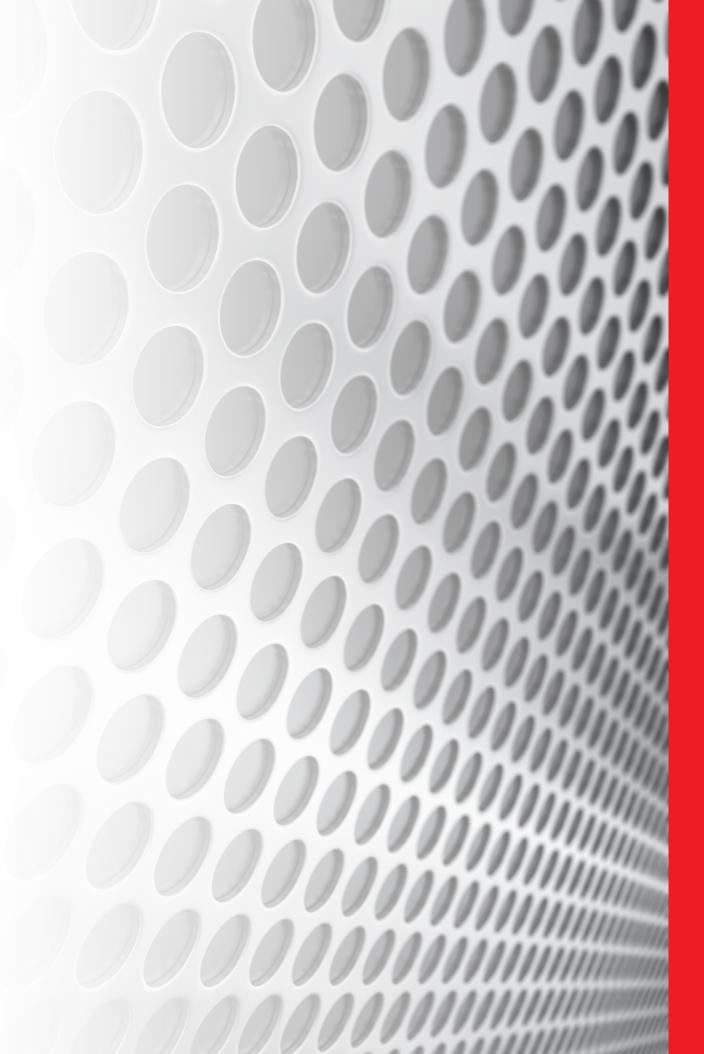
# FLUID CONDITIONING PAODUCTS





# **Reservoir Filtration System Adapter**

Reservoir Filtration System Adapter



### **Features and Benefits**

- The RFSA is an aluminum adapter that gives a kidney loop filter access to a reservoir
- Accommodates kidney loop filtration rates up to approximately 15 gpm
- Suitable to use with many Filter Systems products including: KLS/KLD/MFS/MFD, HFS-BC, MFD-BC, MFD-MV, MFS/MFD-HV, TDS-A, AMFS, FS, MTS
- 1.25" SAE O-Ring Boss Suction Port
- 1.00" SAE O-Ring Boss Return Port
- Suction and Return downtubes included and recommended to be cut to length and bent for proper fluid turnover in a reservoir
- Optional MFS/MFD Fitting Kit can be ordered separately. This includes adapters to install CAM-GROOVE hose couplings between Suction/ Return hoses/wands and additional CAM-GROOVE adapters for installation in kidney loop adapter. Dust caps and plugs included

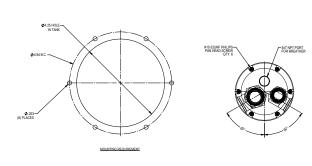
### **MarketApplications**

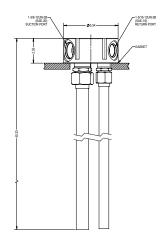
 All applications with a hydraulic reservoir utilizing a 6-bolt mounting connection

### Mounting Requirement

Customer is responsible to cut an appropriately sized hole on top of their tank. This adapter has two (2) ports: one for Suction and one for Return. Also includes a breather port.

Reservoir pattern is six (6) .18" holes on a 4.94" BCD with a 4.25" diameter center hole. See Drawing S-1048.





### **Specifications**

Reservoir Mounting Pattern: Fits standard 6-bolt

Supply Port Thread Size: 1.25" SAE O-Ring Boss Suction Port Return Port Thread Size: 1.00" SAE O-Ring Boss Return Port

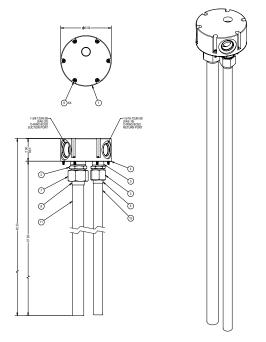
Breather Port Thread Size: 3/4" NPT

Return Tubes: Suction and Return downtubes included and recommended to be cut to

length and bent for proper fluid turnover in reservoir

# **Reservoir Filtration System Adapter**





**Drawing** 

**Parts List** 

Installation **Details** 

**HFS-15** 

RFSA

**Check Plus** 

AS

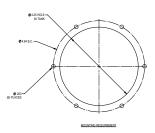
**Retrofit System** 

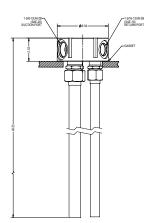
KLS, KLD

**X** Series

**OLF-P** 







### How to Build a Valid Model Number for a Schroeder Filtration System Adapter RFSA:

BOX 1 **RFSA Example:** NOTE: Box 2 can have multiple options. BOX 1 **RFSA** = RFSA

BOX 1	
Model	
DECA	١
RFSA	

BOX 2 **Options** Omit = For use with Kidney Loop Filtration Products 1 = Optional MFS/MFD Fitting Kit

### **Model Number** Selection



# **Handy Filter Systems Basic Cart**



### **Features and Benefits**

- Compact size, easily transported
- Now available with 12 V DC Power Option, allowing for system power to be drawn directly from your heavy machinery
- Cartridge elements have 25% higher dirt holding capacity compared to spin-on filters
- Top-ported filter provides easy element service
- Can be used as an efficient "tank-topper" solution for drums of mineral-based fluids
- Optional Backpack Version available for ease of transport across distances

### **Applications**

- Supplementing continuous filtration by system filters
- Cleaning up a hydraulic system following component replacement
- Filtering new fluid before it is put into service
- Transferring fluid from drums to system reservoirs

### Description

Schroeder's Handy Filter System Basic Cart is a compact, self-contained "light-duty" filtration system equipped with high efficiency, high capacity elements capable of removing particulate contamination and/or water quickly, conveniently and economically. It is perfect for cleaning up existing systems as well as for pre-filtering new fluids, since new fluids often have contamination levels significantly higher than that recommended for most hydraulic systems.

The filtration system's compact, lightweight design with replaceable element cartridge and reusable bowl minimizes landfill waste. Element service is easily accomplished through the top-ported filter housings. The optional dual filter assembly allows for water and particulate removal or staged particulate contamination removal.

### **Specifications**

Flow Rating: 4 gpm (15.14 L/min) max

Maximum Viscosity: 1,600 SUS (350 cSt)

Hose Pressure Rating: 30 psig (2.0 bar) @ 150°F (65.6°C)

Full vacuum @ 150°F (65.6°C)

Fluid Temperature: 25°F to 150°F (-4°C to 65°C)

Material: Element case: Aluminum

Seal Material: Buna N

Compatibility: All petroleum based hydraulic fluid. Contact factory

for use with other fluids.

Motor: 115 VAC single phase .25 hp

Weight: Single housing - 40 lbs

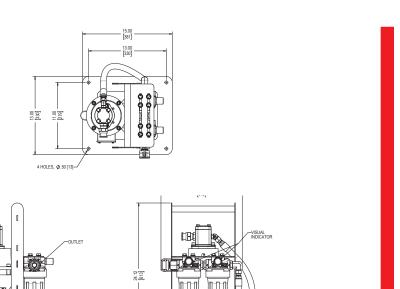
Dual housing - 44 lbs BackPack version - 39 lbs

(Does not include weight of hose/wands)

For replacement element part numbers, please see "Appendix Section - Replacement Elements" of this catalog.

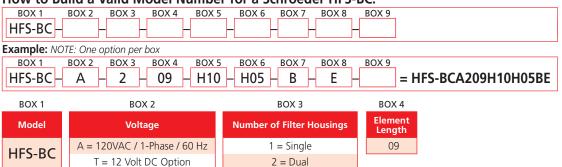
# Handy Filter Systems Basic Cart HFS-B

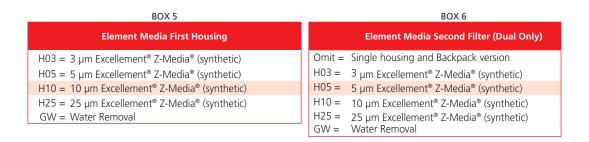




**Check Plus** 

### How to Build a Valid Model Number for a Schroeder HFS-BC:





BOX 7	BOX 8	BOX 9					
Seal Material	Clogging Indicator	Options					
B = Buna	E = Standard Visual Indicator	BP = BackPack Version (Single Housing Only)					

### **Model Number** Selection

HFS-BC **HFS-15** 

**Retrofit System** 

KLS, KLD

**X** Series

Metric dimensions in ().

# **FS-15** Hand Held Portable Filter



### **Features and Benefits**

- Improvement in service life for components and system filters
- Increased oil service life
- Increased machine availability
- Simple operation
- Compact design
- Integrated dry running protection
- Optional CS1000 | Contamination Sensor ensures continuous monitoring of oil cleanliness during cleaning

Part of Schroeder Industries Energy Savings Initiative

### **Description**

The HFS-15 Hand Held Portable Filter is used as a portable service unit for filling and flushing hydraulic systems, as well as for cleaning in bypass flow. It can also be fitted with a CS1000 | Contamination Sensor. This allows the solid particle contamination in the oil to be monitored at the same time. The cleanliness class results are displayed according to ISO, SAE or NAS classifications.

### **Specifications**

Flow Rating: HFS-15-E: 4 gpm (15 L/min)

HFS-15-P: 2.6 gpm (9.84 L/min)

Pump Type: Vane pump

Maximum Operating Pressure: 58 psi (4.0 bar)

Permitted Suction Pressure At Port: -5.8 to 8.7 psi (-0.4 bar to + 0.6 bar)

Viscosity Range: HFS-15-E: 42 to 1623 SUS (5 ... cSt)

HFS-15-P: 42 to 927 SUS (5 ... cSt)

Fluid Temperature: 14°F to 176°F (-10°C to +80°C)

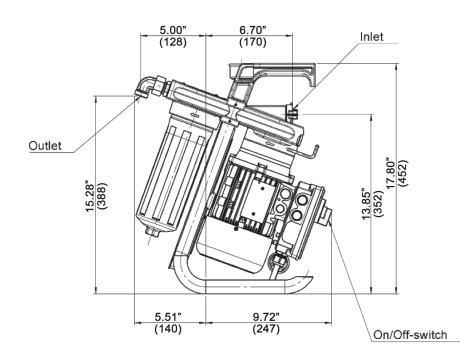
Ambient Temperature: 14°F to 104°F (-10°C to +40°C)

Seal Material: FKM (FPM, Viton®)

Weight: HFS-15-E: 30.9 lbs. (14 kg)

HFS-15-P: 36.4 lbs. (16.5 kg)

### **Economy**



# **Hand Held Portable Filter**

**Premium** 

**Check Plus** 

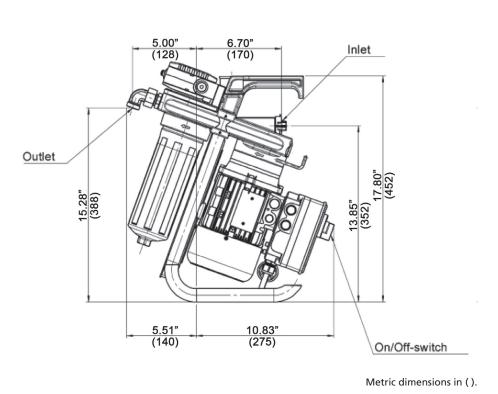
HFS-15

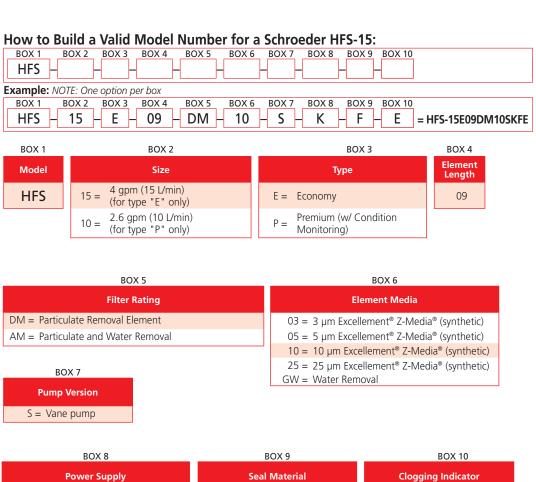
**Model Number** Selection

**Retrofit System** 

KLS, KLD

**X** Series





F = FKM (FPM, Viton®)

K = 120 V, 60 Hz, 1 Ph (0.25 kW)



# MFDBC Mobile Filter System - Basic Cart

# 10 gpm max 37.9 L/min



### **Features and Benefits**

- Compact size, easily transported
- Top-ported filter provides easy element service
- D10 Auto-Reset Indicator indicates when filter elements require a change
- Hoses and connection tubes included (10' total length)
- Drip pan catches oil before it falls to the ground
- Off-line stationary system available see Kidney Loop System

### **Applications**

- Supplementing continuous filtration by system filters
- Cleaning up a hydraulic system following component replacement
- Filtering new fluid before it is put into service
- Transferring fluid from storage tanks and drums to system reservoirs

### Description

The Schroeder Mobile Filter System - Basic Cart is a compact, self-contained, "light-duty" filtration system equipped with high efficiency, high capacity elements capable of removing particulate contamination and/ or water quickly, conveniently and economically. It is perfect for cleaning up existing systems as well as for prefiltering new fluids, since new fluids often have contamination levels significantly higher than that recommended for most hydraulic systems.

The filtration system's compact, lightweight design with replaceable element cartridge and reusable bowl, minimizing landfill waste. Element service is easily accomplished through the top-ported filter housings. The MFD-BC includes a drip pan to help catch any oil before it falls to the ground. The dual filter assembly allows for water and particulate removal or staged, particulate contamination removal.

### **Specifications**

Flow Rating: 10 gpm (37.9 L/min) max

Viscosity Range: 46 - 1,000 SUS (6 - 216 cSt)

Hose Pressure Rating: 30 psig (2.0 bar) @ 150°F (65.6°C)

Full vacuum @ 150°F (65.6°C)

Fluid Temperature: 25°F to 150°F (-4°C to 65°C)

Bypass Valve Setting: Cracking: 25 psi (1.7 bar)

Material: Element Case: Aluminum

Seal Material: Buna N

Compatibility: All petroleum based hydraulic fluid. Contact factory for use with

other fluids.

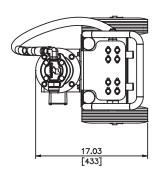
Motor: 115 VAC Single phase 1 hp

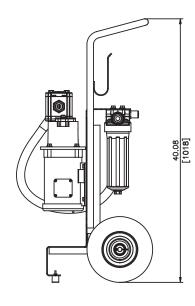
Weight: 102 lbs. (46.3 kg)

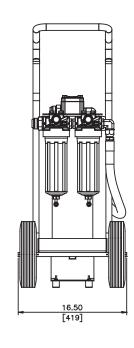
For replacement element part numbers, please see "Appendix Section - Replacement Elements" of this catalog.

# Mobile Filter System - Basic Cart MFDB









Metric dimensions in ().

Selection

NOTES:

Box 6. If 220V, 50

Hz option selected,

flow rating is reduced to

~8-gpm and

will have plug cutoff.

### How to Build a Valid Model Number for Schroeder MFDBC:

BOX 1 BOX 2 BOX 3 BOX 4 BOX 5 BOX 6									
Example: NOTE: One option per box									
BOX 1 BOX 2 BOX 3 BOX 4 BOX 5 BOX 6 H10 - H05 - BOX 6	109H10H05								

BOX 1 **MFDBC** 

No. of Elements 1

BOX 2

вох з Length 09

**Element Media First Filter** 

H03 = 3 μm Excellement® Z-Media® (synthetic) H05 = 5 µm Excellement® Z-Media® (synthetic) H10 = 10 μm Excellement® Z-Media® (synthetic) H25 = 25 μm Excellement® Z-Media® (synthetic) GW = Water Removal

BOX 4

BOX 5

### **Element Media Second Filter**

H03 = 3 µm Excellement® Z-Media® (synthetic) H05 = 5 μm Excellement® Z-Media® (synthetic)

H10 = 10 μm Excellement® Z-Media® (synthetic) H25 = 25 μm Excellement® Z-Media® (synthetic)

GW = Water Removal

### BOX 6 Voltage

Omit = 115 V / 60 Hz A = 220 V / 60 HzB = 220 V / 50 Hz **Check Plus** 

### MFD-BC

**Retrofit System** 

**Model Number** 

KLS, KLD

**X** Series

**OLF-P** 



7 or 14 gpm 26.5 or 53 L/min

> O. FluMoS

■ Usable with FluMoS Mobile App - HY-TRAX® option only

CSI-C-11 Compatible Product

# **Mobile Filtration Systems**

U.S. Patents 6568919 7604738



### **Features and Benefits**

- Single, double and triple bowl length option allows the flexibility of additional dirt-holding capacity
- Modular base eliminates hoses between components and minimizes leakage
- Base-ported filter provides easy element service from the top cap
- D5 Dirt Alarm® indicates when filter element needs changed
- Integral suction strainer protects pump
- Hoses and connection tubes included (13' total length)
- Option for the addition of Contamination Sensors and WLAN/LAN Communication (CSI-C-11)

### **Applications**

- Supplementing continuous filtration by system filters
- Cleaning up a hydraulic system following component replacement
- Filtering new fluid before it is put into service
- Transferring fluid from storage tanks and drums to system reservoirs

### Description

The Schroeder Mobile Filtration System is a compact, self-contained filtration system equipped with high efficiency, high capacity elements capable of removing particulate contamination and/or water quickly, conveniently and economically. It is perfect for cleaning up existing systems as well as for prefiltering new fluids, since new fluids often have contamination levels significantly higher than that recommended for most hydraulic systems.

The MFS single filtration unit can remove either water or particulate contamination. The MFD dual filtration unit can be used to remove both water and particulate contamination, or for staged particulate contaminant removal.

# Contamination Sensor for Remote Visibility Options

**HY-TRAX**<sup>®</sup> **manual fluid sampling system**: Schroeder now offers the HY-TRAX<sup>®</sup> manual fluid sampling system as an additional option allowing for real-time fluid condition monitoring. ISO particle counts are visually displayed on the TCM. Users will now know when they have reached their desired ISO contamination levels. For more information, please see page 102.

**CSI-C-11:** Schroeder also offers the CSI-C-11 Communication Interface for WLAN or LAN transmission of data and data storage capabilities. For more information, please see page 38.

### **Specifications**

Flow Rating: 7 gpm (26.5 L/min) max or 14 gpm (53.0 L/min) max

**Viscosity Range**: 40 - 1,000 SUS (4 - 216 cSt)

Higher viscosity version available. Contact factory for details.

