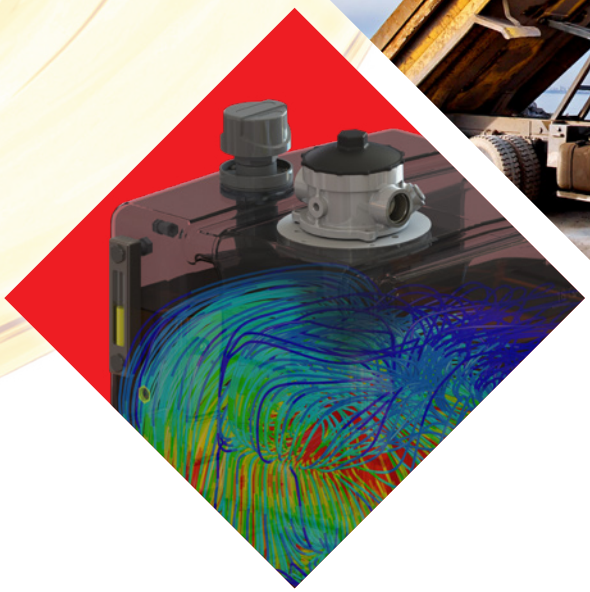
Schroeder INDUSTRIES

Advanced Fluid Conditioning Solutions®

TNK SERIES

Complete Tank Solutions

Tank Optimization Services



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SCHROEDER'S TNK SERIES

Rotomolded reservoirs built for exceptional efficiency and durability in a wide range of operating conditions.

- Optimized design for heat and air removal; includes patented, integrated baffle wall.
- Lightweight and cost effective, yet extremely durable; capable of withstanding heavy impacts and temperature extremes.
- No risk of corrosion and cavitation versus conventional metal hydraulic reservoirs.
- Recyclable, less energy-intensive, more eco-friendly alternative to steel tanks.
- Complete TNK Packages include vital accessories like in-tank filtration, gauges, and breathers pre-installed

Scan to learn more about the TNK Series!

MADE IN USA

RUGGED RESERVOIRS

Just how tough is a TNK?

Steel isn't the be-all, end-all of hydraulic tank materials. Our rotomolded TNK reservoirs are engineered to withstand the types of impacts and temperature extremes expected in some of the most intense operating environments.

Operating Temperatures	
High Density Polyethylene (HDPE)	
Maximum:	180°F (82°C)
Minimum:	-40°F (-40°C)

Beyond the physical toughness of the TNK, the HDPE material is more resistant than steel to cavitation damage and oil deterioration.

View the Tough TNK Initiative Demo Playlist on YouTube!

Traditional Steel Tank	Schroeder's TNK Series
	
✗	✓
✗	✓
✗	✓
✗	✓
✗	✓

Tough & Durable

Lightweight/Space-Saving

Resists Oil Deterioration

Resists Cavitation Damage

All-in-One Hydraulic Solution

6 OPTIMIZED TNK SIZES

Schroeder's TNK Series Complete Tank Solutions come with added options such as tooling, SAE fittings and connections, and top-of-the-line accessories and return-line filter products. Our TNK products come readily available with an 8-week lead time, no lengthy development and tooling period, and in a single purchase order:

TNK1C

Complete hydraulic tank solution (1 gal.) with included accessories.

Options:
Filter, breather, sight glass, strainer, & band strap options

Element Clearance:
8.0" (203 mm)

Desc.	Unit
Vol.	1 gal.
Filter	AFT
Flow	15 gpm
Weight	8.0 lbs.

TNK12

Complete hydraulic tank solution (12 gal.) with included accessories.

Options:
Filter, breather, sight glass, strainer, & band strap options

Element Clearance:
10" (254 mm)

Desc.	Unit
Vol.	12 gal.
Filter	AFT, AFTF, GZT
Flow	40 gpm
Weight	21 lbs.

TNK4

Complete hydraulic tank solution (4 gal.) with included accessories.

Options:
Filter, breather, sight glass, strainer, & band strap options

Element Clearance:
5.3" - 8.6" (134-219 mm)

Desc.	Unit
Vol.	4 gal.
Filter	AFT
Flow	25 gpm
Weight	11.5 lbs.

