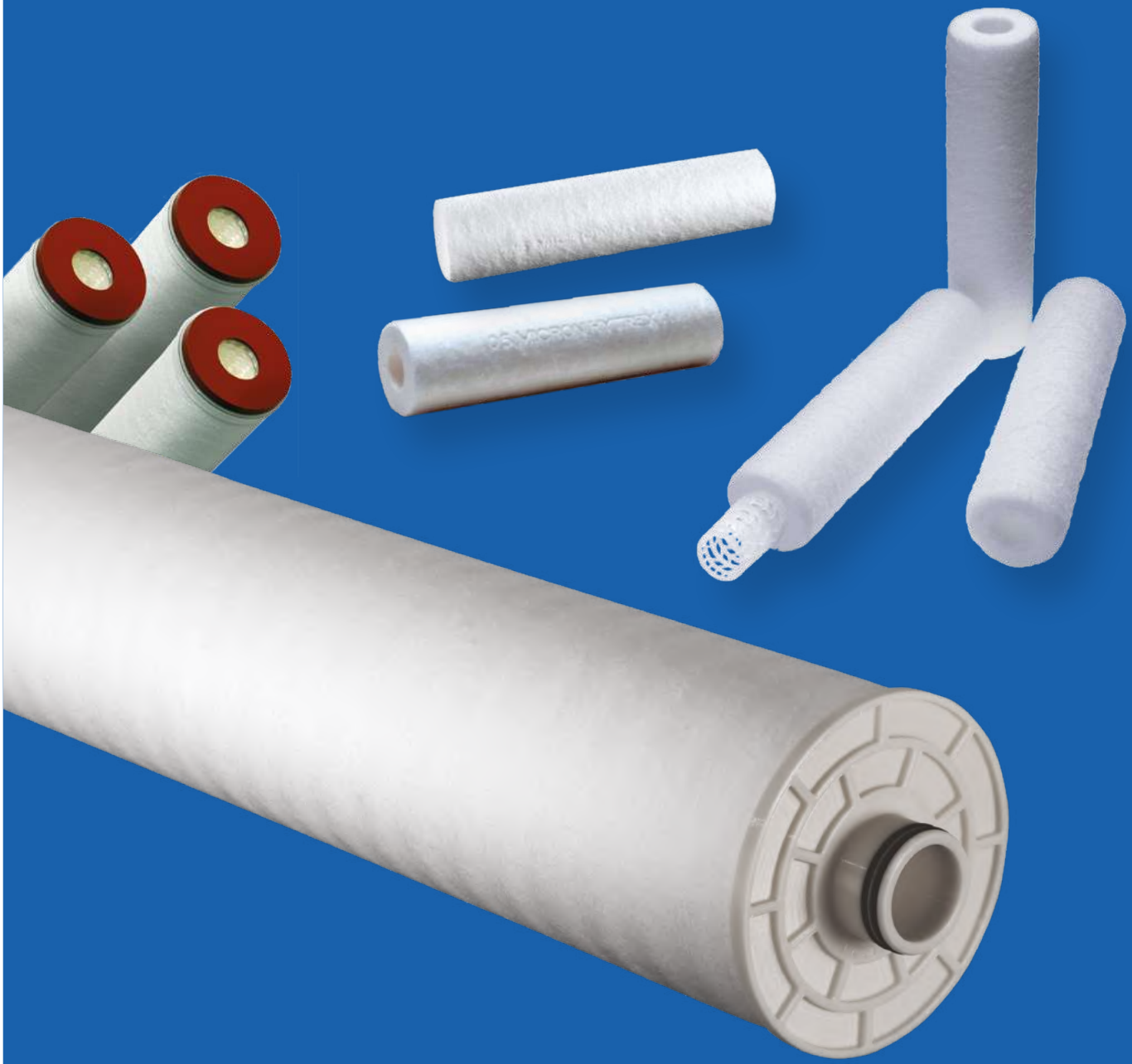
VEOLIA

Veolia's Depth Filters



WATER TECHNOLOGIES

Advanced Depth Filter
Manufacturing Technology

Veolia has a long-term commitment to developing manufacturing technology that advances the performance of depth filters. Beginning with the Hytrex filter technology developed in the 1980s, and more recently with the introduction of the Z.Plex* filter technology, research and development around improved filtration technology has been a priority. Veolia has improved existing designs and enabled a whole new series of depth filters designed to meet the challenges of today's applications. At our Minnetonka, Minnesota Filtration Center of Excellence we are working to develop the next generation of depth filters to meet the ever increasing demands of industry.

