Section 2:

FLUID CONDITIONING PRODUCTS

v.091123

RFSA 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

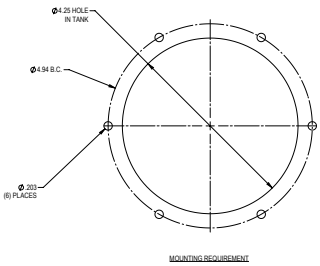
MarketApplications

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

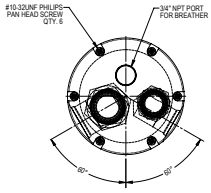
Mounting Requirement

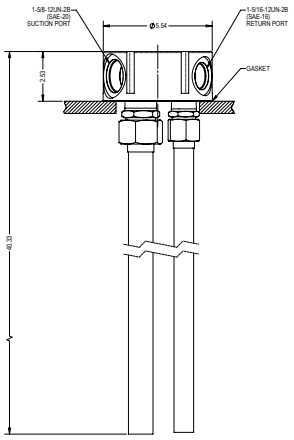
Customer is responsible to cut an appropriately sized hole on top of their tank. This adapter has two (2) ports: one for Suction and one for Return. Also includes a breather port.

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



MOUNTING REQUIREMENT



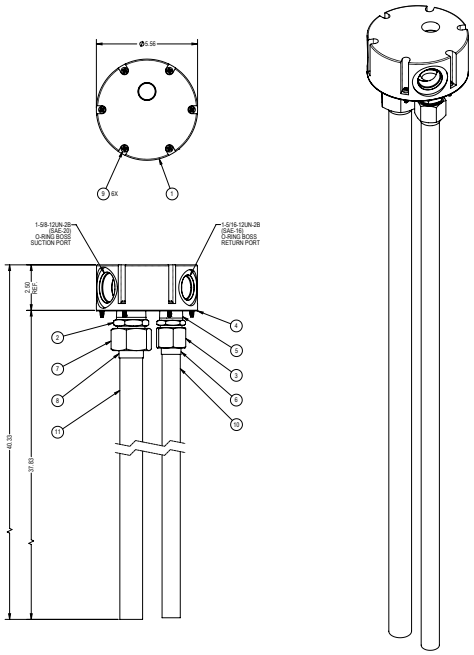


Specifications

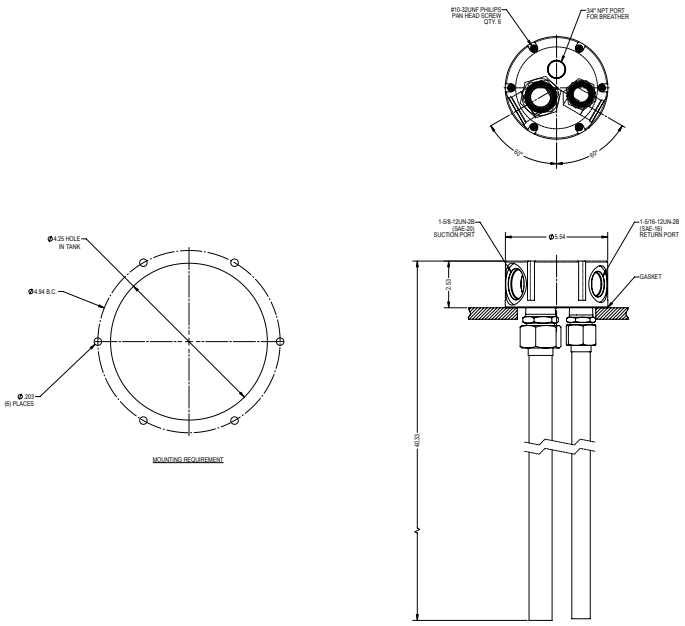
Reservoir Mounting Pattern:	Fits standard 6-bolt
Supply Port Thread Size:	1.25" SAE O-Ring Boss Suction Port
Return Port Thread Size:	1.00" SAE O-Ring Boss Return Port
Breather Port Thread Size:	¾" NPT
Return Tubes:	Suction and Return downtubes included and recommended to be cut to length and bent for proper fluid turnover in reservoir

Reservoir Filtration System Adapter RFSA

Parts List Drawing



Installation Details



Model Number Selection

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

BOX 1		BOX 2
RFSA	–	

Example: *NOTE: Box 2 can have multiple options.*

BOX 1		BOX 2	
RFSA	–		**= RFSA**

BOX 1

Model
RFSA

BOX 2

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

HFS-BC 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.

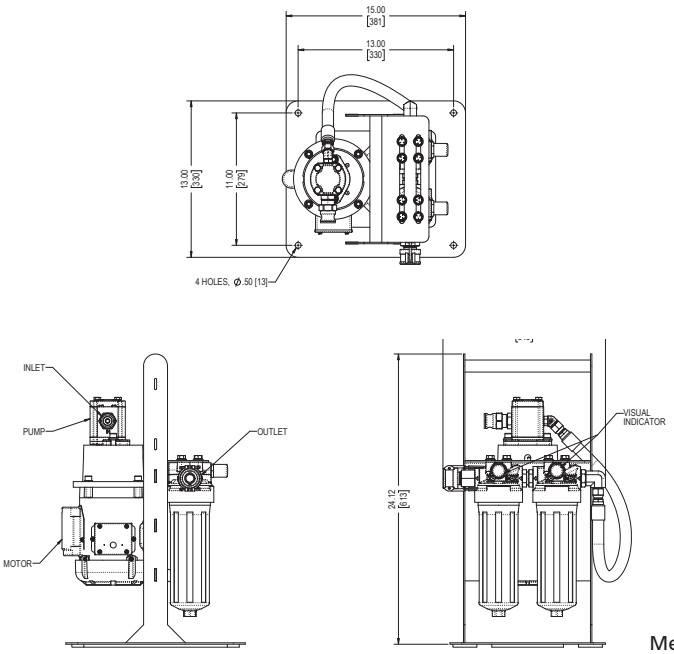
The filtration system's compact, lightweight design with replaceable element cartridge and reusable bowl minimizes landfill waste. Element service is easily accomplished through the top-ported filter housings. The optional dual filter assembly allows for water and particulate removal or staged particulate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



Metric dimensions in ( ).

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9
HFS-BC								

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	
HFS-BC	A	2	09	H10	H05	B	E		**= HFS-BCA209H10H05BE**

BOX 1

Model
HFS-BC

BOX 2

Voltage
A = 120VAC / 1-Phase / 60 Hz
T = 12 Volt DC Option

BOX 3

Number of Filter Housings
1 = Single
2 = Dual

BOX 4

Element Length
09

BOX 5

Element Media First Housing
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

Element Media Second Filter (Dual Only)
Omit = Single housing and Backpack version
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 7

Seal Material
B = Buna

BOX 8

Clogging Indicator
E = Standard Visual Indicator

BOX 9

Options	
BP =	BackPack Version (Single Housing Only)

Model Number Selection

HFS-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 Sustainability Initiative

Description

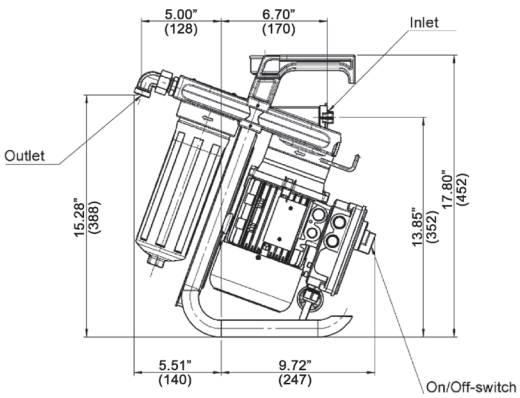
The HFS-15 Hand Held Portable Filter is used as a portable service unit for filling and flushing hydraulic systems, as well as for cleaning in bypass flow. It can also be fitted with a CS1000 | Contamination Sensor. This allows the solid particle contamination in the oil to be monitored at the same time.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

Specifications

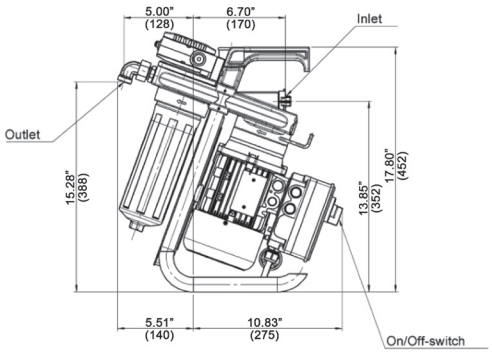
Flow Rating:	HFS-15-E: 4 gpm (15 L/min) HFS-15-P: 2.6 gpm (9.84 L/min)
Pump Type:	Vane pump
Maximum Operating Pressure:	58 psi (4.0 bar)
Permitted Suction Pressure At Port:	-5.8 to 8.7 psi (-0.4 bar to + 0.6 bar)
Viscosity Range:	HFS-15-E: 42 to 1623 SUS (5 ... cSt) HFS-15-P: 42 to 927 SUS (5 ... cSt)
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)
Hoses w/ crimped wands (standard):	Suction hose length: 8.2' (2.5m) Return hose length: 8.2' (2.5m) Hose material: PVC Wand material: Zinc-plated steel

Hand Held Portable Filter HFS-15

Economy & Premium



Economy



Premium

Metric dimensions in ( ).

Model Number Selection

How to Build a Valid Model Number for a Schroeder HFS-15:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
HFS							

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	
HFS	15	E	09	NX	10		E	= HFS-15E09NX10E

BOX 1

Model
HFS

BOX 2

Size
15 = 4 gpm (15 L/min) (for type "E" only)
10 = 2.6 gpm (10 L/min) (for type "P" only)

BOX 3

Type
E = Economy
P = Premium (w/ Condition Monitoring)

BOX 4

Element Length
09

BOX 5

Filter Rating
NX = Particulate Removal Element
AM = Water Removal

BOX 6

Element Media
03 = 3 µm Excellement® Z-Media® (synthetic)
05 = 5 µm Excellement® Z-Media® (synthetic)
10 = 10 µm Excellement® Z-Media® (synthetic)
25 = 25 µm Excellement® Z-Media® (synthetic)
GW = Water Removal

BOX 7

Power Supply
Omit = 120 V, 60 Hz, 1 Ph (0.25 kW)
M = 230 VAC 50 hertz single phase

BOX 8

Clogging Indicator
E = Back-pressure indicator

Accessories

Hoses with threaded connection (depressurized suction up to max. 350 mm²/s)

Description	Part no.	Suction Hose/ Pressure Hose	Thread	Material Suction/ Pressure Hose
MFU-15-SKD5F	4270516	2.5 m / 5 m	M30x2 / M26x1.5	1SN / 2TE

Accessories For Hoses With Threaded Connection

Description	Part No.	Function
MFU-15-SKDK-LF	4270559	Wand[1] (length of 1.30 m)
MFU-15-SKDK-SF	4270560	Suction filter[1]
MFU-15-SKDK-ZWF	4270518	Counter
MFU-15-SKDK-ZPF	4270561	Pump Nozzle[2]
MFU-15-SKDK-ZPWF	4270519	Pump Nozzle + Counter[2]

Notes

[1]max. viscosity 200 mm²/s
[2]max. operation duration of the unit with closed pump nozzle of 5 - 10 min.

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.

