

Filtered Solutions For Pools And Spas

Some of the most important products that lie at the heart of any efficient water cleansing system are those which are associated with **filtration**. And thanks to a number of recent innovations – which have led to improved performance and a reduction in water use – filters and filter media are now the first place to start looking when it comes to combining effective water management and making significant cost savings. This issue, we take a closer look at the range of available filtration products that are on offer in this developing sector

By Jon Wadeson

When it comes to the filtration of water for swimming pools and spas, there really is a wide range of options available for an equally wide range of operating environments.

Hidden away and previously seen as somewhat low tech when compared to other more glamorous products, the filtration sector has seen a number of new innovations recently and technology is playing its part in and providing new and improved solutions for what is without doubt, a critical part of any pool and spa setup.

With improved performance comes the reduction of water use and in turn operating costs, so the advances in the sector are welcomed by all.

With plenty of options already available, combined with an ever-widening range of emerging technologies and products, it can often be hard to stay on top of what's on offer, so this issue we highlight just some of the filtration options.

ASTRALPOOL'S SELF-CLEANING NANOFIBER PROVIDES FILTRATION EFFICIENCY

AstralPool has added to its range of filtration systems for residential pools following the launch of its NanoFiber filter. The new self-cleaning device developed by the brand belonging to the Fluidra group has nanofiber technology and an operating system exclusive to the company, all of which ensures top quality filtered water in pools of up to 90 m³.

With the aim of delivering a degree of filtration never seen before in the residential pool sector, AstralPool's R&D team designed a

sophisticated network of nanofibers exclusive to the product. This material enables particles as small as 5 to 8 microns to be filtered and prevents dirt from building up in the device. As a result, there is a significant improvement in the quality of water once it has been filtered.

Maintenance is another of the device's great advantages. The self-cleaning system on top of the main body features a lever which, when turned, aligns the filter in front of the tangential shower that is built into the unit, thus ensuring that the filter is properly cleaned. Moreover, this shower has been especially designed to spray the water used in backwashing evenly so that the whole surface of the filter is thoroughly cleaned. Finally,

once the device has been backwashed, its initial settings, flow rate and pressure are restored.

Physico-chemical tests were conducted by an external laboratory (Porometer NV) to analyse the effectiveness of NanoFiber's filtration system. Following comparisons with other systems in the same category, the experts who conducted the tests stated that AstralPool's mechanism filtered more evenly and thoroughly than all other models, which prevents limescale.

CERTIKIN'S OC-1 FILTER MEDIA REDUCES RUNNING COSTS

Unlike traditional methods of filtration that use entrapment, Certikin's OC-1 works through settlement. The new British manufactured filtration media has some exceptional benefits – by replacing commonly used media (such as sand and glass) with OC-1, it is possible to reduce the head loss in the filtration system; filter with a constant flow (regardless of debris entrapment) and, most remarkably, significantly reduce running energy costs whilst still filtering to the equivalent standard.

Some of OC-1's outstanding key benefits include:

- Reduces energy consumption – OC-1 maintains constant flow rates, even when the media becomes dirty. No downtime is required for heating/salt chlorinators/heat pumps going out on low flow. The constant flow means pumps can be run at lower speeds, thus saving energy.
- Huge capacity for debris collection – OC-1 offers over 20 times the capacity of sand or glass.
- Reduced requirement for backwashing and a more efficient backwash – reduces water consumption, chemical usage and heating. There is no need to backwash on start up with new installations.
- Lightweight – Can even be shipped



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inside a filter, easy to handle and super quick and easy to install.

- Less maintenance – lasts longer than sand, reduces pressure in the system, extending the life of equipment.
- Payback typically 6-12 months.

For the best savings OC-1 should be used with an Inverter. On an existing system, replacing sand or glass because of the free space of OC-1 you are reducing the head loss in the system allowing you to turn the speed of the pumps down to maintain the exact same turnover and velocity as before. This saving is usually in the region of 20% reduction in the speed of the pump that results in over 40% saving in electrical consumption.

MAGNUM CARTRIDGE FILTERS BENEFIT BOTH SPAS AND POOLS

Pleated cartridges have been the filter of choice for spa pools for many years and New Zealand based Magnum Filters has been manufacturing them since 1982. Peter Hogg, owner of Spaeuro which supplies the UK and European market with Magnum cartridge filters said: "Over the years I have heard many arguments for and against using cartridge filters for swimming pool filtration and which is the best filtering media to use in a cartridge.

"Recently cartridge filtration for swimming pools has become more and more common especially in the USA and Australia. One of the main reasons is water conservation.

A standard Magnum Filter cartridge, which uses Reemay fabric for its filtering media, has a nominal micron rating is around 30 microns



Unlike traditional methods of filtration that use entrapment, Certidin's OC-1 works through settlement

Cartridges cannot be backwashed and have to be cleaned with a hose which takes far less water than the normal backwash."

A standard Magnum Filter cartridge, which uses Reemay fabric for its filtering media, has a nominal micron rating around 30 microns. However after the cartridge has collected dirt and debris, a dirt cake forms on the outside of the fabric. This dirt cake can then become a further filtering mechanism which results in finer filtration. It is conceivable that the micron rating can go down to as low as 3-5 microns. With the added advantage of having a large surface area you end up with a very efficient filter unit which maintains adequate flow that requires very little maintenance.

However, there is an optimum surface area on any given size of cartridge where filtration is at its most efficient and it's worth noting that some cartridge manufacturers push the boundaries and in doing so, have to add too many pleats, resulting in them being crammed together, so much so that the dirt and debris will not travel down the full depth of the pleat. This means that only a very small portion of the cartridge is filtering and premature blockage is inevitable. Something that's never the case with Magnum's products.