TNK18

Complete hydraulic tank solution (18 gal.) with included accessories.

Options:
Filter, breather, sight glass, strainer, & band strap options

Element Clearance:
10" (254 mm)

Desc.	Unit
Vol.	18 gal.
Filter	AFT, AFTF, GZT
Flow	40 gpm
Weight	33 lbs.

TNK7

Complete hydraulic tank solution (7 gal.) with included accessories.

Options:
Filter, breather, sight glass, strainer, & band strap options

Element Clearance:
5" (127 mm)

Desc.	Unit
Vol.	7 gal.
Filter	AFT, MTB
Flow	35 gpm
Weight	16 lbs.

TNK25

Complete hydraulic tank solution (25 gal.) with included accessories.

Options:
Filter, breather, sight glass, strainer, & band strap options

Element Clearance:
12" (305 mm)

Desc.	Unit
Vol.	25 gal.
Filter	AFT, AFTF, GRT
Flow	75 gpm
Weight	45 lbs.

Customization Available

If our versatile series of standard tank sizes aren't quite right for your application, our team can work with you to engineer a custom TNK solution.

CERTIFIED CLEAN TANKS

Ensuring a clean hydraulic reservoir right out of the gate.

Roll-off cleanliness, or the cleanliness level of a new machine fresh off the assembly line, is vitally important for ensuring equipment performs as expected and reduces warranty claims. As the sensitivity of hydraulic components and systems increase, combating any and all contamination at the very beginning of a machine's life is critical.

Machining debris, moisture, and other contaminants in new hydraulic reservoirs can be a major source of roll-off contamination.

Our TNKs are subject to a proprietary, intensive cleaning method and a rigorous testing process to ensure they are certified clean, protecting your equipment from reservoir-related contamination.

Schroeder Industries Technical Specification: Categories and Classification

Class	Requirements
Schroeder Industries Class SI1	**Normal Requirements;** • 0 Particles > 3,000 µm • ≤15 Particles between 1,200-3,000 µm • Mass of Contaminates < 70 mg/m²
Schroeder Industries Class SI2	**Higher Requirements;** • Customer-specific requirements