Hose Pressure Rating: 30 psig (2.0 bar) @ 150°F (65.6°C)

Full vacuum @ 150°F (65.6°C)

Fluid Temperature: 25°F to 150°F (-4°C to 65°C)

Bypass Valve Setting: Cracking: 30 psi (2 bar)

Material: Manifold and cap: Cast aluminum

Element case: Steel

Compatibility: All petroleum based hydraulic fluid. Contact factory for use with

other fluids

Motor: 115 VAC Single phase 3/4 hp (7 gpm) or 1-1/2 hp (14 gpm)

Element Change Clearance: 8.50" (215 mm) 1K (9, 18 or 27" depending on model configuration)

### Weights

gpm	MFS-1K lb (kg)	MFS-2K lb (kg)	MFS-3K lb (kg)	MFD-1K lb (kg)	MFD-2K lb (kg)	MFD-3K lb (kg)
7	170 (77)	180 (82)	190 (86)	185 (84)	203 (92)	220 (100)
14	170 (80)	187 (85)	197 (89)	192 (87)	210 (95)	227 (103)

# **Mobile Filtration Systems**

U.S. Patents 6568919 7604738



MFS, MFD

**Retrofit System** 

If MFD is ordered, the quantity, length, and seals will be identical for both filter housings.

H.5 seal designation may be used with 3, 5, 10, and 25µ Z (synthetic) and calls for EPR seals, stainless steel wire mesh in element(s) and Imron® epoxy coated enclosures on cart. H.5 not available with 7 gpm pump. Imron® is a registered

DuPont.

**Model Number** Selection

Box 2. When Box 2 is 2 or 3, Box 3

must be 09.

NOTES:

Box 5.

Box 6.

Box 7.

Box 9.

For replacement

Elements of this catalog.

element part numbers, please see "Appendix please see "Appendix Section - Replacement

trademark of

X Series

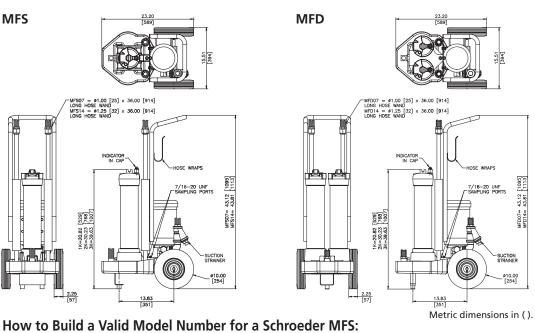
KLS, KLD

230 & 460 Volt, 60 Hz options supplied with starters. 230 with starters. 230 Volt, 50 Hz units will have plug cut-off from power cord and include no starters, flow ratings reduced to ~5-gpm and 11-gpm. Contact factory

for high viscosity version.

Particle counter option only available on 115VAC 60 hertz carts.

Particle counter is not available with Skydrol fluids.



### How to Build a Valid Model Number for a Schroeder MFS:

BOX 1	 OX3 BOX4	BOX 5 BO	 BOX 8	BOX 9	 	
MFS –	 $\neg$ $\sqcup$ $\Box$					

**Example:** NOTE: One option per box

ſ	BOX 1	BOX 2	BOX 3	BOX4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	·
	MFS -	- 1 -	- 09 -	-Z10-		- В		- 07 -	-	= MFS109Z10B07

BOX 1	BOX 2	BOX 3
Model	No. of Elements	Element Length
NATC	1	09
MFS	2	18
MFD	3	27
IVITU		

### BOX 4 **Element Media First Filter**

Z01 = 1 μm Excellement® Z-Media® (synthetic) Z03 = 3 μm Excellement® Z-Media® (synthetic)

Z05 = 5 μm Excellement® Z-Media® (synthetic)

Z10 = 10 µm Excellement® Z-Media® (synthetic)

Z25 = 25 μm Excellement® Z-Media® (synthetic)

EWR = Water Removal

G03 = 3 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

G05 = 5 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

G10 = 10 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

G25 = 25 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

GWR = Water Removal w/GeoSeal®

DOV 2	
lement Media d Filter (MFD Only)	
ent® Z-Media® (synthetic)	

 $Z01 = 1 \mu m Excellement$ Z03 = 3 μm Excellement® Z-Media® (synthetic) Z05 = 5 μm Excellement® Z-Media® (synthetic) Z10 = 10 μm Excellement® Z-Media® (synthetic)

Z25 = 25 μm Excellement® Z-Media® (synthetic)

G03 = 3 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

G05 = 5 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

G10 = 10 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

G25 = 25 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

GWR = Water Removal w/GeoSeal®

### BOX 6 BOX 7 **Seal Material** Voltage

Omit = 115 V / 60 Hz / 1-Phase B = BunaV = Viton® A = 230 V / 60 Hz / 3-PhaseSkydrol B = 460 V / 60 Hz / 3-PhaseH.5 =Compatibility C = 220 V / 50 Hz / 1 -PhaseD = 230 V / 60 Hz / 1-Phase

BOX 8 ump Size (gpm) 07 14

### BOX 9 **Particle Counter**

Omit = Without Particle Counter P = Particle Counter

P-CSI = Particle Counter + CSI-C-11 Option

P-CSI-W = Particle Counter + CSI-C-11

+ Water Sensor (No Display) Option



# HY-TRAX<sup>®</sup> Retrofit System Assembly





Usable with FluMoS Mobile App when connected to the CSI-C-11

CSI-C-11 Compatible **Product** 



### Features and Benefits

- Provides local and remote fluid condition monitoring and visibility to offline filtration systems MFS, MFD, KLS and KLD
- Integrated micro VSD driven motor and pump provides optimal flow for accurate sensor measurement
- Pre-assembled kit allows for quick installation onto existing applicable offline filtration systems
- Rugged design
- Optional TestMate<sup>®</sup> Water Sensor for relative humidity and temperature measurement
- Optional CSI-C-11 ConditionSensor Interface module for data logging, transmission and trending

### **Applications**

■ Offline Filtration Systems MFS, MFD, KLS and KLD

### Description

Predictive maintenance has never been more convenient. The HY-TRAX<sup>®</sup> Retrofit System Assembly adds contamination monitoring abilities to our MFS, MFD, KLS and KLD Offline Filtration Systems. This kit allows for the integration of the TestMate<sup>®</sup> Contamination Monitor (TCM) and TestMate<sup>®</sup> Water Sensor (TWS) to accurately measure particle counts, relative humidity and temperature of the fluid the offline filtration system is processing. Retrofit kit includes all necessary material to upgrade existing filter carts.

An attractive option to this kit is the CSI-C-11 ConditionSesnor Interface module. This module adds stateof-the-art monitoring capabilities via the W-LAN signal produced by the module. This wireless capability allows data to be transmitted from the TCM and TWS (optional) to FluMoS Mobile.

### What's Included

Pre-assembled HY-TRAX® Retrofit Assembly:

- Control Panel
- Mounting Bracket
- HY-TRAX<sup>®</sup> Manifold Block
- Particle Counter
- Hydraulic Hoses (for HY-TRAX<sup>®</sup> Circuit)
- Electrical Receptacles (one male receptacle for power supply to retrofit kit; one female receptacle for power supply to filter cart electrical motor)
- 2x Hydraulic Fittings for integrating HY-TRAX® onto Filter Cart Manifold
- FluMoS Light Rate of Change (ROC) Trending Software

### **Specifications**

Measuring Range: Display ISO ranges between 25/24/23 and 9/8/7

Calibration within the range ISO 13/11/10 to 23/21/18

Contamination Output Code: Standard: ISO 4406:1999 or SAE AS 4059(D)

Optional: ISO 4406:1987; NAS 1638 and ISO 4406:1999

Self-Diagnosis: Continuously with error indication via status LED

Pressure Rating: 50 psi (3.4 bar) max

Fluid Inlet/Outlet: SAE ORB, Size 4

Seal Material: Fluorocarbon elastomer (FKM) Pump Speed: 500-5000 rpm (adjustable)

Optimal Sampling Pump

0.0008-0.079 gpm (30-300 mL/min) Flow Rate:

Fluid Temperature Range: 32°F to 185°F (0°C to +85°C)

Ambient Temperature Range: -22°F to 176°F (-30°C to +80°C)

Max Viscosity: up to 350 cSt (1622 SUS)

Pump Type: Gear Pump

Power Supply: 115 V AC/60Hz/1 PH

Electrical Safety Class: III (low voltage protection), IP 52 enclosure



# HY-TRAX® Retrofit System Assembly HYR



Selection

**Model Number** 

AS

**Check Plus** 

**RFSA** 

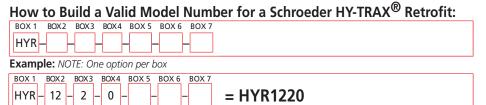
HFS-15

### **HY-TRAX®** Retrofit System

KLS, KLD

**X** Series

**OLF-P** 



BOX 1	BOX 2	BOX 3	BOX 4				
Model	ISO Code	Display Option	Fluid Type				
1111/15	12 = >4/>6/>14	1 = Without Display	0 = Hydraulic/Mineral Oil				
HYR	13 = >2/>5/>15	2 = With Display					

BOX 5	BOX 6	BOX 7			
Analog Interfaces	Communications Option	Water Sensor Option			
Omit = 4-20 mA (Standard)	Omit = None	Omit = None			
S = 2-10V Analog Output	CSI = CSI-C-11-00 ConditionSensor	W = TestMate <sup>®</sup> Water Sensor			
1.13.114.11	Interface				



# **Medium Viscosity Mobile Filtration Systems**

# 6 or 10 gpm 22.7 to 37.9 L/min



MFD-MV

### **Features and Benefits**

- Ability to filter fluids having a viscosity up to 5,000 SUS
- Top-ported filter provides easy element service
- 7' hose and extension wands included (10' total length)
- Standard 18" filter housings

### **Applications**

- Supplementing continuous filtration by system filters
- Cleaning up a hydraulic system following component replacement
- Filtering new fluid before it is put into service
- Transferring fluid from storage tanks and drums to system reservoirs

### Description

The MFD-MV is a compact, self-contained filtration system equipped with high efficiency high capacity elements capable of removing particulate contamination and/or water quickly, conveniently and economically. It is perfect for cleaning up existing systems as well as for prefiltering new fluids, since new fluids often have contamination levels significantly higher than that recommended for most hydraulic systems. The MFD-MV dual filtration unit can be used to remove both water and particulate contamination or for staged particulate contamination removal.

### **Specifications**

Flow Rating: 6 or 10 gpm (22.7 or 37.9 L/min) max

Maximum Viscosity: up to 5,000 SUS (1000 cSt)

Hose Pressure Rating: 30 psig (2.0 bar) at 150°F (65.6°C)
Full vacuum at 150°F (65.6°C)

Maximum Operating Temperature: -20°F to 150°F (-29°C to 65°C)

Bypass Valve Setting: Cracking: 30 psi (2 bar)

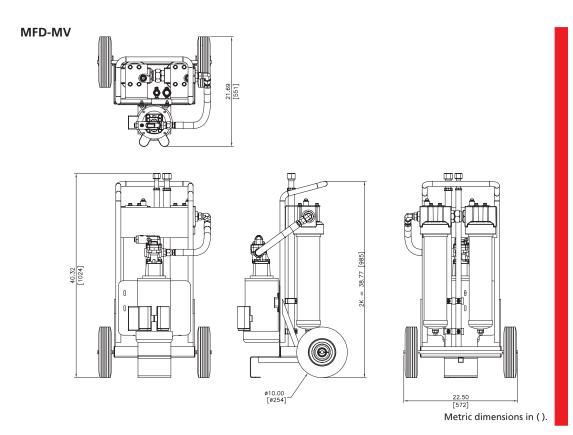
Material: Manifold and cap: Cast Aluminum Element case: Steel

Compatibility: All petroleum based hydraulic fluid. Contact factory for use with other fluids.

Motor: 1.0 hp 110 VAC/60 Hz TEFC (6 gpm) 1.5 hp 110 VAC/60 Hz TEFC (10 gpm)

# **Medium Viscosity Mobile Filtration Systems**





CI H

MFS, MFD

Model Number HY-TRAX® Selection

NOTES:

Box 5. When MFD is ordered, the number of elements, element length, and seals will be identical for both filter housings. MFD-MV

AMS, AMD

MS, AMD

FS

AMFS

KLS, KLD

AKS. AKI

SN, LSA, LSW

X Series

OLF Compac

OLE

NxTM

VEU-F

VMII

VMU

riton-A

Triton-E NAV SVD01

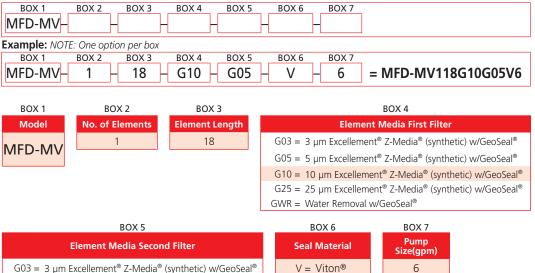
Appendix

How to Build a Valid Model Number for a Schroeder MFD-MV:

G05 = 5 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

G10 = 10 µm Excellement® Z-Media® (synthetic) w/GeoSeal® G25 = 25 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

GWR = Water Removal w/GeoSeal®



For replacement element part numbers, please see "Appendix Section - Replacement Elements" of this catalog.

10



# **High Viscosity Mobile Filtration Systems**

U.S. Patents 6568919 7604738

3 gpm max 7.5 L/min



### **Features and Benefits**

- Ability to filter fluids having a viscosity up to 15,000 SUS
- Flow rates up to 3 gpm
- 115 V AC single phase 1 1/2 HP motor
- Dual filtration unit, available to remove both water and particulate contamination or for staged particulate contamination removal
- Modular base eliminates hoses between components and minimizes leakage
- Base-ported filter provides easy element service from the top cap
- Ten-foot hose and extension tubes included (13' total length)
- Drip pan catches oil before it falls to the ground
- 27-inch housing is standard
- Integrated lifting eye option

### **Applications**

- Supplementing continuous filtration by system filters
- Cleaning up a hydraulic system following component replacement
- Filtering new fluid before it is put into service
- Transferring fluid from storage tanks and drums to system reservoirs

### Description

The Schroeder Mobile Filtration System for high viscosity applications is a compact, self contained filtration system equipped with high efficiency, high capacity elements capable of removing particulate contamination and/or water quickly, conveniently and economically. It is perfect for cleaning up existing systems as well as prefiltering and transferring fluids. Remember, new fluid does not mean clean fluid! Most new fluids have contamination levels significantly higher than is recommended for most hydraulic systems.

### **Specifications**

Flow Rating: 3 gpm (7.5 L/min) max

Maximum Viscosity: 15,000 SUS (3236 cSt)

Hose Pressure Rating: 30 psig (2.0 bar) @ 150°F (65.6°C)

Full vacuum @ 150°F (65.6°C)

Fluid Temperature: 25°F to 150°F (-4°C to 65°C)

Bypass Valve Setting: Cracking: 40 psi (2.8 bar)

Material: Manifold and cap: Cast Aluminum

Element case: Steel

Compatibility: All petroleum based hydraulic fluid. Contact factory for use with

other fluids.

Motor: 115 VAC Single phase 1.5 hp

Element Change Clearance: 8.50 (215 mm) 1K (9, 18 or 27" depending on model configuration)

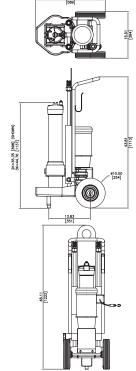
Weight: MFS-HV - 230 lbs (104 kg); MFD-HV - 260 lbs (118 kg)

# **High Viscosity Mobile Filtration Systems**

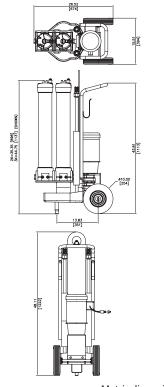
U.S. Patents 6568919 7604738



MFS-HV



MFD-HV



Metric dimensions in ().

**Model Number** Selection

NOTES:

Box 5. When MFD is

ordered,

element

identical for both filter

housings.

length, and

seals will be

the number of elements,

**Retrofit System** 

MFS-HV

KLS, KLD

**X** Series

How to Build a Valid Model Number for a Schroeder MFS-HV:

MFD-HV-	1 -	- 27 -	Z10 –	Z05 –	В	- 03	= MFD-HV127Z10Z05B03			
BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7				
Example: NOTE: One option per box										
MFD-HV-										
BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7				

BOX 1 Model MFS-HV MFD-HV

BOX 2 No. of Elements

BOX 3 **Element Length** 18 27

**Element Media First Filter** Z03 = 3 µm Excellement® Z-Media® (synthetic) Z05 = 5 μm Excellement® Z-Media® (synthetic)

Z10 = 10 μm Excellement® Z-Media® (synthetic) Z25 = 25 μm Excellement® Z-Media® (synthetic) EWR = Water Removal G03 = 3 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

G05 = 5 µm Excellement® Z-Media® (synthetic) w/GeoSeal® G10 = 10 µm Excellement® Z-Media® (synthetic) w/GeoSeal® G25 = 25 µm Excellement® Z-Media® (synthetic) w/GeoSeal® GWR = Water Removal w/GeoSeal®

BOX 4

BOX 5 Element Media Second Filter (MFD-HV Only) Z03 = 3 μm Excellement® Z-Media® (synthetic) Z05 = 5 μm Excellement® Z-Media® (synthetic) Z10 = 10 µm Excellement® Z-Media® (synthetic) Z25 = 25 μm Excellement® Z-Media® (synthetic) EWR = Water Removal G03 = 3 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

G05 = 5 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

G10 = 10 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

G25 = 25 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

BOX 6 Seal Material B = BunaV = Viton®

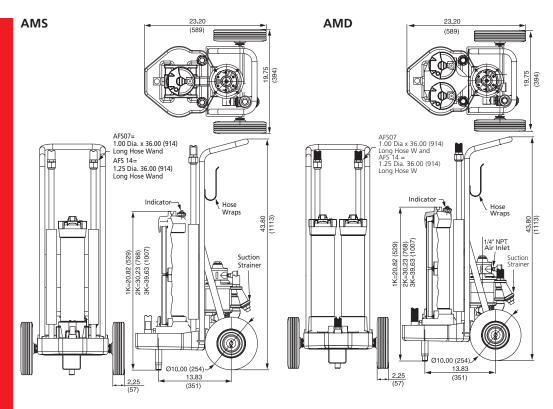
BOX 7 Pump Size(gpm) 03

GWR = Water Removal w/GeoSeal® For replacement element part numbers, please see "Appendix Section - Replacement Elements" of this catalog.

# AMS AMD 7 or 14 gpm 26.5 or 53 L/min

# **Air -Operated Mobile Filtration Systems**

U.S. Patents 6568919 7604738

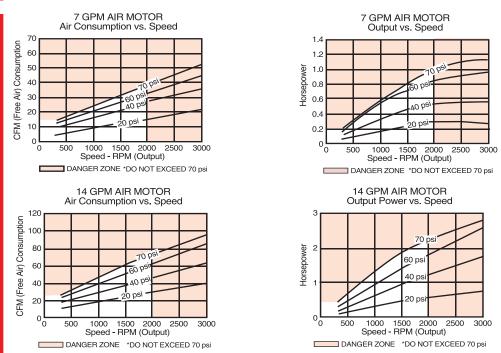


Metric dimensions in ().