Hytrex* Filter Manufacturing Technology

Hytrex, the original polypropylene depth filter, provides purity and reliability to ensure consistent results. Both Hytrex and Z.Plex are produced using a patented, continuous process that provides consistent product performance. Lot-to-lot, order-to-order, strict quality control assures repeatability and high quality products.

In Hytrex filters, thermally bonded micro fibers create a strong, secure cartridge matrix that traps and holds particles throughout its depth. Its pure polypropylene construction assures fast rinse-up in high purity applications, and it carries the NSF 61 certification and is FDA compliant. Hytrex is ideally suited for applications where purity is the primary consideration, such as microelectronics and food and beverage.

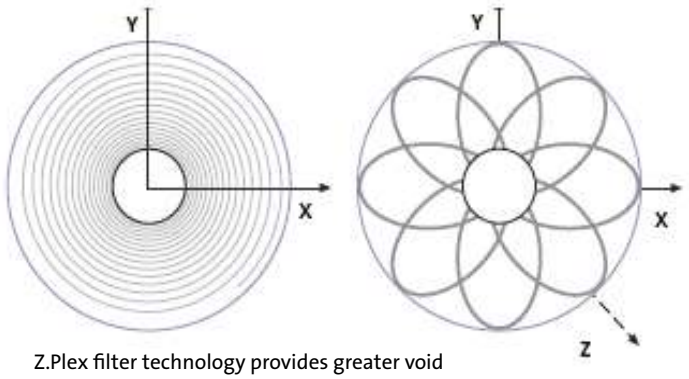
Hytrex depth filters are also one of the strongest filters available, which makes them appropriate for the most demanding industrial filtration. Hytrex is the choice where greater efficiency such as fluid clarification is needed, and severe conditions such as high flow rates and pressure drops will be encountered. Filtration applications in chemical process, oil and gas, and produced water are typical of Hytrex filter usage.

Z.Plex Filter Manufacturing Technology

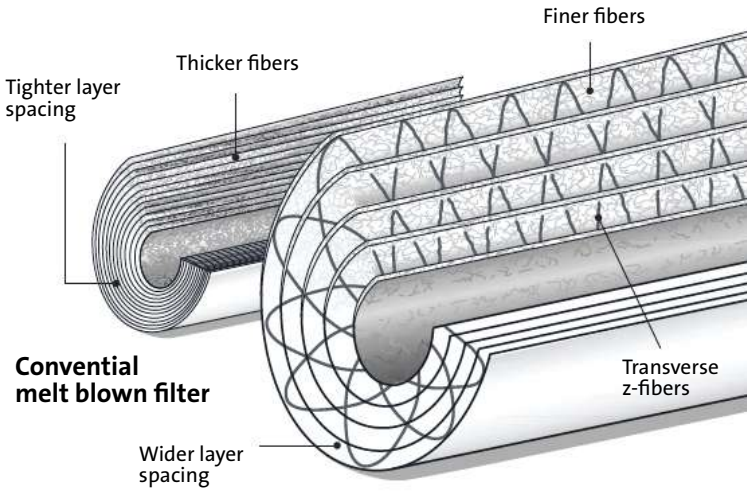
In 2003, Veolia introduced a new, patented filter manufacturing technology known as Z.Plex. The technology uses finer fibers than conventional melt blown fibers and creates a unique filter structure using polypropylene fibers in a bi-directional fiber arrangement. The transverse fibers and filter layer "lofting" increase the available space to collect contaminants, which results in a better-performing filter.

