

ENERGY SUSTAINABILITY INITIATIVE



Delivering Responsible Energy Solutions

E-Drive Media is part of Schroeder Industries' **Energy Sustainability Initiative**, our mission to provide filtration solutions that contribute to a cleaner world and help organizations reach their sustainability goals. **Here's how:**

- By supporting emerging clean energy technology, including electric and hydrogen gas powered systems, with optimized filtration solutions.
- By reducing wasted hydraulic oil and increasing the energy efficiency of hydraulic systems with advanced hydraulic filtration solutions.
- By increasing diesel fuel efficiency and reducing carbon emissions through superior fuel filtration.
- By engineering innovative alternatives to current wasteful and inefficient filtration technology.



Visit us online @ www.schroederindustries.com for our complete product offering!



580 West Park Road | Leetsdale, PA 15056, USA
724.318.1100 phone | 724.318.1200 fax
sisales@schroederindustries.com
An ISO 9001:2015 Certified Company | © 4.2022 All rights reserved.



Markets Served



L-5096 | 2023

www.schroederindustries.com



 | **ectric DRIVE**
Low Energy Loss & High Stability

E-Drive Media



**Optimized filtration
for your electrically
powered equipment.**

1.800.722.4810 @ sisales@schroederindustries.com

SCHROEDER INDUSTRIES: ELECTRIC DRIVE (E-DRIVE) MEDIA

E-Drive Media: Optimized Filtration for Electric-Powered Equipment

Environmentally-friendly, electric-powered machines are becoming more viable and widespread, including in the field of hydraulics. To support this emerging green technology, Schroeder Industries has engineered the ideal filtration media which protects electric hydraulic systems while maintaining energy efficiency.

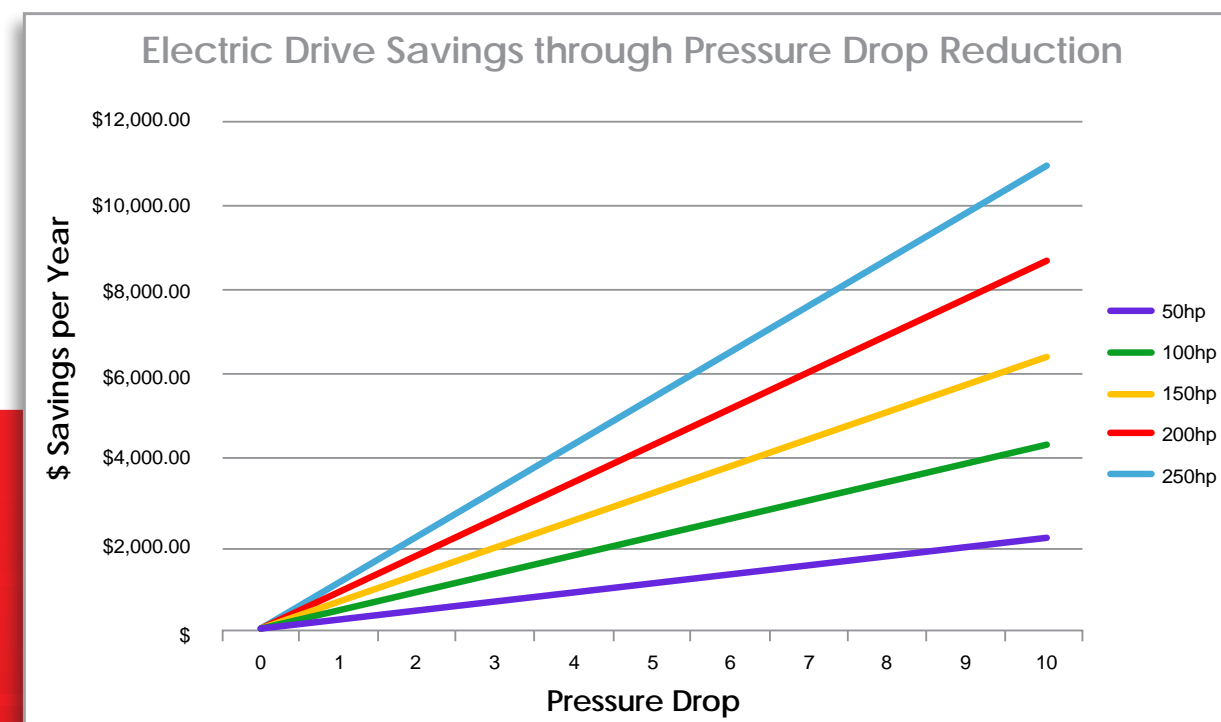
The Quest for Energy Efficient Electric Systems

Extended battery life is the the number one design challenge for all EV's, and increasing hydraulic efficiency—and thus, energy efficiency—is critical for achieving better battery life. Filtration plays a key role in a hydraulic system's efficiency, and E-Drive Media delivers by minimizing pressure drop across the hydraulic filter.