### Description

Schroeder's AMS and AMD carts feature a pneumatic motor in place of the standard electric motor. The pneumatic motor offers the same flow capability using the same components, but without the need for an electrical outlet. This provides a major advantage in the application of this unit. With no need for an electrical outlet, it is more portable than the standard electric-motored skids and carts.

Because most trucks and industrial machinery are already equipped with an air compressor, a simple connection to the 1/4" NPT port will easily power the 1.5 HP (or 4.0 HP) motor. At 70 psi, and 2000 rpm, this motor consumes less than 40 cfm (70 cfm for the 4.0 HP motor) of compressed air. Because no electricity is used, the pneumatic motor is ideal for working in hazardous environments such as mines.



### NOTES:

Performance data represents a 4-Vane model with no exhaust restriction.

# **Air-Operated Mobile Filtration Systems**

U.S. Patents 6568919 7604738

**Specifications** 

Weights

Model Number Selection

**Applications** 

**Check Plus** 

**Retrofit System** 

AMS, AMD

**X** Series

Box 2 & 3. When Box 2 equals 2 or 3. Box 3 must be 09.

NOTES:

Box 5. When AMD is ordered, the number of elements, element length, and seal will be identical for both filter housings.

Box 7.

Supplementing continuous filtration by system filters

■ Cleaning up a hydraulic system following component replacement

■ Filtering new fluid before it is put into service

Transferring fluid from storage tanks and drums to system reservoirs

■ Field applications on service trucks

Flow Rating: 7 gpm (26.5 L/min) max and 14 gpm (53.0 L/min) max

Maximum Viscosity: 1,000 SUS (216 cSt)

Higher viscosity version available. Contact factory for details.

Housing Pressure Rating: 250 psi (17.2 bar) max operating<sup>1</sup>

1,000 psi (68.9 bar) min yield Fluid Temperature: 25°F to 150°F (-4°C to 65°C)<sup>2</sup>

Bypass Valve Setting: Cracking: 30 psi (2 bar)

Material: Manifold and cap: Cast aluminum

Element case: Steel

Compatibility: All petroleum based hydraulic fluid. Contact factory

for use with other fluids.

Element Change Clearance: 8.50" (215 mm) 1K (9, 18 or 27" depending on model configuration)

<sup>1</sup>For higher hose pressure applications contact factory. <sup>2</sup>For higher temperature applications contact factory.

	AMS-1K		AM	S-2K	AM:	5-3K	AMI	D-1K	AMI	D-2K	AM	1D-3K
gpm	lb	(kg)	lb	(kg)	lb	(kg)	lb	(kg)	lb	(kg)	lb	(kg)
7	170	(77)	180	(82)	190	(86)	185	(84)	203	(92)	220	(100)
14	177	(80)	187	(85)	197	(89)	192	(87)	210	(95)	227	(103)

### How to Build a Valid Model Number for Schroeder AMS:

	, bana a	Tuna mo	acı ıtaııı	DC: 101	50111000	
BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7
AMS		_		_		_

**Example:** NOTE: One option per box

	Example: //	OTL. OTIC	phon per k	JOX				
ſ	BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	
	AMS -	- 1 –	09	_ Z10 _		В –	- 14	= AMS109Z10B14

Model **AMS** AMD

BOX 1

No. of Elements					
1					
2					
3					

BOX 2

BOX 3
<b>Element Length</b>
09
18
27

th	

th	

Z01 = 1 μm Excellement® Z-Media® (synthetic) Z03 = 3 µm Excellement® Z-Media® (synthetic) Z05 = 5 µm Excellement® Z-Media® (synthetic) Z10 = 10 µm Excellement® Z-Media® (synthetic)

Z25 = 25 μm Excellement® Z-Media® (synthetic)

EWR = Water Removal

G03 = 3 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

BOX 4

**Element Media First Filter** 

G05 = 5 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

G10 = 10 µm Excellement® Z-Media® (synthetic) w/GeoSeal® G25 = 25 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

GWR = Water Removal w/GeoSeal®

а	Second	Filter	(AMD	Only)

Z01 = 1 μm Excellement® Z-Media® (synthetic)

Z03 = 3 μm Excellement® Z-Media® (synthetic) Z05 = 5 μm Excellement® Z-Media® (synthetic)

Z10 = 10 μm Excellement® Z-Media® (synthetic) Z25 = 25 μm Excellement® Z-Media® (synthetic)

EWR = Water Removal

G03 = 3 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

BOX 5

G05 = 5 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

G10 = 10 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

**Element Med** 

BOX 6 **Seal Material** B = Buna

BOX 7 Pump Size(gpm) 07 14

G25 = 25 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

GWR = Water Removal w/GeoSeal®

For replacement element part numbers, please see "Appendix Section - Replacement Elements" of this catalog.

**SCHROEDER INDUSTRIES 107** 

07 gpm - 50 CFM at 70 psi 14 gpm - 70 CFM at 70 psi



# Filtration Station® SMART

U.S. Patents 6979397

9 gpm or 3-8 gpm variable 34 L/min or 11-30 L/min



### **Features and Benefits**

- Real time monitoring of ISO cleanliness classes
- Automatic shutdown when user defined ISO codes are reached
- USB port allows the ISO code data to be downloaded for further processing and/or printing
- 30 mesh suction strainer and 230 micron filter are included to protect the particle monitor from clogging
- Water sensor allows real-time water saturation of the fluid to be displayed
- Bypass valve allows cart to be used as a transfer cart
- Single lift point
- Plastic removable drip pan
- Hoses and connection tubes included (13' total length)

### **Applications**

- In-Plant Service: Filter to desired cleanliness levels and extend component life
- Mobile Dealer Networks: Aid in certified re-builds, service maintenance contracts and total maintenance & repair programs
- Original Equipment Manufacturer: Filter to require roll-off cleanliness levels
- Lubricant Reclamation/Recycling: Clean oil to extend oil life and reduce hazardous waste

### Description

The Filtration Station® (FS) is capable of flushing, filtering, and monitoring ISO cleanliness with user-defined, automatic features. The FS is designed to transfer fluid through two (2) K9 filters in series for staged particulate or water/particulate removal. The FS is always furnished with two filter housings. Both filters are top-loading and include element indicators in the cap. A particle monitor reads samples from the pump discharge and displays ISO contamination codes on the control panel. The monitor allows the user to input the desired ISO cleanliness codes for the fluid. In auto mode, the system will run until the cleanliness codes are reached. Upon reaching the codes, the pump will stop and the cycle complete light will come on. When in manual mode, the system will run continuously and display the ISO codes. The included water sensor reports the water saturation of the fluid, which is displayed on the control panel.

### **Specifications**

Flow Rating: 9 gpm (34 l/min) fixed or 3-8 gpm (11-30 l/min) variable

Motor: 1.5 HP - 15 amps at 120 volts AC for fixed flow

1 HP - 10 amps at 120 volts AC for variable flow

Viscosity: 60 - 1,000 SUS (10-216 cSt)

Fluid Temperature Range: -20°F to 150°F (-29°C to 65°C)

Bypass Valve Setting: Cracking: 30 psi (2 bar) x 2

Compatibility: All petroleum-based hydraulic fluid.

Contact factory for use with other fluids.

Element Change Clearance: 8.50" (215 mm) 1K

Weight: 195 lbs (89 kg)

Protection Class: IP54 (DIN 40050)

\*Note: Optional front caster set PN: 7627132 includes (2) plate mount swivel casters with brake, installation hardware and mounting instructions.

# Element Performance Information

		ing Per ISO 4572/N article counter (APC) ca								
Element	β <sub>X</sub> ≥ 75	β <sub>X</sub> ≥ 100	β <sub>X</sub> ≥ 200	β <sub>X</sub> (c) ≥ 200	β <sub>X</sub> (c) ≥ 1000	Dirt Holding Capacity gm				
KZ5/KKZ5	2.5	3.0	4.0	4.8	6.3	119 / 238				
KZ10/KKZ10	7.4	8.2	10.0	8.0	10.0	108/216				
KZ25/KKZ25	18.0	20.00	22.5	19.0	240.	93 / 186				

U.S. Patents 6979397





**Retrofit System** 

**Model Number** 

Selection

NOTES:

Box 2. A plug is not provided for

6 gpm.

options B & C in Box 2 (220 V). If C is chosen,

flow rate will be reduced to 7 and

Box 3 & 4 Box 3

either 18 or 27; when Box 3 = 2 or 3,

Box 4 must be 09

Box 9. The

only.

water sensor

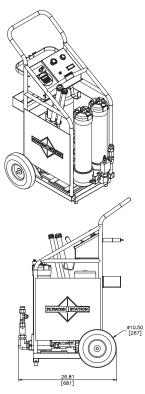
is to be used as

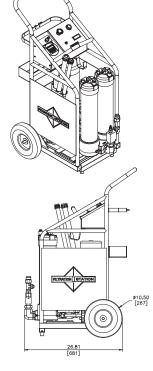
a reference tool for hydraulic oil analysis purposes

=1, Box 4 must be

KLS, KLD

**X** Series





Metric dimensions in ().

### How to Build a Valid Model Number for a Schroeder FS:

FS -	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	
Example	: NOTE: Or	ne option µ	oer box						
BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	
BOX I			20/1		20710	20111	50/(0	50/(5	

BOX 1	BOX 2	BOX 3	BOX 4
Model	Voltage	No. of Elements	Element Length
FS	A = 120 V / 60 Hz	1	09
LO	B = 220 V / 60 Hz	2	18
	C = 220 V / 50 Hz	3	27

Z03 = 3 µm Excellement® Z-Media® (synthetic)
Z05 = 5 μm Excellement <sup>®</sup> Z-Media <sup>®</sup> (synthetic)
Z10 = 10 μm Excellement <sup>®</sup> Z-Media <sup>®</sup> (synthetic)
Z25 = 25 μm Excellement <sup>®</sup> Z-Media <sup>®</sup> (synthetic)
EWR = Water Removal
G03 = 3 µm Excellement® Z-Media® (synthetic) w/GeoSeal®
G05 = 5 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

G10 = 10 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

G25 = 25 µm Excellement® Z-Medi® (synthetic) w/GeoSeal®

GWR = Water Removal w/GeoSeal®

Z01 = 1 μm Excellement® Z-Media® (synthetic)

BOX 5 **Element Media First Filter** 

### BOX 6 **Element Media Second Filter**

### Z01 = 1 μm Excellement® Z-Media® (synthetic) Z03 = 3 μm Excellement® Z-Media® (synthetic)

Z05 = 5 μm Excellement® Z-Media® (synthetic) Z10 = 10 µm Excellement® Z-Media® (synthetic)

Z25 = 25 μm Excellement® Z-Media® (synthetic)

EWR = Water Removal

30.71

1181

G03 = 3 µm Excellement® Z-Media® (synthetic) w/GeoSeal® G05 = 5 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

G10 = 10 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

G25 = 25 µm Excellement® Z-Medi® (synthetic) w/GeoSeal® GWR = Water Removal w/GeoSeal®

### BOX 7 BOX 8 BOX 9 **Seal Material Pump Size Water Sensor** B = Buna9 = 9 gpmW = TestMate® V = Viton® D = DC drive, Water Sensor variable flow, 3-8 gpm

For replacement element part numbers, please see "Appendix Section - Replacement Elements" of this catalog.

### **SCHROEDER INDUSTRIES 109**



# AMFS Asset Management Filtration Station®

## 5 gpm 19 L/min





### **Features and Benefits**

- Complete tracking of hydraulic fluid conditions by equipment name
- Provides automatic record-keeping, trending and analysis of the fluid
- Ideal for managing multiple equipment assets
- Automatically shuts down when the selected ISO cleanliness is reached
- Dual staged filters for both water and/or contaminated removal bypass valve allows cart to be used as a transfer cart
- Real Time data displays cleanliness and water saturation
- Selectable ISO target levels
- Only 3 entry fields needed to start the system and record data
- Hoses and connection tubes included (13' total length)

### **Applications**

- In-Plant Service: Filter to desired cleanliness levels and extend component life
- Mobile Dealer Networks: Aid in certified re-builds, service maintenance contracts and total maintenance & repair programs
- Industry
- Paper Industry
- Power Generation
- Mobile Vehicles
- Steel Making

### Description

The Asset Management Filtration Station® (AMFS) is a complete fluid management system designed to manage fluid cleanliness, so that the greatest return of that asset is achieved. The AMFS is an all-in one system that monitors your fluid condition, filters out contaminants and tracks all the necessary data needed for trend analysis and record keeping by asset number or name. The on-board rugged PC records the ISO code and water saturation level, provides a graphical display of the data in real time and shuts down when the selected cleanliness level is reached. Each asset file created automatically is separately labeled and summarized to quickly inform maintenance on the condition of the fluid, and each run of the fluid is logged by date and time, providing a complete history of the equipment's fluid.

### **Specifications**

Flow Rating: 5 gpm (19 L/min)

Motor: 1.5 HP - 15 FLA at 120 volts AC

Viscosity Range: 60 - 1,000 SUS (10 - 216 cSt)

Operating Temperature: -20°F to 150°F (-29°C to 65°C)

Bypass Valve Setting: Cracking: 30 psi (2 bar) x 2

Compatibility: All petroleum-based hydraulic fluid compatible with Viton®

Element Change Clearance: 17.5" KK / 26.5" 27K

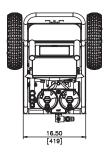
Weight: 200 lbs (440 kg) approx.

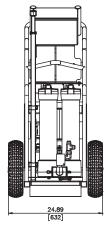
**Dimensions:** 26.6" x 25.25" x 50.0" (675 x 641 x 1270 mm)

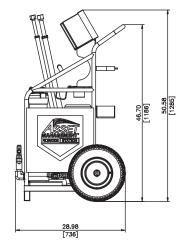
\*Note: Optional front caster set PN: 7627132 includes (2) plate mount swivel casters with brake, installation hardware and mounting instructions.

# Asset Management Filtration Station® AMF









Metric dimensions in ().

				IVIC	ctric difficultions in ( ).
	Filtration Rati		ting wrt ISO 16889 brated per ISO 11171		
GeoSeal® Element	ß <sub>X</sub> ≥ 75	<b>B</b> <sub>X</sub> ≥ 100	$\beta_{\chi} \ge 200$	$\beta_{\chi}(c) \ge 200$	β <sub>χ</sub> (c) ≥ 1000
KKGZ3/27KGZ3	<1.0	<1.0	<2.0	4.0	4.8
KKGZ5/27KGZ5	2.5	3.0	4.0	4.8	6.3
KKGZ10/27KGZ10	7.4	8.2	10	8.0	10.0

GeoSeal <sup>®</sup> Element	DHC (gm)	GeoSeal® Element	DHC (gm)
KKGZ3V	230	27KGZ3V	345
KKGZ5V	238	27KGZ5V	357
KKGZ10V	216	27KGZ10V	324

# Element Information

**Performance** 

**Dirt Holding** Capacity

**Model Number** Selection Preferred order codes designate

shorter lead times

**Retrofit System** 

**Check Plus** 

**AMFS** 

KLS, KLD

**X** Series

and faster delivery. OLF Compact

How to Build a Valid Model Number for a Schroeder AM
--

AMFS
Example: NOTE: One option per box
BOX 1 BOX 2 BOX 3 BOX 4 BOX 5
AMFS - 1 - 27 - G05 - G03 = AMFS127G05G03

BOX 1 **AMFS**  BOX 2 No. of

BOX 3 **Element Length** 18 27

**Element Media First Filter** G03 = 3 μm Excellement® Z-Media® (synthetic) w/ GeoSeal®

G05 = 5 µm Excellement® Z-Media® (synthetic) w/ GeoSeal® G10 = 10 µm Excellement® Z-Media® (synthetic) w/ GeoSeal® G25 = 25 µm Excellement® Z-Media® (synthetic) w/GeoSeal® GWR = Water Removal w/ GeoSeal®

BOX 4

### BOX 5 **Element Media Second Filter**

G03 = 3 µm Excellement® Z-Media® (synthetic) w/ GeoSeal®

G05 = 5 µm Excellement® Z-Media® (synthetic) w/ GeoSeal® G10 = 10 µm Excellement® Z-Media® (synthetic) w/ GeoSeal®

G25 = 25 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

GWR = Water Removal w/ GeoSeal®

For replacement element part numbers, please see "Appendix Section - Replacement Elements" of this catalog.



# 7 or 14 gpm 26.5 or 53 L/min



■ Usable with FluMoS Mobile App - HY-TRAX® option only

CSI-C-11 Compatible Product

# **Kidney Loop Systems**

U.S. Patents 6568919 7604738



### **Features and Benefits**

- Single, double and triple bowl length option allows the flexibility of additional dirt-holding capacity
- Modular base eliminates connections between components and minimizes leakage
- Base-ported filter provides easy element service from the top cap
- D5 Dirt Alarm® indicates when filter element needs changed
- Two 7/16 20 UNF sampling port included on all models (upstream)
- Suction strainers to protect pump
- Optional CSI-C-11 Communication Interface for WLAN or LAN transmission of data and data storage capabilities

### **Applications**

- Supplementing in-line filtration by system filters when adequate turnover cannot be attained
- Large volume systems requiring multiple filters in different locations
- Cleaning up a hydraulic system following component replacement

### Description

Schroeder's off-line Kidney Loop System is a stationary version of the Mobile Filtration System. It is a compact, self-contained filtration system equipped with high efficiency, high capacity elements capable of removing particulate contamination and/or water quickly, conveniently and economically. This off-line system can be used to supplement in-line filters when adequate turnover cannot be achieved in the system. It is also ideal for free water removal. Like the Mobile Filtration System, the Kidney Loop System operates at a surprisingly low noise level. Its modular base eliminates hoses and fittings between components. The KLS single filtration unit can remove either water or particulate contamination. The KLD dual filtration unit can be used to remove both water and particulate contamination, or for staged particulate contaminant removal.

# Contamination Sensor for Remote Visbility Options

**HY-TRAX**<sup>®</sup> **manual fluid sampling system**: Schroeder now offers the HY-TRAX<sup>®</sup> manual fluid sampling system as an additional option allowing for real-time fluid condition monitoring. ISO particle counts are visually displayed on the TCM. Users will now know when they have reached their desired ISO contamination levels. For more information, please see page 102.

**CSI-C-11:** Schroeder also offers the CSI-C-11 Communication Interface for WLAN or LAN transmission of data and data storage capabilities. For more information, please see page 38.

### **Specifications**

Flow Rating: 7 gpm (26.5 L/min) max and 14 gpm (53.0 L/min) max

**Viscosity Range:** 40 - 1,000 SUS (4 - 216 cSt)

Higher viscosity version available. Contact factory for details.

Fluid Temperature: 25°F to 150°F (-4°C to 65°C)

Bypass Valve Setting: Cracking: 30 psi (2 bar)

Material: Manifold and cap: Cast aluminum

Element case: Steel

Compatibility: All petroleum based hydraulic fluid. Contact factory

for use with other fluids.

Motor: 115 VAC single phase 3/4 hp (7 gpm), 1-1/2 hp (14 gpm),

or 230 and 460 VAC 3 phase power optional

Weight: KLS-1: 101 lb (45.9 kg) KLD-1: 117 lb (53.2 kg)

**KLS-2**: 112 lb (50.9 kg) **KLD-2**: 139 lb (63.2 kg) **KLS-3**: 123 lb (55.9 kg) **KLD-3**: 161 lb (73.2 kg)

Element Change Clearance 8.50" (215 mm) 1K

# **Kidney Loop Systems**

U.S. Patents 6568919 7604738



**Check Plus** 

### **Model Number** Selection

Preferred order codes designate shorter lead times and faster delivery.