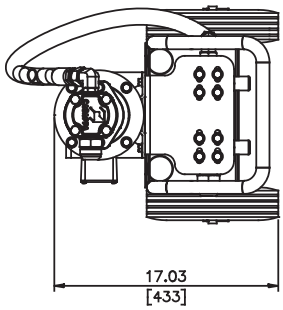
The filtration system's compact, lightweight design with replaceable element cartridge and reusable bowl, minimizing landfill waste. Element service is easily accomplished through the top-ported filter housings. The MFD-BC includes a drip pan to help catch any oil before it falls to the ground. The dual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

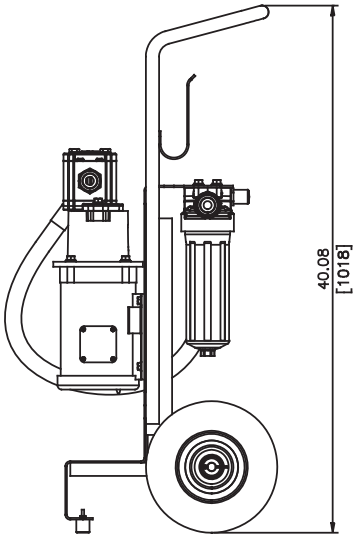
Specifications

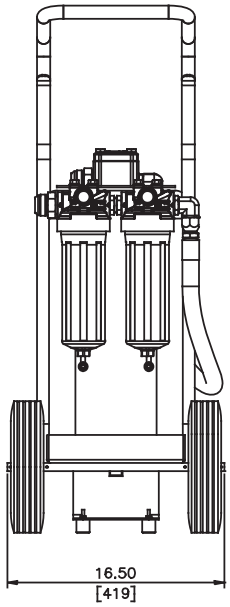
Flow Rating:	10 gpm (37.9 L/min) max
Viscosity Range:	46 - 1,000 SUS (6 - 216 cSt)
Hose Pressure Rating:	30 psig (2.0 bar) @ 150°F (65.6°C) Full vacuum @ 150°F (65.6°C)
Fluid Temperature:	25°F to 150°F (-4°C to 65°C)
Bypass Valve Setting:	Cracking: 25 psi (1.7 bar)
Material:	Element Case: Aluminum
Seal 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 MFDBC







Metric dimensions in ( ).

How to Build a Valid Model Number for Schroeder MFDBC:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6
MFDBC –		–	–	–	

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	
MFDBC –	1	– 09	– H10	– H05	–	= MFDBC109H10H05

BOX 1

Model
MFDBC

BOX 2

No. of Elements
1

BOX 3

Element Length
09

BOX 4

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 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 Hz
B = 220 V / 50 Hz

Model Number Selection

NOTES:

Box 6. If 220V, 50 Hz option selected, flow rating is reduced to ~8-gpm and will have plug cutoff.

MFS MFD Mobile Filtration Systems

U.S. Patents 6568919 7604738

7 or 14 gpm *26.5 or 53 L/min*

FluMoS MOBILE

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

CSI-C-11 Compatible Product

MFD

MFS

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® manual fluid sampling system: Schroeder now offers the HY-TRAX® 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

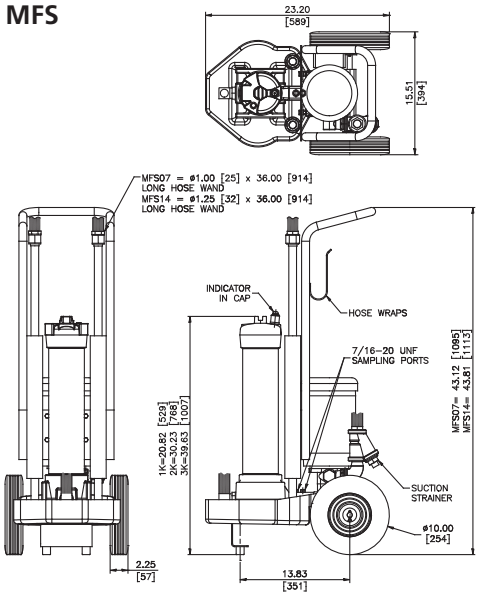
gpm	MFS-2K lb (kg)	MFS-3K lb (kg)	MFD-2K lb (kg)	MFD-3K lb (kg)
7	180 (82)	190 (86)	203 (92)	220 (100)
14	187 (85)	197 (89)	210 (95)	227 (103)

Mobile Filtration Systems

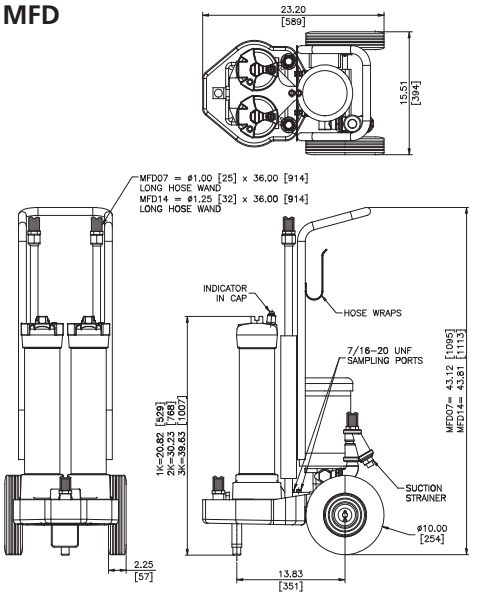
U.S. Patents 6568919 7604738

MFS MFD

MFS



MFD



Metric dimensions in ( ).

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

BOX 1	BOX2	BOX3	BOX4	BOX 5	BOX 6	BOX 7	BOX 8
MFS –		–		–		–	

Example: *NOTE: One option per box*

BOX 1	BOX2	BOX3	BOX 4	BOX 5	BOX 6	BOX 7	BOX8	
MFD –	1-27 –	G10 –	G05 –	B	–	07 –		= MFD1-27G10G05B07

BOX 1

Model
MFS
MFD

BOX 2

No. of Elements/ Element Length
1-18
1-27
2-09
3-09

BOX 3

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®

BOX 4

Element Media Second Filter (MFD 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)
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

Seal Material
B = Buna
V = Viton®
H.5 = Skydrol Compatibility

BOX 6

Voltage
Omit = 115 V / 60 Hz / 1-Phase
A = 230 V / 60 Hz / 3-Phase
B = 460 V / 60 Hz / 3-Phase
C = 220 V / 50 Hz / 1-Phase
D = 230 V / 60 Hz / 1-Phase

BOX 7

Pump Size (gpm)
07
14

BOX 8

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

Model Number Selection

NOTES:

Box 6. 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 trademark of DuPont.

Box 7. 230 & 460 Volt, 60 Hz options supplied 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.

Box 9. Particle counter option only available on 115VAC 60 hertz carts. Particle counter is not available with Skydrol fluids.

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

HYR HY-TRAX® Retrofit System Assembly

HY-TRAX®

FluMoS MOBILE

- 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® 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® 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® Contamination Monitor (TCM) and TestMate® 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 state-of-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® Manifold Block
- Particle Counter
- Hydraulic Hoses (for HY-TRAX® 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 Flow Rate:	0.0008-0.079 gpm (30-300 mL/min)
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

CS 1000
CS 1939
CSI-C-11
HY-TRAX®
RBSA
CSM
FCU
MCS
AS
SMU
CTU
EPK
Trouble Check Plus
HMG2500
HMG4000
ET-100-6
HTB
RFSA
HFS-BC
HFS-15
MFD-BC
MFS, MFD
HY-TRAX® Retrofit System
MFD-MV
MFS-HV
AMS, AMD
FS
AMFS
KLS, KLD
KLCO
MCO
AKS, AKD
LSN, LSA, LSW
X Series
OLF Compact
OLF
OLF-P
NxTM
VEU-F
VMU
IXU
Triton-A
Triton-E
NAV
SVD01
OXS
Appendix

How to Build a Valid Model Number for a Schroeder HY-TRAX® Retrofit:

BOX 1	BOX2	BOX3	BOX4	BOX 5	BOX 6	BOX 7
HYR–	–	–	–	–	–	–

Example: *NOTE: One option per box*

BOX 1	BOX2	BOX3	BOX4	BOX 5	BOX 6	BOX 7	
HYR–	12 –	2 –	0 –	–	–	–	**= HYR1220**

BOX 1

Model
HYR

BOX 2

ISO Code
12 = >4/>6/>14
13 = >2/>5/>15

BOX 3

Display Option
1 = Without Display
2 = With Display

BOX 4

Fluid Type
0 = Hydraulic/Mineral Oil

BOX 5

Analog Interfaces
Omit = 4-20 mA (Standard)
S = 2-10V Analog Output

BOX 6

Communications Option
Omit = None
CSI = CSI-C-11-00 ConditionSensor Interface

BOX 7

Water Sensor Option
Omit = None
W = TestMate® Water Sensor

MFD-MV 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.

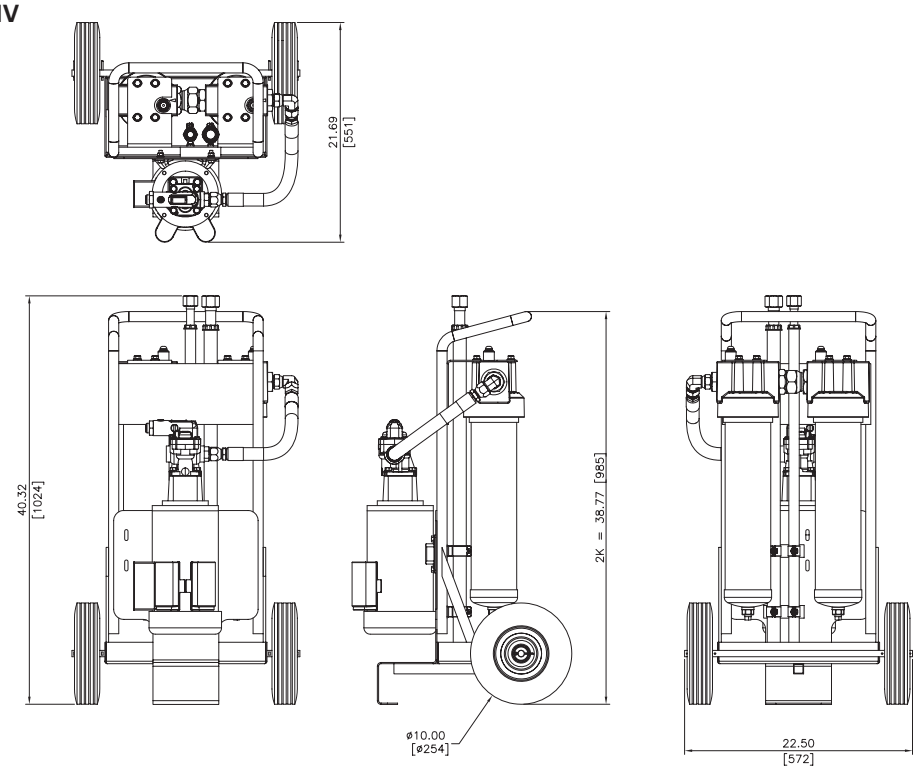
Specifications

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

MFD-MV

MFD-MV



Metric dimensions in ( ).

