

TANK OPTIMIZATION



Customizable Filtration & Deaeration

Complete Internal Filtration System

Increased Thermal Conductivity

Why Do We Recommend a Tank Optimization?

Global competition put strong pressure on OEMs: decreasing costs and increasing energy efficiency as key to be competitive as well as high requirements based on emission's directive belong to the usual daily challenges of OEMs. It is tough to install additional engine components in the already quite limited design space to match certain standards.

Changes in design engineering driven by the market and the resulting increased space demand for new components are among the many factors Schroeder must be mindful with when creating system-optimized tank reduction products. In every existing tank system Schroeder sees the opportunity of optimizing and reducing the tank. OEMs and end-users can benefit from lower costs thanks to less material demand as well as smaller oil volume, environmentally friendly products and from additional space in the engine compartment.

Standard Product Range for Tank Optimization

► In-to-Out Filtration

- ◆ Upstream flow from the bottom - outlet close to oil surface
- ◆ Low outlet velocity
- ◆ Minimized turbulences in the tank
- ◆ Smooth oil blending in the tank
- ◆ Additional options (Quality Protection to secure the spare parts business)

► Integrated Deaeration Windows

- ◆ Guidance of flow above oil level
- ◆ Coalescence of air bubbles

► Different Designs

Within the Schroeder standard product range of filters, we offer different designs such as:

- ◆ Filter solutions with upstream flow from the bottom
- ◆ Filter solutions with upstream flow from the side
- ◆ Integrated Quality Protection (as an option)

All of which enable maximum tank optimizing potential. Besides to standard filters, we provide even customized solutions.

► Advantages

- ◆ Reduction of oil volume
 - ◆ Environmental protection, cost-savings for the end-user
- ◆ Reduction of tank size
 - ◆ Available design space for additional components
 - ◆ Cost-savings for OEM (material)
- ◆ Lower complexity of tank, fittings and connections ...
 - ◆ Cost-savings for OEM (material, assembly)



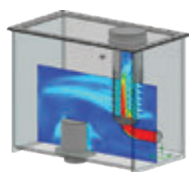
How Schroeder Industries Supports You

Our optimizing experts in the field of tank and filtration systems support you during the design-engineering revision of your machine through:

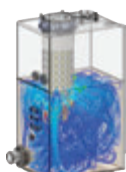
- ◆ Simulations, tests and experience
- ◆ Optimized filter systems
- ◆ Reduction of complexity of the tank and optimization of space
- ◆ Spare part management

Tools for System Optimization

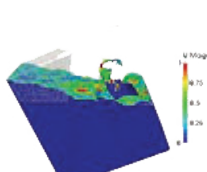
► Tank Simulations (Computer-aided optimization of tank systems)



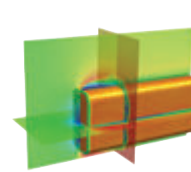
Flow



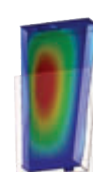
Deaeration



Sloshing

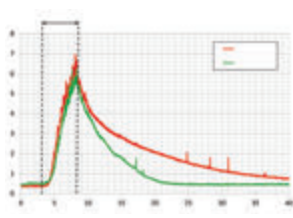


Thermal



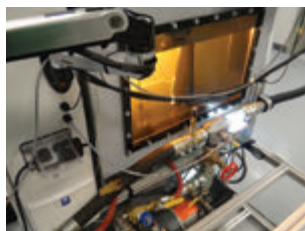
Structural

► Laboratory Tests



- ◆ Experimental investigation of the deaeration performance of tank systems
- ◆ Unique air content sensor for quantitative characterization, optimization and validation of tank systems

► Experience & Know-How



- ◆ Many years of experience in the field of "Air In Oil"
- ◆ Research & Development Center for Filtration
- ◆ Innovative lab and test equipment
 - ◆ Individual system analysis
 - ◆ Customized and application-specific solutions

► Field Tests (Characterization & validation under real working conditions)



- ◆ Measuring the air content in the real hydraulic system
- ◆ Investigation of the influence of working conditions to the air content
- ◆ Final validation of optimized tank systems



Manufacturing and Testing

Schroeder Industries' corporate headquarters is located in Leetsdale, PA (USA) with an additional manufacturing facility in Cumberland, MD (USA). Filter housings and diagnostic and specialty products are manufactured at our Leetsdale plant, while filter elements are manufactured in our Cumberland plant. Both facilities have the skilled workforce and the capacity to meet our customers' needs. Schroeder's research and development center as well as our contamination control laboratory are located at our corporate headquarters.

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Complete Tank Solutions

If you do not require a full hydraulic system evaluation, Schroeder also offers standard catalog options of tanks in addition to the optimization services mentioned in this brochure. Unlike the optimization process, these tank solutions come standard and are available to order today.

These standard tanks (or TNKs) are offered in 12, 18 or 25 gallon sizes and provide guaranteed protection from air-in-oil and sloshing of the fluid.

Below is a brief product description. Should you require additional information on these or anything mentioned in this brochure, feel free to contact us at sisales@schroederindustries.com or visit us on the web at www.schroederindustries.com.



Hydraulic & Lube Filter | TNK

- ◆ Package solution comes complete with all accessories installed
- ◆ Patented insertion ring for filter head flange mounting prevents leakage
- ◆ Patented integrated baffle wall creates settling zone for returning oil (degassing) with simultaneous cooling effect
- ◆ Tested for leakage (no testing is required)
- ◆ High degree of cleanliness eliminates time-consuming flushing processes
- ◆ Lightweight and cost efficient
- ◆ No risk of corrosion
- ◆ Available in three different sizes and configurations
- ◆ GeoSeal® patented element technology



For more information, please contact sisales@schroederindustries.com



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