**Retrofit System** 

Box 2 & 3 . When Box 2 equals 2 or 3.

NOTES:

Box 3 must be 09.

Box 5. When KLD is ordered, the number of elements. element length, and seals will be identical for

KLS, KLD

both filter

Box 7. Motor starter is included with 3-Phase options

housings.

**X** Series

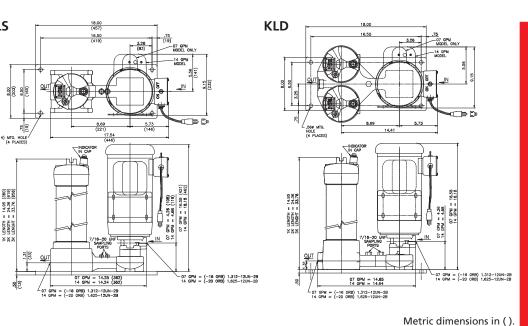
A and B. Box 9.

Particle counter option only available on 115 V / 60 Hz units. Particle counter is not available with

Skydrol fluids. Contact factory if EPR seals are required. Contact factory for

For replacement element P/Ns, please see "Appendix Section - Replacement Elements" of this catalog.

high viscosity version.



How to Build a Valid Model Number for a Schroeder KLD:

BOX 1 BOX 2 BOX 3 BOX 4 BOX 5 BOX 6 BOX 7 BOX 8 BOX 9
KLD

Example: NOTE: One option per box

**KLS** 

BOX 1	BOX 2	BOX 3	BOX4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	
KLD-	- 1	_ 27 -	-Z05	- Z03 -	В		- 7	_	= KLD127Z05Z03B07

BOX 1	BOX 2	BOX 3
Model	No. of Elements	Element Length
KLS	1	09
KLS	2	18
KLD	3	27
KLD		

Z01 = 1 µm Excellement® Z-Media® (synthetic) Z03 = 3 μm Excellement® Z-Media® (synthetic) Z05 = 5 μm Excellement® Z-Media® (synthetic) Z10 = 10 µm Excellement® Z-Media® (synthetic) Z25 = 25 μm Excellement® Z-Media® (synthetic) EWR = Water Removal

BOX 4

**Element Media First Filter** 

G03 = 3 µm Excellement® Z-Media® (synthetic) w/GeoSeal® G05 = 5 µm Excellement® Z-Media® (synthetic) w/GeoSeal® G10 = 10 µm Excellement® Z-Media® (synthetic) w/GeoSeal® G25 = 25 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

GWR = Water Removal w/GeoSeal®

BOX 5 **Element Media Second Filter (KLD only)** 

Z01 = 1 μm Excellement® Z-Media® (synthetic) Z03 = 3 μm Excellement® Z-Media® (synthetic) Z05 = 5 μm Excellement® Z-Media® (synthetic) Z10 = 10 μm Excellement® Z-Media® (synthetic)

Z25 = 25 μm Excellement® Z-Media® (synthetic)

EWR = Water Removal

G03 = 3 µm Excellement® Z-Media® (synthetic) w/GeoSeal® G05 = 5 µm Excellement® Z-Media® (synthetic) w/GeoSeal® G10 = 10 µm Excellement® Z-Media® (synthetic) w/GeoSeal® G25 = 25 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

GWR = Water Removal w/GeoSeal®

BOX 6 **Seal Material** 

B = BunaV = Viton®

> BOX 8 Pump Size 07

BOX 7 Voltage

Omit = 115 V / 60 Hz / 1-Phase A = 230 V / 60 Hz / 3-PhaseB = 460 V / 60 Hz / 3-PhaseC = 220 V / 50 Hz / 1-PhaseD = 230 V / 60 Hz / 1 -Phase

> BOX 9 **Particle Counter**

Omit = Without Particle Counter

P = Particle Counter

P-CSI = Particle Counter + CSI-C-11 Option

P-CSI-W = Particle Counter + CSI-C-11 + Water Sensor (No

Display) Option



6 or 10 gpm 22.7 or 53 L/min



■ Usable with FluMoS Mobile App - HY-TRAX<sup>®</sup> option only

CSI-C-11 Compatible Product



U.S. Patents 6568919 7604738



KLD

### **Features and Benefits**

- Single, double and triple bowl length option allows the flexibility of additional dirt-holding capacity
- Base-ported filter provides easy element service from the top cap
- D5 Dirt Alarm® indicates when filter element needs changed
- Two 7/16 20 UNF sampling port included on all models (upstream)
- Suction strainers to protect pump
- Optional CSI-C-11 Communication Interface for WLAN or LAN transmission of data and data storage capabilities

### **Applications**

- Supplementing in-line filtration by system filters when adequate turnover cannot be attained
- Large volume systems requiring multiple filters in different locations
- Cleaning up a hydraulic system following component replacement

### Description

Schroeder's off-line Kidney Loop System is a stationary version of the Mobile Filtration Medium Viscosity System. It is a compact, self-contained filtration system equipped with high efficiency, high capacity elements capable of removing particulate contamination and/or water quickly, conveniently and economically. This off-line system can be used to supplement in-line filters when adequate turnover cannot be achieved in the system. It is also ideal for free water removal. Like the Mobile Filtration System, the Kidney Loop System operates at a surprisingly low noise level. The KLS-MV single filtration unit can remove either water or particulate contamination. The KLD-MV dual filtration unit can be used to remove both water and particulate contamination, or for staged particulate contaminant removal.

# Contamination Sensor for Remote Visbility Options

**HY-TRAX**<sup>®</sup> **HV manual fluid sampling system**: Schroeder now offers the HY-TRAX<sup>®</sup> manual fluid sampling system as an additional option allowing for real-time fluid condition monitoring. ISO particle counts are visually displayed on the TCM. Users will now know when they have reached their desired ISO contamination levels. For more information, please see page 102.

**CSI-C-11:** Schroeder also offers the CSI-C-11 Communication Interface for WLAN or LAN transmission of data and data storage capabilities. For more information, please see page 38.

### **Specifications**

Flow Rating: 6 gpm (22.7 L/min) max and 10 gpm (37.0 L/min) max

Viscosity Range: 40 - 5,000 SUS (4 - 1000 cSt)

Fluid Temperature: 25°F to 150°F (-4°C to 65°C)

Bypass Valve Setting: Cracking: 30 psi (2 bar)

Material: Manifold and cap: Cast aluminum

Element case: Steel

Compatibility: All petroleum based hydraulic fluid. Contact factory

for use with other fluids.

Motor: 115 VAC single phase 1 hp (6 gpm), 1-1/2 hp (10.4 gpm),

or 230 and 460 VAC 3 phase power optional

Element Change Clearance 8.50" (215 mm) 1K

# **Kidney Loop Systems**



### **Model Number** Selection

Preferred order codes designate shorter lead times and faster delivery.

**Retrofit System** 

Box 2 & 3. When Box 2 equals 2 or 3, Box 3 must be

NOTES:

KLS, KLD

Box 5. When KLD is ordered, the number of elements, element length, and seals will be

**X** Series identical for both filter

Box 7. Motor starter is included with 3-Phase options

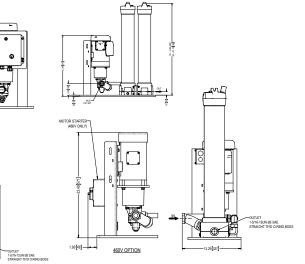
housings.

A and B.

Box 9.

Particle counter option only available on 115 V / 60 Hz units.

U.S. Patents 6568919 7604738 **KLD-MV** 



Metric dimensions in ().

### How to Build a Valid Model Number for a Schroeder KLD-MV:

KLD-MV

Example: NOTE: One option per box

**KLS-MV** 

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	ВО	X 8	BOX 9	
KLD-MV -	- 1 -	- 27 -	- G10	- G05 -	- V -	-	- 0	6 -	-	= KLD-MV127G10G05V06

	BOX 1	BOX 2	BOX 3
	Model	No. of Elements	Element Length
	KLD-MV	1	09
'	KLD-IVIV	2	18
	KLS-MV	3	27
	ICTO-IAIA		

**Element Media First Filter** G03 = 3 µm Excellement® Z-Media® (synthetic) w/GeoSeal® G05 = 5 µm Excellement® Z-Media® (synthetic) w/GeoSeal® G10 = 10 µm Excellement® Z-Media® (synthetic) w/GeoSeal® G25 = 25 µm Excellement® Z-Media® (synthetic) w/GeoSeal® GWR = Water Removal w/GeoSeal®

BOX 4

### BOX 5 **Element Media Second Filter (KLD only)**

G03 = 3 µm Excellement® Z-Media® (synthetic) w/GeoSeal® G05 = 5 µm Excellement® Z-Media® (synthetic) w/GeoSeal® G10 = 10 µm Excellement® Z-Media® (synthetic) w/GeoSeal®

G25 = 25 µm Excellement® Z-Media® (synthetic) w/GeoSeal® GWR = Water Removal w/GeoSeal®

**Seal Material** V = Viton®

BOX 6

Voltage Omit = 115 V / 60 Hz / 1-Phase A = 230 V / 60 Hz / 3-PhaseB = 460 V / 60 Hz / 3-PhaseC = 220 V / 50 Hz / 1 -Phase

BOX 7

BOX 8 Pump

06 10

Omit = Without Particle Counter

P = Particle Counter P-CSI = Particle Counter

P-CSI-W = Particle Counter + CSI-C-11 + Water Sensor (No Display) Option

### BOX 9

### **Particle Counter**

D = 230 V / 60 Hz / 1 -Phase

+ CSI-C-11 Option

For replacement element P/Ns, please see "Appendix Section - Replacement Elements" of this catalog.



# Fail-Safe In-Line Mechanical Clean Oil Dispenser

U.S. Patent 7,604,738 for connecting end cap



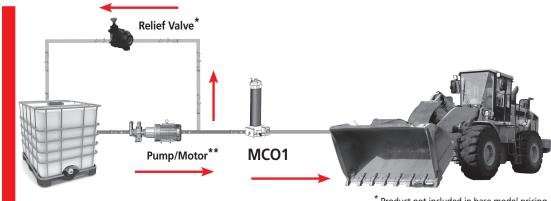
### **Product Description**

- Fail-safe In-Line Mechanical Clean Oil Dispensing Filter rated for 900 psi and 30 gpm
- Ideal for dispensing applications where clean fluid delivery is a <u>must</u>
- Dispensed fluid is filtered or it is returned to the tank
- Field proven to deliver ISO cleanliness levels of 18/15/13 or better in a single pass
- Series filtration with MCO2 and MCO3 filters

### **Technology**

- Housings incorporate a non-bypassing but low cost 150 psi βeta X > 1000 rated element
- Low element cost is achieved through the use of a unique proportional valve that, when used with an external relief valve, redirects the flow back to the tank as element DP increases
- As the element loads, the element service life indicator, located on the housing, indicates that service is required before the fluid flow begins to return to tank. Unfiltered "dirty" oil cannot pass the filter even if the service life indicator is ignored.
- Fluid Cleanliness Sampling Ports provided for proof of filtration into the system being filled
- Easy to install and designed with top service for easy element service
- Push button bleed valves located on each filter housing

# Application Circuit

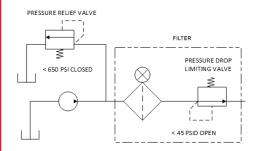


\* Product not included in base model pricing.

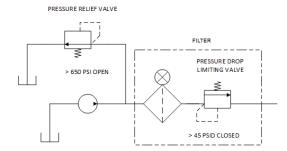
\*\* Product is customer supplied.

### Schematics

### **Normal Operation**



### "Bypass" Operation



# Fail-Safe In-Line Mechanical Clean Oil Dispenser

**Filter** 

**Specifications** 

Housing

**Model Number** Selection

**Retrofit System** 

KLS, KLD

MCO

**X** Series

U.S. Patent 7,604,738 for connecting end cap

Flow Rating: Up to 30 gpm (113 L/min) for 150 SUS (32 cSt) fluids Max. Operating Pressure: 900 psi (60 bar) Min. Yield Pressure: 3200 psi (220 bar), per NFPA T2.6.1 Rated Fatigue Pressure: 750 psi (52 bar) per NFPA T2.6.1-R1-2005 Temp. Range: -20°F to 225°F (-29°C to 107°C) Bypass Setting: Non-Bypassing System Porting Head & Cap: Cast Aluminum Element Case: Steel Weight of MCO-1K: 21 lbs. (9.5 kg) Weight of MCO-2K: 32 lbs. (14.5 kg) Weight of MCO-3K: 43 lbs. (19.5 kg)

### How to Build a Valid Model Number for a Schroeder MCO:

Element Change Clearance: 17.50" (445 mm) for KK; 26.5" (673 mm) for 27K

BOX 1 BOX 2 BOX 3 BOX 4 BOX 5 BOX 6 BOX 7 BOX 8 BOX 9 BOX 10						
MCO						
Example: NOTE: One option per box						
BOX 1 BOX 2 BOX 3 BOX 4 BOX 5 BOX 6 BOX 7 BOX 8 BOX 9 BOX 10						

MCO 3 27 G05 G03 - G03 S D5 RV

= MCO327G05G03G03VSD5RV

BOX 1 BOX 3 BOX 2 No. of **Element** Model Housings Length 27 1 MCO 2 3

Element Micron Rating First Filter (MCO1, MCO2, MCO3)  $G01 = 1 \mu m Z-Media^{\circ}$  (synthetic) G03 = 3 µm Z-Media® (synthetic)

BOX 4

 $G05 = 5 \mu m Z-Media^{\circ}$  (synthetic) G10 = 10 µm Z-Media<sup>®</sup> (synthetic) G25 = 25 µm Z-Media® (synthetic)

BOX 5

Element Micron Rating Second Filter (MCO2, MCO3)
G01 = 1 µm Z-Media® (synthetic)
G03 = 3 µm Z-Media® (synthetic)
G05 = 5 μm Z-Media® (synthetic)
G10 = 10 μm Z-Media® (synthetic)
G25 = 25 µm 7-Media® (synthetic)

**Element Micron Rating Third Filter (MCO3 Only)** G01 = 1 µm Z-Media® (synthetic) G03 = 3 μm Z-Media<sup>®</sup> (synthetic)  $G05 = 5 \mu m Z-Media^{\circ}$  (synthetic) G10 = 10 µm Z-Media® (synthetic)

BOX 6

BOX 7 BOX 8 **Seal Material Porting** V = Viton® S = SAE 20P = 1 1/4 NPTF

BOX 9 Indicator Options (Only for outlet block)

D5 = Visual Pop-up

MS10 = Electrical with DIN Connector (male end only)

MS11 = Electrical with 12ft. 4-conductor wire

G25 = 25 µm Z-Media® (synthetic)

MS14 = Supplied with 5-pin Brad Harrison make connector and light (male end)

**BOX 10** 

**Relief Valve** 

Omit = Customer Supplied

RV = Schroeder Relief Valve (set at 650 psi)\*

\*The "RV" option is supplied as a loose item. Users have to install the relief valve within their Hydraulic System.

NOTES:

Box 10. An upstream pressure relief valve must be used. Should be no greater than 650 psi.



# **Air-Operated Kidney Loop Systems**

U.S. Patents 6568919 7604738



### **Features and Benefits**

- Modular base eliminates connections between components and minimizes leakage
- Base-ported filter provides easy element service from the top cap
- Single, double and triple bowl length option allows the flexibility of additional dirt-holding capacity
- D5 Dirt Alarm® indicates when filter element needs changed
- Two 7/16 20 UNF sampling port included on all models (upstream)
- Suction strainers to protect pump

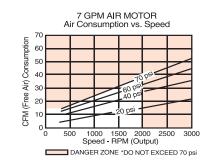
### **Applications**

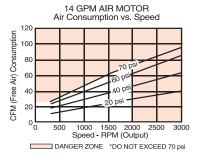
- Supplementing in-line filtration by system filters when adequate turnover cannot be attained
- Large volume systems requiring multiple filters in different locations
- Cleaning up a hydraulic system following component replacement
- Ideal location for water removal
- Field applications on service trucks

### Description

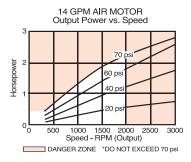
Schroeder offers a kidney loop filtration system with a pneumatic motor in place of the standard electric motor. The pneumatic motor offers the same flow capability using the same components, but without the need for an electrical outlet. This provides a major advantage in the application of this unit. With no need for an electrical outlet, it is more portable than the standard electric-motored skids and carts.

Because most trucks and industrial machinery are already equipped with an air compressor, a simple connection to the 1/4" NPT port will easily power the 1.5 HP (or 4.0 HP) motor. At 70 psi, and 2000 rpm, this motor consumes less than 40 cfm (70 cfm for the 4.0HP motor) of compressed air. Because no electricity is used, the pneumatic motor is ideal for working in hazardous environments such as mines.









Note: Performance data represents a 4-vane model with no exhaust restriction.

# **Air-Operated Kidney Loop Systems**

U.S. Patents 6568919 7604738



**Check Plus** 

**Specifications** 

**Retrofit System** 

KLS, KLD

AKS, AKD

**X** Series

NOTES:

Box 2 & 3. When Box 2 equals 2 or 3, Box 3 must be

**Model Number** 

Selection

Box 5. When AKD is ordered, the number of elements, element length, and seal will be identical for both filter housings.

07 gpm - 50 CFM at 70 psi 14 gpm - 70 CFM at 70 psi

.75 (19)	AKD  (467) (467) (468) (469) (
NPT AIR	- NDICATOR
(462) (4	(a) (b) (c) (c) (c) (c) (c) (c) (c) (c) (c) (c
	Metric dimensions in ( ).

Flow Rating: 7 gpm (26.5 L/min) max and 14 gpm (53.0 L/min) max Maximum Viscosity: 1,000 SUS (216 cSt)

Higher viscosity version available. Contact factory for details.

Fluid Temperature: 25°F to 150°F (-4°C to 65°C)

For higher temperature applications contact factory. Cracking: 30 psi (2 bar)

Material: Manifold and cap: Cast aluminum

Element case: Steel Compatibility: All petroleum based hydraulic fluid.

Contact factory for use with other fluids.

Element Change Clearance: 8.50" (215 mm) 1K

Weight: AKS1 = 86 lbs. (39 kg.) AKD1 = 98 lbs. (44 kg.)

> AKS2 = 98 lbs. (44 kg.)AKD2 = 120 lbs. (54 kg.)AKS3 = 108 lbs. (49 kg.)AKD3 = 142 lbs. (64 kg.)