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7
MFD-MV						

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	
MFD-MV	1	18	G10	G05	V	6	**= MFD-MV118G10G05V6**

BOX 1

Model
MFD-MV

BOX 2

No. of Elements
1

BOX 3

Element Length
18

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
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
V = Viton®

BOX 7

Pump Size(gpm)
6
10

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

Model Number Selection

NOTES:

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

MFS-HV MFD-HV

High Viscosity Mobile Filtration Systems

U.S. Patents 6568919 7604738

3 gpm max
7.5 L/min

MFD-HV

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

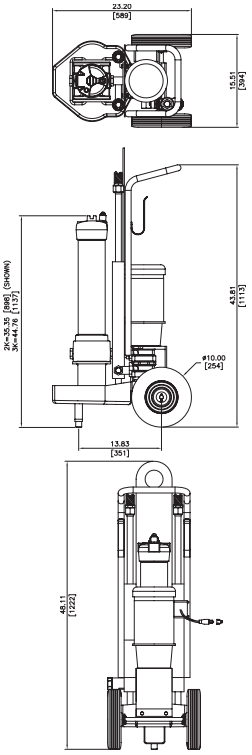
Flow Rating:	3 gpm (7.5 L/min) max
Maximum Viscosity:	15,000 SUS (3236 cSt)
Hose Pressure Rating:	30 psig (2.0 bar) @ 150°F (65.6°C) Full vacuum @ 150°F (65.6°C)
Fluid Temperature:	25°F to 150°F (-4°C to 65°C)
Bypass Valve Setting:	Cracking: 40 psi (2.8 bar)
Material:	Manifold and cap: Cast Aluminum 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

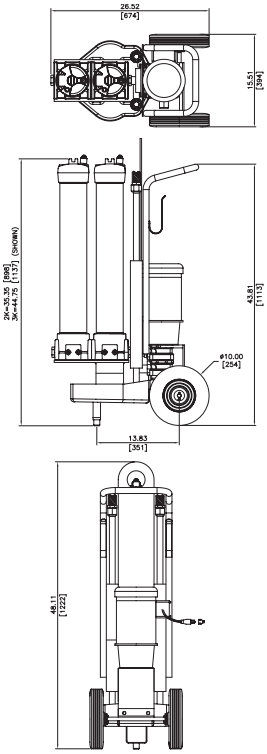
U.S. Patents 6568919 7604738

MFS-HV
MFD-HV

MFS-HV



MFD-HV



Metric dimensions in ( ).

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7
MFD-HV						

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	
MFD-HV	1	27	Z10	Z05	B	03	= MFD-HV127Z10Z05B03

BOX 1

Model
MFS-HV
MFD-HV

BOX 2

No. of Elements
1

BOX 3

Element Length
18
27

BOX 4

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 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®
GWR = Water Removal w/GeoSeal®

BOX 6

Seal Material
B = Buna
V = Viton®

BOX 7

Pump Size(gpm)
03

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

Model Number Selection

NOTES:

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

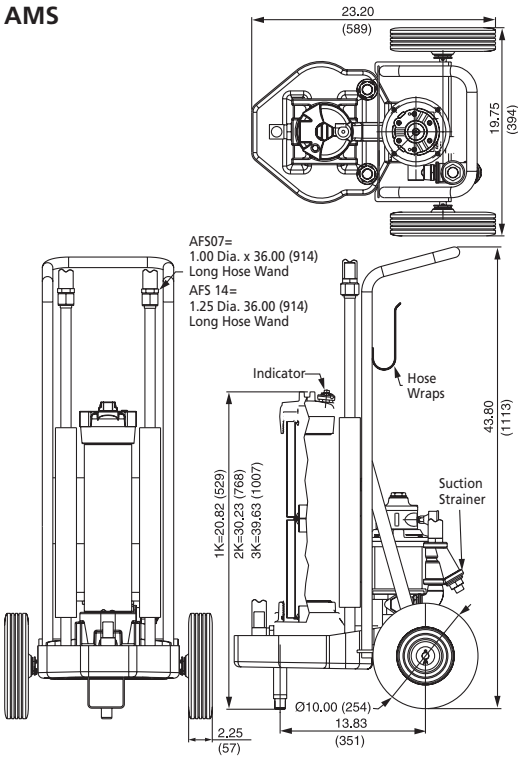
AMS AMD

Air -Operated Mobile Filtration Systems

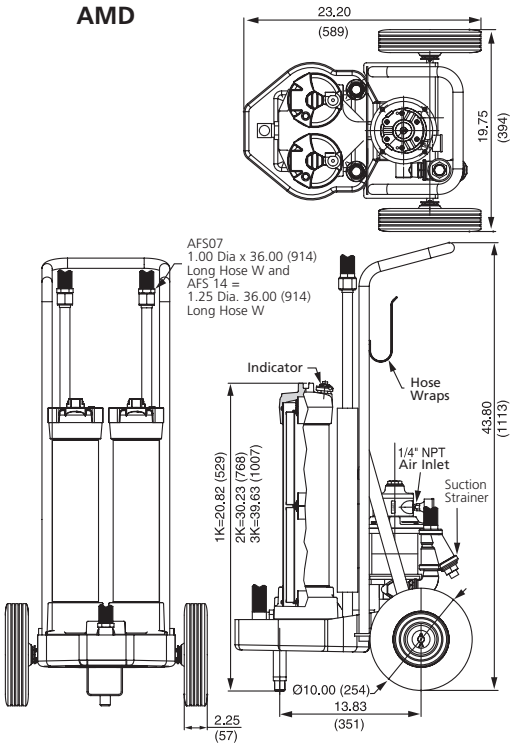
U.S. Patents 6568919 7604738

7 or 14 gpm
26.5 or 53 L/min

AMS



AMD

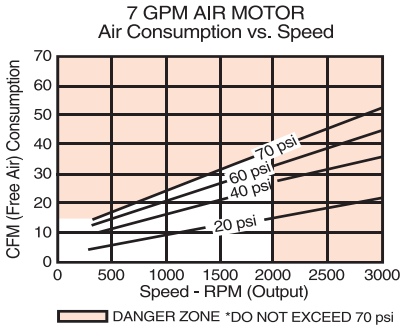


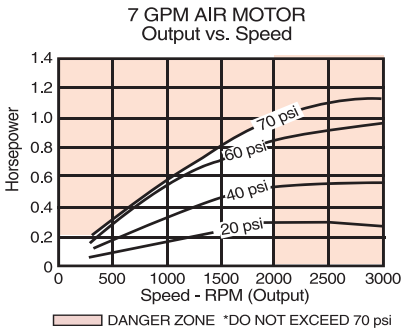
Metric dimensions in ( ).

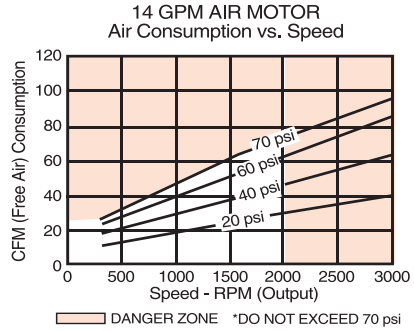
Description

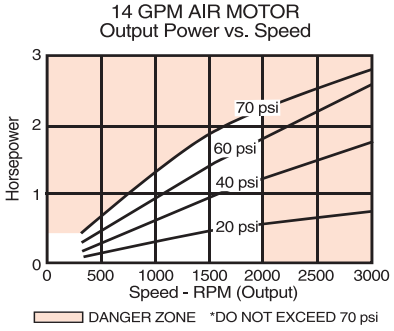
Schroeder's AMS and AMD carts feature a pneumatic motor in place of the standard electric motor. The pneumatic motor offers the same flow capability using the same components, but without the need for an electrical outlet. This provides a major advantage in the application of this unit. With no need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

AMS
AMD

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
- Field applications on service trucks

Specifications

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[1] 1,000 psi (68.9 bar) min yield
Fluid Temperature:	25°F to 150°F (-4°C to 65°C)[2]
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)

[1]For higher hose pressure applications contact factory.
[2]For higher temperature applications contact factory.

Weights

	AMS-2K		AMS-3K		AMD-2K		AMD-3K	
gpm	lb	(kg)	lb	(kg)	lb	(kg)	lb	(kg)
7	180	(82)	190	(86)	203	(92)	220	(100)
14	187	(85)	197	(89)	210	(95)	227	(103)

Model Number Selection

How to Build a Valid Model Number for Schroeder AMS:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6
AMS					

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	
AMS	1-18	G10		B	14	**= AMS1-18G10B14**

BOX 1

Model
AMS
AMD

BOX 2

No. of Elements/ Element Length
1-18
1-27
2-09
3-09

BOX 3

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®

BOX 4

Element Media 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®
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

Seal Material
B = Buna

BOX 6

Pump Size(gpm)
07
14

NOTES:

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

Box 7.
07 gpm - 50 CFM at 70 psi
14 gpm - 70 CFM at 70 psi

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

FS Filtration Station®

Schroeder SMART TECHNOLOGY INSIDE

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

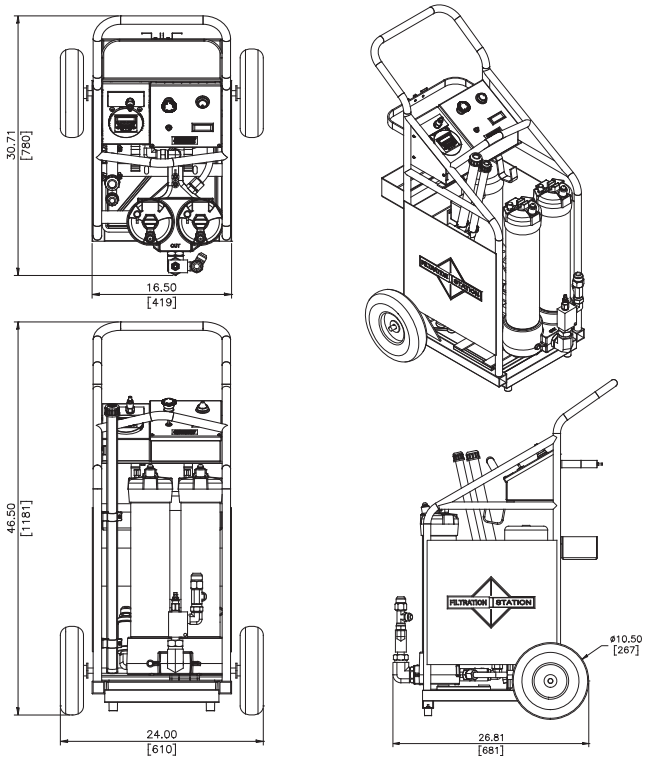
Flow Rating:	9 gpm (34 l/min) fixed or 3-8 gpm (11-30 l/min) variable
Motor:	1.5 HP - 15 amps at 120 volts AC for fixed flow 1 HP - 10 amps at 120 volts AC for variable flow
Viscosity:	60 - 1,000 SUS (10-216 cSt)
Fluid Temperature Range:	-20°F to 150°F (-29°C to 65°C)
Bypass Valve Setting:	Cracking: 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

Element	Filtration Rating Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402			Filtration Rating wrt ISO 16889 Using APC calibrated per ISO 11171		Dirt Holding Capacity gm
	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_x(c) \geq 200$	$\beta_x(c) \geq 1000$	
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



Metric dimensions in ( ).

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

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

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	
FS	A	1	27	Z05	Z03	B	9	W	= FSA127Z05Z03B9W

BOX 1

Model
FS

BOX 2

Voltage
A = 120 V / 60 Hz
B = 220 V / 60 Hz
C = 220 V / 50 Hz

BOX 3

No. of Elements
1
2
3

BOX 4

Element Length
09
18
27

BOX 5

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-Medi® (synthetic) w/GeoSeal®
GWR = Water Removal w/GeoSeal®

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
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

Seal Material
B = Buna
V = Viton®

BOX 8

Pump Size
9 = 9 gpm
D = DC drive, variable flow, 3-8 gpm

BOX 9

Water Sensor
W = TestMate® Water Sensor

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

Model Number Selection

NOTES:

Box 2. A plug is not provided for options B & C in Box 2 (220 V). If C is chosen, flow rate will be reduced to 7 and 6 gpm.

