

Donaldson Industrial Hydraulics New Product Announcement



Donaldson Triboguard™ Synteq™ XP - Extended Life Liquid Filter Cartridges

Synteq XP filter applications include:

- Paper Machine Oil (PMO) filtration
- Wind Power gearbox filtration
- High flow lube oil and hydraulic filtration
- Kidney-loop filter systems
- Flushing and clean-up systems

Media	Microns @Beta 200	Microns @Beta 1000
2XP	<<4.0	<4.0
6XP	4.5	6.0
11XP	9.0	11.0
22XP	16.5	22.0



Synteq XP Features	User Benefits
Bi-component binder fiber to eliminate filming and resin migration	Improved chemical resistance, no resin leaching, improved dirt capacity
Multi-layer design	Improved dirt capacity
Ultra-thin media with the highest pleat count	Maximum media area and longest life

The difference is in the filter media!

The new Donaldson Triboguard Synteq XP liquid filter cartridges are manufactured using breakthrough Synteq XP filter media, which delivers absolute level efficiencies with contaminant holding capacities beyond that of competitive filters. Extended filter life is a key to meeting today's demanding system cleanliness requirements.

New Synteq XP filter media

Unlike other media Synteq XP media combines glass fiber and other synthetic fibers in a design that maximizes its capacity to capture and hold contaminants. This unique micro-fiber media design provides more usable specific fiber length and micro-pores per area. When combined with unparalleled filter media surface area, the results are a winning combination.

Standard Features

- Epoxy-coated steel screens
- Synthetic media
- Epoxy-bonded media seam
- Stamped steel endcaps with epoxy potting
- Fluoro-polymer seals

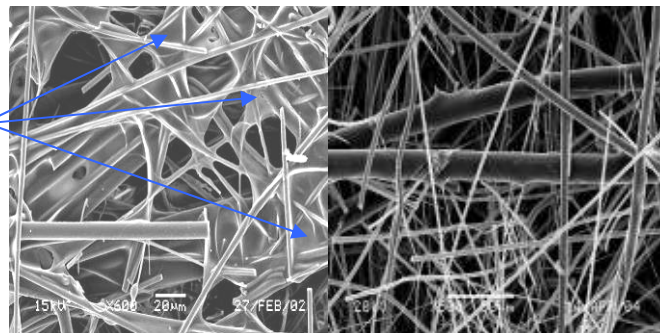
Coreless Features

- Epoxy-coated steel screens
- Synthetic media
- Epoxy-bonded media seam
- Polymer endcaps with epoxy potting
- Fluoro-polymer seals

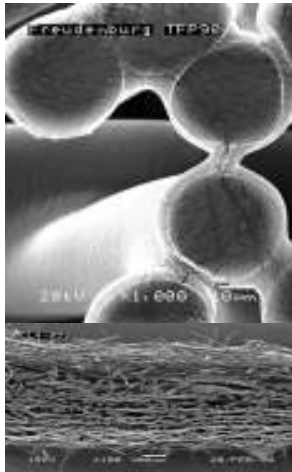
A Visual Media Comparison

Typical glass fiber media utilizes a chemical-based resin system to bond its fibers together. A consequence of this is the filming over and plugging of a portion of its pores, reducing the usefulness of many of its finer fibers. Also portions of this resin system may dissolve and migrate into the fluid system due to the fluid's chemistry, negatively impacting the fluid process.

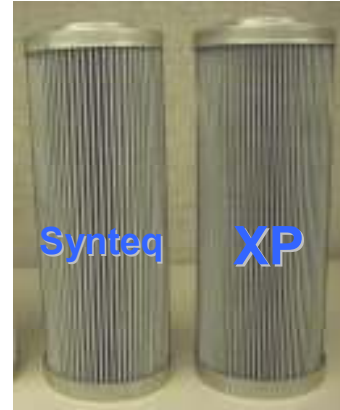
Typical Glass Fiber Media vs. Synteq® XP



Synteq XP takes a revolutionary approach by using a bi-component binder fiber to bond the glass fiber structure together without resulting in the filming over of its porous area. The result is easy to see by comparing the two photo-micrographs. The bi-component binder fibers have a core and sheath structure, enabling the outer sheath to partially melt and bond together the adjacent matrix of surrounding fibers, while maintaining the structural support in the non-melting inner core.



