost of a workers' compensation claim. This is not really anything new. Active safety programs that operate within a true safety culture really work!

We see it every day in the hundreds and hundreds of swimming pool related businesses we work with. Safety programs work because they reduce insurance claims, keep indirect costs down and create more productivity and a business with a good claims record and a proven safety culture/program is very attractive to insurance carriers.

Next month we'll continue to discuss ways to control your insurance destiny by making your company more attractive to your insurance carrier.

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Do you need a chemistry controller with saline? Many say you don't but that can be argued. It is bad enough that saline systems trickle chlorine into the pool at a relatively slow rate, but if the pH were to go up to 7.8 (pretty easy to do with a manually fed pool), now output is being further reduced to 33 percent of that low number. Not good. Also, how else does one stop the saline system from over chlorinating the pool.

Other known issues: As if there aren't enough issues impeding the success of commercial saline systems, one also needs to address things like chlorine demand, phosphates, cell cleaning, periodic cell replacement, and untrained staff. It has been proven that elevated phosphate levels will seriously lower the residual making potential of a saline system, while chlorine demand could possibly consume up the entire daily output of an undersized cell in a few hours.

So does commercial saline really work anyway? It depends on who you ask!

On one hand, you might run into the recipient of an oversold, undersized, residential-grade, illegally installed, manually fed, and otherwise challenged (with phosphates, high pH, etc.) system, and you might not get a good review.

On the other hand, you might visit the local county pool that has been making 75 lbs of chlorine a day out of their saline system for nearly 10 years and you might get another answer altogether.

One thing seems obvious, saline conversions need to be taken more seriously than in the past. It is a process that requires one to use the right equipment and that they spend a decent amount of time selling, designing, engineering, permitting, installing, training and servicing. Then the chances for success are much higher.

Success stories are out there.



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