Box 3 & 4. Box 3 =1, Box 4 must be either 18 or 27; when Box 3 =2 or 3, Box 4 must be 09.

Box 9. The water sensor is to be used as a reference tool for hydraulic oil analysis purposes only.

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.

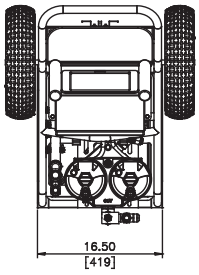
Specifications

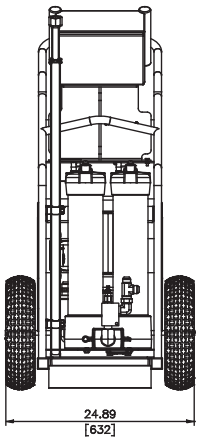
Flow Rating:	5 gpm (19 L/min)
Motor:	1.5 HP - 15 FLA at 120 volts AC
Viscosity Range:	60 - 1,000 SUS (10 - 216 cSt)
Operating Temperature:	-20°F to 150°F (-29°C to 65°C)
Bypass Valve Setting:	Cracking: 30 psi (2 bar) x 2
Compatibility:	All petroleum-based hydraulic fluid compatible with Viton®
Element 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)

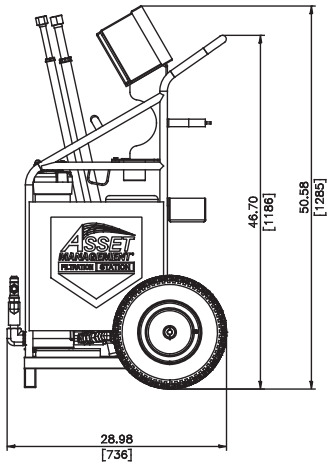
***Note: Optional front caster set PN: 7627132 includes (2) plate mount swivel casters with brake, installation hardware and mounting instructions.**

Asset Management Filtration Station®

AMFS







Metric dimensions in ( ).

Element Performance Information

GeoSeal® Element	Filtration Rating Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402			Filtration Rating wrt ISO 16889 Using APC calibrated per ISO 11171	
	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_x(c) \geq 200$	$\beta_x(c) \geq 1000$
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

Dirt Holding Capacity

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

Model Number Selection

Preferred order codes designate shorter lead times and faster delivery.

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
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

Model
AMFS

BOX 2

No. of Elements
1

BOX 3

Element Length
18
27

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
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.

KLS KLD

Kidney Loop Systems

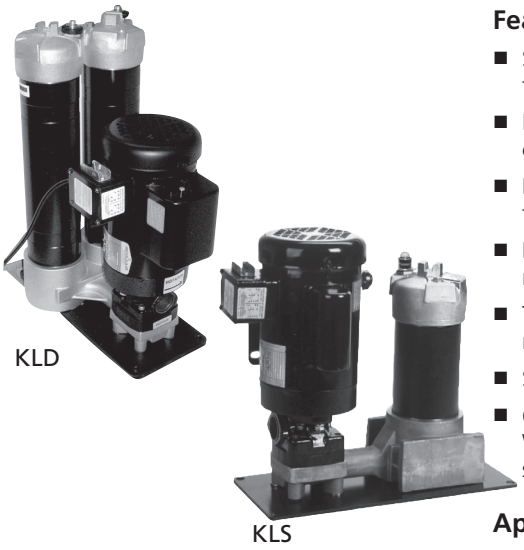
U.S. Patents 6568919 7604738

7 or 14 gpm
26.5 or 53 L/min

FluMoS MOBILE

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

CSI-C-11 Compatible Product



KLD

KLS

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® manual fluid sampling system: Schroeder now offers the HY-TRAX® 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

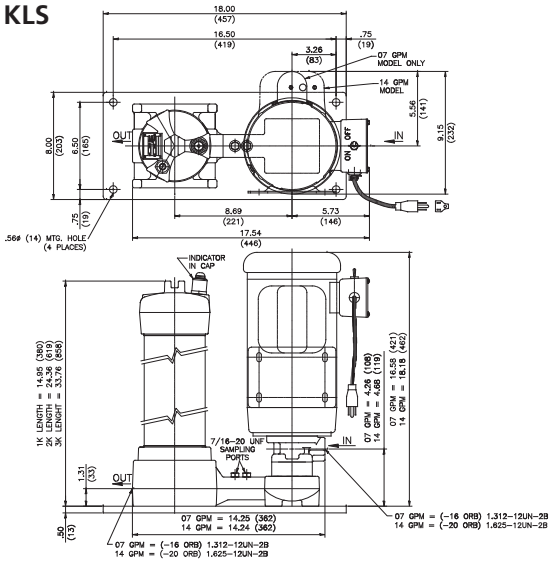
Flow Rating:	7 gpm (26.5 L/min) max and 14 gpm (53.0 L/min) max
Viscosity Range:	40 - 1,000 SUS (4 - 216 cSt) Higher viscosity version available. Contact factory for details.
Fluid Temperature:	25°F to 150°F (-4°C to 65°C)
Bypass Valve Setting:	Cracking: 30 psi (2 bar)
Material:	Manifold and cap: Cast 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

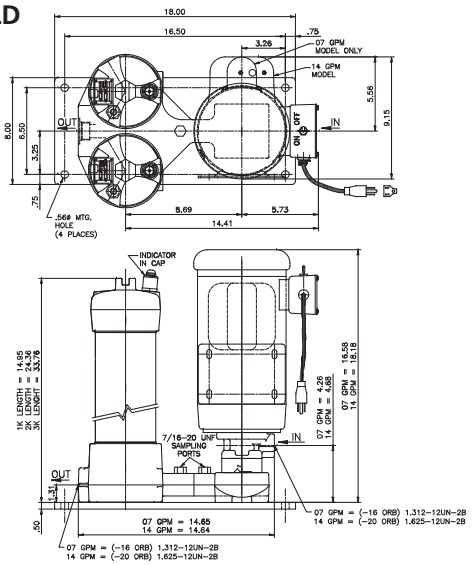
U.S. Patents 6568919 7604738

KLS KLD

KLS



KLD



Metric dimensions in ( ).

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

BOX 1	BOX2	BOX3	BOX4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9
KLD –		–		–		–		–

Example: *NOTE: One option per box*

BOX 1	BOX2	BOX3	BOX4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	
KLD –	1 –	27 –	Z05 –	Z03 –	B –		7 –		**= KLD127Z05Z03B07**

BOX 1

Model
KLS
KLD

BOX 2

No. of Elements
1
2
3

BOX 3

Element Length
09
18
27

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®

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 = Buna
V = Viton®

BOX 7

Voltage
Omit = 115 V / 60 Hz / 1-Phase
A = 230 V / 60 Hz / 3-Phase
B = 460 V / 60 Hz / 3-Phase
C = 220 V / 50 Hz / 1-Phase
D = 230 V / 60 Hz / 1-Phase

BOX 8

Pump Size
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

Model Number Selection

Preferred order codes designate shorter lead times and faster delivery.

NOTES:

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

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

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

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

KLS-MV
KLD-MV

Kidney Loop Systems

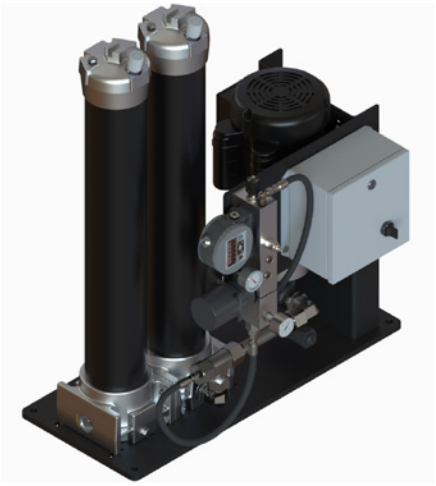
U.S. Patents 6568919 7604738

6 or 10 gpm
22.7 or 53 L/min

FluMoS MOBILE

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

CSI-C-11 Compatible Product



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® HV manual fluid sampling system: Schroeder now offers the HY-TRAX® 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

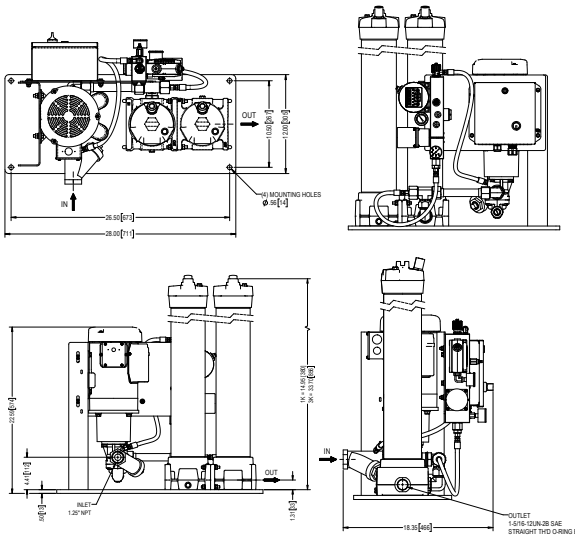
Flow Rating:	6 gpm (22.7 L/min) max and 10 gpm (37.0 L/min) max
Viscosity Range:	40 - 5,000 SUS (4 - 1000 cSt)
Fluid Temperature:	25°F to 150°F (-4°C to 65°C)
Bypass Valve Setting:	Cracking: 30 psi (2 bar)
Material:	Manifold and cap: Cast aluminum Element case: Steel
Compatibility:	All petroleum based 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

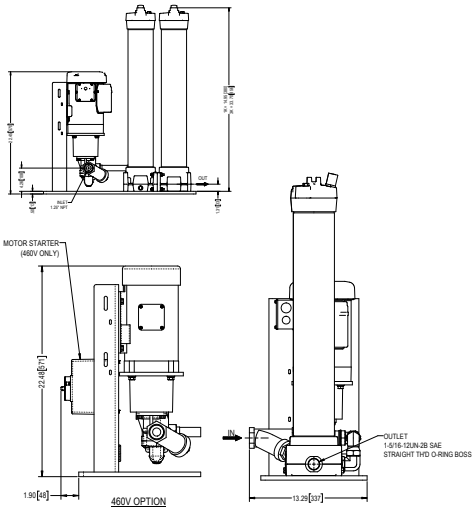
U.S. Patents 6568919 7604738

KLS-MV
KLD-MV

KLS-MV



KLD-MV



Metric dimensions in ( ).

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

BOX 1	BOX2	BOX3	BOX4	BOX 5	BOX 6	BOX 7	BOX 8	BOX9
KLD-MV –		–		–		–		–

Example: *NOTE: One option per box*

BOX 1	BOX2	BOX3	BOX4	BOX 5	BOX 6	BOX 7	BOX 8	BOX9	
KLD-MV –	1	– 27	– G10	– G05	– V	–	– 06	–	**= KLD-MV127G10G05V06**

BOX 1

Model
KLD-MV
KLS-MV

BOX 2

No. of Elements
1
2
3

BOX 3

Element Length
09
18
27

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)
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
V = Viton®

BOX 7

Voltage
Omit = 115 V / 60 Hz / 1-Phase
A = 230 V / 60 Hz / 3-Phase
B = 460 V / 60 Hz / 3-Phase
C = 220 V / 50 Hz / 1-Phase
D = 230 V / 60 Hz / 1-Phase

BOX 8

Pump Size
06
10

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

Model Number Selection

Preferred order codes designate shorter lead times and faster delivery.

