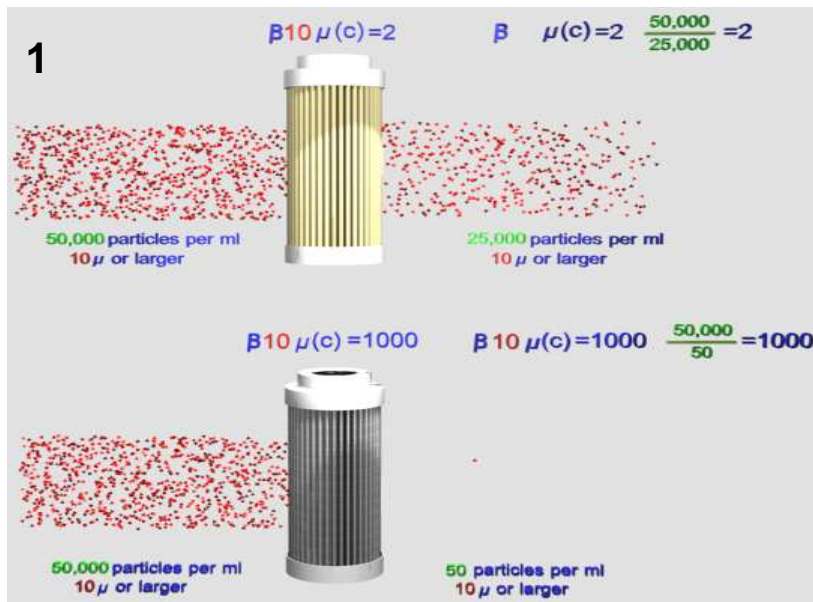


Evolution of Media: Hy-Pro G7 Dualglass Upgrade from Cellulose Media

Glass media has superior fluid compatibility versus cellulose with hydraulic fluids, synthetics, solvents, and high water based fluids. Glass media also has a significant filtration efficiency advantage over cellulose, and is classified as “absolute” where cellulose media efficiency is classified as “nominal”.

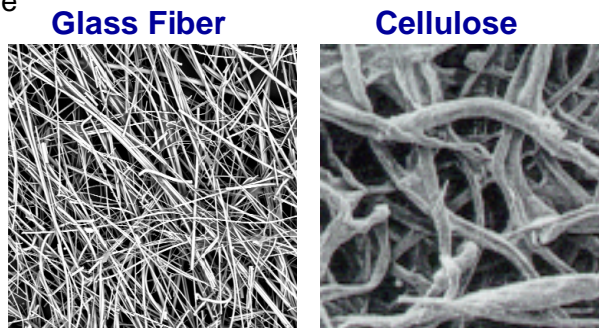
Elements of different media with the same “micron rating” can have substantially different filtration efficiency. Figure 1 provides a visual representation of the difference between absolute and nominal filter efficiency.

The illustrated glass element would typically deliver an ISO Fluid Cleanliness Code of 18/15/8 to 15/13/9 or better depending upon the system conditions and ingress rate. The cellulose element would typically achieve a code no better than 22/20/17.



Runaway contamination levels at $4\mu_{[c]}$ and $6\mu_{[c]}$ are very common when cellulose media is applied where a high population of fine particles exponentially generate more particles in a chain reaction of internally generated contaminate.

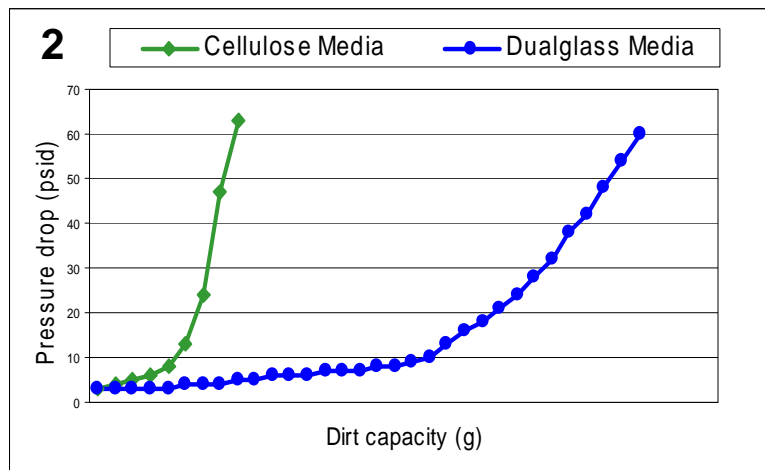
Inorganic glass fibers are much more uniform in diameter and are smaller than cellulose fibers. Organic cellulose fibers can be unpredictable in size and effective useful life. Smaller fiber size means more fibers and more void volume space to capture and retain contaminate.



Upgrading to Hy-Pro G7 Dualglass

Glass media has much better dirt holding capacity than cellulose. When upgrading to an absolute efficiency glass media element the system cleanliness must be stabilized. During this clean-up period the glass element halts the runaway contamination as the ISO cleanliness codes are brought into the target cleanliness range. As the glass element removes years of accumulated fine particles the element life might be temporarily short.

Once the system is clean the glass element can last up to 4~5 times longer than the cellulose element that was upgraded as shown in figure 2.



FILTRATION