

HOW TO:

INSTALLING
AND
ENJOYING
THE
BENEFITS OF
FILTERBALLS

BY KIRK MORRIS

INSTALLING AND ENJOYING THE BENEFITS OF FILTERBALLS™ FOR POOL OWNERS



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ABOUT THE AUTHOR

Kirk is the CEO and inventor of the FilterBalls™ product and manufacturing process. He is a leading filtration expert with over 30 years of system engineering, marketing, sales, distribution and customer support.

He built his career in the filtration industry designing systems for consumer goods many are familiar with such as Miller/Coors “Cold Filter”, Ocean Spray “No pulp, More pulp etc..” Gallo Wines.

Kirk is active on several NSF committees that set standards for public pool safety and filtration performance. He serves as Chairman for the ANSI/NSF 50 committee setting new standards for polymeric fiber media.

Kirk is devoted to supporting our veterans, wounded heroes, and gold star families through motivational speaking, fundraising and support programs. He is an avid hunter and fisherman serving as Treasurer for Ducks Unlimited and President of the PFC Geoffrey Morris Memorial Fishing Tournament.



FilterBalls™ are a lightweight patented filtration media designed to be used in sand filter housings. The media solves many of the problems pool owners experience with sand and other granular media such as glass and *Zeosand*™.

FilterBalls™ bring many benefits starting with better filtration and clearer water, dramatic reduction in energy consumption, healthier water, less wasted water from a reduction in backwashing, and less chemical usage saving you even more money.

This tutorial is designed to help pool service techs and Do It Yourself pool owners properly install, operate, and maximize the benefits of FilterBalls™. We will also share solutions for many pool problems we encounter in the field.

We hope you find this useful informative so you, your family and friends enjoy years of great activity and memories with your pool.

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1.

THE PROBLEMS WITH SAND

Sand is the most popular filter media used in pools, industrial and commercial media. It has been used in water filtration for literally thousands of years. It is much lower cost compared to cartridges and D.E. filter systems and offers acceptable filtration characteristics filtering particles down to 20 microns in size or something about the diameter of a typical human hair. When the media needs cleaning, you simply backwash and re-generates the media



Pool sand is not beach sand. Pool sand has angular edges that capture dirt and other particulate matter. Both are limited natural resources but pool sand is mined in quarries depleting natural resources and wildlife habitat.

Sand has many problems:

1. Sand is heavy and cumbersome to transport
2. Sand is an energy hog generating expensive monthly energy bills for the pool owner
3. Sand requires frequent backwashing wasting water
4. Replacing sand is tedious and time consuming



Blü™



Sanž™



Minis™



2.

WHAT ARE FILTERBALLS?

FilterBalls media are designed for pool and industrial water treatment applications. The media is an alternative to sand in sand filter housings. The product is made of a patented combination of thermally bonded polyester fibers to enable tight filtration, backwashing and prevention of fibers migrating from the filter into the pool. FilterBalls are made entirely in the USA and are certified to commercial pool and drinking water ANSI/NSF standards by Underwriters Laboratories, (UL). Three products are available.

FilterBalls Products:

1. **Blü™** – Our most popular pool product rated to 15 microns at 95% removal first pass, designed to improve filtration and reduce energy consumption. NSF/ANSI50 certified for quality & reliability.
2. **Sanž™** – for commercial pools rated to 5 microns, where tight filtration is required. NSF/ANSI 42, 50, 61 and 372. Highest standards in the pool industry for health/safety.
3. **Minis™** – Typically used in above -ground pools with smaller filter housings. Rated to 15 microns.

Sample Benchmark: FilterBalls Blü vs #20 filter sand with a two speed pump. FilterBalls reduced energy use by 74 percent, saving the average residential pool owner \$110 per month

Residential Pool Media Benchmark;
 29,000 gallon Pool, Carvin L250; 350 pound sand filter.
 2 speed / 1.5HP pump
 Just 3 lightweight bags of FilterBalls replaced
 Qty (6) 50 pound bags of sand

Media	Setting (rpm)	Pressure (psi)	Flow (gpm)	Turns per day	Kilowatts (kw)	Costs per turn	Monthly power cost
#20 Filter Sand	High: 3450	12	42	2.1	0.966	\$2.37	\$149
FilterBalls	Low: 1750	1	47	2.4	0.256	\$0.53	\$38.50

FilterBalls combined with a 2 speed pump will save pool owners \$110/month with less than 10% pressure on the pump. **Total Monthly savings = \$110.00**



Vs.



3. FILTERBALLS BENEFITS

FilterBalls provides benefits that sand, cartridges and D.E. filters simply cannot match. While many filtration products and systems can provide excellent filtration performance, when you also consider purchase cost, energy savings, and ease of maintenance, FilterBalls is the new gold standard for water filtration in residential and commercial pools.