NOTES:

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

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

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

Box 9. Particle counter option only available on 115 V / 60 Hz units.

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

KLD-HV

Kidney Loop Systems

U.S. Patents 6568919 7604738

3 gpm
11.4 L/min

KLD-HV

Features and Benefits

- Rugged, protective frame with integrated lifting eyes for lifting the filter skid via crane or hoist
- Ability to filter fluids having a viscosity up to 15,000 SUS
- Modular base eliminates hoses between components and minimizes leakage
- Base-ported filter provides easy element service from the top cap
- 18-inch housing is standard

Applications

- Compact design in protective frame allows for easy transport uptower in wind applications
- Supplementing continuous filtration by the system's 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

Schroeder's newest addition to the off-line kidney loop family offers the user the ability to filter high viscosity fluids - up to 15,000 SUS.

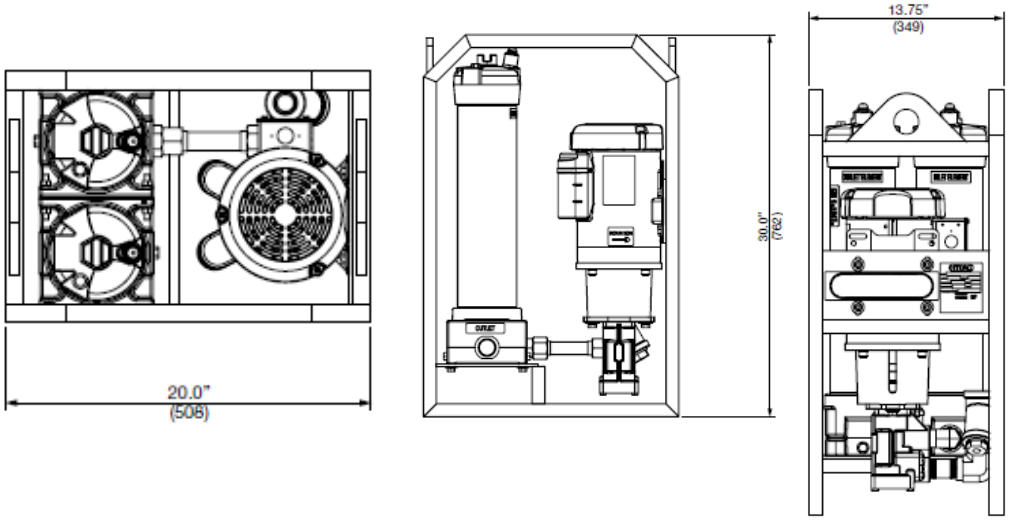
The KLD-HV is a compact, self-contained filtration system equipped with high efficiency, high capacity elements capable of removing particulate contamination and/or water quickly, conveniently and economically. It is perfect for cleaning up existing systems as well as for prefiltering new fluids, since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

The KLD-HV dual filtration unit can be used to remove both water and particulate contamination or for staged particulate contamination removal. Additional features include a modular base that eliminates hoses and fittings between components with easy to change element design.

Specifications

Flow Rating:	3 gpm (11.74 L/min) max
Maximum Viscosity:	15,000 SUS (2150 cSt)
Maxiumum Operating Temperature:	-20°F to 150°F (29°C to 65°C)
Bypass Valve Setting:	Cracking: 40 psi (2.8 bar)
Material:	Manifold and cap: Cast aluminum Element case: Steel Protective Frame: Tubular Steel
Compatibility:	All petroleum based hydraulic fluid. Contact factory for use with other fluids.
Motor:	115V AC single phase 1.5 HP

KLD-HV



Metric dimensions in ( ).

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

BOX 1	BOX2	BOX3	BOX4	BOX 5	BOX 6
KLD-HV –	–	–	–	–	–

Example: *NOTE: One option per box*

BOX 1	BOX2	BOX3	BOX4	BOX 5	BOX 6	
KLD-HV –	18 –	G10 –	G05 –	V –	G2820	**= KLD-HV18G10G05VG2820**

BOX 1

Series
KLD-HV

BOX 2

Element Length
18

BOX 3

Element Micron Rating	
G03, G05, G10 =	Excellement® Z-Media® (synthetic) w/ GeoSeal®
GWR =	Water Removal w/ GeoSeal®

BOX 4

Element Micron Rating	
G03, G05, G10 =	Excellement® Z-Media® (synthetic) w/ GeoSeal®
GWR =	Water Removal w/ GeoSeal®

BOX 5

Seals
V = FPM

BOX 6

Options
G2820 = High Viscosity Filter Skid with rugged protective frame

KLCO Kidney Loop with Change-Over

Model No. of filter in photograph is KLCO40..BB...

Model No. of filter in photograph is KLCO40..PCSI

Features and Benefits

- Continuous fluid conditioning without the need to shutdown for filter element replacement
- Exceptional fluid conditioning with high capacity, high efficiency filtration
- Flexible, application-specific fluid processing with 3, 7, 10, and 14gpm processing rates
- Monitor important fluid condition parameters with the optionally integrated HY-TRAX® Fluid Sampling System

Description

The Kidney Loop with Change-Over (KLCO) system is a stationary off-line fluid conditioning system for removing solid particle and free water contamination. The KLCO features an RLD (25DN or 40DN sizes) series duplex-type filter, allowing users to change the direction of flow through one of two filters, and the ability to replace filter elements without shutting the system down. This is particularly beneficial in fluid conditioning applications where continuous filtration and contamination control is necessary.

Fluid Condition Monitoring

HY-TRAX® manual fluid sampling system: Schroeder now offers the HY-TRAX® manual fluid sampling system as an option allowing for real-time fluid condition monitoring. 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.

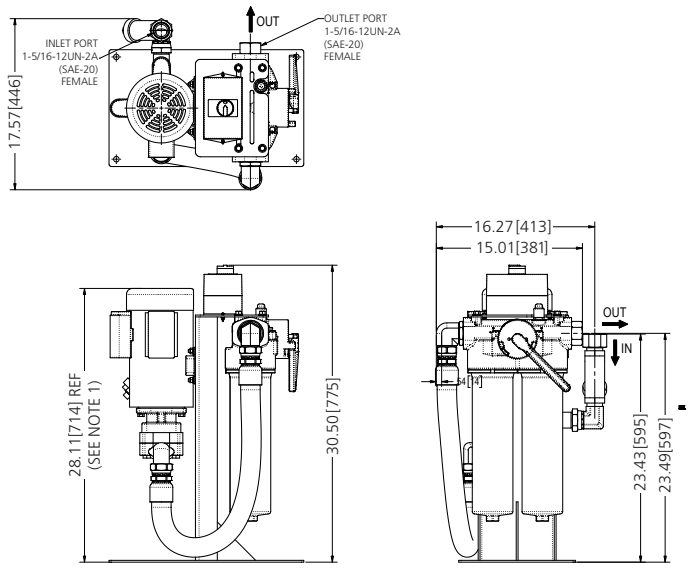
Specifications

Pump Type:	Vane type
Flow Rate:	3 to 14 gpm (model dependant)
Permissible Operating Pressure Range:	-6 psi to 87 psi max
Viscosity:	7/14 gpm: 40 to 1,000 SUS (4 to 216 cSt); 3/10 gpm: 40 to 2,500 SUS (4 to 540 cSt)
Fluid Compatibility:	All petroleum-based hydraulic fluid. Contact factory for use
Fluid Temperature Range:	33°F to 150°F (-4°C to 65°C)
Seal Material:	FKM (Viton®)

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

Kidney Loop with Change-Over KLCO

Dimensions



KLCO40DNXXXB14

Dimensions in inches (mm)

Model Number Selection

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7
KLCO –		–		–		–

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	
KLCO –	40 –	DNZ5 –	B –		14 –		= KLCO25DNZB14

BOX 1

Model
KLCO

BOX 2

Element Length
25 = RLD - 25 (25 cm)
40 = RLD - 40 (40 cm)

BOX 3

Element Size and Media
DZN5 = DN size 5 µm synthetic media
DZN10 = DN size 10 µm synthetic media
DZN25 = DN size 25 µm synthetic media

BOX 4

Seal Material
B = NBR (Buna-N®)
V = FKM (Viton®)

BOX 5

Voltage
Omit = 115V AC / 60Hz / 1 Ph.
A = 230V AC / 60Hz / 3 Ph.
B = 460V AC / 60Hz / 3 Ph.
C = 220V AC / 50Hz / 1 Ph.
D = 230V AC / 60Hz / 3 Ph.

BOX 6

Pump Size
3 = 3 gpm (for up to 2,500 SUS)
7 = 7 gpm (for up to 1,000 SUS)
10 = 10 gpm (for up to 2,500 SUS)
14 = 14 gpm (for up to 1,000 SUS)

BOX 7

Options
P = HY-TRAX Contamination Monitoring System
CSI = CSI-C-11 Sensor Interface Option for data acquisition
CSIW = CSI-C-11 Sensor Interface Option for data acquisition with AS1008 Water Saturation Sensor (only with PC option)

Consult Factory for special options.
Not all combinations available.

MCO Fail-Safe In-Line Mechanical Clean Oil Dispenser

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

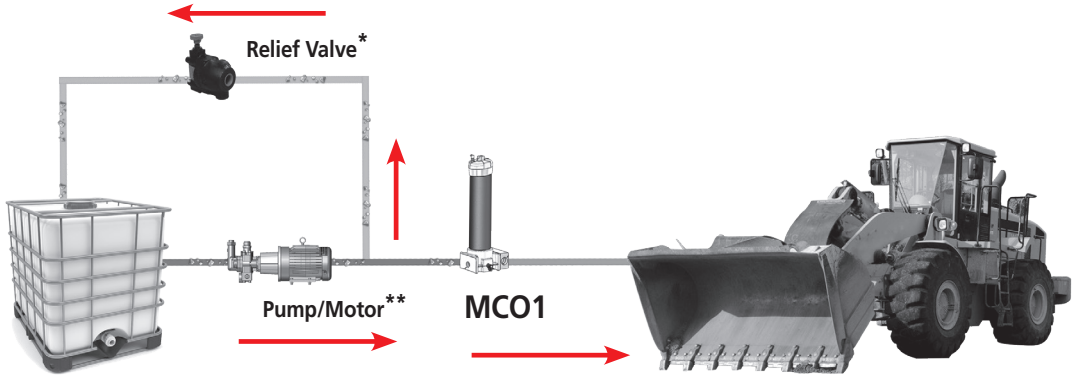
Product Description

- 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 must
- 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 ßeta 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

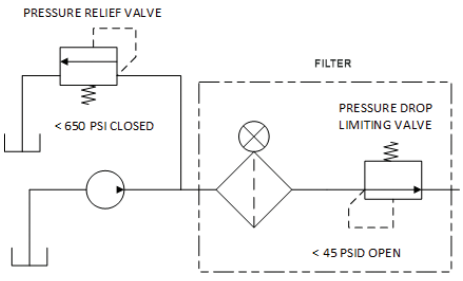
Application Circuit



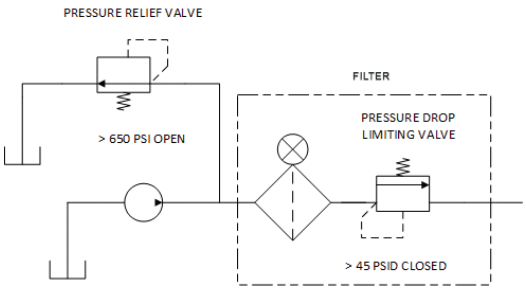
* Product not included in base model pricing.
** Product is customer supplied.