### How to Build a Valid Model Number for Schroeder AKS:

Bypass Valve Setting:

**AKS** 

(0.00 (0.00 (0.00 (0.00 (0.00) 14.95 24.36 33.76

> 07 GPM = 14.25 (362) 14 GPM = 14.24 (362) 07 GPM = (-16 ORB) 1.312-12UN-2B 14 GPM = (-20 ORB) 1.625-12UN-2B

BOX 1 BOX 2 BOX 3 BOX 4 BOX 5 BOX 6 BOX 7
<b>Example:</b> NOTE: One option per box
BOX 1 BOX 2 BOX 3 BOX 4 BOX 5 BOX 6 BOX 7
AKD - 1 - 09 - Z10 - Z05 - B - 14 = AKD109Z10Z05B14

71170			210 203 0 14 -	- 7 (175 1052 102055 1 1
BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Model	No. of Element		Element Media First Filter	Element Media Second Filter (AKD Only)
AKS	1 2	09 18	Z01 =1 μm Excellement® Z-Media® (synthetic)	Z01 =1 µm Excellement® Z-Media® (synthetic)
AKD	3	27	Z03 =3 µm Excellement® Z-Media® (synthetic) Z05 =5 µm Excellement® Z-Media® (synthetic)	Z03 =3 µm Excellement® Z-Media® (synthetic) Z05 =5 µm Excellement® Z-Media® (synthetic)
AKD			Z10 =10 µm Excellement® Z-Media®(synthetic) Z25 =25 µm Excellement® Z-Media®(synthetic)	Z10 =10 µm Excellement® Z-Media®(synthetic) Z25 =25 µm Excellement® Z-Media®(synthetic)
			EWR =Water Removal	EWR =Water Removal
			G03 =3 µm Excellement® Z-Media® (synthetic) w/GeoSeal®	G03 =3 µm Excellement® Z-Media® (synthetic) w/GeoSeal®
			G05 =5 µm Excellement® Z-Media® (synthetic) w/GeoSeal®	G05 =5 µm Excellement® Z-Media® (synthetic) w/GeoSeal®
BOX 6 BOX 7		BOX 7	G10 =10 µm Excellement® Z-Media®	G10 =10 µm Excellement® Z-Media®
Seal Material Pump Size(gpm)			(synthetic) w/GeoSeal®	
B = Buna 07		07	(synthetic) w/GeoSeal®	(synthetic) w/GeoSeal®
14		14	GWR =Water Removal w/GeoSeal®	GWR =Water Removal w/GeoSeal®

For replacement element part numbers, please see "Appendix Section - Replacement Elements" of this catalog.



# Series X Series Filter Skids SMART



### **Features and Benefits**

- Clean fluid to protect and extend the life of expensive components
- Minimizes downtime and maintenance costs
- Designed to handle high viscosity oils up to 25,000 SUS (see Skid Selection; next page)
- Many component combinations and variable starter options allow the flexibility to match specific user needs
- Four wheel cart option provides product portability
- Integral drip pan with drain plug protects oil from spilling on the ground
- 1620 Testpoints provided at filter base for fluid sampling
- Market leading Schroeder Excellement® synthetic filtering media provides for quick, efficient clean up with maximum element life

Part of Schroeder Industries Energy Savings Initiative

### Description

Schroeder's X Series filtration skids are compact, self-contained filtration systems equipped with high efficiency, high capacity elements capable of removing particulate contamination and/or water quickly and economically. They supplement in-line filters whenever the existing filtration is incapable of obtaining the desired ISO cleanliness level.

It is not uncommon for viscosity to be overlooked when specifying an off-line filtration unit. The results of this oversight can severely affect system efficiency and longevity, and render the filtration system useless when high viscosity fluid causes the filter to be in constant bypass. Schroeder considers maximum fluid viscosity, (at the minimum operating temperature) in conjunction with flow to properly size the pump and motor.

Standard X Series skids (X2, X3 and X7) include a hydraulic pump, electric motor, and a QF5 housing. Standard X Series Skids (X5, X6 and X8) include a hydraulic pump, electric motor, and dual K9 or QF5 housings. Many different component combinations provide the flexibility to match specific system viscosity, flow, and cleanliness requirements.

Schroeder's high viscosity X Series skids (X7 and X8) are designed to handle fluids that have a viscosity as high as 25,000 SUS. The skids have 39" long QF5 filters to efficiently clean the viscous fluids. The filters have a high dirt-holding capacity, capable of holding almost 1000 grams of dirt depending on the element. X7 and X8 skids include a pump, motor, QF5 filter, suction strainer, and dirt indicator. Various options can account for specific user needs.

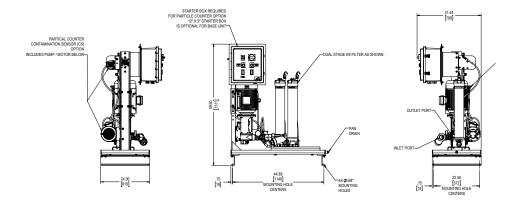
### **Skid Selection**

Series	Viscosity Range	Filter Housing(s)	Maximum Flow
X2	100 - 2000 SUS	(1) QF5	82 gpm (310 L/min)
X3	100 - 5000 SUS	(1) QF5	37 gpm (140 L/min)
X5	100 - 2000 SUS	(2) QF5 or K9 in series	82 gpm (310 L/min)
X6	100 - 5000 SUS	(2) QF5 or K9 in series	37 gpm (140 L/min)
X7	100 - 25,000 SUS	(1) QF5	6 gpm (23 L/min)
X8	100 - 25,000 SUS	(2) QF5 in parallel	30 gpm (114 L/min)

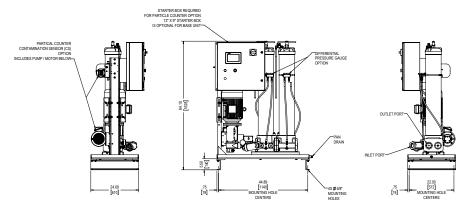




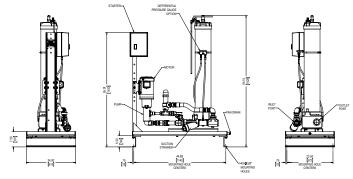
### **Dual K9 Filter Version (Series X5 & X6)**



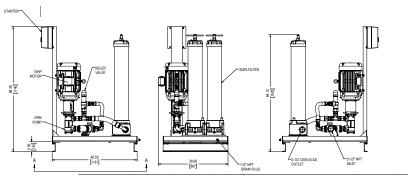
### **Dual QF5 Filter Version (Series X5 & X6)**



### Single QF5 Filter Version (X7); For High Viscosity (up to 25,000 SUS)



### Dual QF5 Filter Version (X8); For High Viscosity (up to 25,000 SUS)



Metric dimensions in ().

**RBSA** 

AS

**Check Plus** 

**RFSA** 

HFS-15

MFS, MFD

**Retrofit System** 

KLS, KLD

MCO

X Series

**OLF-P** 



### **Specifications**

Flow Rating: Up to 82 gpm (310 L/min)

Temp. Range: 0°F to 180°F (-17°C to 82°C)

Bypass Valve Setting: 50 psi (3.5 bar) for skid series X2, X3, X5, X7, and X8

40 psi (2.8 bar) for skid series X6

Fluid Viscosity: Up to 25,000 SUS (see Skid Selection; previous page)

Compatibility: All petroleum based hydraulic fluids. Contact Schroeder

for use with other fluids, including ester and skydrol.

Pump: X2-X6: Continuous duty gear pump with integral 150 psi relief.

Flow dependent on skid series and motor. Refer to table below.

X7-X8: Positive displacement rotary screw pumps

Motor: Horsepower dependent on skid series and flow. Refer to table below.

Porting: Dependent on flow. Refer to table below.

# Pump and Motor Data

Skid Series	Flow (gpm)	Motor (hp)	Skid Series	Flow (gpm)	Motor (hp)
X2	17 37 60 82	3 5 10 10	X6	17 37	5 10
Х3	17 37	5 10	X7	06	2
X5	17 37 60 82	5 10 10 15	X8	30	15

### **Porting Data**

Model	Flow (gpm)	Inlet Port Sizes	Outlet Port Sizes with K9 Filters	Outlet Port Sizes with Q39 Filters
X2	17	1.50" NPT	-	#32 SAE (2")
X2	37	2" NPT	-	#32 SAE (2")
X2	60	2" NPT	-	#32 SAE (2")
X2	82	2" NPT	-	#32 SAE (2")
X3	17	2" NPT	-	#32 SAE (2")
X3	37	2" NPT	-	#32 SAE (2")
X5	17	1.50" NPT	#24 SAE (1.50")	#32 SAE (2")
X5	37	2" NPT	#24 SAE (1.50")	#32 SAE (2")
X5	60	2" NPT	#24 SAE (1.50")	#32 SAE (2")
X5	82	2" NPT	-	#32 SAE (2")
X6	17	2" NPT	#24 SAE (1.50")	#32 SAE (2")
X6	37	2" NPT	#24 SAE (1.50")	#32 SAE (2")
X7	06	1.50" NPT	-	#32 SAE (2")
X8	30	2.50" NPT	-	#32 SAE (2")

### **Weight Data**

Skid Series	Flow (gpm)	Weight (lb)*	Skid Series	Flow (gpm)	Weight (lb)*
X2	17 37 60 82	311-504 348-577 Contact factory 597-705	X6	17 37	370-659 502-607
Х3	17 37	340-580 461-566	X7	06	Contact factory
X5	17 37 60 82	396-684 497-849 Contact factory 947-1054	X8	30	Contact factory

\*Weight dependent on options chosen.

# SMART X Series Filter Skids



Box 1. Z1 media not offered for use in 500 to 2000 SUS filtration skids. Contact factory for specific applications.

(X2, X5) Z1 and Z3 media not offered for use in 2000 to 5000 SUS filtration skids.

Contact factory for specific applications.

Boxes 4 & 5. Z1 and Z3 media not offered for use in 2000 to 5000 SUS filtration skids. Contact factory for specific applications.

All elements are singular construction (no stacked elements). Retrofit System QPML elements only

available in the QF5 housing. X2, X3 and X7 skids have one filter

housing, box 5. X8 skid has AMS, AMD filters in parallel. Box 4 &

rating. Box 7.

575 will be built to

Boxes 9 and 10. Motor starter control

option - C-series, nondisconnect shut-off, "motor on" light, electrical indicator "change element" light, and type 4x wash

down enclosure. Contact factory for additional custom control options.

Box 11. Continuous bleed option - to eliminate filter air buildup in continuously

aerated systems. Includes cap vent port, valve, and return line. (B) Suction strainer

all X Skids. Particle Counter not

**Model Number** Selection

NOTES:

(X3, X6)

5 must have same micron

KLS, KLD

CSA standards. (E) X7 and X8 only available with 230/460 VAC 3 phase motor.

X Series

standard on

available for X7 or X8.

How to Build a Valid	Model Number f	or a Schroodor V	Sorios Eiltor Skid:
How to Build a Valid	iviogei Number t	or a Schroeder X	Series Fliter Skid:

BOX3 BOX4 BOX5 BOX6 BOX7 BOX8 BOX9 BOX10 BOX11

<b>Example:</b> NOTE: One option per box	
BOX 1 BOX 2 BOX 3 BOX 4 BOX 5 BOX 6 BOX 7 BOX 8 BOX 9 BOX	OX 10 BOX 11
X5 - 17 - 3Q - D - C - B - N - N - B -	M – N = X5173QDCBNNBMN

BOX 1	BOX 2	BOX 3		BOX 4	BOX 5	BOX 6
Model	Flow (gpm)	K9 Filter 3K	QF5 Filter 39Q	Element Media 1st Filter	Element Media 2nd Filter (omit for X2, X3, and X7 skids)	Seal Material
	17		3Q	A = 1 Z Micron	N = NA	B = Buna
X2	37		3Q	B = 3 Z Micron	A = Z1 (K  or  Q)	(Standard)
\\Z	60		3Q	C = 5 Z Micron	B = Z3 (K  or  Q)	H = EPR
	82		3Q	D = 10 Z Micron	C = Z5 (K  or  Q)	V = Viton®
Х3	17		3Q	E = 25 Z Micron	D = Z10 (K  or  Q)	
VO	37		3Q	M = QPMLZ1	E = Z25 (K or Q)	
	17	3K	3Q	P = QPMLZ3	M = QPMLZ1	Deeper
X5	37	3K	3Q	R = QPMLZ5	P = QPMLZ3	Pleats
VO	60		3Q	S = QPMLZ10	R = QPMLZ5	110015
	82		3Q	T = QPMLZ25	S = QPMLZ10	
X6	17	3K	3Q	W = W	T = QPMLZ25	
70	37	3K	3Q		W = W	Water Removal
X7	06		3Q			
X8	30		3Q			

BOX 7	BOX 8	BOX 9	BOX 10
Power	Motor Frame	Starter Control Options	Dirt Alarm®
N = 230/ 460 VAC 3 PH.	N = TEFC	N = None	N = D5 Indicator on Filter Cap
E = 575 VAC 3 PH.	W = Washdown (NEMA	A = 230 VAC	G = Differential Pressure Gauge
	Design B)	B = 460 VAC	M = MS11 Electric Cartridge
		E = 575 VAC	C = Differential Pressure Gauge with Electric Switch

### **BOX 11**

Miscellaneous Options	
N = None	
C = Mobile	
B = Continuous Bleed	
P = Particle Counter	

Note: Vacuum gauge and suction strainer comes standard on all available models.

For replacement element part numbers, please see "Appendix Section - Replacement Elements" of this catalog.

# OLF Compact

# **Offline Filtration Systems**

Formally Known as "KLC - Kidney Loop Compact Systems"



### **Features and Benefits**

- Lower operating costs
- Extended element service life
- Extended fluid life
- Cleaner and more efficient systems
- Easy installation
- High dirt-holding capacity
- Requires low volume of oil

### **Applications**

- Injection molding machines
- Machine tools
- Gear boxes
- Mobile equipment
- Filtration of fluids for intermittently operated hydraulic systems and test stands

### Description

Schroeder's OFFLINE FILTRATION SYSTEMS - OLF are designed to filter highly contaminated hydraulic oils efficiently and cost effectively off-line. The OLF is designed for use on hydraulic systems with a reservoir of up to 1000 gallons and is perfect for retrofit situations when additional filtration is required. This compact filter is easy to install and ideal for gear boxes. They are supplied as ready-to-install off-line units complete with pump/motor assembly.

### **Specifications**

Viscosity: OLF-5/4 to 10,000 SUS OLF-5 to 700 SUS OLF-5/15 to 3,000 SUS Operating Pressure: 45 psi (3 bar) max Suction Pressure: -6 psi to 87 psi max Fluid Temperature: 32°F to 175°F (0°C to 80°C) Ambient Temperature: -4°F to 104°F (-20°C to 40°C) Seals: Buna N Maximum Flow Rate: OLF-5/4 1.3 gpm OLF-5 1.6 gpm OLF-5/15 4.9 gpm Fluids: Standard mineral oils, water/oil based fluids (min 40% oil in fluid), Consult factory for other fluids Media: Dimicron with or without water removal capability - (2 μm, 20 μm) Dirt Holding Capacity: 200g ISO MTD (KLExx particulate elements) / 185g ISO MTD (KLEAxx water elements) Water Retention: Approximately 0.5 quarts (0.5 liters) Beta Ratio:  $\beta x > 1000$ Maximum  $\Delta P$ : 45 psi (3 bar) Connections with Pump/Motor: OLF-5/4 1 5/16"-12 SAE Female Straight Thread OLF-5 3/4"-16 SAE Female Straight Thread OLF-5/15 1 5/16"-12 SAE Female Straight Thread Weight: OLF-5/4 24.3 lbs (11.0 kg)

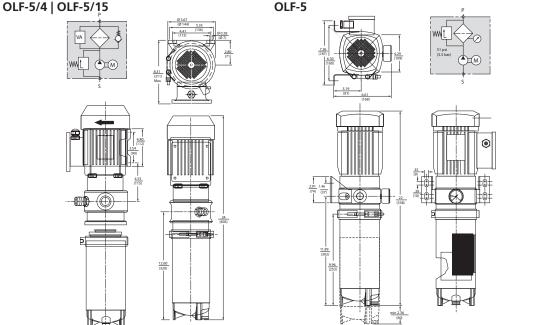
OLF-5/15 24.3 lbs (11.0 kg)

Note: SAE connections when using supplied adapters; BSPP connections when supplied adapters are not used. Housing drain standard on all models.

15.5 lbs (7.0 kg)

OLF-5

Formally Known as "KLC - Kidney Loop Compact Systems"



### **Model Number** Selection

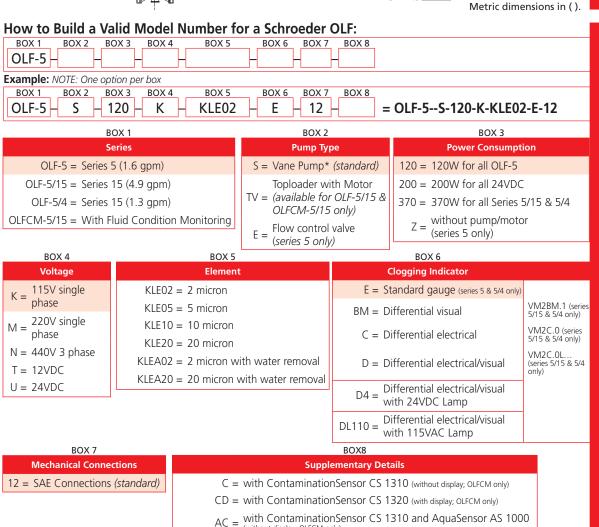
**Retrofit System** 

**Check Plus** 

KLS, KLD

X Series

### **OLF Compact**



(without display; OLFCM only)

(with display; OLFCM only)

Consult Factory for special options.

Not all combinations available.

ACD = with ContaminationSensor CS 1320 and AquaSensor AS 3000

# OLF

# **Offline Filtration Systems**

Formally Known as "MTS - Membrane Technology Systems"

5 - 20 gpm <u>19-75 L/min</u> <u>85 psi</u> 6.0 bar



#### **Features and Benefits**

- Effectively cleans hydraulic and cleaning fluids, lubricating oils, and coolants
- Provides excellent dirt removal efficiency, even in single pass filtration
- Available with pump and motor or can be utilized as an individual filter
- Included framework makes unit ready to install
- Easy to retrofit existing system
- Test points provided on all models
- Housing drain standard on all units

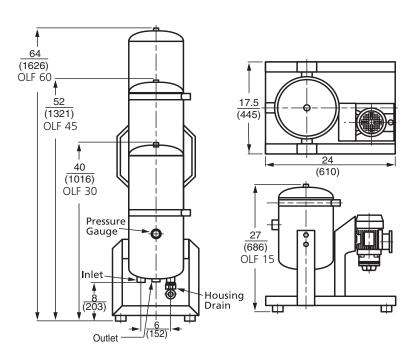
#### **Applications**

- Off-line filtration for hydraulic systems and test stands
- Bypass filtration
- Flushing and filling applications
- In-line auxiliary filtration

### Description

Element

The OLF from Schroeder is an off-line filtration system that features unique membrane elements constructed of stacked disks where dirt holding capacity is measured in pounds instead of grams, drastically reducing the amount of time required to clean up highly contaminated fluids. The abundant media surface area afforded by the stacked disk construction combined with the highly efficient membrane filtration give the OLF its very impressive dirt retention characteristics. The OLF can hold up to four filter elements and can be supplied as a stand-alone filter or with a pump and motor.



