Competitive Analysis

i108_0917

Their 5 micron Nominal 1st stage Pre-filter:

Single stage pre-filter cartridge

Nominally rated cartridge removes particles as small as 5 micron. Designed primarily as a particulate filter, it's typically unable to stop slugs of water and oil present in compressed air systems. Also, what the competition fails to mention is that the cartridge will not filter all particles 5 micron and larger. In fact, their nominally rated 5 micron filter is, in reality, a 15 micron absolute rated filter.

The problem? 50% of the contaminants in a typical compressed air system, by weight alone, are less than 1 micron in size. This means that if one were to measure the total count of contaminants, 95-99% of the contaminants present in most compressed air systems are less than 1 micron. Therefore, the remaining particles in the 1-50 micron range, called dispersion aerosols, only account for roughly 1-5% of the total contaminants in a compressed air system.

End result? Grossly inadequate pre-filtration to the 0.01 micron coalescer.

VS.

RTi's Advanced 1st stage Separator/Coalescer/Pre-filter:

Eliminizer®/1st stage

Our systems use a patented multi-stage separation technology to yield high-efficiency removal of all bulk liquids, while providing absolute (99% and 99.9%) particulate removal on particles 0.9 micron and 1 micron, respectively.

Advantage? The Eliminizer® Combo 1st stage removes 99% of the sub-micronic particulates which will shorten the life of high-efficiency 0.01 micron coalescers.

End result? RTi's 1st stage Separator/Coalescer/Pre-filter provides our advanced 2nd stage coalescer with virtually particulate-free air, while removing all water, bulk liquids, and slugs. Therefore, our 0.01 micron coalescer is free to remove only the sub-micronic oil aerosols while maintaining high flow rates and low pressure drops.

Their 0.01 micron Coalescer:

2nd stage High-Efficiency Coalescer

Removes 99.99% of DOP aerosols and dirt particles down to 0.01 micron. However, due to inadequate pre-filtration, element life can be shortened considerably. Also, because moisture slugs can by-pass the pre-filter, the 0.01 micron cartridge will experience surges in pressure drop across the element. In addition, conventional 0.01 micron coalescers are not designed to filter slugs of oil and water moisture, and where slugs are present, liquid carryover is very common.

Media: Flat-stock, wrapped media around a center core. Process is not conducive to tapered pore structure. The pore structure created by the conventional wrapping technique typically results in increased operating pressure drops and shortened element life.

Support Core: "Stainless" steel can oxidize and corrode in moisture.

Endcaps: Epoxy bonded to element, potential for particle by-pass.

Foam Drain Layer: Conventional polyurethane foams have had problems in the past with degradation from synthetic lubricants. Also, they tend to hold moisture, which can increase the potential for re-entrainment.

VS.

RTi's Sophisticated 0.01 micron Coalescer:

Eliminizer®/Combo 2nd stage 0.01 micron Coalescer

Removes 99.99% of DOP aerosols and 99.9999% of dirt particles down to 0.01 micron.

Advantage? You will see particulate and water free influent air, allowing the cartridge to serve its primary function: to remove all remaining sub-micron oil aerosols, without the presence of solid particulates which can shorten its life.

End result? Oil free, water free, dirt free compressed air with long, enhanced element life.

Media: Seamless, formed tube with tapered pole structure. ***Advantage?*** Allows for true depth loading of particulates and reduces operating pressure drops as much as 20-30%, reducing work load on compressor.

Support Core: Scientifically advanced industrial polymeric supports. ***Advantage?*** Withstand high differential pressures with no rust or corrosion.

Endcaps: Injection-molded engineering grade resin, fusion bonded to media and polymeric support cores. ***Advantage?*** Creates integral bond to assure zero particle by-pass between media and endcaps.

Drain Layer: Sophisticated polymeric composition creates non-wicking feature. ***Advantage?*** Allows coalesced aerosols to drain to bottom of housing without aerosol re-entrainment. Also, RTi's drain layer is highly compatible with synthetic lubricants.