FilterBalls improves performance by offering almost no back pressure to the system. Filter system pressure is reduced, increasing flow, and increasing the life of your pump. Using a pump that operates at lower speeds will save you money, improve turn-over, and ensure healthier, cleaner water. Choosing a variable speed pump or two speed pump will allow you to capture the savings while continuously running your filter while maintaining need flow rates.

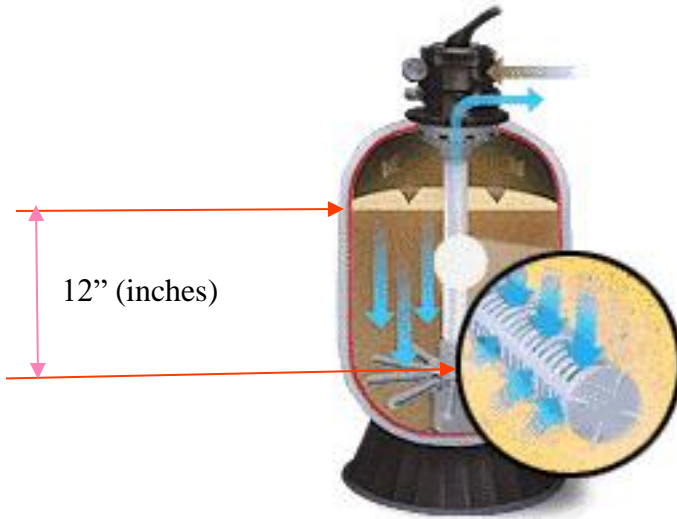
In the benchmark on the facing page, running FilterBalls on low provides more flow than sand on high saving the pool owner over \$100 per month!

FilterBalls benefits are all **GREEN!**:



1. Documented 33- 75 % energy savings
2. Superior Filtration: 5-15 micron, better than sand
3. Less Backwashing: FilterBalls holds over 20 times the dirt compared to sand
4. Water Savings from reduced backwashing
5. Recyclable; simply recycle when it's time to replace

Top Mount - Sand Filter



Pre-Installation guidance:

One 1 cubic foot bag of Blü or Sanz replaces TWO fifty pound bags of sand.

One 1/2 cubic foot bag of Minis replaces ONE fifty pound bag of sand.

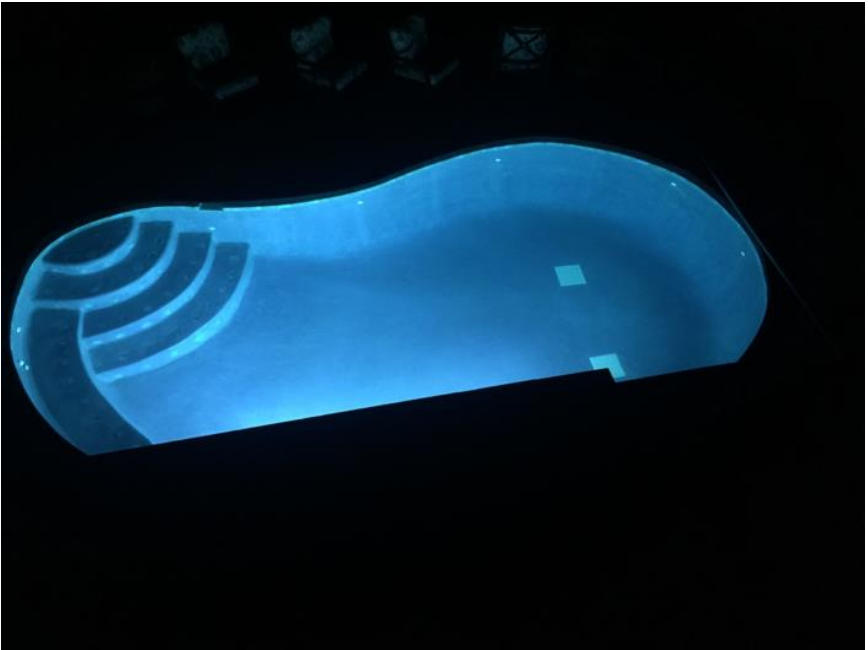
If you are changing out the sand, check to ensure your system components such as your pressure gage, laterals, gaskets, and valves are in good working condition. Replace any cracked laterals or other parts that should be replaced.

4. INSTALLATION INSTRUCTIONS

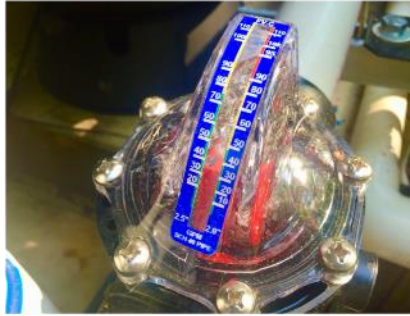
FilterBalls are easy to install. In general, follow the steps recommended by the filter housing manufacturer. Always ensure twelve inches of media above the laterals. You can mark this height on the stand pipe with a marker to ensure proper fill. If the manufacturer recommends pea gravel to support the laterals, please follow that guidance.