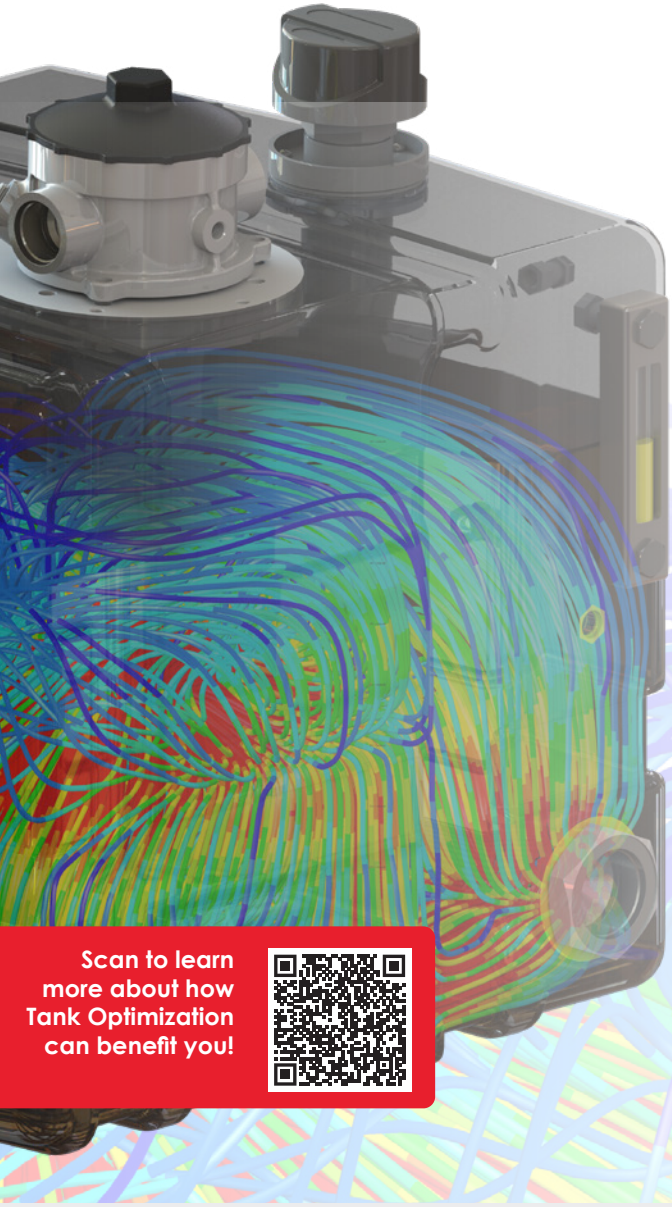
Hydraulic Accessories

In addition to a high-performing hydraulic tank solution, Schroeder also includes hydraulic accessories with each TNK Complete Tank Solution, including:

- Tank Straps
- Oil Sight Glasses
- Indicators
- Test Points
- Test Point Equipment
- Particulate & Desiccant Filter Breathers

TANK OPTIMIZATION SERVICE

Are you getting the most out of your hydraulic reservoir?



Scan to learn more about how Tank Optimization can benefit you!

The goal of hydraulic tank optimization is to reduce the reservoir size and thus reduce its fluid volume. Two primary factors determine how much a tank can be optimized:

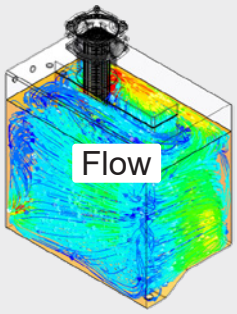
- **Volume Utilization.** In a suboptimal reservoir design, 'dead zones' can appear, where fluid stagnates and is not effectively utilized by the system.
- **Fluid Velocity.** Fluid velocity impacts how well a tank can de-aerate and prevent new air from entering the fluid due to splashing. Lower fluid velocity is more desirable.

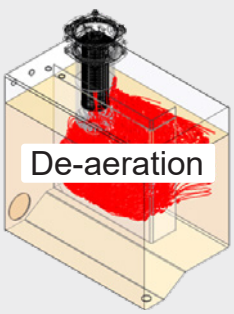
How can Tank Optimization analysis benefit you?

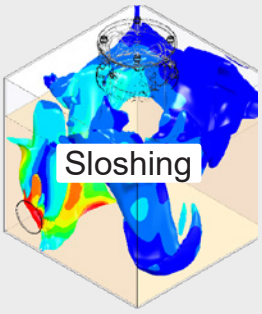
- **Identify Inefficiencies.** Analysis can reveal inefficiencies in the hydraulic reservoir design, enabling valuable system improvements.
- **Increase Machine Space.** A smaller tank means more room for innovations like larger fuel tanks or batteries, or even downsizing the footprint of a system design.
- **Improve Energy Efficiency.** Reduced tank size/fluid volume reduces both the weight and warmup time of the overall system, consuming less energy in operation.
- **Reduce Cost.** Tank downsizing results in a reservoir that requires less material to produce and a hydraulic system that requires less oil to operate, reducing expenses.
- **Increase Sustainability.** Improving fuel efficiency, reducing oil volume, and minimizing the material needed to construct the system's reservoir through Tank Optimization all contribute to a reduced carbon footprint.

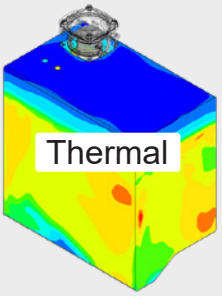
Work with the Tank Optimization Experts at Schroder Industries

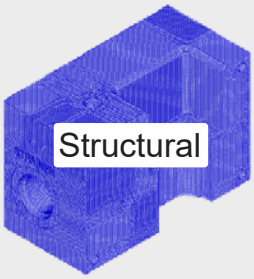
Through cutting-edge simulations and CFD analyses, we can provide our customers with real world data on flow, de-aeration, sloshing, thermal and structural characteristics and develop optimization solutions for your application.











