FLOW EZY FILTERS, INC.

Manufacturer of hydraulic, pneumatic, air, oil, and fuel filters

"News You Can Use"

July 2016

"A Simplified Study In Filtration" - Part 1 of 10

Filtration has come a long way since the beginning of time. It goes all the way back to ancient times. The Egyptians used to strain their grape juice through fabric. Even the use of filters to purify water and make it fit for consumption is not new. Historical records dating back before the birth of Christ have many references to making water drinkable. The Bible has many references to water treatment and supply. Egyptians heated, then filtered their water through sand. Ancient Indo-European records refer to placing water in copper kettles, heating it, exposing it to sunlight, and running the water through charcoal to make it consumable. In ancient Rome around 300 B.C, water provided by the aqueducts was used not only for drinking but for bathing. Primitive filtration systems were used in the form of settling tanks to remove large debris from the water to help purify it. So you see, the idea of filtration goes back a long, long way.

Enough of the history lesson in filtration. The development of science through the ages has brought us to the point that we not only filter solid particles but even molecules. Now that is getting pretty scientific! Just so you have a basic understanding of the relative sizes of particles, the human eye can see no smaller than 40 micron, the human hair averages 50-70 micron in diameter, a grain of table salt is about 100 micron, white blood cells are 25 micron, red blood cells are 8 micron, and most bacteria (cocci) is about 2 micron. Now that's small! This is all fine and dandy and might come in handy during a Trivial Pursuit™ game, but how does it relate to the filtration of fluids in a multi-million dollar system? If there is an area that, generally speaking, people do not think of very much when designing and maintaining a fluid power system, it's filtration. It isn't necessarily carelessness, it is simply a matter of something that is not thought about. However, it may be one of the most important areas in a system. Think about it for a moment—here you are with a $15,000,000 power system, or even a $10,000 car engine, the inlet filter plugs (if there even is an inlet filter), the pump cavitates, and there goes the system. The pump, being the heart of all power systems, is destroyed—all because of the simple, inexpensive, inlet filter, which was not maintained, or maybe one never existed in the first place. Too much resistance to flow creates considerable power loss and ineffectual operation.

Filters are relatively inexpensive and well worth the investment. For the cost of a filter it may mean the difference between a good operation and a poor operation. In this day and age when we all want to get "more bang for the buck", a properly maintained system, whether it be $15,000,000 power system, a $10,000 car engine, or a even a $150 lawn mower, is a must. That doesn't only mean the filtration side of it either. All components in the system are important as well, and need to be protected and maintained. They all work as a team in getting the job done effectively, both in cost and in performance. Stay tuned for next month's Part 2. We start getting into the meat of filtration.

- Donald C. Krause ©1999

INDUSTRIAL PROCESS CARTRIDGES

Overcome temperature and fluid compatibility limitations of fabric and synthetic filter cartridges by replacing them with an all stainless steel cartridges. No epoxy is used in the construction of these cartridges. Fabrication is by welding and mechanically crimping. Buna, Viton, and Teflon grommets are available for sealing into most standard filter cartridge housings. They are good for temperatures up to 500°F. and are completely unaffected by most caustic and corrosive fluids. Micron ranges are from 10 to 840. The filtration area is either pleated or cylindrically wound. Most 10" lengths are usually in stock. 20" and 30" cartridges are available to order. Call Flow Ezy for your cartridge requirements.

Visit flowezyfilters.com for our full product line

ALL FLOW EZY PRODUCTS ARE MADE IN THE U.S.A.

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