OHIO FABRICATORS COMPANY

news YOU CAN use

ISSUE 24

"Unparalleled Delivery Times on Custom and Standard Filtration Products"

Wire Cloth: Fluids and Filtration Media

There are many different types of hydraulic fluids that are used in a system. Base oils are mixed with various additives to make them effective hydraulic oils. That is why it is important to ensure that proper filter media is used. Wire cloth is the most versatile and widely used filter media for hydraulic filters. OFCO is considered one of the leading manufacturers of hydraulic filters using wire cloth as media. Consult us when selecting filters that are efficient and compatible with your fluid. With today's engineering and technology, wire cloth media can generally be as fine as 5 micron. OFCO specializes in manufacturing custom filters, too. Let us show you how we can simplify your decision-making when you require the most efficient filtration for your application.

Basic Fluid Power Quiz

1. Fluid power deals with the transmission and control of energy by a pressurized _____.
2. Pressure is equal to force divided by _____.
3. Flow rate is equal to volume divided by _____.
4. A pump produces _____.
5. Pressure is created by the _____.

See upside down answers to questions on page 2

Custom Made Filters are Our Specialty

When was the last time you couldn't find a source for the filter you need? Or when could you find a source but lead time was months out? Or the price was in orbit? From concept, to design, to order, to manufacturing, to delivery, OFCO should be your next contact. OFCO specializes in custom made filters along with our standard quick-ship products. You will find our lead times very desirable and working with us is extremely easy. There isn't much we can't make, and if we can't we'll tell you. If we can, we'll tell you that, too. We will always be honest and "up front" with you. You will like our pricing as well, and all our products are made in the USA at our plant in Coshocton, Ohio. All it takes is one phone call, fax, or e-mail, to bring you on board. We make solutions for your problems.

PART 3 OF 10: PIPE SIZE

Does Filter Size Matter?

Last time we mentioned flow rate to be considered when selecting filters. Well, with flow rate, pipe size goes hand in hand. The filter must be properly sized to keep the pressure drop compatible with the fluid passing through it. A pump putting out 50 gpm, for example, will create less pressure drop when flowing through a 3" npt pipe than through a 1" npt pipe. The pipe size will help focus filter selection. This general reference chart relates pipe size to flow rate.

Typically, flow velocities in hydraulic subsystems should be high enough to ensure they run smoothly and efficiently. In pump suction lines, flows should be traveling roughly 2-4 feet/second (fps). In pressure lines, the flow rate should be generally 10-25 fps. In return lines, the figure is generally 5-10 fps.

FLOW RATE (GPM)	PIPE SIZE (NPT)
2	1/4" - 1/2"
3	3/8" - 3/4"
5	3/4" - 1 1/4"
10	3/4" - 1 1/4"
20	1" - 1 1/4"
30	1 1/2" - 2"
50	1 1/2" - 2"
75	2 1/2" - 3"
100	2 1/2" - 3"
200	3" - 4"
400	4" - 6"

Ohio Fabricators Company has been recognized and respected since 1945 as a premier filter manufacturer. *That is all we do! We specialize in filters. We don't pretend to make any other components. We know how to make filters. Our logo has stood for quality and service for a very long time when it comes to solving filtration problems. We plan on continuing this legacy for many years to come.*

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When Did Filtration First Occur?

Filtration has come a long way since the beginning of time. It goes all the way back to the ancient Egyptians (as best as anyone can tell). They use to strain their grape juice through fabric. Development of science through the ages where filtration is concerned, has brought us to the point where we not only filter solid particles but even molecules. Now that is getting pretty scientific! After all, the human eye can see no smaller than 40 microns (325 mesh). The human hair averages 50-70 microns in diameter (about 230 mesh). Most bacteria is about 2 microns in diameter (in inches that's .000078 of an inch). Now that's pretty small!

That is all fine and dandy and may come in handy during a Trivial Pursuit game, but how does it relate to the filtration of fluids in an expensive fluid power system? Because we have been in business for 79 years we hear it all the time. We know where filters should be placed in the system. Look at it this way, if the filtration breaks down, the system will break down.

Not only is the critical use of filters important, but maintaining them properly is just as important. Filters that become dirty and restrict flow are a sure sign of problems to come. Too much resistance to flow creates considerable loss of power and an ineffectual operation.

If this is an area where you need some guidance and have questions, give us a call. We have been manufacturing and selling filters for almost 80 years. Together we keep your system running effectively.

Basic Fluid Power Quiz Answers

Answers: 1. Fluid; 2. Area; 3. Time; 4. Flow; 5. Resistance to flow

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