

Process Solutions

Water and Process Fluid Purification

Goodbye 2020 (and good riddance!)

It's probably safe to say that no one is sorry to see 2020 in the rearview mirror.

While a lot of things came to a screeching halt with the pandemic, the water industry has remained essential – and strong. Since quality water is so critical to so many processes, there was virtually no disruption in demand. Whether working remotely or in the building, we have continued to support our customers with the products they need to keep their systems running, as well as technical service support, both onsite and offsite.

The new year brings hope and opportunity. *We hope to have the opportunity to continue to be of service to all of you.*

Here's to a happy, healthy and successful 2021!

A Gentle Reminder.....

We've said it before but it "bears" repeating! The colder temperatures affect us all – including your water system!

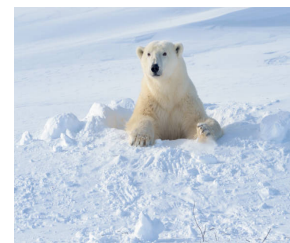
For anyone operating a reverse osmosis system, you've probably noticed that your feed pressures have increased in order to maintain permeate flow. This is perfectly normal although it doesn't necessarily mean your membranes aren't fouling, so please keep an eye on the pressure differentials. The upside to colder feedwater is that you're likely seeing better permeate quality, as salt passage decreases with colder water temperatures.

Another cold weather adjustment is on the backwash flow rates for your media filters or ion exchange units. With colder water, it takes less flow to achieve the required expansion of the bed during backwash. If you're still using the warm water flow rates, you may be in for an unpleasant surprise in the spring.....

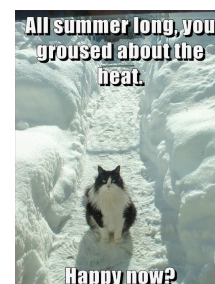
If you would like some assistance determining proper instrument settings or flow rates, give us a call!

About Our Organization...

At **Process Solutions, Inc.** we're committed to being your full-service supplier of water treatment products, systems and services. We do this by providing our customers with high quality products, great service and *all at competitive prices.* Please feel free to call us with your feedback and suggestions as to how we can be of service to you.



Be careful what you wish for!



New Products from Avista Technologies!

Our friends at *Avista Technologies* continue to innovate, update and find new ways to improve the life of your membranes. In particular, new and improved membrane cleaners are now available to better target specific foulants.

Avista 192 is a new high pH powdered cleaner formulated to remove stubborn biological fouling, as well as polysaccharide layers, clays, silica complexes and carbon fines. This product is highly effective in removing severe biological/organic or particulate foulants – plus it is certified by NSF for offline use in systems producing water for consumption.

For those using an on-line biocide, *K-BAC 7015* replaces the old *Avista /S-2*. *K-BAC 7015* is a broad spectrum anti-microbial product that is easily handled in liquid form and effective at low concentrations. This product is **not** recommended for use in potable water systems or where contamination of potable water can occur; however, for boiler feedwater or industrial applications it's an effective means of controlling biological fouling.

While it's been around for a little while, *RoClean P903* is becoming more popular in applications where iron, manganese, aluminum and metal-organic complexes are the foulants. This product also contains dispersants and chelating agents that suspend colloidal material and metal complexes in solution to prevent redepositing on the membranes. Compared to other metal cleaners on the market, it does not contain anything that could emit noxious odors.

For additional information or to determine if these products are right for *your* system, please contact your ***Process Solutions Inc.*** sales representative at **(513) 791-3338!**



New membrane support products are available from Avista Technologies!

Service with a Smile – Yours!

Is your water treatment system operating properly? Are your membrane pressures up? Flows down? No time to clean? No one understands the system? Just plain shorthanded?

Process Solutions Inc. has been offering preventive maintenance agreements for several years and our customers who use our services in this way are finding it valuable to assure that their systems are “up to snuff”. Our Service Engineers routinely review the system operation, make needed repairs, and assure that potential issues are addressed *before* they can cause serious problems or possible downtime. These are offered on a monthly, quarterly, bi-annual, or annual basis to evaluate and optimize system performance; and written reports are submitted after each visit. Preventive maintenance agreements are tailored to the specific needs of your system and your plant operations.

An added benefit is that consumables pricing is guaranteed for the life of the agreement; i.e. the end user is protected from price increases during the contract term.

For further details or pricing information, please contact your ***Process Solutions Inc.*** sales representative!



Preventive maintenance agreements are tailored to YOUR needs!

Conventional Media Filtration – Or Not??

When you're looking at particulate removal as pretreatment to your water treatment system, the go-to process has been multimedia filtration – a graded media bed consisting of anthracite, sand and garnet. This configuration is capable of removing particles to a nominal size of 10 microns, which in some cases is good enough. If you need to remove smaller particles, what are your options? There are a variety of alternative products which are becoming more commonly used for finer filtration.

There is a class of media which is composed of aluminosilicate, which removes particles down to the 3-5 micron range and is capable of loadings up to 20 gpm per square foot. For new equipment, this means smaller tank diameters, smaller footprint, and in most cases, less backwash volume. Brand names for these products are SandPlus, Next Sand and MicroZ. These products are typically used for suspended solids removal, SDI and turbidity reduction.

In cases where heavy metals removal is the objective, a catalytic media is utilized. Most common is Greensand Plus, which is a synthetic manganese greensand. This is used for iron and manganese removal, as the media oxidizes the iron/manganese that is in solution and filters it out as particulate.

Alternate products are available to remove iron, manganese, hydrogen sulfide, arsenic, aluminum and radium. OxiPlus⁷⁵ is a naturally mined ore, 75% manganese dioxide by weight; and OxiPlus¹² is a silica sand with a manganese dioxide coating. OxiPlus¹² is suggested for economical retrofits in applications where more than iron/manganese removal is desired. Like conventional greensand and Greensand Plus, these medias utilize a continuous oxidant feed (usually sodium hypochlorite) to optimize the catalytic properties and removal capacity of the media. Both of these products are NSF/ANSI 61 certified for use in potable water applications.

Other media products for iron, H₂S and chlorine removal include KDF, a copper/zinc granule that uses a redox (exchange of electrons) process; and birm, which acts as a catalyst, but requires pH above 6.8 and a sufficient amount of dissolved oxygen in the water to oxidize dissolved iron.

There are additional catalytic media materials for removal of specific contaminants, less commonly used in industrial or municipal applications. And if you need finer filtration than 3-5 micron, your options are bag or cartridge media – or possibly a coagulant aid upstream of your filter.

For further information or to evaluate one of these medias for *your* application, please contact your **Process Solutions Inc.** sales representative at **(513) 791-3338!** We're always available to help!



SandPlus can filter down to 3-5 micron removal



Catalytic media is used for oxidation of metals and H₂S removal



Who Says It's Not Easy Being Green ?

If you would prefer to save a tree and receive our newsletter electronically, please email us at sales@psiwater.com and we'll add you to our electronic distribution list. Thank you!

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