Direction for start-up with Empty Tank and System Off:

1. Remove filter sand if current vessel has sand in it
2. Clean the sand and debris that might be jammed in the lower manifold and laterals
3. Cover the stand pipe with a plastic bag and add FilterBalls to the tank. Gently press the balls down to avoid water and dirt channeling around media
4. Set to Filter Mode and start filter system
5. Check pressure and record, backwash when pressure increases by 5-7 PSI



FilterBalls running on low: 1750 RPM
2.2 PSI with 32 GPM on just 147 watts of power
46,000 gallon/Day., \$19/month, > 5turns/day



5. OPTIMIZING PERFORMANCE

Proper Flow is the most important factor in optimizing performance. Too high of flow may enable dirt and other particulates to by-pass the media and cloud your water. Not enough flow may not provide the turns you need to keep your water healthy and clean.

Most pools operate best with enough flow to operate heaters and chlorinators (20-35 gpm) and the filter housing recommended limit (50-60 gpm). The Center for Disease Control recommends 2-3 turns per day for residential pools.

FilterBalls will increase the flow compared to sand. Using a flow meter is the best way to measure. Lower flow rates are always better for media performance.

Some Performance Tips:

1. Know your pools size to calculate flow rate need for proper, healthy water
2. Use a variable or two speed pump and flow meter to program your pool.
3. Vacuum to waste
4. Initiate Backwash when PSI increases 5-7 PSI
5. If you are using clarifiers, use 1/3 the recommended dosage as prescribed by cleaner manufacturer

6. TROUBLE SHOOTING

FilterBalls are installed successfully in tens of thousands of pools world-wide. We do occasionally speak with pool owners about troubles they are experiencing with their pools. The troubles we track fall into a few categories:

Trouble:

1. Pool is not clearing
2. FilterBalls are discharging to the pool or backwash

In most all cases, a pool not clearing can be sourced to four conditions:

1. Poor water chemistry
2. Not enough media
3. Not the right media
4. Too much flow from the pump

Additional technical information is available at
www.filterballs.com

TO SOLVE PROBLEMS WITH CLOUDY WATER/POOL NOT CLEARING:

1. First check your water chemistry and confirm that your PH and other factors are at recommended levels.
2. Make sure you have at least twelve inches of media above the laterals.
3. If you have a small filter housing rated for less than 200 pounds of sand, confirm you are using Minis for small housings.

Check your flow to confirm the flow is within the recommended limits of the housing. The standards is found on the manufacturer's label. We often find pool owners installing and even some pool products retailers suggesting pumps with horse power ratings that are simply too big for the system. The thinking is often "Bigger is Better".

When you switch from sand to FilterBalls, you should experience a noticeable increase in flow. Decreasing the flow to within the limits of the housing specification is the best solution, it also saves you money by using less energy.

Lower flow levels that meet or exceed pool water turnover standards and minimum flow requirements for your heaters and chlorinators. For filtration, lower flow rates are more effective allowing the media to capture dirt without bypass. If you own a variable or two speed pump, simply lower the speed. Replacing your single speed pump with a variable speed, two speed, or smaller more efficient pump is your best option. Please consult your FilterBalls dealer or our customer service representatives for suggestions.

TO SOLVE PROBLEMS WITH FILTERBALLS DISCHARGING TO POOL OR BACKWASH:

Occasionally we hear of FilterBalls returning to the pool or ejecting in the backwash. Something is allowing the FilterBalls to escape.

It is likely that a lateral is broken or the valve is broken. Check the condition of filter components to ensure everything is in good working condition.

If you have questions
Give us a call
at 224.637.8900!
or
email at info@filterballs.com

7. BEWARE OF FAKE MEDIA

FilterBalls' success has attracted several importers of inferior overseas filtration products looking to confuse consumers by adopting similar names or internet tags such as *filter balls*, *filtraballs* and others. The products are manufactured in China using a very different polyester product and they do not backwash. It is typically white in color but we are now also seeing them offered in blue.

While other foreign polyester filter media products capture dirt, they cannot claim effective backwashing or longevity. In fact, a simple search of the internet will find instructional cleaning video for these products. These manufacturers actually suggest cleaning the fiber balls by removing them from your filter and washing them in your home washing machine or kitchen sink!

We find Chinese manufactured product sold primarily through Amazon or EBAY and rarely sold in your local retail store. Brand names such as StarMatrix, Aqualoon, Rx Clear, FlowXtreme Cotton Tails, and a few more.

Consumers call our support line with questions because there is rarely a published customer service line or any contact information for support. We do our best to help but please beware of the confusion these foreign manufacturers and distributors have made here in the US. FilterBalls Blü and Sanz has been independently tested and certified by NSF. Only FilterBalls carries the NSF50 certification for use in commercial pools.

**Buy American, Buy the
original FilterBalls!**