OHIO FABRICATORS COMPANY

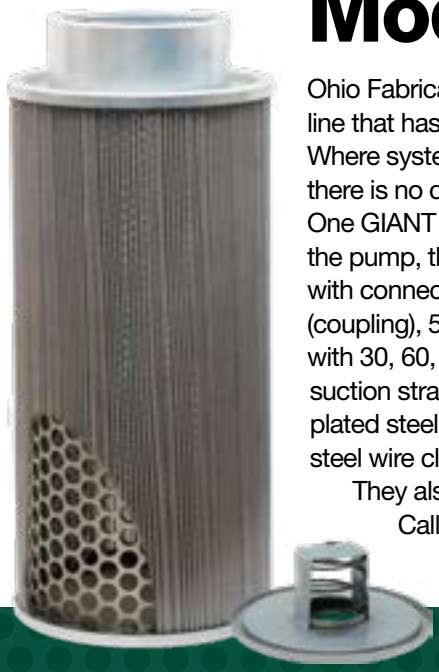
news YOU CAN use

ISSUE 13

"Unparalleled Delivery Times on Custom and Standard Filtration Products"

NEW PRODUCT FROM OHIO FABRICATORS!

Giant Suction Strainers Model "OS"

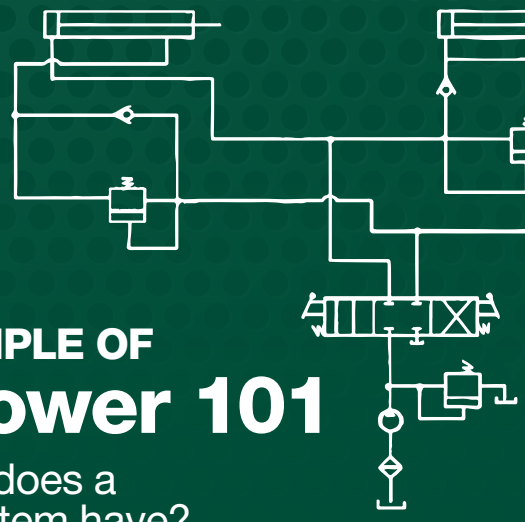


Ohio Fabricators introduces the new GIANT suction strainer line that has the capacity to handle flows up to 400 gpm. Where systems with hi-flow applications are in operation, now there is no question of how to protect the pump adequately. One GIANT suction strainer can now do the job to protect the pump, the system's most valuable component. Available with connections of 3" and 4" npt, male (nipple) and female (coupling), 5.9" and 8.1" diameters with varying lengths, and with 30, 60, 100, or 200 mesh level of filtration. The GIANT suction strainers are made of plated nipples and couplings, plated steel end caps and support tubes, pleated stainless steel wire cloth, and are epoxy bonded for leak-proof strength. They also have optional 3 psi or 5 psi bypass valves. Call or e-mail for more information.

Three Approaches to Maintenance

1. **REACTIVE:** This is crisis mode and the costliest approach. The basic belief of some maintenance management is not to repair or service any issue until it breaks down.
2. **PREVENTIVE:** This is a philosophy of making changes and servicing a system whether it needs it or not with the hopes of beating system failure.
3. **PROACTIVE:** This is tracking and recording a number of considerations, such as, system design, fluid analysis, and monitoring the system's health. If this is done properly, it will allow maintenance to plan and get the most useful life out of the system. It may seem that this is too time consuming. However, if a system breaks down, it will be more time consuming fixing the problems than planning and record keeping. This is the most cost efficient of the three approaches!

Which Approach Do You Take?



BASIC PRINCIPLE OF

Fluid Power 101

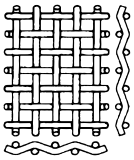
What purpose does a fluid power system have?

See answer to question on page 2

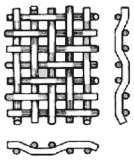
A Simplified Study in Filtration

PART 10 OF 10

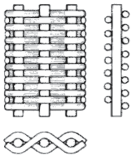
Other terms and samples regarding the most common wire cloth weaves that are used today are:



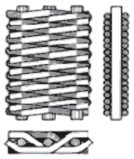
Plain Weave (square mesh). Each warp and fill wire passes over and under each other. Most common. Wire diameters are generally the same. {Window screens in your home are plain weave and 30 mesh).



Twilled Weave. Each fill wire passes over two, then under two successive warp wires and each warp wire passes alternately over two and under two successive fill wires. Used to allow a heavier than standard wire diameter in association with a given mesh. Used for finer filtration than plain weave offers.



Plain Dutch Weave. Same pattern as plain weave, but the warp wires have a larger diameter than fill wires. Fill wires are driven close to each other, making tapered or wedge-shaped openings instead of square ones. Warp wires remain straight, fill wires have crimps. Used for very fine filtration.



Twilled Dutch Weave. Same pattern as twilled weave but the warp wires have a larger diameter than the fill wires. Warp wires are straight and the fill wires, driven up tight, have all the crimps, both down and sideways. Used for very fine filtration in rugged specialty applications.

Cellulose & Synthetic Media (most common are micro-glass, polyester, polypropylene, cotton). Used in both surface and depth type filters (wire cloth is a surface filter), and can be made of cellulose paper or synthetic materials. They are used generally, for finer filtration tasks than wire cloth. These filters are non-cleanable. Whenever making a determination of what type of filter media to use in your application, remember three things;

1. Is the media compatible with the operating temperature of the system?
2. Is the media chemically compatible with the process fluid that is being used in the system?
3. Can the media withstand the rigors of the operation?

There are a few definitions that apply when talking about micron ratings. They are:

Absolute Rating. The size, usually in microns, of the largest opening or pore in a filter element. In other words, the complete absence of holes larger than the rating. If a filter is rated at 200 mesh (74 micron), there will be no opening the filter media larger than 200 mesh or 74 micron.

Nominal Rating. Media that has no consistent opening size. It is an average. Wire cloth is nominal rated. If a filter is rated at 100 mesh, it may have a few openings, for example, of 80 mesh or 120 mesh. Like mentioned, it Is an average.

Mean Flow Pore Size. Indicates that half the flow passes through openings of equal or smaller size and the rest flows through openings of larger size. This is another way of saying it has a nominal rating.

Beta Ratio. Simply a way of testing and stating the effectiveness of a filter for removing particles of a certain micron size or larger. The effectiveness can also be expressed as efficiency. This may be accomplished by using one of the laboratory procedures called a Filter Multi-Pass Test. Most of the time it is also only a single pass test. This is as “in- depth” as we will get in this writing concerning beta ratio.

This is the last of this series and we hope you have learned more about fluid power and filtration. We hope you have enjoyed reading, A Simplified Study in Filtration!

To read the entire series visit: ohfab.com/ofco-newsletters.

Quiz Answer

The purpose of a fluid power system is to transmit power from one location to another.

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