Formally Known as "MTS - Membrane Technology Systems"

	OLF-15	OLF-30	OLF-45	OLF-60
Number of Elements:	1	2	3	4
Contamination Retention Capacity:	1.1 lbs (500 g)	2.2 lbs (1000 g)	3.3 lbs (1500 g)	4.4 lbs (2000 g)
Filter Efficiency:	$B_x > 1000$	$B_x > 1000$	$B_x > 1000$	$\beta_{x} > 1000$
Permissible $\Delta p$ Across the Element:	72.5 psi (5.0 bar)			
Material of Filter Housing:	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
Capacity of Pressure Vessel:	5.25 gal (19.87 L)	10.50 gal (39.75 L)	15.75 gal (59.62 L)	20.5 gal (77.60 L)
Max Operating Pressure Filter Housing:	85 psi (6.0 bar)			
Material of Seals-Housing (standard):	Buna N	Buna N	Buna N	Buna N
Fluid Temperature:	15° to 175°F (-9.44° to 79.44°C)			
Technical Details for Motor-Pumps Units:	31	10 gpm (37.85 L/min)	15 gpm (56.78 L/min)	20 gpm (75.71 L/min)
Operating Pressure of the Pump:	65 psi (4.48 bar)			
Gear Pump (SUS)	75 to 5000	75 to 5000	75 to 5000	75 to 5000
Weight Element	6.6 lbs (2.99 kg)	13.2 lbs( 5.99 kg)	19.8 lbs (8.98 kg)	26.4 lbs (11.97 kg)
Weight Housing:	25 lbs (11.34 kg)	33 lbs (14.97 kg)	53 lbs (24.04 kg)	62 lbs (28.12 kg)
Material of Seals in Pumps (standard):	Buna N	Buna N	Buna N	Buna N
	4 5/4 6 4 3 1 1 1 1 / 6 4 5	4.6\		

Housing Connections: 1 5/16-12UN (SAE16)

(Units without motor pump groups)

#### Differential Pressure at 3.96 gpm (15 L/min) Viscosity (cSt) 1000 58 4.00 3.50 51 44 3.00 isd 36 2.50 (Ja 2.00 AO 29 N15DM002 22 N15DM010 15 N15DM020 N15DM030 3000 4000 900 Viscosity SUS

**Specifications** 

**Element Pressure** Drop

**EPK** 

AS

**Check Plus** 

**RFSA** 

**HFS-15** 

**Retrofit System** 

KLS, KLD

**X** Series

OLF

**OLF-P** 



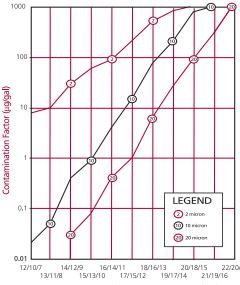
#### Formally Known as "MTS - Membrane Technology Systems"

### Sizing Off-line **Filtration**

The following calculations will help to approximate the attainable system cleanliness level when applying off-line filtration.

**Step 1:** Select the approximate contamination ingression rate from the chart. Quantitative investigations have yielded the following approximate figures.

	Contamination Ingression (µg/gal) Surroundings		
Type of System	Clean	Normal	Polluted
Closed circuit	1	3	5
Injection molding machine	3	6	9
Standard hydraulic system	6	9	12
Lubrication system	8	11	14
Mobile equipment	10	13	16
Heavy industrial press	14	18	22
Flushing test equipment	42	60	78



Maximum Attainable Cleanliness Level (ISO)

**Step 2:** Make the correction required for off-line filtration.

The contamination input selected above must be multiplied by the factor:

Main System Flow Rate / Desired Off-line Flow Rate

Note: Main system flow rate must be corrected for cycle time. For example, if the flow rate is 500 gpm, but only runs for 20% of the system cycle, the main system flow rate would be 100 gpm. (500 gpm X 20%)

This yields the expression:

 $\textbf{Contamination Factor = Contamination Input} \; (\mu g/gal) \; \; \textbf{x} \underline{\hspace{1cm} \textbf{Main System Flow Rate} \; (gpm)}$ **Desired Off-line Flow Rate (gpm)** 

Calculate the contamination factor using this expression.

Step 3: Determine the attainable cleanliness level. Locate the calculated contamination factor on the y-axis of the attached graph. Go to the right to find the intersection point on the curve corresponding to the desired absolute filter micron rating. Read the resulting attainable cleanliness level on the x-axis. (In case of dynamic flow through the off-line filter, the attainable cleanliness level will be 2 to 3 times worse than indicated by the graph.)

### Off-line Filtration Sizing Example:

Type of System: Heavy industrial press

Surroundings: Normal

Main System Flow Rate: 150 gpm

**Desired Off-line Flow Rate:** 20 gpm (OLF-60)

- **Step 1:** Using this criterion select the approximate contamination ingression rate from the chart above. This yields a contamination input of 18 µg/gal based on a heavy industrial press with normal surroundings.
- **Step 2:** Make the correction required for off-line filtration. Contamination Factor =  $18 \mu g/gal \times 150 gpm / 20 gpm = 135$
- Step 3: Determine the approximate attainable cleanliness level for each micron rating using the attached graph. If the attainable cleanliness level is not acceptable, the desired off-line flow rate should be increased. The approximate attainable levels for this example are as follows.

2 μm - ISO 17/15/12

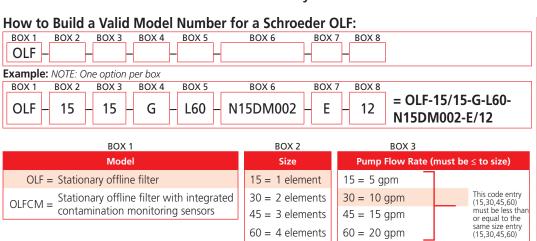
20 µm - Between ISO 20/18/15 and ISO 21/19/16

60 = 20 gpm

Z = without pump



Formally Known as "MTS - Membrane Technology Systems"



BOX 4	BOX 5	BOX 6
Pump Type	Motor Voltage	Filter Element
G = Gear Pump	L60 = 115V, Single Phase	N15DM002 = Dimicron®2 µm Absolute
Z = Without motor-pump	O60 = 460V, Three Phase	N15DM010 = Dimicron® 10 μm Absolute
	Z = Without motor-pump	N15DM020 = Dimicron® 20 µm Absolute
		N15DM030 = Dimicron® 30 µm Absolute
		Z = No filter element supplied

60 = 4 elements

BOX 7	BOX 8
Clogging Indicator	Model
E = Standard gauge	12 = SAE adapters (BSPP connections are standard)
BM = Differential visual VM2BM.1	V = Viton® Seals (NBR seals are standard)
C = Differential electrical VM2C.0	MP = Integrated TestPoint for connection of FCU via Minimess Line
D = Differential visual/electrical	CD = ContaminationSensor CS 1320 (with Display)
	CS = ContaminationSensor CS 1310 (without Display) with SMU1260
	ACD = ContaminationSensor CS 1320 and AS 3000 (with Display)

## **Model Number**

Highlighted product eligible for QuickDelivery

Selection

**Check Plus** 

**Retrofit System** 

KLS, KLD

**X** Series

OLF

**OLF-P** 





#### **Features and Benefits**

- Removal of oil aging products, solid particles and water
- Improvement in component lifetime
- Greater machine availability
- Less space required due to compact construction
- Very easy maintenance
- High contamination retention capacity of the elements



Part of Schroeder Industries Energy Savings Initiative

### Description

The OffLine Filter Pressure (OLFP) is a stationary offline filter and is used to remove oil aging products, water and solid particles from hydraulic and lubrication fluids.

Thanks to its compact construction, the OLFP is also ideally suited for use in even the smallest of installation spaces. The housings are pressure resistant up to 20 bar. Since the housing material is aluminium, the filters are also suitable for low-temperature applications.

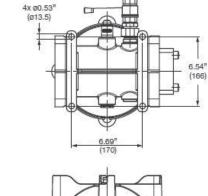
The flow can be taken directly from the main flow through an orifice and the orifice determines the flow rate. The offline filters can also be equipped with a motor-pump unit and an inductive particle counter, as an option.

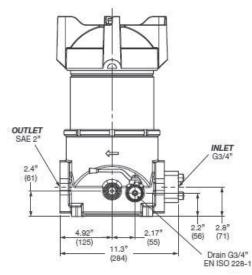
The Trimicron series of filter elements NxTMxxx have been specially developed for the combined removal of fine particles, water and oil aging products. The most modern filter materials with reliable separation characteristics and high contamination retention capacity are used for this purpose.

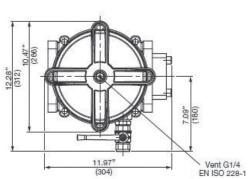
### **Specifications**

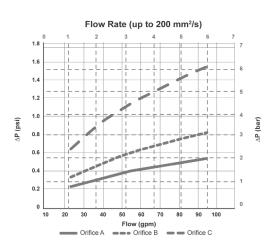
	OLFP 1	OLFP 3	OLFP 6
Operating Pressure:	Max. 363 psi (25 bar)	Max. 290	0 psi (20 bar)
Fluid Temp. Range:	-22° F to	176° F (-30° C to 80	° C)
Max. Operating Viscosity:		1000 cSt	
Ambient Temp. Range:	-22° F to	176° F (-30° C to 80	° C)
Survival Temp.:	-40° F (-40° C)		
Storage Temp.:	-40° F to 176° F (-40° C to 80° C)		
Head Material:	Aluminum		
Bowl Material:	Aluminum		
Seals:		FPM/NBR	
Filter Housing Content:	-2.4 gal. (-9 liters)	-7.1 gal. (-27 liters)	-11 gal. (-43 liters)
Hydraulic Port (IN/OUT):	See table "Hydr	aulic Connections" or	n next page
Filter Element:	1 x N1TMXXX	1 x N3TMXXX	2 x N3TMXXX
Weight:	Approx. 46.3 lbs (21 kg)	Approx. 82 lbs (37 kg)	Approx. 90 lbs (41 kg)

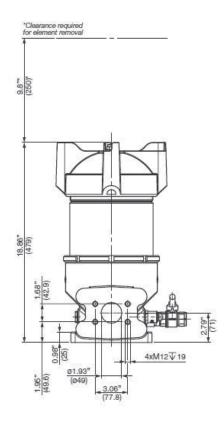
OLFP 1











**HY-TRAX**®

AS

**EPK** 

**Check Plus** 

**RFSA** 

HFS-15

MFS, MFD

**Retrofit System** 

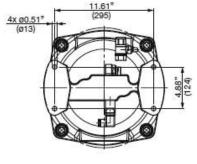
KLS, KLD

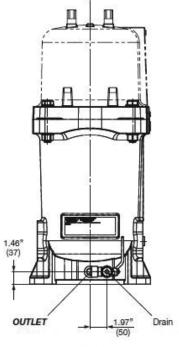
**X** Series

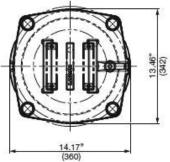
OLF-P

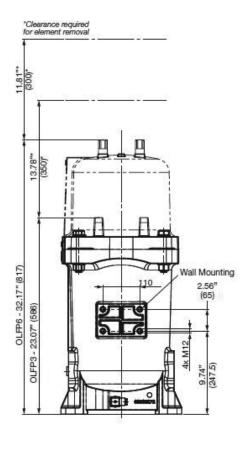




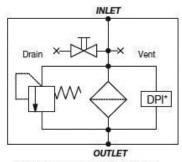








### Hydraulic Schematic



\*Option: Differential pressure indicator

Replacement Elements

Model Code	Micron Rating	Part No.
N1TM003	3	3284980
N3TM003	3	3566060

# **Offline Filter System**



**Model Number** 

Selection

**HY-TRAX**®

AS

**Check Plus** 

**RFSA** 

HFS-15

**Retrofit System** 

KLS, KLD

**X Series** 

OLF-P

					•		
How to	Ruild a	WileV	Model	Number	tor a	Schroeder	UI E-D-
IIOVV LO	Dulla a	vallu	IVIOUCI	INGILIDE	101 4	Juliocaci	OLI I

BOX 1 BOX 2 BOX 3 BOX 4 BOX 5 BOX 6 BOX 7 BOX 8 BOX 9
Example: NOTE: One option per box
BOX 1 BOX 2 BOX 3 BOX 4 BOX 5 BOX 6 BOX 7 BOX 8 BOX 9  OLFP 1 / 2 - G - M - M - TM - N E = OLFP-1/2-G-M-M-TM-N E

#### BOX 1 BOX 2 Series Size 1 =Filter size 1 (1 x filter element N1TM003 \*) **OLFP** = Offline Filter - Pressure Offline Filter - Pressure with Condition 3 = Filter size 3 (1 x filter element N3TM003 \*) OLFPCM = Monitoring (TCM) 6 = Filter size 6 (2 x filter element N3TM003 \*)

BOX 3	BOX 4	BOX 5
Flow Rate	Type of Pump	Motor
2 = 0.53 gpm (2 L/min)	O = with orifice	M = 230 V/50 Hz/1 Phase/0.37 kW
3 = 0.79 gpm (3 L/min)	G = gear pump	N = 400 V/50 Hz/3 Phase/0.37 kW
6 = 1.59 gpm (6 L/min)	Z = without	AB = 690 V/50 Hz/1 Phase/0.37 kW
Z = variable (without pump)		X = Other voltages
		N60, M60 = Operation at 60 Hz
		Z = Without electric motor

BOX 6	BOX 7	BOX 8	BOX 9
Contamination Monitoring	Element Type	Sealing Material	Clogging Indicator
M = TMS Metallic Sensor	TM = Trimicron	N = NBR	E = Standard, back-pressure indicator
A = TWS Water Sensor Z = Omit		F = FPM	B = Differential pressure indicator, visual (VM2BM.x)
Z = Offitt			C = Differential pressure indicator, electrical (VM2C.x)
			D3 = Differential pressure indicator, visual/electrical (VM2D.x)
			D38 = Differential pressure indicator, visual/electrical (VL x GW.0 /-V-113)
			Z = Omit

### **TriMicron Element Series**



#### **Features and Benefits**

- Excellent filtration performance ( $\beta_{5(c)} > 1000$ )
- Low initial differential pressure
- High contamination retention capacity
- Fine particle contamination, water and oil aging products removed by depth filter material
- Broad range of fluid compatibility
- Simple element change

#### **Applications**

- Offline filtration in lubrication systems (e.g. in wind turbines)
- Offline filtration in hydraulic systems
- Transmission and hydraulic test rigs

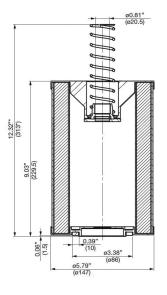
### Description

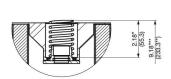
The filter elements in the TriMicron series have been specially developed for the combined filtration of fine solid particle contamination, water and oil-ageing products from hydraulic and lubrication oils in the bypass flow.

They are a combination of pleated and SpunSpray depth filter elements. The filter layers are produced using melt-blown technology (synthetic fibers).

### **Specifications**

Model:	N1	N3
Contamination Retention Capacity ISOMTD at $\Delta P=2.5$ bar	~ 410 g	~ 410 g
Water Retention Capacity:	~ 680 ml	~ 2.1
Beta value β₅(c) @ 2 bar	> 1,	000
Filtration Rating:	3 µ	ım
Differential Pressure at Starting Point:	< 0.1	l bar
Permitted Fluid Temperature Range:	14 to 176 °F (	(-10 to 80 °C)
Storage Temperature Range:	41 to 104 °F	(5 to 40 °C)





\* spring unloaded \*\* spring loaded

### **TriMicron Element Series**



**Model Number** 

Selection

66 4000

CS 1939

C5 1555

....

HY-TRAX®

CSIV

FCU

IVICS

AS

SMU

EDV

Trouble Check Plus

MG2500

HIVIG4000

: 1- 100-6

RFSA

113 00

....

IES MED

HY-TRAX®

**Retrofit System** 

MFD-M

MFS-H

MS. AMD

AIVIS, AIVID

KLS, KLD

IVICO

AKS, AKD

SN, LSA, LSW

X Series

OLF Compac

OLF

OI F-P

NxTM

VEU-F

VMI

IXU

Iriton-*F* 

Triton-I

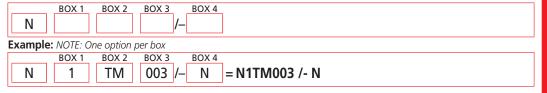
iton E

VD01

OX

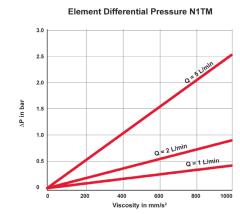
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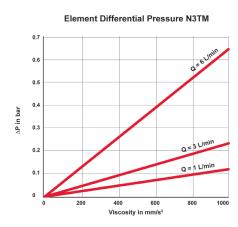
How to Build a Valid Model Number for a Schroeder NxTM TriMicron Element:











# VEU

### **Varnish Elimination Unit**



#### **Features and Benefits**

- Removal of solid and gel-like oil aging products
- Increased operating reliability of the system as a result of fewer deposits in hydraulic valves
- Increased oil service life
- Available for existing and for new systems

#### **Applications**

- Turbine Lubrication Systems
- Plastic Injection Molding Machines
- Industrial Forges and Presses

### Description

The service-friendly Varnish Elimination Unit (VEU) is used to prepare mineral oils and is particularly effective at removing oil aging products (varnish) from mineral oils. Varnish takes the form of oil-insoluble aging products which settle in the tank, in valves or in bearings. These can be filterable gels or solid paint-type deposits. The VEU series product is used in bypass flow. The removal of varnish is based on reducing the oil solubility for varnish with subsequent filtration using a combination of a heat exchanger with Dimicron filter element technology.

### **Specifications**

Flow Rate: VEU-x-10-...=10 gpm (38 L/min)

VEU-x-15-...=15 gpm (57 L/min)

Fluid Viscosity: 75 to 2,000 SUS

Permitted Operating Fluids: Mineral-based

Fluid Service Temperature: VEU-x-10-: 32°F to 140°F (0°C to 60°C)

VEU-x-15-: 32°F to 176°F (0°C to 80°C)

Pump Operating Pressure: 87 psi (6 bar) max

Differential Pressure Across Elements: 72.5 psi (5 bar) max

Permissible Inlet Pressure Range: -5.8 psi to 7 psi (-0.4 bar to 0.48 bar)

INLET Port Connection: VEU-x-10-: 1-5/8 x 12UN - Male

VEU-x-15-: 1-7/8-12UN - Male

OUTLET Port Connection: 1-5/16 x 12UN - Male

Water INLET port connection (VEU-W-...only) 1-1/2 x NPT - Male

Water OUTLET port connection (VEU-W-...only) 1-1/2 x NPT - Male

Supply Voltage: 460V AC / 60Hz / 3 Ph.

575V AC / 60Hz / 3 Ph.

Seal Material: FKM (Viton®)

Ambient Temperature Range: 32°F to 104°F (0°C to 40°C)

Storage Temperature Range: 0°F to 140°F (-18°C to 60°C)

Relative Humidity: 0% to 80%, non-condensing

Weight: VEU-x-10-: 1,100 lbs. (499 kg.)

VEU-x-15-: 1,150 lbs. (522 kg.)