A RANGE OF FILTERS THAT CAN LEAD TO SIGNIFICANT SAVINGS

Golden Coast offers a range filters for commercial and domestic applications which can save owners time, money and water.

One such product, Waterco's range of Micron Bobbin Filters, delivers

superior water filtration. Featuring a unique fishtail lateral configuration, the ingenious design eliminates the ineffective 'dead areas' commonly associated with traditional star-design filters.

That's not all – this highly efficient design requires as much as 30% less water to backwash. Furthermore, a dual function drain/large sand dump port allows for easy winterisation and sand changes, while a large clear access lid ensures quick and easy servicing and inspections.

Supplied complete with a side mount multiport and gauge, micron bobbins are available in 500, 600, 700, 750 and 900mm tank sizes with all tanks 700mm and upwards supplied with a 2" valve.

Golden Coast offers a extensive range of filters from other leading manufacturers, including Darlly's filters for spas.

As the UK's largest independent supplier of wet leisure products to the trade, Golden Coast are well aware that inferior filter cartridges are a major source of problems. Not only do they fail to give users the water quality and clarity that is so essential to the pool and spa experience but they are a false economy. A poor filter cartridge becomes clogged more quickly, needs more frequent cleaning and replacement, and risks damaging the circulation pump by restricting flow.

Golden Coast's Managing Director Jamie Adams says: "Whether you're specifying for a pool, a spa, or a hot tub – residential or commercial – Golden Coast has the right filter for you, your business and your customer."

MULTICYCLONE-CENTRIFUGAL WATER FILTRATION FROM WATERCO

In addition to a wide range of fibreglass filters, one product that has been particularly well received by the industry

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MultiCyclone Plus combines centrifugal and cartridge filtration into one streamline housing, creating an ultra compact filtration system

effect. This spins the sediment out to the hydro cyclone's wall and then spirals it down to the sediment sump, while the cleansed water spirals upwards.

The MultiCyclones are ideal as a pre-filter to extend the life of an existing filter. It will filter out up to 80% of the incoming sediment from a swimming pool. The unit works together with a variety of filter types to polish the water. It allows the installation of finer filtration systems, such as cartridge filters with finer cartridges and the sand filters with finer filter media. Finer filtration systems can be installed without the burden of extra maintenance. The pool water ends up clearer with less upkeep.

MultiCyclone Plus and MultiCyclone Ultra filters combine centrifugal and cartridge filtration into one streamline housing, creating an ultra compact filtration system that can be vertically installed on a pool pump.

The MultiCyclone XL70 is the commercial model of the range and like its domestic cousins, the XL70's unique filtration system works on the basis of centrifugal water filtration and is designed with no moving parts.

An ultra compact system, the XL70 is an evolution of Waterco's MultiCyclone technology and the company has specially created the commercial version by increasing its number of hydrocyclones to cater for the higher flow rates and redesigned it to cope with the demanding requirements of commercial installations.

over recent years is Waterco's MultiCyclone range. MultiCyclones are a series of products that are capable of saving water and reducing filter maintenance and work on the basis of centrifugal water filtration. The MultiCyclone Filter and MultiCyclone Pro models have no moving parts to wear and tear and no filter media to clean or replace. Incoming water is guided by a diverter plate so that it enters multiple hydro cyclones tangentially, generating a strong centrifugal

NEW AND EXCLUSIVE - SUPERPOOL SAND FILTERS FROM SCP

Whether it's for domestic or commercial pools, SCP offer a wide range of filtration products from a number of brands including Haywood, Pentair, Pleatco and Waterco, but two of the newest additions to their extensive filtration line up are the new top and side mount sand filters from Superpool. These distinctive products feature a non-corrosive gel coat fibreglass tank and are available exclusively from SCP.

The two smooth finished white models include a 6 way multiport valve, reliable and durable Glycerine Pressure Gauge and air release valve. There are four sizes available ranging from diameters of 500 to 900mm



SCP has added two Superpool sand filters to their extensive filtration line up, including this, the side mount model

CASE STUDY OC-1 MAKES WAVES AT DARTMOUTH POOL

The opening of the new Dartmouth Indoor Swimming Pool was a result of many years of hard fundraising by the local community. For installers, Westcountry Leisure, the new OC-1 filtration system, with its promise of reduced energy consumption and much-increased efficiency, was a natural choice.

Devonshire pool specialists, Westcountry Leisure installed the beautiful 25m swimming pool using Certikin supplied equipment and impressed with the claims of the new ground-breaking OC-1 filter media, felt that this would be an excellent occasion to put it through its paces.

Embracing the recent advances in pump technology and maximising the benefits of variable speed pumps, the ingenious OC-1 works through settlement, as opposed to the traditional method of entrapment. By replacing commonly used media (such as sand and glass) with OC-1 Filtration Media it is possible to reduce the head loss in the filtration

system; filter with a constant flow (regardless of debris entrapment) and, most remarkably, significantly reduce energy costs as it can be used with a smaller pump or a variable speed pump or controller.

Certikin's Commercial Manager, Steve Nelson, went into consultation with Westcountry's Mark Gilpin and estimated that using OC-1 compared to sand would in terms of electricity consumption save 71.73kW per day, which over the year equates to 26,181.45 kW. Assuming a price of 12p a kW, this amounts to a massive saving of £3,141.77 each year!

Mark Gilpin said: "To be honest, I am amazed at just how efficiently it does work and the results it achieves. I think it justifies the title of a revolutionary product."



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