Schematics

Normal Operation



"Bypass" Operation



Fail-Safe In-Line Mechanical Clean Oil Dispenser

MCO

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

Filter Housing Specifications

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

Model Number Selection

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

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	V	S	D5	RV	**= MCO327G05G03G03VSD5RV**

BOX 1

Model
MCO

BOX 2

No. of Housings
1
2
3

BOX 3

Element Length
27

BOX 4

Element Micron Rating First Filter (MCO1, 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 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 Z-Media® (synthetic)

BOX 6

Element Micron Rating Third Filter (MCO3 Only)
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 Z-Media® (synthetic)

BOX 7

Seal Material
V = Viton®

BOX 8

Porting
S = SAE 20
P = 1 ¼ 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
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.

AKS AKD

Air-Operated Kidney Loop Systems

U.S. Patents 6568919 7604738

7 or 14 gpm
26.5 or 53 L/min

AKD

AKS

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

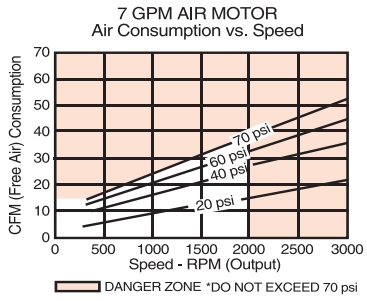
Applications

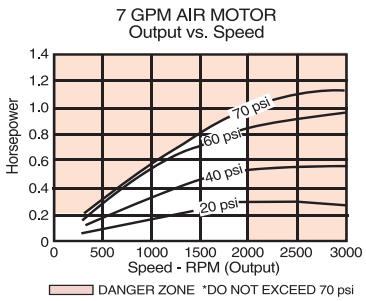
- Supplementing in-line filtration by system filters when adequate turnover cannot be attained
- Large volume systems requiring multiple filters in different locations
- Cleaning up a hydraulic system following component replacement
- Ideal location for water removal
- Field applications on service trucks

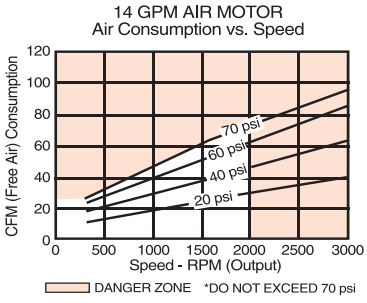
Description

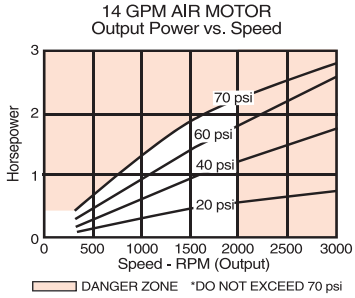
Schroeder offers a kidney loop filtration system with a pneumatic motor in place of the standard electric motor. The pneumatic motor offers the same flow capability using the same components, but without the need for an electrical outlet. This provides a major advantage in the application of this unit. 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.









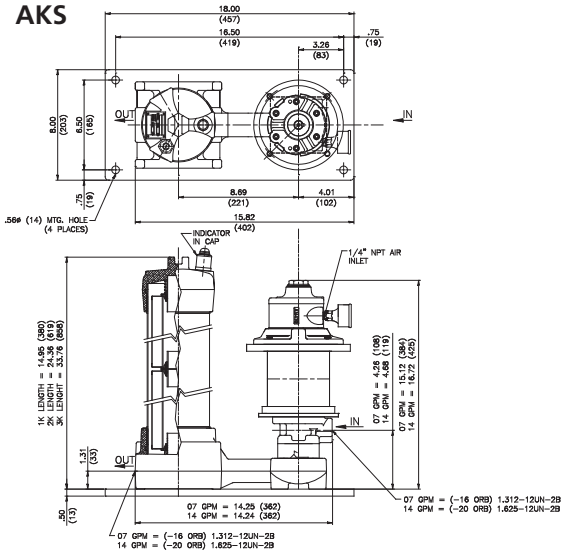
Note: Performance data represents a 4-vane model with no exhaust restriction.

Air-Operated Kidney Loop Systems

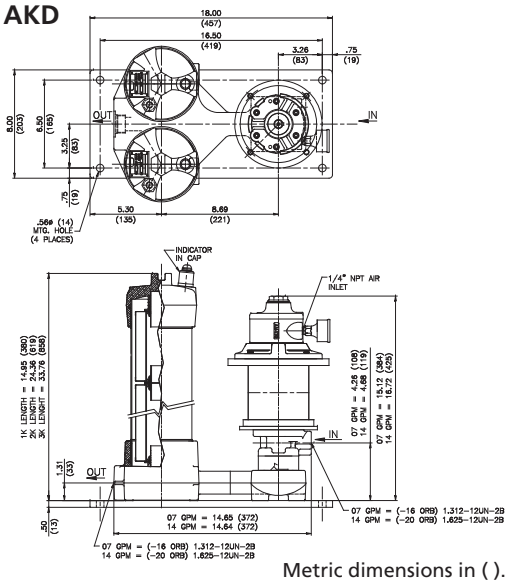
U.S. Patents 6568919 7604738

AKS AKD

AKS



AKD



Metric dimensions in ( ).

Specifications

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

Model Number Selection

How to Build a Valid Model Number for Schroeder AKS:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6
AKD					

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	
AKD	1-27	G10	G05	B	14	**= AKD1-27G10G05B14**

BOX 1

Model
AKS
AKD

BOX 2

No. of Elements/ Element Length
1-18
1-27
2-09
3-09

BOX 3

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®

BOX 4

Element Media Second Filter (AKD 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 5

Seal Material
B = Buna

BOX 6

Pump Size(gpm)
07
14

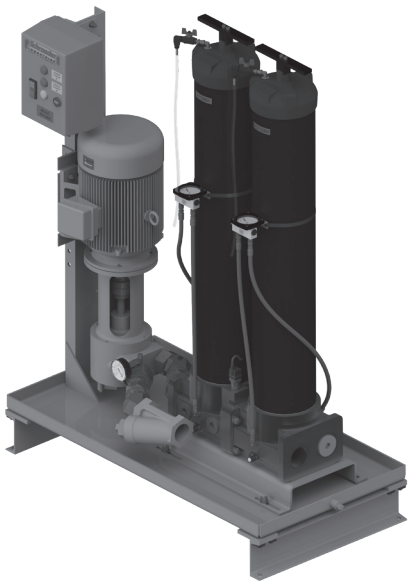
NOTES:

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

Box 7.
07 gpm - 50 CFM at 70psi
14 gpm - 70 CFM at 70psi

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

X Series X Series Filter Skids



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 Sustainability 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.

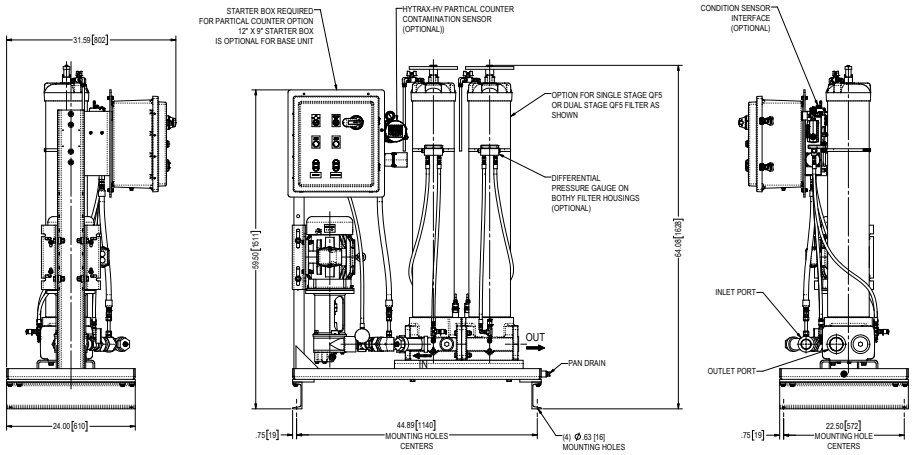
Standard X Series skids (X2 and X7) include a hydraulic pump, electric motor, and QF5 housings. Many different component combinations provide the flexibility to match specific system viscosity, flow, and cleanliness requirements.

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.

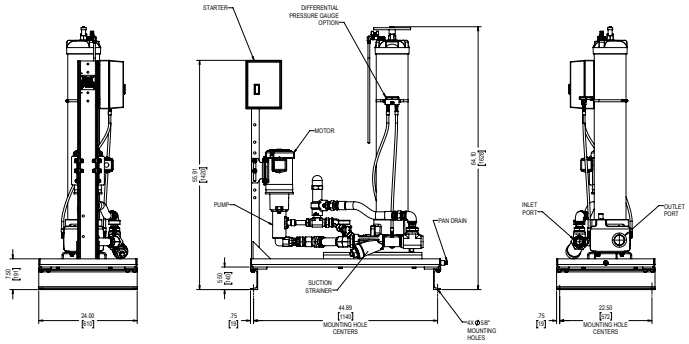
Skid Selection

Series	Viscosity Range	Filter Housing(s)	Maximum Flow
X2	100 - 5000 SUS	(1) QF5	82 gpm (310 L/min)
X5	100 - 5000 SUS	(2) QF5	82 gpm (310 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)

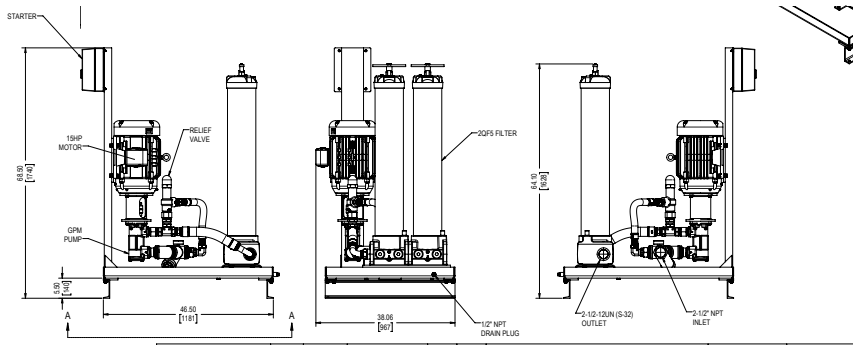
Dual QF5 Filter Version (Series X5)



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 ( ).

X Series Filter Skids

Schroeder SMART TECHNOLOGY INSIDE

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, X5, X7, and X8
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-X5:** 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	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 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")
X5	17	1.50" NPT	#32 SAE (2")
X5	37	2" NPT	#32 SAE (2")
X5	60	2" NPT	#32 SAE (2")
X5	82	2" NPT	#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	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.

How to Build a Valid Model Number for a Schroeder X Series Filter Skid:

BOX 1	BOX2	BOX3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX11	BOX12

Example: *NOTE: One option per box*

BOX 1	BOX2	BOX3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	BOX 10	BOX11	BOX12	
X5	17	3Q	Q25	Q10	B	N	N	B	M	N	P	= X5173Q25Q10BNNBMN

BOX 1 / BOX 2 / BOX 3

Model	Flow (gpm)	QF5 Filter 39Q
X2	17	3Q
	37	3Q
	60	3Q
	82	3Q
X5	17	3Q
	37	3Q
	60	3Q
	82	3Q
X7	06	3Q
X8	30	3Q

BOX 4 — Element Media

Q1 = 1 micron element
Q3 = 3 micron element
Q5 = 5 micron element
Q10 = 10 micron element
Q25 = 25 micron element

BOX 5 — Element Media

Q1 = 1 micron element
Q3 = 3 micron element
Q5 = 5 micron element
Q10 = 10 micron element
Q25 = 25 micron element

BOX 6 — Seal Material

B = Buna (Standard)
H = EPR
V = Viton®

BOX 7 — Power

N = 230/ 460 VAC 3 PH.
E = 575 VAC 3 PH.

