Schroeder INDUSTRIES
Advanced Fluid Conditioning Solutions®
Proudly Manufactured In The United States

2020 Edition - Vol 1
Oil Dehydration And Degassing Application Guide

The purpose of this document is to provide a comprehensive introduction and value guide to oil dehydration and degassing.

A must-have resource for those interested in state-of-the-art oil dehydration theories and the negative causes of water in oil.

INTERNAL USE ONLY

HYDRAULIC AND LUBE OILS **Volume 1**

Overview

Schroeder Industries understands the profound effects of liquid (water) contamination on fluid power systems, and the duty to help our customers identify and overcome water contamination issues. Our solutions utilize positive pressure and vacuum dehydration technology to reduce water contamination, and to minimize consequential effects. These include the Triton Dehydration Station® Series (TDS-A and TDS-E versions), the Schroeder Vacuum Dehydrator (SVD-01), and the North American Vacuum (NAV) offline oil dehydrators.

Positive Pressure - ambient air is conditioned to increase water holding capability before injecting to a reaction chamber. Fluid is equally distributed and cascaded down through reticulated media and the conditioned air stream. Water is transformed to water vapor and is expelled from the unit as a moist air stream.

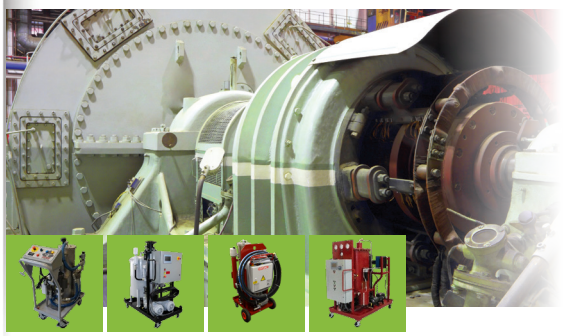
Vacuum - vacuum-drawn ambient air in conjunction with reduced vapor pressure effectively removes free and dissolved water and gases, which are then condensed and collected for disposal.

All Schroeder Dehydrator Solutions incorporate high capacity, high efficiency filters for solid particle filtration.

Application Guidelines

Many applications use either positive pressure or vacuum dehydration, but it is important to understand the critical application parameters. Most dehydration solutions are based on fluid type, rate of ingression, water content tolerance of the fluid, volume and temperature, as well as available power supply. It is also important to consider the placement of the dehydrator in proximity to the system, cost and lead-time constraints.

Power Gen.

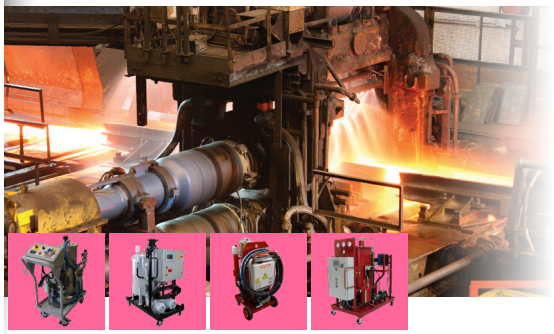


- Turbine bearing lubricants
- Electro-hydraulic control system (EHC) fluid
- Boiler feed pumps lubricants

Pulp & Paper

- Press and dryer section cylinder bearing lubricant
- Calendar section hydraulic fluid
- Power house generator turbine lubrication

Steel



- Hot and cold rolling mill bearing lubrication
- AWC & AGC systems

Quick Comparison of Schroeder Oil Dehydration And Degassing Solutions:




	TDSA	TDSE	TDSE-VF	TDSE-22	SVD	NAV
Fluid Processing Rate (gpm)	1.5	15	3-15	22	1.5	30
Applicable Fluid Volume (gal.)	20-500	1,000-4,000	55-4,000	2,000-6,000	20-500	2,000-6,000
Maximum Permissible Fluid Viscosity	215 cSt	514 cSt			350 cSt	700 cSt
Degassing	-	-			x	x
Integrated Fluid Heater	-	x			x	x
Automatic Shutdown Based on Relative Water Content	-	x			x	x
Power Supply	115V AC / 60Hz / 1 Ph. 220V AC / 50Hz / 1 Ph. 230V AC / 60Hz / 1 Ph.	380V AC / 50Hz / 3 Ph. 460V AC / 60Hz / 3 Ph. 575V AC / 60Hz / 3 Ph.			230V AC / 60Hz / 1 Ph. 230V AC / 50hz / 1 Ph. 460V AC / 60Hz / 3 Ph.	460V AC / 60Hz / 3 Ph.
Attainable Absolute Water Content	< 50ppm	< 50ppm			<10ppm	<10ppm
Applicable Fluid Type						
Mineral-based	x	x			x	x
Other	Consult Factory	Consult Factory			Consult Factory	Consult Factory

