



# Donaldson® Alpha-Web™ Media Technology



# REVOLUTIONARY HYDRAULIC FILTRATION FOR THE REAL WORLD

Fine fibers for rough work.

Donaldson.  
**ALPHA-WEB™**

# CLEANER HYDRAULIC FLUID IS THE ANSWER

## 75% of Hydraulic Failures Are Caused by Dirty Fluid

More than 75 percent of all hydraulic system failures can be traced back to contaminated fluid. Today's modern hydraulic systems operate at such high pressures that even microscopic particles can cause wear and tear on components, unplanned downtime and higher maintenance costs.

The cleanliness of your hydraulic fluid directly impacts your bottom line. **Clean hydraulic fluid can extend component life, increase uptime and lower the cost of ownership.**

To best protect your hydraulic equipment in real-world conditions, you need filtration that's been developed and tested to handle those conditions effectively and efficiently.

**Donaldson® Alpha-Web™ hydraulic filtration technology is that protection.**

### ALPHA-WEB IMPROVES HYDRAULIC FLUID CLEANLINESS BY

**2 ISO** codes over  
synthetic media

That's hydraulic fluid up  
to **4x cleaner\***

Which can **extend  
component life by 60%**

\*Results achieved from lab testing. Field testing is ongoing.

### Efficient Filtration Is Effective Filtration

Efficient filtration extends the life of your hydraulic fluid, therefore extending its protection of your components.

**But how much does filter efficiency matter?**

According to the Equipment Life Extension Table by Noria Corporation, the industry-accepted authority on fluid cleanliness, an improvement in fluid cleanliness by two ISO codes can extend component life by 60 percent. How much would you save annually if you could get 60 percent more life out of your components?

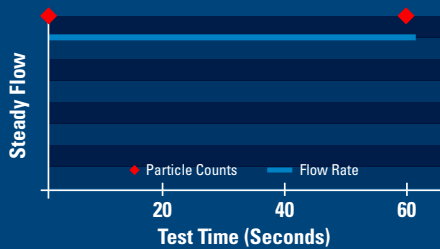
# Alpha-Web: A New Standard in Filtration Media

With the 2021 industry ratification of ISO 23369, lab testing for hydraulic filtration more closely replicates the varying, or “cyclic” flow rates of real-world filter working conditions. This evolution of hydraulic filtration test standards has opened the door for new technology solutions.



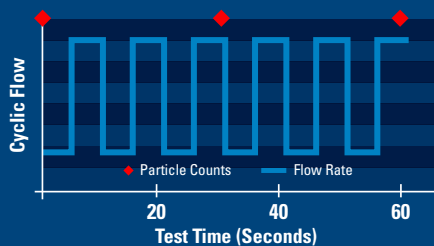
## Steady Flow ISO 16889

- Constant flow
- Particle counts every minute



## Cyclic Flow ISO 23369

- Cyclic flow 4:1 ratio every 10 seconds
- Particle counts every 30 seconds



The fine-fiber layer of Alpha-Web media enables high filtration efficiency during cyclic flow conditions, while minimizing dynamic events where particles are dislodged as the fluid flow changes. Alpha-Web is designed for enhanced filtration efficiency that is effective in real-world operating conditions.

## What is your current ISO code?

Lab testing shows that Alpha-Web improves hydraulic fluid cleanliness by two ISO codes over today’s synthetic media. This means that operators get hydraulic fluid that is up to 4 times cleaner and can lead to longer component life. **This can lower overall cost of ownership and decrease downtime.**

### Range of number of particles per milliliter

Code	More Than	Up to & Including	Code	More Than	Up to & Including
24	80,000	160,000	14	80	160
23	40,000	80,000	13	40	80
22	20,000	40,000	12	20	40
21	10,000	20,000	11	10	20
20	5,000	10,000	10	5	10
19	2,500	5,000	9	2.5	5
18	1,300	2,500	8	1.3	2.5
17	640	1,300	7	.64	1.3
16	320	640	6	.32	.64
15	160	320			

**By dropping one ISO code, particle count shrinks by half. Dropping two ISO codes means fluid that is four times cleaner.**

## OBJECT SIZES IN MICRONS ( $\mu\text{m}$ )



GRAIN OF TABLE SALT  
100  $\mu\text{m}$



HUMAN HAIR  
80  $\mu\text{m}$



HUMAN VISION  
40  $\mu\text{m}$



WHITE BLOOD CELL  
25  $\mu\text{m}$



TALCUM POWDER  
10  $\mu\text{m}$



RED BLOOD CELL  
8  $\mu\text{m}$



SILT  
< 5  $\mu\text{m}$



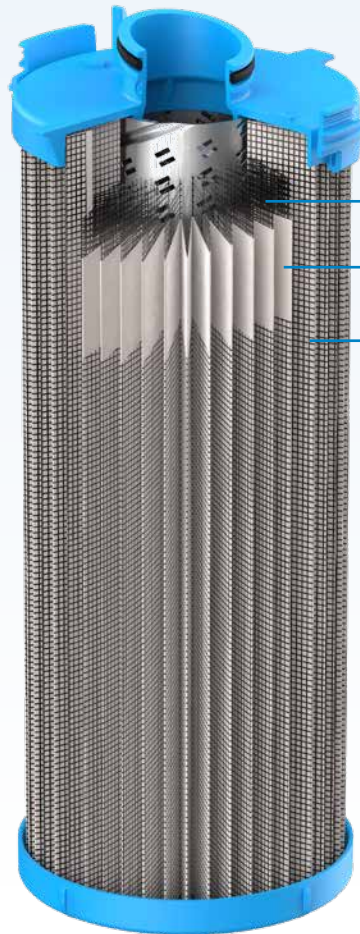
BACTERIUM  
2  $\mu\text{m}$

Even dirt particles smaller than a red blood cell can cause major issues in a hydraulic system. If your filtration isn't blocking particles of that size in real-world conditions, it's not doing its job.

## Transformational Protection

Alpha-Web filtration media from Donaldson features a first-of-its-kind fine-fiber layer to trap and lock particles during frequent flow-rate changes, which delivers transformational improvement in hydraulic equipment protection.

**Cleaner oil. Less downtime. Extended component life. Better performance. That's Alpha-Web™.**



Downstream Wire

Alpha-Web Media

Upstream Wire

**Alpha-Web's fine-fiber media and wire backing trap and lock particles to keep them from becoming dislodged during cyclic flow conditions.**

For more information, visit [Donaldson.com](https://www.donaldson.com)



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Brochure No. F115414 ENG 10/22

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