Z.Plex technology uses transverse "Z" fibers to provide rigid strength from the core to the outer layer without the presence of a conventional support core. The gradient density from the outer to inner core preserves the original Hytrex melt blown technology concept of progressively finer layers where the previous layer acts as a pre-filter to the next layer. This design spreads the dirt removal work out over the entire depth of the media. The unique three-dimensional structure of Z.Plex filter matrix helps deliver benefits to users in three key areas: dirt holding capacity, filter life, and pressure drop.

The advanced design capability of the Z.Plex Technology has allowed the development of application grade filters, created specifically for the defined purpose. Today, products are available for applications in well injection, reverse osmosis pretreatment, seawater desalination, etc. in both nominal and absolute versions.



Z.Plex filter technology provides greater void volume than conventional filter technology.



Z.Plex filter technology

High efficiency, high performance, long life filter

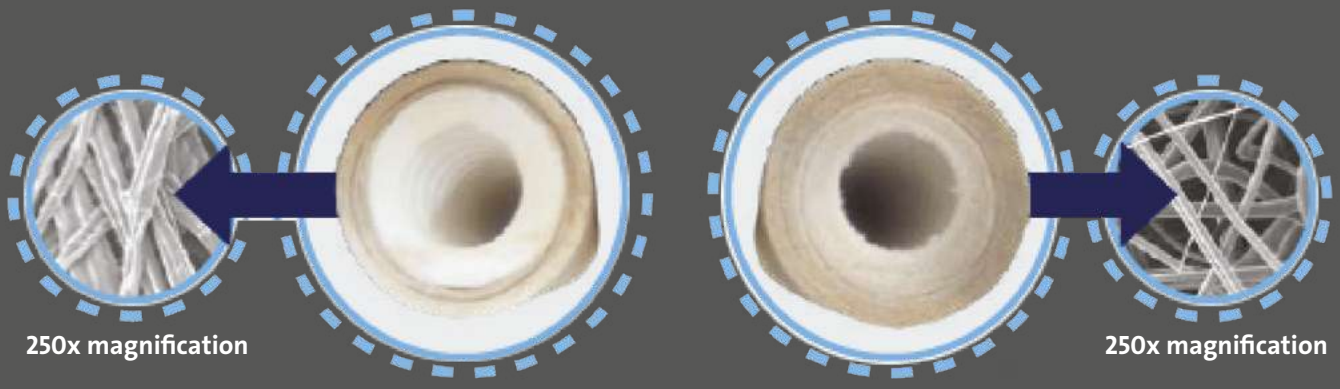
Veolia continually develops technology to improve performance. Laboratory testing and field experience show Veolia depth filters outperform low cost imports on several measurements.

Graded Density – Performance is built into Veolia's depth filter design. Veolia's graded density enables the entire cartridge to hold contaminants. Competitor filters without graded density completely plug while leaving the majority of the media unused.

Lifetime and dirt holding capacity – Veolia filters are engineered to maximize dirt-holding capacity and minimize pressure drop at each micron rating. When compared to Veolia's depth filter, the competitor's products with similar efficiency has uniform density throughout the filter, which results in poor life and capacity. Veolia depth filters employ technology that can change filter density to increase service life.

Pressure drop – When compared to Veolia's depth filter, the charts (located on Page 5) show the inferior performance of the competitor's product. In this test, the competitor's product was labeled as a one micron rated filter and was compared to the Veolia 20 micron rated filter.