Key: x = Standard - = Not Available

Additional Selection Considerations

- Select a larger size for systems with very high and continuous process-related water entry
- In contrast, for systems with just a small amount of moisture entry via tank breathing, one size smaller can be selected
- Ideally the water content will be measured periodically to determine the water entry per hour/day. Our sales specialists can then determine the suitable size if they know the oil type, oil temperature, operating viscosity, system dimensions, environmental conditions and target water content

Contacts

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TRITON DEHYDRATION STATION

FILTER SYSTEMS & DIAGNOSTIC TOOLS

About Us

As an ISO 9001:2015 certified company, Schroeder Industries has been designing, manufacturing, and marketing a complete range of Advanced Fluid Conditioning Solutions® for over 73 years.

With products for diagnostic, as well as filtration tools, we have been recognized as *the* leader in the fluid conditioning industry for markets that use hydraulic oils, fuels and water.

Schroeder Industries' corporate headquarters is located in Leetsdale, PA, with manufacturing facilities at the Leetsdale location, as well as in Cumberland, MD.

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Markets Served











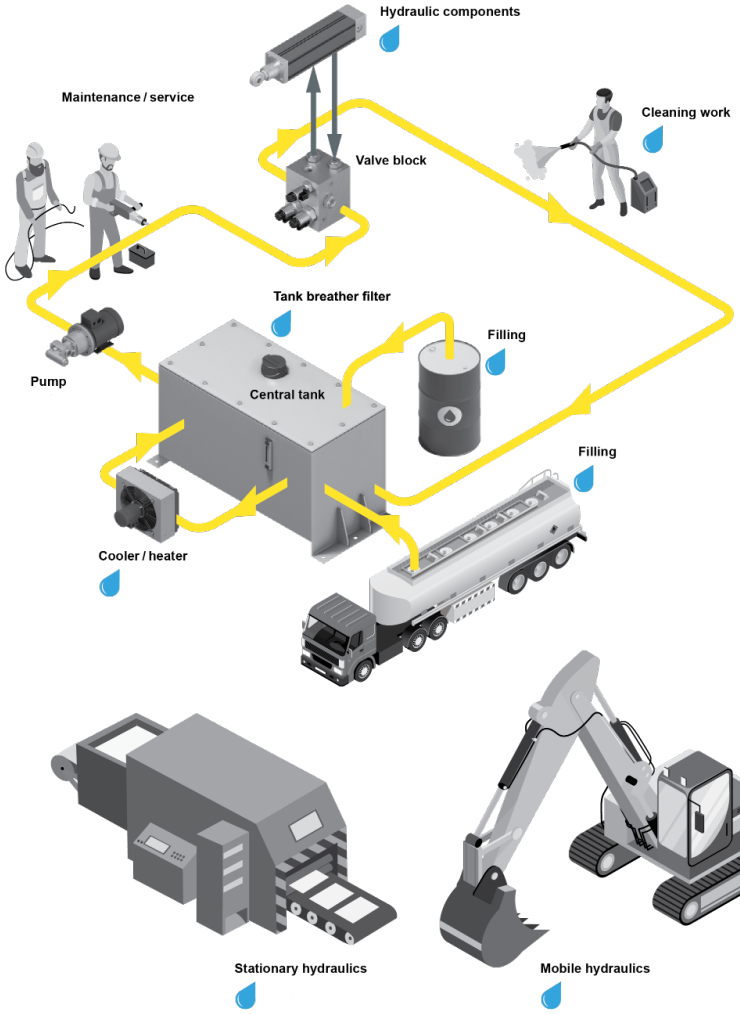









LIQUID CONTAMINATION SOURCES & EFFECTS



Liquid Contamination

Sources:

- Leaking cooler/heater and pipe work
- Filling with contaminated new oil
- Leaking hydraulic component seals
- Tank breathing (without, or improperly applied desiccant breathers)
- Pressurized water cleaning

Effects:

- Corrosion
- Reduced dynamic viscosity
- Reduced lubricating film thickness
- Increased surface-to-surface
- Change in fluid properties
- Accelerated oil aging and
- Degradation byproducts (varnish)
- Cavitation damage

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

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