Sizing + Element Selection

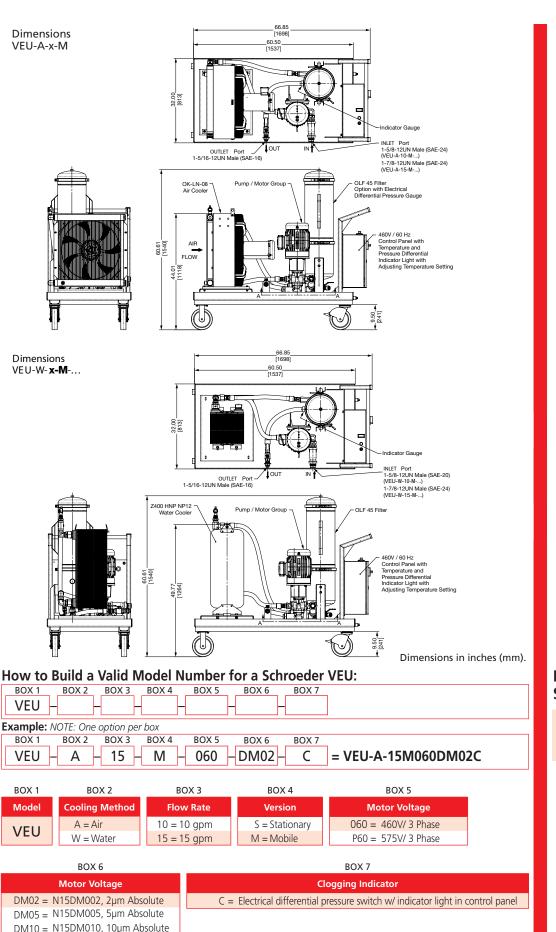
#### Sizing Chart

Tank Volume (gallons)	VEU-F Model
150 to 1200	VEU-x-10-
225 to 2000	VEU-x-15-

Model Code	Micron Rating	Part No.
N15DM002	2	1251590
N15DM005	5	3252552
N15DM010	10	3115180

### **Varnish Elimination Unit**





**Check Plus** 

**Retrofit System** 

KLS, KLD

X Series

### **Model Number** Selection

and faster delivery.

Preferred order codes designate shorter lead times

**VEU-F** 



# **MU** Varnish Mitigation Unit 1/4 Series



#### **Features and Benefits**

- Removal of solid or gel-type oil aging products
- Operating reliability of the system is increased because there are fewer deposits in hydraulic components
- Increases oil service life
- Available as a complete unit for service, and as a modular system for retrofitting existing bypass circuit or for OEM

### Description

The user-friendly Varnish Mitigation Unit is designed to condition mineral oils. The VMU is particularly effective at removing oil aging products (varnish) from mineral oils.

Varnish takes the form of insoluble oil aging products which settle in reservoirs, valves and bearings. These can be non-filterable gels or solid paint-type deposits.

The VMU series offline filtration system removes varnish through adsorption on an active filter element

### **Specifications**

#### **Hydraulic Data**

MPC Values Achievable < 20

Flow Rate: VMU 1 ≈ 0.58 gpm (≈ 2.2 l/min)

VMU 4 ≈ 2.4 gpm (≈ 8.9 l/min)

Fluid Temperature: 86 to 140 °F (30 to 60 °C)

Max. Operating Pressure: 87 psi (6 bar)

Permissible Suction 2.9 to 14.5 psi (-0.2 to 1 bar)

Pressure at Suction Inlet IN:

Viscosity Range: 78 to 370 SUS (15 to 80 cSt)

Permissible Operating Fluid: Mineral-based fluids

Connections IN / OUT: 1/2"-20 male JIC / 1/2-20 female o-ring

Pump Type: Gear

#### **Electrical Data**

Power Supply Voltage: See ordering details

Power Consumption: 0.25 to 0.6 kW / 16 Amps

#### **Ambient Conditions**

Operating Temperature Range: 32 to 104 °F (0 to 40 °C)

Storage Remperature Range 32 to 140 °F (0 to 60 °C)

Relative Humidity: 0 to 80%, non-condensing

Protection Class to DIN 40050: IP 55

#### **General Data**

Length of Electrical Connection Cable: 5' (1.5 m)

Sealing Material: FKM (Viton®)

Sound Level at 1m: < 80 dB(A)

Weight\* (empty): VMU 1 = 155 lbs (70 kg), VMU 4 = 660 lbs (300 kg)

Fluid Cleanliness Required: | ISO 19/17/14 (ISO 4406:1999) 9A/9B/9C (SAE AS4059)

\*Weight noted is for a stationary unit.

# **Varnish Mitigation Unit 1/4 Series**

**Dimensions** 

**Check Plus** 

**Retrofit System** 

KLS, KLD

Model

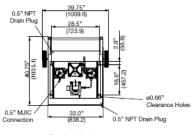
Number

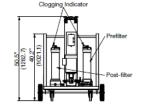
Selection

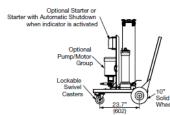
**X** Series

VMU

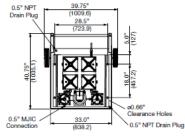
**Dimensions** VMU1 Series

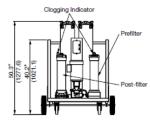


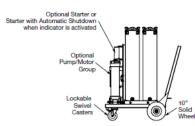




Dimensions VMU4 Series







Dimensions in inches (mm).

### How to Build a Valid Model Number for a Schroeder VEU: BOX 1 BOX 2 BOX 3 BOX 4 BOX 5 BOX 6 BOX 7 BOX 8 BOX 8

VIVIU									<b> =</b>	
Example:	NOTE: O	ne optior	n per box							
BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9		

	VMU -	4	- M	- G -	· O -	G05	BM -	G05 –	PKZ	=VMU4MGO-G05BMG05-PKZ
-										

BOX 1 Series **VMU** 

**Series** 1x Varnish Mitigation element NAVME ≈ 0.5 gpm (2.2 l/min) 4x Varnish Mitigation elements NAVME ≈ 2.5 gpm (8.9 l/min)

BOX 2

BOX 3 Type Mobile Stationary

BOX 7

BOX 4 Type of Pump Gear Pump Without

BOX 5 **Power Supply Voltage** 230 V, 60 Hz, 3 Ph 115 V, 60 Hz, 1 Ph 460 V, 60 Hz, 3 Ph (standard)

BOX 6 **Prefilter** 

G05 = With 5µm element

10 = With 10μm element

BM = differential pressure indicator – visual (VM2BM.1)

**Clogging Indicator** 

C = differential pressure indicator – electrical (VM2C.0)

BOX 8 **Postfilter** 

 $G05 = With 5\mu m$  element

10 = With 10μm element

BOX 9

#### **Supplementary Details**

PKZ = with on-off switch and overload protective motor switch (standard)

FA1 = with on-off switch, overload protective motor switch and cut-out when filter clogged (requires neutral wire in power supply)

with on-off switch, overload protective motor switch and cut-out when filter clogged (does not require neutral wire in power FA2 =



# IXU Ion eXchange Unit

.5 -2.5 gpm 1.9-9.5 L/min



#### **Features and Benefits**

- Longer oil change intervals
- Increase in the lifetime of operating fluids and components
- Higher machine availability
- Reduction in functional problems, e.g. with servo valves
- Easy to service unit through
  - Component replacement without tools
  - Filter elements can be removed with the cover pointing "upward"
- Ideal to combine with type SVD Dewatering Units
- Available to service as complete unit, modular system for retrofitting existing bypass circuits or for OEM
- Visual Dirt Alarm® provided on all models
- Sold in North America only.

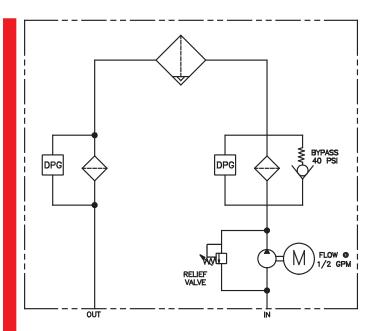
#### **Applications**

- Power plants
- Steel industry
- Other applications with ester-based, flame resistant fluids

#### Description

This easy to service ion exchange unit of the IXU series is used for conditioning flame resistant, HFD-R-based hydraulic and lubrication fluids. They effectively remove acidic products of decomposition caused by hydrolysis and/or oxidation of the fluid. The units are applied to hydraulic and lubrication oil tanks up to approximately 5,300 gallons (20,000 L) with volumetric flow of up to approximately 2.4 gpm (9 l/min) in the bypass flow. Mobile or stationary IXU are available. The IXU uses Ion eXchange Element (IXE) filled with ion exchange resin.

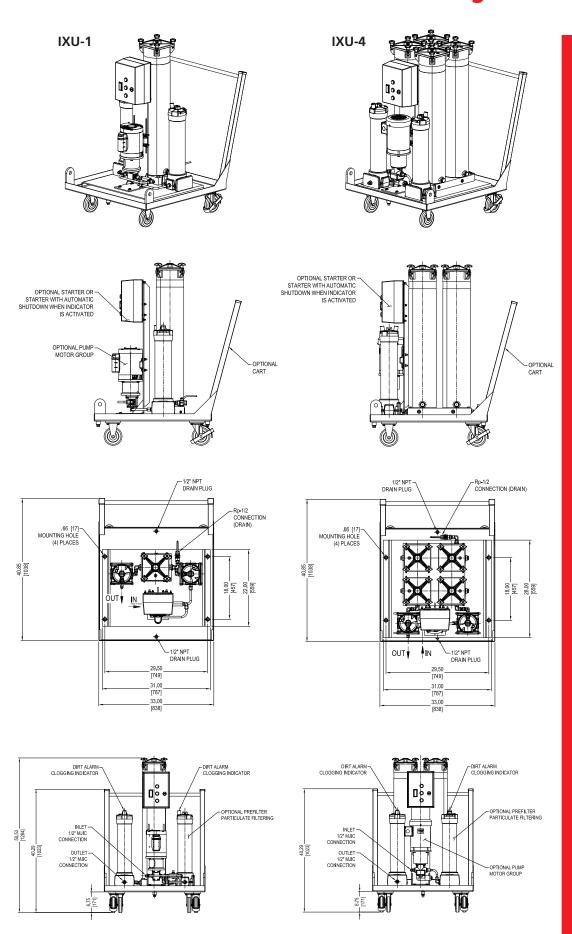
### **Hydraulic** Circuit



NOTES: No connection lines included

# Ion eXchange Unit IXU





**HY-TRAX**®

AS

**EPK** 

**Check Plus** 

**RFSA** 

**Retrofit System** 

KLS, KLD

**X** Series

**OLF-P** 

IXU



# IXU Ion eXchange Unit

### **Specifications**

Neutralization Number: < 0.1 mg KOH/g possible

Flow Rating: IXU-1: 0.5 gpm (1.9 l/min) IXU-4: 2.5 gpm (9.5 l/min)

Max. Operating Pressure: 116 psi (7.99 bar)

Suction Pressure @ Inlet: -5.8 to 14.5 psi (-0.4 to 1 bar)

Viscosity Range: 80 to 400 SUS (15 to 80 cSt)

Fluid Compatibility: HFD-R (Fire-Resistant / Phosphate-Based Fluids)

Operating Temperature :  $32^{\circ}F$  to  $104^{\circ}F$  (0 to  $40^{\circ}C$ ) <80% = Relative humidity (non-condensing)

Hydraulic Connection: 1/2" (-8) Male JIC Inlet and Outlet

Seals: Viton®

Pump Type: Gear

Power Consumption: 0.25 - 0.6 kW, depending on motor and voltage

Length of Electrical Cable: 30 ft. (10 m)

M

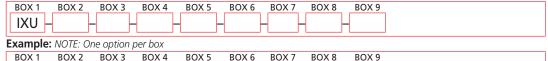
Noise Level: <80 dB at 3 feet (1 m)

Storage Temperature: 32°F to 140°F (0°C to 60°C)

### Model Number Selection

IXU

#### How to Build a Valid Model Number for a Schroeder IXU:



C

G05

= IXU1MGJG10CG05

G10 -

BOX 1	BOX 2	BOX 3 BOX 4		BOX 5	
Model	Flow Rate	Transport	Pump	Connection Voltage	
IXU	1 = 0.5 gpm (1.9 l/min)	M = Mobile	G = Gear Pump	Omit = 115 V / 60 Hz, 3 Phase	
IXU	4 = 2.5 gpm (9.5 l/min)	S = Stationary		B = 460 V / 60 Hz, 3 Phase	
				E = 575 V / 60 Hz, 3 Phase	

BOX 6	BOX 7	BOX 8		
Pre-filter	Clogging Indicator	Post-filter		
05 = w/ 5µm Element	C = Differential Pressure Indicator	05 = w/ 5µm element		
10 = w/ 10μm Element	– Electrical	10 = w/ 10μm element		
G05 = 5 µm Excellement® Z-Media® (synthetic) w/GeoSeal®		G05 = 5 µm Excellement® Z-Media® (synthetic) w/GeoSeal®		
G10 = 10 µm Excellement® Z-Media® (synthetic) w/GeoSeal®		G10 = 10 µm Excellement® Z-Media® (synthetic) w/GeoSeal®		
	BOX 9			

#### Accessories

FA1 = with on/off switch, overload protective motor switch and cut-out when filter clogged (requires neutral wire in power supply)

FA2 = with on/off switch, overload protective motor switch and cut-out when filter clogged (does not require neutral wire in power supply)

#### Ion eXchange **Unit Replacement Elements**

Model Code	P/N	Description
IXE36-5.5	3348961	Standard Ion Exchange Resin Element
KKZ5V	7615359	5 Micron Pre/ Post Element
KKZ10V	7628656	10 Micron Pre/ Post Flement

NOTES:

IonExchange Element is not included with unit and is to be ordered separately





2.0 gpm 7.6 L/min

### Features and Benefits

- Patented mass transfer technology uses ambient air to optimize and control dewatering rates
- High Dewatering Rates and particulate removal in one system
- Simple Controls; RUN/DRAIN modes
- Reduce fluid recycling cost
- No expensive vacuum pump to service and replace
- Compact, efficient footprint
- Remove free and dissolved water
- Highly effective in low and high humidity environments

Description

Principle of

Operation

**Retrofit System** 

**Specifications** 

**X** Series

Triton-A

Water contamination in hydraulic systems can severely reduce the life of hydraulic systems and fluids. The Triton Dehydration Station® is designed to eliminate 100% of free and up to 90% of dissolved water from small reservoirs, barrels, and gear boxes. Using a patented mass transfer process, the Triton Dehydration Station® efficiently removes water and particulate contamination quickly in all environments. A proprietary design reduces aeration of free and entrained gases of returned fluid. The unit was designed to be extremely portable using the optional cart to access tight areas.

The Triton Dehydration Station<sup>®</sup> uses patented mass transfer dewatering technology. Ambient air is conditioned to increase its water holding capability before injecting to the 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. The relative humidity of the incoming fluid is continually monitored by an integral AS1000 and displayed real-time on the control panel.

Dimensions: 45.2"(H) x 36.7"(W) x 20.3"(D)

**Dry Mass:** 295 lbs (134 kg)

Inlet Connections: 1" SAE Outlet Connections: 1" SAE

Flow Rate: 120 gallons/hour or 2.0 gpm

Permissible Inlet Pressure Range: -5.8 psig (-0.4 bar) to 32 psia (2.2 bar)

Max. Permissible Outlet Pressure: 75 psig (5 bar)

Fluid Service Temperature: 100° F to 150°F (40°C to 65.5°C)

Fluid Viscosity: 70- 1000 SUS (13 - 215 cSt), Explosion-proof: 500 SUS maximum

Power Supply: 110 VAC, 60 Hz, 12 amp

Attainable Water Content: < 50 ppm

Relative Humidity Display: Standard, 0-99% Range

Construction: Reaction Vessel: Stainless Steel

Seals: Viton®

Protection Class: NEMA 2

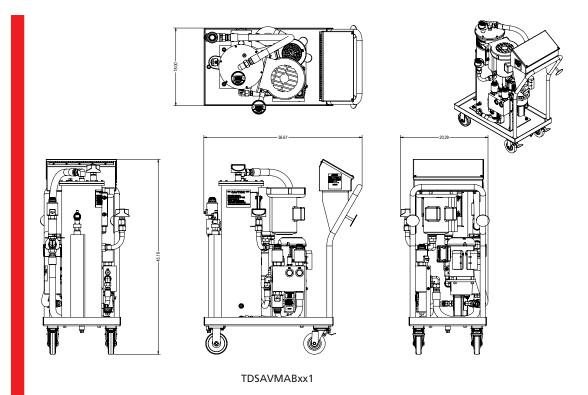
Media	Filter Rating	DHC (gm)
Z1	ß 4.2 <sub>(C)</sub> ≥1000	55
Z3	ß 4.8 <sub>(с)</sub> ≥1000	57
Z5	ß 6.3 <sub>(C)</sub> ≥1000	62
Z10	ß 10 <sub>(с)</sub> ≥1000	52
Z25	ß 24 <sub>(C)</sub> ≥1000	48

Element **Performance** 





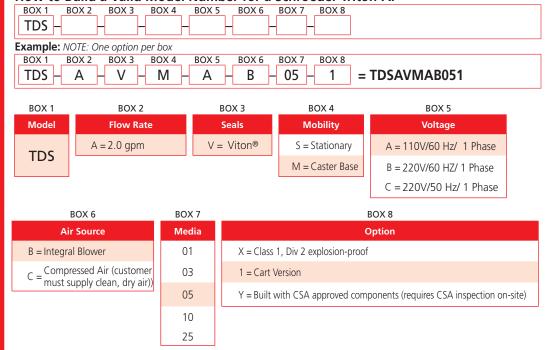
U.S. Patent 8491785



Dimensions in inches.

### Model Number Selection

### How to Build a Valid Model Number for a Schroeder Triton-A:



For replacement element part numbers, please see "Appendix Section - Replacement Elements" of this catalog.





**Description** 

Principle of Operation

**Retrofit System** 

**Specifications** 

**X** Series

Triton-E

15 gpm

56.78 L/min

#### **Features and Benefits**

- Patented mass transfer technology uses ambient air to optimize and control dewatering rates
- High Dewatering Rates and particulate removal in one
- Simple Controls maintenance, operation and troubleshooting instructions are available in the Human Machine Interface (HMI) Touch Screen
- Reduce fluid recycling cost
- No expensive vacuum pump to service and replace
- Compact, efficient footprint
- Remove free and dissolved water
- Highly effective in low and high humidity elements

Part of Schroeder Industries Energy Savings Initiative

Water contamination in hydraulic systems can severely reduce the life of hydraulic systems and fluids. The Triton Dehydration Station® is designed to eliminate 100% of free and up to 90% of dissolved water. The Triton-E can handle large quantities of oil from sizeable hydraulic reservoirs, lubricating circuits, totes and large gear boxes due to the high flow rate of the unit. Using a patented mass transfer process, the Triton Dehydration Station® efficiently removes water and particulate contamination quickly in all environments. A proprietary design reduces aeration of free and entrained gases of returned fluid. The unit is designed to be extremely portable using either the integrated lifting lugs located on each corner of the cart or the optional wheeled version.

The Triton Dehydration Station® uses patented mass transfer dewatering technology. Ambient air is conditioned to increase its water holding capability before injecting to the 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 moist air/stream. The relative humidity of the incoming fluid is continually monitored by an integral TestMate® Water Sensor (TWS) and displayed real-time on the control panel in percent saturation.