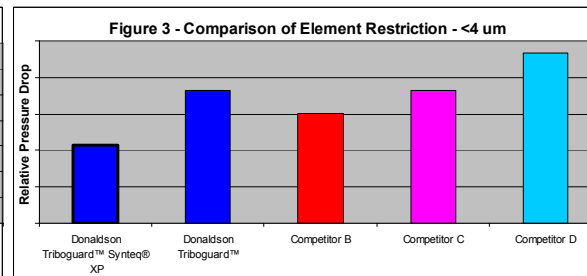
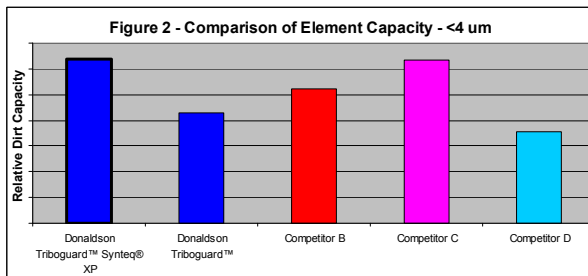
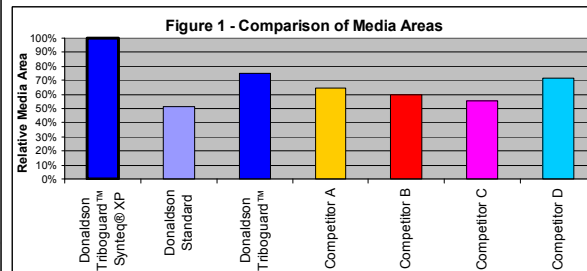
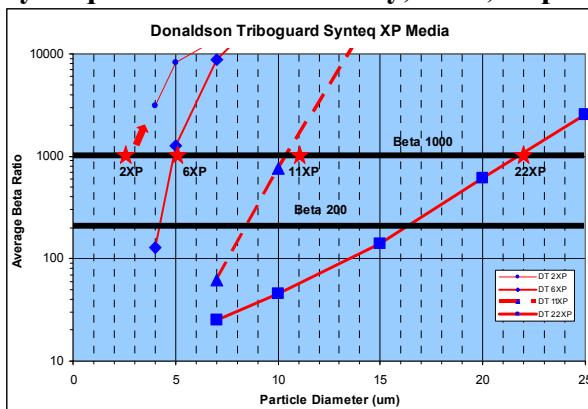
Synteq XP media also is multi-layered with a gradient pore structure enabling enhanced particulate capture and storage. The cross-sectional view below shows the two layer, co-wet-laid formation.



Donaldson Triboguard with Synteq XP looks visibly different than our regular Donaldson Triboguard elements. The thinness of the media pleat tips and increased number of pleats are apparent. The results are evident in Synteq XP's performance.

The results are evident in Synteq XP's performance.

Synteq[®] XP Media Efficiency, Area, Capacity, & Initial Restriction



Beta Rating (per ISO 16889)	Typical $\beta=1000$	Operating Temperatures / Fluids
2XP $\beta <4(c) = 1000$	$<4 \mu\text{m}$	-45° to 250°F (-43° to 121°C)
6XP $\beta 6(c) = 1000$	6 μm	200°F max for Phosphate Ester-HFD Fluids
11XP $\beta 11(c) = 1000$	11 μm	150°F max for Water Glycol-HFC & HWCF-HFA Fluids
22XP $\beta 22(c) = 1000$	22 μm	Element Collapse Ratings
		150 psi / 1034 kPa / 10.3 bar (standard)