BOX 8 — Motor Frame

N = TEFC
W = Washdown (NEMA Design B)

BOX 9 — Starter Control Options

N = None
A = 230 VAC
B = 460 VAC
E = 575 VAC

BOX 10 — Dirt Alarm®

N =D5 Indicator on Filter Cap
G = Differential Pressure Gauge
M = MS11 Electric Cartridge
C = Differential Pressure Gauge with Electric Switch

BOX 11 — Miscellaneous Options

N = None
C = Mobile

BOX 12 — Condition Monitoring

P = Particle Counter (oils to 3500 SUS)
CSI = CSI-C-11 option
CSI-W = CSI-C-11with AS1200 Option
WD = Water Sensor with Display
Omit = No Condition Monitoring Options

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

Replacement Element Part Numbers

P/N TBD	Element, 39QCLQFZ1VF
P/N 7641268	Element, 39QCLQFZ3VF
P/N 7641269	Element, 39QCLQFZ5VF
P/N 7640135	Element, 39QCLQFZ10V
P/N 7641270	Element, 39QCLQFZ25VF

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

Model Number Selection

NOTES:

Box 1.
Z1 media not offered for use in 500 to 2000 SUS filtration skids. Contact factory for specific applications. X2 and X7 skids have one filter housing. X8 skid has filters in parallel. Box 4 & 5 must have same micron rating.

Box 7.
575 will be built to CSA standards.
(E) X7 and X8 only available with 230/460 VAC 3 phase motor.

Boxes 9 and 10.
Motor starter control option – C-series, non-disconnect shut-off, "motor on" light, electrical indicator "change element" light, and type 4x wash down enclosure. Contact factory for additional custom control options.

Particle Counter not available for X7 or X8.

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

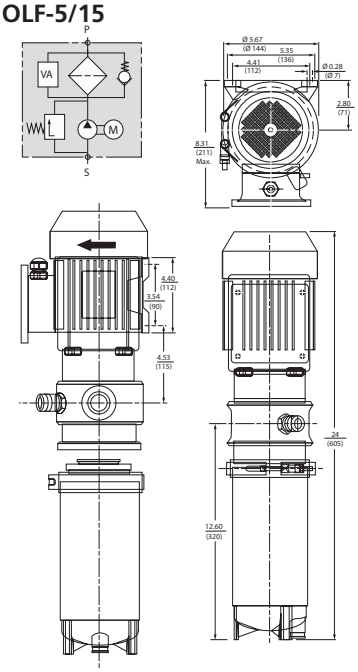
Viscosity:	**OLF-5/4** to 10,000 SUS **OLF-5** to 700 SUS **OLF-5/15** to 3,000 SUS
Operating Pressure:	45 psi (3 bar) max
Suction Pressure:	-6 psi to 87 psi max
Fluid Temperature:	32°F to 175°F (0°C to 80°C)
Ambient Temperature:	-4°F to 104°F (-20°C to 40°C)
Seals:	Buna N
Maximum Flow Rate:	**OLF-5/4** 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:	ßx > 1000
Maximum ΔP:	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** 15.5 lbs (7.0 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.

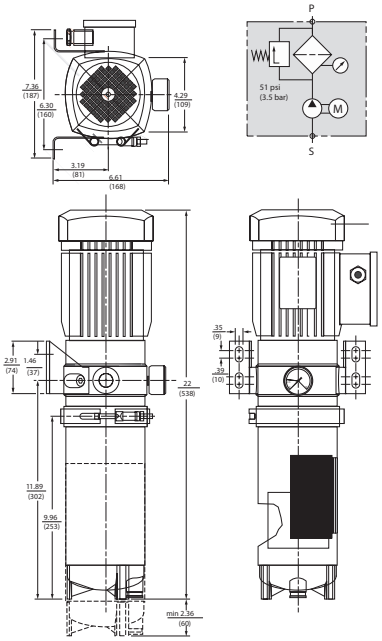
Offline Filtration Systems **OLF Compact**

Formally Known as "KLC - Kidney Loop Compact Systems"

OLF-5/4 | OLF-5/15



OLF-5



Metric dimensions in ( ).

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
OLF-5							

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	
OLF-5	S	120	K	KLE02	E	12		**= OLF-5--S-120-K-KLE02-E-12**

BOX 1

Series
OLF-5 = Series 5 (1.6 gpm)
OLF-5/15 = Series 15 (4.9 gpm)
OLF-5/4 = Series 15 (1.3 gpm)
OLFCM-5/15 = With Fluid Condition Monitoring

BOX 2

Pump Type
S = Vane Pump* *(standard)*
TV = Toploader with Motor *(available for OLF-5/15 & OLFCM-5/15 only)*
E = Flow control valve *(series 5 only)*

BOX 3

Power Consumption
120 = 120W for all OLF-5
200 = 200W for all 24VDC
370 = 370W for all Series 5/15 & 5/4
Z = without pump/motor (series 5 only)

BOX 4

Voltage
K = 115V single phase
M = 220V single phase
N = 440V 3 phase
T = 12VDC
U = 24VDC

BOX 5

Element
KLE02 = 2 micron
KLE05 = 5 micron
KLE10 = 10 micron
KLE20 = 20 micron
KLEA02 = 2 micron with water removal
KLEA20 = 20 micron with water removal

BOX 6

Clogging Indicator	
E = Standard gauge (series 5 & 5/4 only)	
BM = Differential visual	VM2BM.1 (series 5/15 & 5/4 only)
C = Differential electrical	VM2C.0 (series 5/15 & 5/4 only)
D = Differential electrical/visual	VM2C.0L… (series 5/15 & 5/4 only)
D4 = Differential electrical/visual with 24VDC Lamp	
DL110 = Differential electrical/visual with 115VAC Lamp	

BOX 7

Mechanical Connections
12 = SAE Connections *(standard)*

BOX8

Supplementary Details
C = with ContaminationSensor CS 1310 (without display; OLFCM only)
CD = with ContaminationSensor CS 1320 (with display; OLFCM only)
AC = with ContaminationSensor CS 1310 and AquaSensor AS 1000 (without display; OLFCM only)
ACD = with ContaminationSensor CS 1320 and AquaSensor AS 3000 (with display; OLFCM only)

Consult Factory for special options.
Not all combinations available.

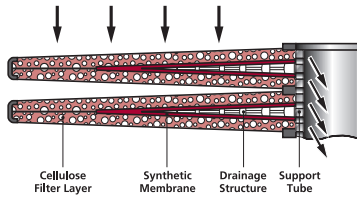
Model Number Selection

OLF Offline Filtration Systems

Formally Known as "MTS - Membrane Technology Systems"

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

Single Membrane Element



Element Cross Section

Features and Benefits

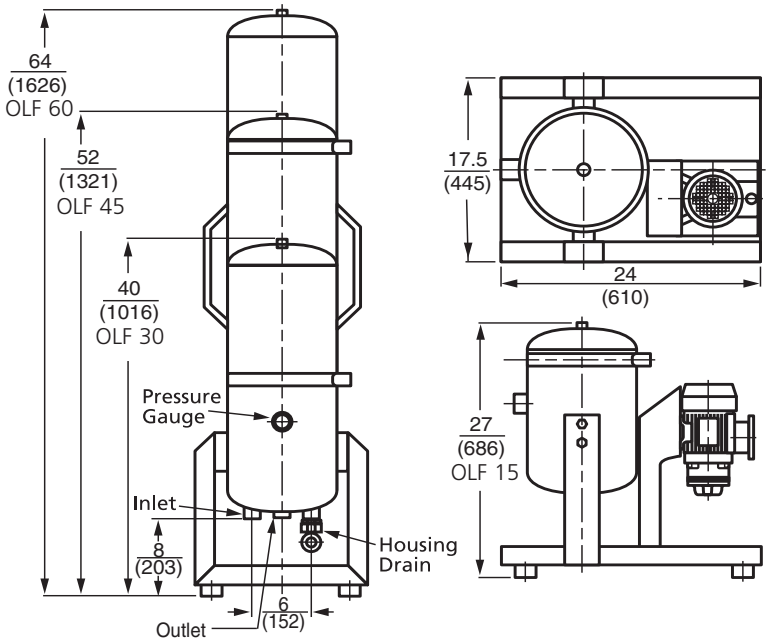
- Effectively cleans hydraulic and cleaning fluids, lubricating oils, and coolants
- Provides excellent dirt removal efficiency, even in single pass filtration
- Available with pump and motor or can be utilized as an individual filter
- Included framework makes unit ready to install
- Easy to retrofit 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

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.



Metric dimensions in ( ).

Offline Filtration Systems OLF

Formally Known as "MTS - Membrane Technology Systems"

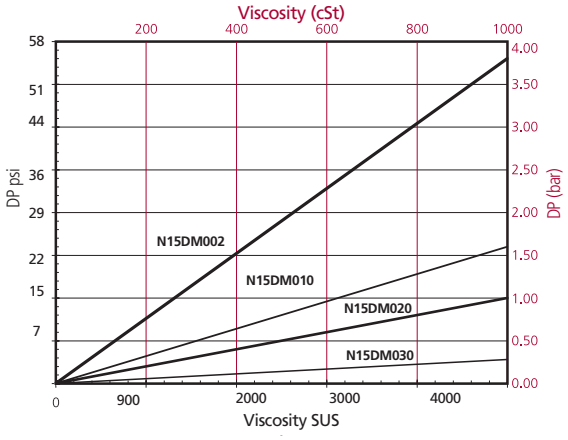
Specifications

	OLF-15	OLF-30	OLF-45	OLF-60
Connections:	Inlet = Female O-Ring Boss; Outlet Male JIC			
Housing Inlet & Outlet:	1 5/6 - 12UN (SAE 16); G 1" BSPP*			
Pump Inlet: Gear	1 1/16 - 12UN (SAE 12); G 3/4" BSPP	1 5/16 - 12UN (SAE 16); G 1" BSPP	1 7/8 - 12UN (SAE 24); G 1 1/2" BSPP	
Filter Element:	N15DMxxx(1x)	N15DMxxx(2x)	N15DMxxx(3x)	N15DMxxx(4x)
Contamination Retention Capacity:	1.1lbs (500g)	2.2lbs (1000g)	3.3lbs (1500g)	4.4lbs (2000g)
Filter Efficiency:	ßx > 1000			
Permissible Δp Across the Element:	72.5 psi (5 bar)			
Element Weight:	6.6lbs (3 kg)	13.2lbs (6 kg)	19.8lbs (9 kg)	26.4lbs (12 kg)
Material of Filter Housing:	Stainless Steel			
Capacity of Pressure Vessel:	5.25 gal. (20 l)	10.50 gal. (39.7l)	15.75 gal. (59.6 l)	20.5 gal. (28.1 l)
Max. Operating Pressure - Filter Housing:	85 psi (5.86			
Material of Seals - Housing:	Buna N	Buna N	Buna N	Buna N
Housing Weight:	25lbs (11.3 kg)	33lbs (15 kg)	53lbs (24 kg)	62lbs (28.1 kg)
Fluid Temperature:	15 to 175°F (-9.4 to 79.4°C)			
Motor-Pump Units:	5 gpm 18.9 lpm)	10 gpm (37.8 lpm)	15 gpm (56.8 lpm)	20 gpm (75.5 lpm)
Pump Operating Pressure:	65 psi (4.5 bar)			
Gear Pump Viscosity Range:	7-5000 SUS (14 to 1078 cSt)			
Gear Pump Motor Capacity:	370 W	570 W	1500 W	1500 W
Material of Seals - Pumps:	Buna N	Buna N	Buna N	Buna N
Dry Weight of OLF System:	50 lbs. (22.7 kg)	77 lbs. (34.9 kg)	116 lbs. (57.6 kg)	132 lbs. (60 kg)