Dimensions: 32"W x 59"L x 70.25" H

**Dry Mass:** 1000 lbs (453 kg)

Inlet Connections: 1-1/2" MJIC

Outlet Connections: 1-1/2" MJIC

Flow Rate: 15 gpm Standard, (other options available - see Box 2 on the next

Inlet Pressure: Atmospheric

Outlet Pressure: to 125 psi (8.62 bar)

Fluid Service Temperature: 50° F to 175°F (10°C to 79°C)

Fluid Viscosity: 70-2000 SUS (13 -539 cSt), 2500 with heater Power Supply: 460 V/3/60 Hz, 13 amps

> 460 V/3/60 Hz, 28 amps w/heater 575 V/3/60 Hz, 10.5 amps 575 V/3/60 Hz, 23 amps w/heater

Attainable Water Content: < 50 ppm

Relative Humidity Display: Standard, 0-99% Range

Construction: Base Frame: Carbon Steel

Vessel: Stainless Steel Seals: Viton®

Protection Class: NEMA 2

Media	Filter Rating	DHC (gm)	Media	Filter Rating	DHC (gm)
Z1	ß 4.2 <sub>(C)</sub> ≥1000	55	Z10	ß 10 <sub>(с)</sub> ≥1000	52
Z3	ß 4.8 <sub>(C)</sub> ≥1000	57	Z25	ß 24 <sub>(с)</sub> ≥1000	48
Z5	ß 6.3 <sub>(c)</sub> ≥1000	62			
	(-)				

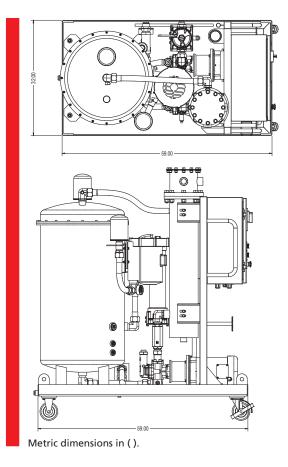
Element

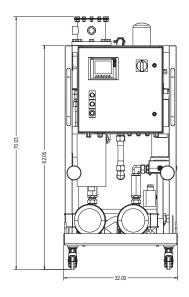
**Performance** 





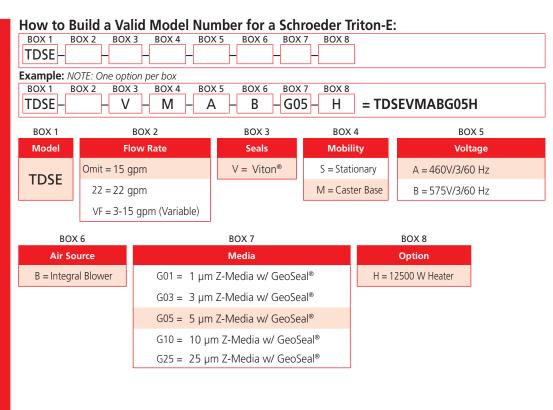
U.S. Patent 849178!





Manala au

Model Number Selection



# **North American Vacuum Dehydrator**



**30** gpm

113.6 L/min

**Description** 

**Specifications** 

**Retrofit System** 

KLS, KLD

**X** Series

NAV

**Features and Benefits** 

Water Sensor standard on all units to show percent saturation

Removes 100% of free and over 90% of dissolved water, as well as 100% of free and over 90% of dissolved gases

Maintenance, operating, troubleshooting instructions are in HMI (touchscreen)

Automatic mode enables user-defined system shutdowns

■ Use of a low maintenance, dry running claw vacuum pump helps to avoid any dangerous, chemically reactive by-products

Part of Schroeder Industries Energy Savings Initiative

The North American Vacuum Dehydrator (NAV) uses vacuum dehydrating technology to remove both free and dissolved water, and gases, from oil. In addition to water and gas, the NAV also removes solid contaminants from the oil with the use of highly efficient filter elements installed on the unit. The NAV is designed for use with larger applications, such as the conditioning of oil in larger hydraulic and lube reservoirs.

Dimensions: 39" W x 76" L x 74" H (99.06 cm x 193.04 cm x 187.96 cm)

**Dry Mass:** 1990 lbs (903 kg)

Inlet Connections: 2" NPT Outlet Connections: 1 ½ " NPT

Flow Rate: 30 gpm (114 L/min)

Inlet Pressure: 22 in. Hg - 10 psi Outlet Pressure: 110 psi (7.6 bar)

Fluid Service Temperature: 39°F to 170°F (3.8°C to 77°C) Operating Temperature: 39°F to 105°F (3.8°C to 40.6°C)

Fluid Viscosity: 150-3280 SUS (23-700 cSt)

Power Supply: 460V or 575V

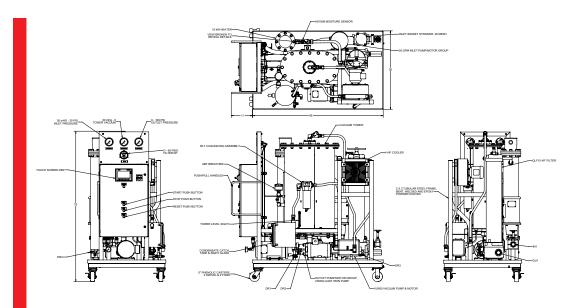
Attainable Water Content: <10ppm Relative Humidity Display: Standard, 0 - 99%

Constructions: Base Frame: Carbon Steel

Vessel: Carbon Steel Seals: Viton

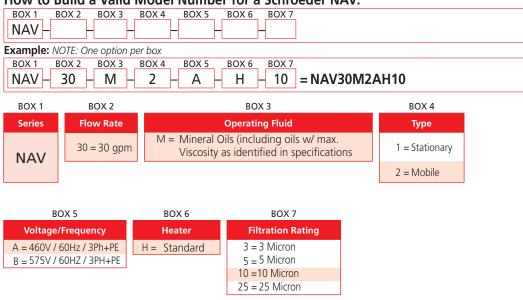
Protection Class: NEMA 4

# **North American Vacuum Dehydrator**



### Model Number Selection

### How to Build a Valid Model Number for a Schroeder NAV:



### Vacuum Dehydrator SVD01

1.6 gpm

6 L/min

**Check Plus** 

Description

**Specifications** 

**Retrofit System** 

**X** Series

\*Maximum specifications given, equipmentdependent

\*\*For other fluids, viscosities or temperature ranges, please contact us

NOTES:

\*\*\* Units are not suitable for "Online" and "Onload" operation (transformer in operation and connected to grid).

#### **Features and Benefits**

- Small, compact and easy-to-use unit with Siemens LOGO controller as well as control panel for quick use during service calls or emergencies
- Reliable and convenient for fixed and permanent use due to extensive monitoring functions
- Optional integrated heater to increase dewatering performance, especially for cold or high viscosity oils
- Optional integrated water content and particle measurement technology with continuous display of the measurements, storage of the values and control of the
- Very low residual water content, gas content and particle contamination result in longer oil change intervals, improved life expectancy of components, higher machine availability and as a result, a reduction in the Life Cycle Cost (LCC)

The Schroeder Vacuum dehydrator SVD01 designed for dewatering, degassing and filtering hydraulic and lubrication fluids. It operates on the principle of vacuum dewatering to eliminate free and dissolved water as well as free and dissolved gases. By using Schroeder Dimicron filter technology which has a high contamination retention capacity and filtration efficiency, the SVD01 is extremely cost effective.

Perfect for service work thanks to its compact and mobile design. In the stationary version it provides perfect continuous protection for applications where operating fluids require optimal care, in which valuable bio-oils or fire-resistant fluids are used, or where water frequently gets into the system.

Flow Rate at 60 Hz: ~ 1.6 gpm (~6 l/min)

Permitted Fluids\*\*: Fluids compatible with NBR or FKM (See fluid compatibility chart)

Sealing Material: NBR or FKM (FPM, Viton®)

Filter Clogging Indicator: Differential pressure switch with cut-off function when filter is clogged

Type of Vacuum Pump: Rotary vane vacuum pump

Pump Type for Filing and Draining: Gear pump

Operating Pressure (outlet): 0 to 116 psi (0 to 8 bar)

Permitted Pressure at Suction Port -2.9 to 14.5 psi (-0.2 to 1 bar)

Permitted Pressure Viscosity 78 to 1623 SUS (15 to 350 mm2/cSt) - w/o integrated heater

Range\*\*: 78 to 2550 SUS (15 to 550 mm2/cSt) - with integrated heater

Permitted Viscosity Range for 15 to 200 mm<sup>2</sup>/s – with measuring

Particle Measurement: equipment ACS, AC

Fluid Temperature Range\*\*: 50 to 176° F (10 to 80° C)

Ambient Temperature: 32 to 104 °F (0 to 40 °C)

Storage Temperature Range\*\*: 32 to 104 °F (0 to 40 °C)

Relative Ambient Humidity\*\*: Maximum 90%, non-condensing

Electrical power consumption ≈ 1 kW / 16 A for circuit breakers with (without heater) / required external fuse\*:

Heating output (optional) Max. 2.4 kW (depending on the nominal voltage, see Model Code)

Protection Class: IP 54

Length of Power Cable/Plus: 10 m / CEE (depending on the nominal voltage, see Model Code)

Length of Connection Hoses: 197" (5 m) (mobile version only)

Material of Hoses: see Model Code

Hydraulic Connections: see table "Connection Summary"

Weight When Empty: ~26.5 lb. ≈ 120 kg

<100 ppm — hydraulic & lubricating oils

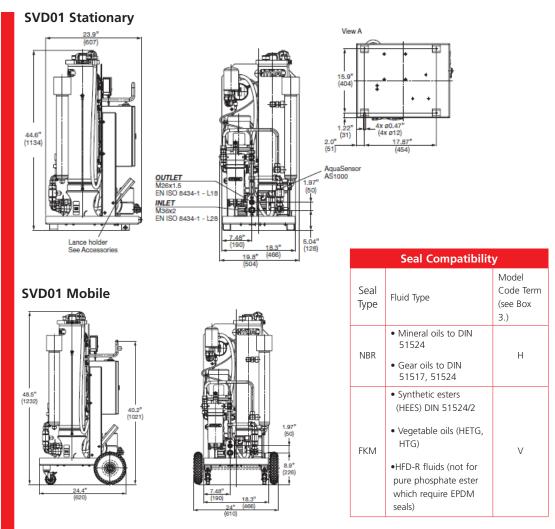
Achievable Residual Water Content: < 50 ppm — turbine oils (ISO VG 32/46)

< 10 ppm — transformer oils \*\*\*

**SCHROEDER INDUSTRIES 149** 

SVD01

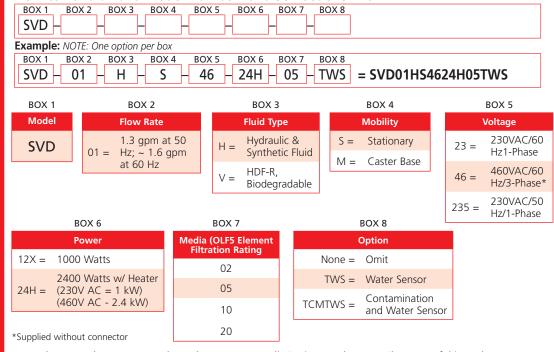
# **SVD01** Vacuum Dehydrator



Dimensions in inches (millimeters).

### Model Number Selection

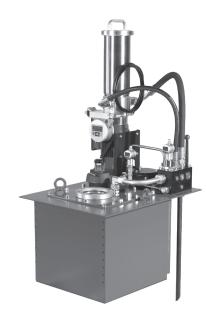
#### How to Build a Valid Model Number for a Schroeder SVD01:



For replacement element part numbers, please see "Appendix Section - Replacement Elements" of this catalog.

# OXiStop OXS LID Series OX





#### **Features and Benefits**

- Reduced oil volume up to a factor of 10
- Oil service life is increased as a result of the reduction by up to 80% in air content and reduced dirt ingress
- Higher process speeds
- Higher efficiency
- Reduced noise and wear due to less cavitation
- Ideal for humid and dusty environments
- Reduced costs due to similar size, fewer installation costs, less oil required and easier transport
- Longer component service life, less service downtime of hydraulic system components

Schroeder's OXiStop is a tank solution for hydraulic systems with an integrated, hydraulically driven degassing and dewatering unit. The integrated membrane prevents direct contact with the ambient air. This means the tank can be calculated for the differential operating volume actually required, thus reducing its size. The pump flow rate is no longer important for the tank calculation.

Very low gas and water content is achieved in the fluid. Thanks to the membrane which keeps the fluid "vacuum packed", it is also possible to install the OXiStop in extremely dusty or humid environments. The OXS LID series is installed in a custom-designed tank and contains all necessary components

The OXS LID comes in seven standard sizes, with differential operating volumes ranging from 8 to 32 gallons. Contamination Sensor option available.

The size of the OXiStop (based on required differential operating volume) can be calculated from the sum of the actual volume differences of cylinders, accumulators, hoses etc. that may be present in a system. In addition, allowances must be made for the volume required for thermal expansion in the oil and for possible continuous oil losses. This volume (except for accumulator) should be doubled as a safety margin.

#### Rule of thumb:

Sum of total accumulator volume + 2x sum of volume difference for cylinders, hoses, temperature expansion, etc. = OXiStop differential operating volume.

Also, it is important to check if the total oil volume in the system is required to return to the tank when maintenance work is carried out.

- OXiStop LID according to model code
- Membrane bag holder
- Integrated membrane
- MiniOx degassing unit
- KLC5 offline filtration unit with optional TestMate<sup>®</sup> Contamination Sensor (TCM)
- TestMate<sup>®</sup> Water Sensor (TWS-D)
- HNS electronic level sensor

- Breather filter and piping for individual components
- Gasket (interface to tank)
- Operating and maintenance instructions
- Instructions for tank installation

### Description

What's

Included

**Retrofit System** 

**X** Series



# OXS OXIStop OXS LID Series

### **Specifications**

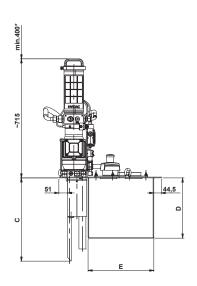
OXS 30LID OXS 45LID OXS 70LID OXS 150LID OXS 250LID OXS 325LID OXS 500LID **Differential Operating** 8 gal. 11.8 gal. 18.5 gal. 39.5 gal. 66 gal. 86 gal. 132 gal. Volume: Typical Degassing Rate\*: up to 2.3 gallons per hour Max. Viscosity: up to 1,500 SUS Max. Fluid Flow Rate 238 gpm IN/OUT: Fluid Temperature: 50°F to 175°F (10°C to +80°C) Ambient Temperature\*\*: -4°F to 104°F (-20°C to 40°C) Storage Temperature: 32°F to 104°F (0°C to 40°C) Relative Humidity: 0 - 80%, non-condensing Filtration Unit: KLC05 Filtration Unit Filter Element: KLE02 Contamination Retention Capacity: 36 psi (2.5 bar) Pump Type: Vane Pump Optimal Sampling Pump Flow Rate: 1.9 gpm (7.5 L/min) Filtration Unit Operating Pressure: 145 psi (10 bar) Clogging Indicator: Visual Differential Pressure Indicator Electrical Connection: See Model Code Power Consumption: 370 W IP Rating per DIN 40050: IP54 Permitted Fluids\*\*: Mineral Based Hydraulic Fluids Sealing Material\*\*: NBR Membrane Material\*\*: PUR **Typical Lifetime, Membrane:** ≈ 6 years with 104°F - 140°F fluid temperature ≈ 2 years with 175°F fluid temperature

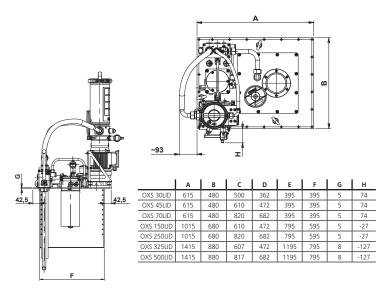
<sup>\*</sup> Typical values for ISO VG 46, 40 °C when saturated with gas. The degassing rate depends on the total gas content in the oil, the oil temperature, and especially the oil viscosity. The degassing rate reduces as viscosity increases.

<sup>\*\*</sup> Others on request

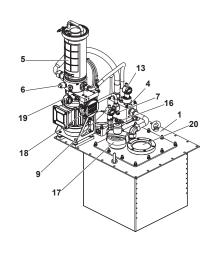
# OXiStop OXS LID Series OXS

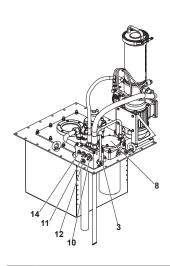






	-
Item	Component
1	OXS LID with membrane bag holder
2	Directional control valve
3	Valve and connection block
4	KLC5 filtration unit
5	Clogging indicator on KLC5
6	Check valve
7	MOX degassing unit
8	EDS electronic pressure sensor or vacuum gauge (optional)
9	Filling port
10	Drain port
11	Pressure test point
12	HNS electronic level sensor
13	Port for visual tank fluid level indicator
14	Vent
15	Air filter
16	TCM Contamination Sensor (optional)
17	TWS-D Water Sensor (optional)
18	Sight glass





Item

Component

KLC5 offline filtration n

	3	Valve and connection block
	4	KLC5 offline filtration unit
13	8	MiniOX (MOX) degassing and dewatering unit
	13	HNS electronic level sensor
5	17	Air filter
	8	17
For replacement element part numbers, please see "Appendix Section - Replacem	ent Eler	nents" of this catalog.

**HY-TRAX**®

**RBSA** 

AS

**EPK** 

**Check Plus** 

**RFSA** 

HFS-15

MFS, MFD

**Retrofit System** 

KLS, KLD

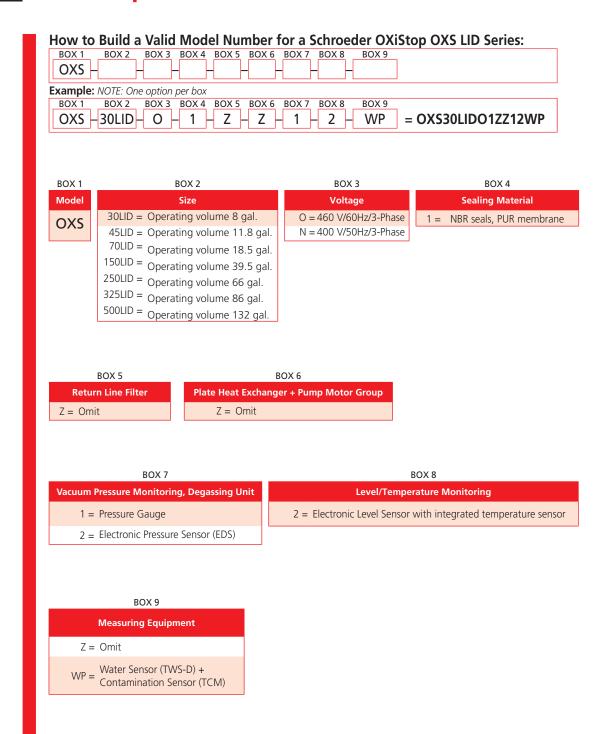
MCO

**X Series** 

**OLF-P** 

oxs

# S OXiStop OXS LID Series



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**HY-TRAX**®

RBSA

AS

**EPK** 

**Check Plus** 

RFSA

HFS-BC HFS-15

MFD-BC

MFS, MFD

**Retrofit System** 

MFD-MV

AMS, AMD

KLS, KLD

MCO

LSN, LSA, LSW

**X** Series

OLF-P

**Triton-A** 

NAV

**Appendix** 

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