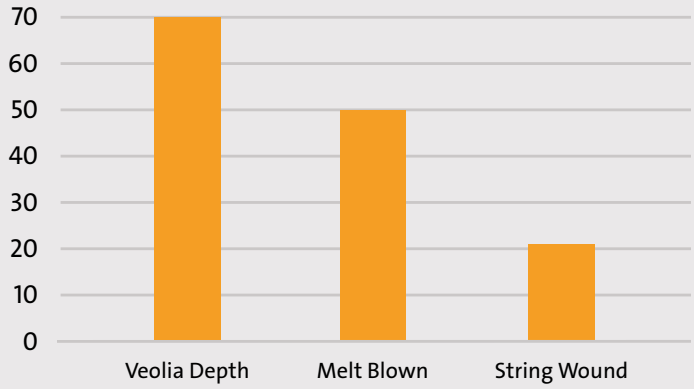
Z.Plex vs competitor depth filter



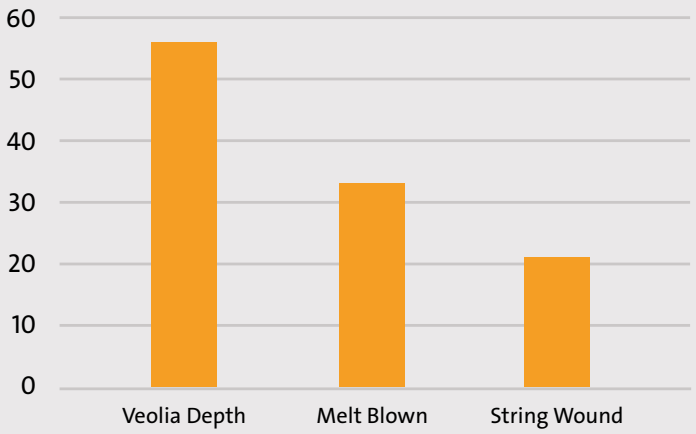
Graded Density

Side by side comparison of used depth filters. The Veolia filter shows dirt capture through the entire cartridge whereas the competition's filter gets plugged, leaving the majority of the cartridge unused.

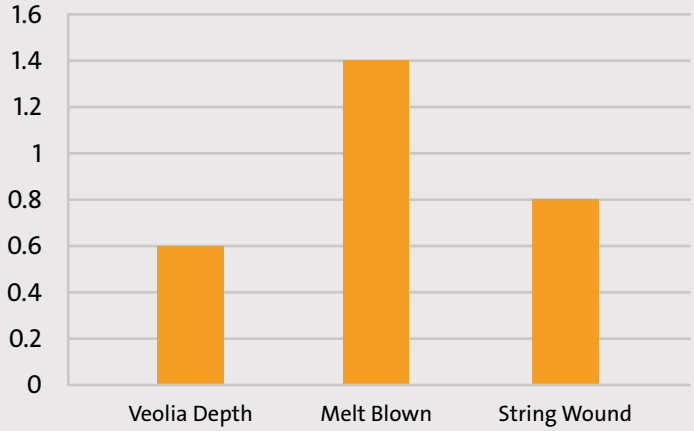
Lifetime
(in minutes)



Dirt Holding Capacity
(in grams)



Pressure Drop
(in psid/5 gpm)



All data based upon 10" filters.

High Purity
Regulatory Compliance

Veolia depth filters are made in the USA. We partner with the world's best polypropylene producers to ensure a consistent supply of raw material that allows for FDA compliance and NSF certification. It also keeps us on the cutting edge of polymer advances.

Veolia's commitment to filtration is supported by our dedicated Research and Development staff and world-class laboratories. This commitment provides leading technology that results in superior performance. Rigorous quality assurance has been integral to our process with ISO registration for more than 15 years.

When you use Veolia depth filters, you reduce fouling, increase filter life and decrease the costs of your system performance. If you would like more information about how Veolia filters can provide you with high performance and high purity, contact your Veolia account representative or visit www.veoliawatertechnologies.com.

Veolia Depth Filter Portfolio	
Hytrex Technology Filters	Z.Plex Technology Filters
Hytrex	ROSave.Z
Purtrex	WellPro.Z
Selex	Absolute.Z
RX	SWRO.Z
Aquatrex LD	ZCore
	Muni.Z
	High Flow Z

Resourcing the world

Veolia Water Technologies

Please contact us via:

www.veoliawatertechnologies.com