Cost Savings Through Pressure Drop Reduction

When the hydraulic circuit has an electric drive, reducing **differential pressure** takes priority. Differential Pressure describes the loss of available energy in a hydraulic system, which directly impacts battery life. A better filter housing and DP optimized element significantly reduce this loss. Even a relatively small pressure drop in a high horsepower system forces the pump/motor group to work harder to make up for the loss of energy.

This reduced efficiency leads to increased costs associated with battery usage. The graph below highlights how lowering pressure drop by even a few psi can save money*:



*Assuming electric driven operation at 65% efficiency. \$ Savings based on energy cost of \$0.15/kw-hr & ~6000 hours per year on an electric driven operation.

Reduce Pressure Drop & Increase Energy Efficiency with E-Drive Media

E-Drive filter elements are made using an all-new specialty formulated, high efficiency, low differential pressure media. **Filter elements built with all-new E-Drive media boast the lowest pressure drop at any given level of filtration**, making them the best choice for battery drive hydraulic circuits. E-Drive filter elements are the ideal choice for hydraulic-drive motor-pump units, particularly in low-temperature conditions where cold start behavior occurs.



Downstream Epoxy-Coated Wire Mesh

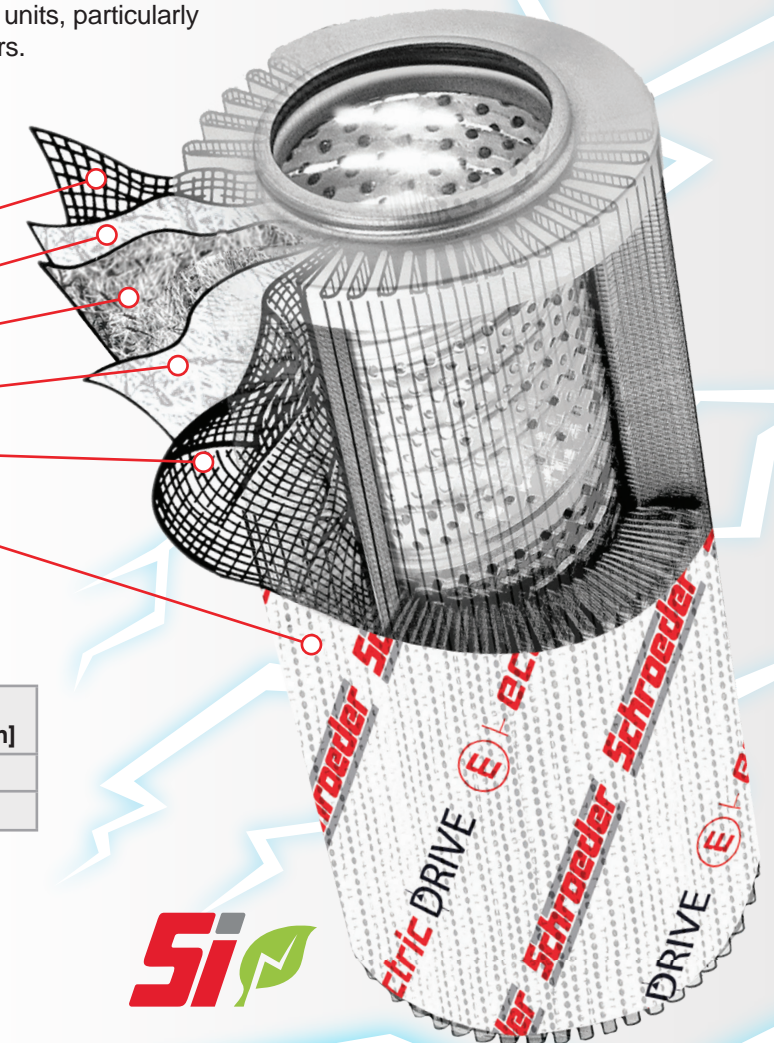
Downstream Scrim Layer

Specialty Low DP Filter Media

Upstream Scrim Layer

Upstream Epoxy-Coated Wire Mesh

Branded Plastic Outer Wrap



When tested against the typical synthetic microglass media currently available, our 10-micron Electric Drive Media element demonstrated a **68% lower** pressure drop factor:

Media Type	β200 [μm(c)]	Pressure Drop Factor [psid/gpm]
E-Drive Media (10 μ)	10.2	0.050
Typical Synthetic Media (10 μ)	10.6	0.156

- Element Collapse Rating: 145 psid (10 bar)
- Temperature Range: -22°F to 212°F (-30°C to 100°C)
- Flow Direction: Outside to Inside

E-Drive Media is currently rated for 10-micron filtration, with other micron options available in the near future.

E-Drive Media Benefits At A Glance:

- ⚡ Low pressure drop to maximize the energy efficiency of electric-powered systems
- ⚡ Substantial cost savings due to increased energy efficiency
- ⚡ May enable reduced horsepower requirements
- ⚡ Superior filtration protects machine components and minimizes downtime for further cost savings