Tank Optimization Success Story: Study of Flow Trajectories and Air Residence Time Using Single-Phase CFD Analysis

Baseline

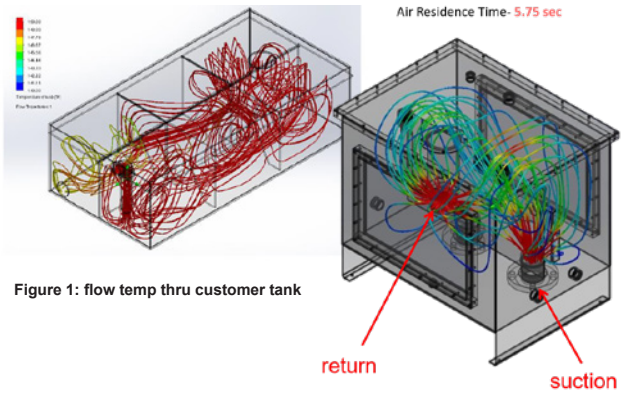


Figure 1: flow temp thru customer tank

Optimized

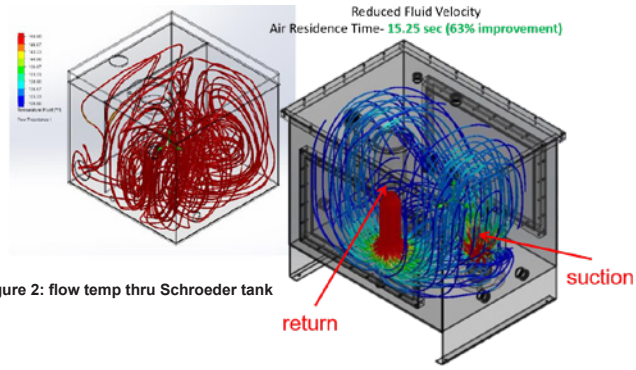


Figure 2: flow temp thru Schroeder tank

A customer came to Schroeder seeking additional room in their hydraulics' equipment space. Their system utilized a 27 gallon tank (Figure 1). Upon evaluation through single-phase CFD analysis, we were able to optimize their system to an 18 gallon TNK18 (Figure 2) without losing productivity and adding a 34% oil cost savings.

63% Air Residence Increase → **Volume Reduced by 9 Gallons** → **34% Oil Cost Savings** → **Productivity Maintained**

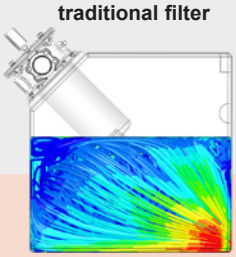
Dynamic Duo: Pair AFT with TNK Series for Maximum Tank Optimization

The exceptional deaerating filtration of Air Fusion Technology and optimized, lightweight, durable design of the Schroeder Industries TNK series combine to form the ideal reservoir system. **Significant reservoir downsizing may be possible!**

Scan to learn more about Air Fusion Technology!

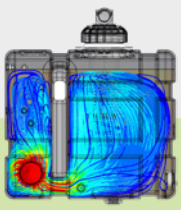
- Unique AFT design decreases fluid turbidity, promotes faster bubble coalescence in reservoir
- Highly effective deaerating filtration can allow tank downsizing by up to 60%!

27 gallon tank with traditional filter



- ✗ Minimal dwell time
- ✗ Requires baffles to manage high fluid velocity & utilize full tank volume
- ✗ Increases the cost and complexity of tank
- ✗ High velocity, turbulent flow into tank creates sloshing and air bubbles

12 gallon TNK utilizing AFT



- ✓ Radial exit velocity, exceptional air bubble coalescing
- ✓ Significantly longer dwell time in a smaller space
- ✓ Unconventional flow path design smoothly removes air from the fluid
- ✓ Laminar Flow = No Sloshing

SUSTAINABLE SOLUTIONS

Schroeder's Energy Sustainability Initiative

The TNK Series and Tank Optimization Services are 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.

Si Energy Sustainability
Delivering Responsible Energy Solutions

Scan to learn more about Schroeder's Energy Sustainability Initiative!

- The light weight of TNKs compared to typical steel tanks increases the energy efficiency of the hydraulic system.
- Made with recyclable High Density Polyethylene (HDPE), considered among the easiest plastic materials to recycle.
- HDPE products require less energy to produce than a comparable product made from steel.
- Reservoir downsizing through Tank Optimization reduces oil usage/waste, improves energy efficiency and reduces material consumption among other carbon-reducing perks.

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Scan to learn more about the TNK Series!

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