

*"Unparalleled Delivery Times on Custom and Standard Filtration Products"*

## We Understand Fluid Cleanliness

All reservoirs are designed to breathe and have a certain amount of headspace inside between the equipment and housings and the process fluid. The fluid level simply rises and falls inside the reservoir through simple operation. Our tank breathers ensure a free flow of air while stopping airborne contaminants from entering the reservoir. We have several standard threaded models to choose from. We also have breathers for pressurized tanks and filler-breathers where the breather cap covers the filler-port, thus doing "double duty." There are many options and filtration sizes to choose from. Give us a call or check our website for more information.



## Do You Know the Answers to These Basic Questions?

1. How much does one cubic foot of standard hydraulic oil weigh?
2. What is the real purpose of a hydraulic pump?
3. What does a relief valve do?
4. What causes pressure?

*See upside down answers to questions on page 2*



# A Simplified Study in Filtration

## PART 9 OF 10

**When sizing the filter to a system, this is a chart which shows a guide when helping match flow to pipe size.**

### Schedule 40 (Standard Weight) Pipe

PIPE (NPT)	2 FT/SEC	4 FT/SEC	10 FT/SEC	15 FT/SEC	20 FT/SEC	30 FT/SEC
1/8	.36 GPM	.72 GPM	1.8 GPM	2.7 GPM	3.6 GPM	5.4 GPM
1/4	.60	1.2	3.0	4.5	6.0	9.0
3/8	1.2	2.4	6.0	9.0	12.0	18.0
1/2	1.9	3.8	9.5	14.0	19.0	29.0
3/4	3.4	6.6	16.0	25.0	33.0	50.0
1	5.5	11.0	27.0	41.0	55.0	83.0
1 1/4	9.4	19.0	47.0	70.0	94.0	140.0
1 1/2	13.0	26.0	65.0	95.0	130.0	190.0
2	21.0	42.0	105.0	156.0	210.0	312.0
2 1/2	30.0	60.0	120.0	222.0	300.0	444.0
3	45.0	92.0	225.0	345.0	450.0	690.0

*Numeric figures to the right of NPT pipe sizes all represent gpm flow rates.*

Let's talk wire mesh or wire cloth. Wire cloth acts as a surface type filter or strainer. It is normally specified in mesh. This indicates the number of openings per linear inch. It does not directly indicate the size of the openings, which can vary depending upon wire diameter. There are a few terms to be familiar with when speaking of wire cloth.

**Space:** Clear opening or space between parallel adjacent wires, expressed in inches.

**Fill Wires:** Wires running the short way of the cloth as woven.

**Warp Wires:** Wires running the long way of the cloth as woven.

**Square Mesh:** Wire cloth with the same mesh count in the fill and warp. Also called "plain" weave. You will mostly find this type of weave up to 200 mesh.

**Rectangular Mesh:** Wire cloth with a different mesh count in the fill than in the warp. You will find this type of mesh as finer filtration is achieved. Normally it begins in the neighborhood of 325 mesh.

Most wire cloth filter elements are cleanable. There are different

methods of cleaning. Manually cleaning requires a very soft bristle brush and standard industrial cleaning solvents. Do not brush so hard to separate the stainless steel threads. This will open the filter up causing it to lose its integrity to filter at the level it was intended. Brushing away the contamination and blowing the fluid and contamination out is the most common method. Remember, safety first, however. Ultrasonically is the best method to clean wire cloth filter elements. It is more effective and will lengthen the useful life of the filter.

Next time we will close out the wire mesh section explaining the various weaves and briefly touch on other types of media with a few filtration terms to take with you.

#### Basic Questions Quiz Answers

1. 55-58 lbs.; 2. To create flow; 3. Sets the maximum pressure available; 4. Resistance to flow

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