Housing drain standard on all units
BLACK = SAE connections when using adapters which are supplied standard
RED = BSPP connections if supplied adapters

Element Pressure Drop

Differential Pressure at 3.96 gpm (15 L/min)



OLF Offline Filtration Systems

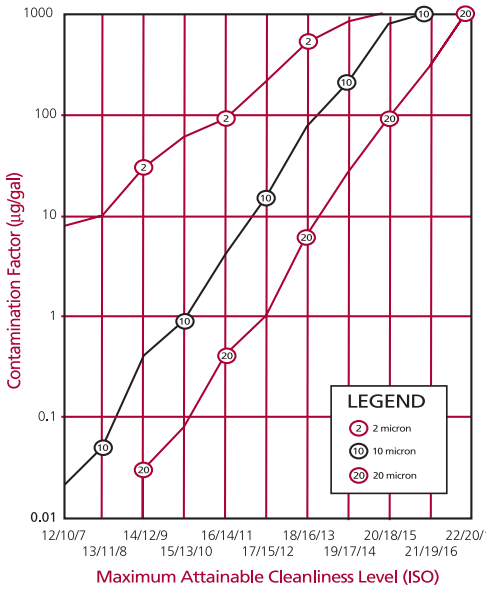
Formally Known as "MTS - Membrane Technology Systems"

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



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:

$$\textbf{Contamination Factor} = \textbf{Contamination Input}\ (\mu g/gal)\ \times \frac{\textbf{Main System Flow Rate}\ (gpm)}{\textbf{Desired Off-line Flow Rate}\ (gpm)}$$

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 µg/gal x 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

Offline Filtration Systems OLF

Formally Known as "MTS - Membrane Technology Systems"

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
OLF							

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	
OLF	30	30	G	L60	N15DM002	E	12	= OLF-30/30-G-L60-N15DM002-E/-12

BOX 1

Model	
OLF =	Stationary offline filter
OLFCM =	Stationary offline filter with integrated contamination monitoring sensors

BOX 2

Size	
15 =	1 element
30 =	2 elements
45 =	3 elements
60 =	4 elements

BOX 3

Pump Flow Rate (must be ≤ to size)	
15 =	5 gpm
30 =	10 gpm
45 =	15 gpm
60 =	20 gpm
Z =	without pump

This code entry (15,30,45,60) must be less than or equal to the same size entry (15,30,45,60)

BOX 4

Pump Type	
G =	Gear Pump
Z =	Without motor-pump

BOX 5

Motor Voltage	
L60 =	115V, Single Phase
O60 =	460V, Three Phase
Z =	Without motor-pump

BOX 6

Filter Element	
N15DM002 =	Dimicron® 2 µm Absolute
N15DM010 =	Dimicron® 10 µm Absolute
N15DM020 =	Dimicron® 20 µm Absolute
N15DM030 =	Dimicron® 30 µm Absolute
Z =	No filter element supplied

BOX 7

Clogging Indicator		
E =	Standard gauge	
BM =	Differential visual	VM2BM.1
C =	Differential electrical	VM2C.0
D =	Differential visual/electrical	

BOX 8

Model	
12 =	SAE adapters (BSPP connections are standard)
V =	Viton® Seals (NBR seals are standard)
PKZ =	On/Off Switch and Overload Protective Motor Switch
C =	Cart-style mobile frame
PC =	Hytrax-HV Contamination Monitoring Unit *(only with L60 motor voltage; contact SI for other product configurations)*
CSI =	CSI-C-11 Sensor Interface Option for data acquisition *(only with PC option)*
CSI-W =	CSI-C-11 Sensor Interface Option for data acquistion with AS1008 Water Saturation Sensor *(only with PC option)*

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

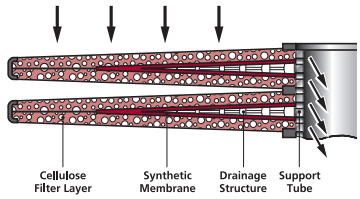
Model Number Selection

Highlighted product eligible for QuickDelivery

N15DM Offline Filtration Systems Replacement Elements

Formally Known as "MTS - Membrane Technology Systems"

Single Membrane Element



Element Cross Section

Features and Benefits

- Removes gels and colloids
- Removes free water (in small quantity)
- Removes varnishes
- Retains fire contaminants at high loading rate
- Improves fluid filterability

Applications

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

Description

The N15DM element from Schroeder are 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 N15DM elements its very impressive dirt retention characteristics. The Dimicron filters are high efficiency, low pressure drop, high dirt holding capacity/long service life.

Specifications

Fluid Compatibility:	Compatible with all petroleum based fluids and most synthetic and lubricating fluids
Temperature Range:	0°C to 80°C (32°F to 176°F)
Maximum Operating Differential Pressure:	4.0 bar (60 psid)
Materials of Construction:	*Filter Medium:* Cellulose based *Hardware:* Polypropylene *Seals:* Flurocarbon (standard)

Schroeder Reference Module	Absolute Rating (99.9% efficiency)
N15DM002	2µm
N15DM005	5 µm
N15DM010	10 µm
N15DM020	20 µm
N15DM030	30 µm

ECO TriMicron Element Series NxTM

Features and Benefits

- Excellent filtration performance ($ß_{5(c)} > 1000$)
- 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

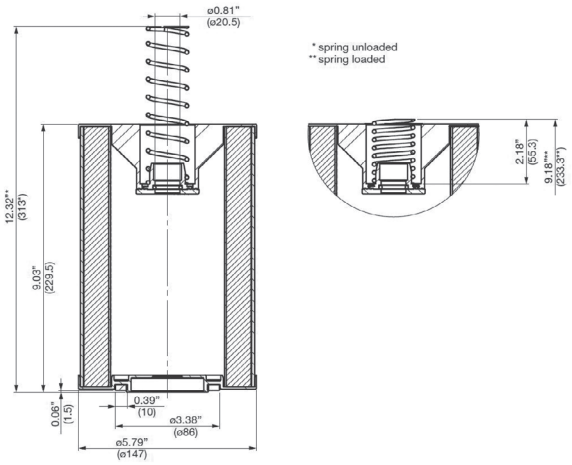
The filter elements in the TriMicron series have been specially developed for the combined filtration of fine solid particle contamination, water and oil-ageing products from hydraulic and lubrication oils in the bypass flow.

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

Specifications

	N1TM003 / ECO p/n 7643926	N14TM003/-ECO 7643925	42.0TM/-ECO 7644096
Multipass Test in Accordance with ISO 16889			
Dirt Holding Capacity @ 2.5 bar ΔP	>250g	>400g	>550g
Filtration Efficiency $ß_{(c)}$	200	200	>500
Water Holding Capacity	400 mL	560 mL	500 mL
Influence on Oil Composition			
Foam Behavior (Flender Foam Test)	increase of 2%		
Oil Additives (Silicon and Boron)	almost no reduction		
Construction of Filter Element			
Contaminants Removed	Particles, water and oil aging products		
Filter Element Design	Synthetic media for particulate and water removal		
Filtration Rating	3 µm		
Permitted Fluid Temperature Range	14 to 176°F (-10 to 80°C)		
Storage Temperature Range	41 to 104°F (5 to 40°C)		

Dimensions



VEU Varnish Elimination Unit

VEU-A-x-M

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

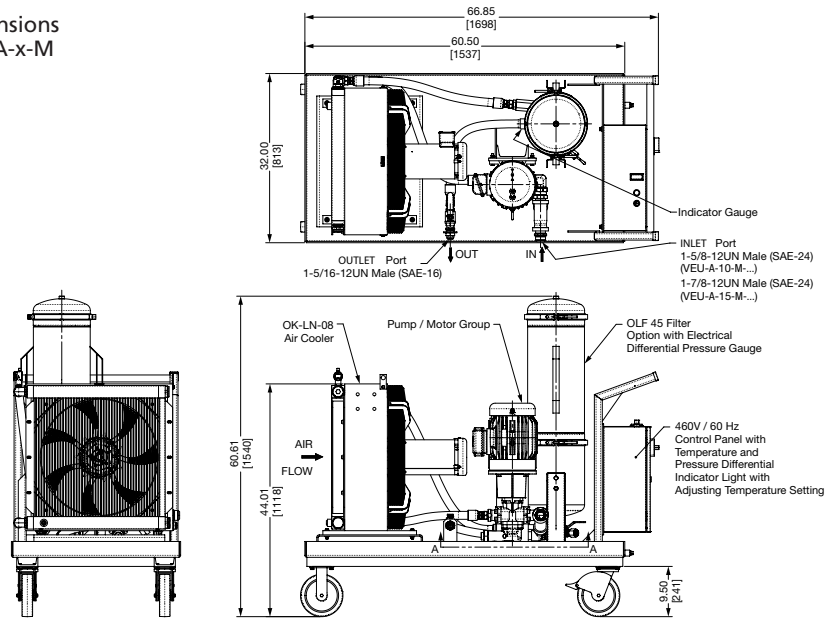
Sizing Chart

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

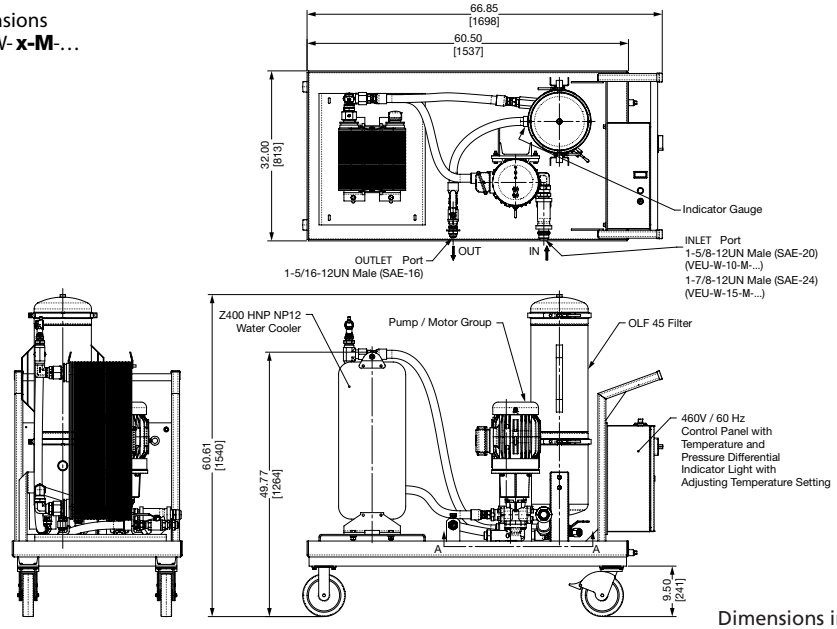
Model Code	Micron Rating	Part No.
N15DM002	2	1251590
N15DM005	5	3252552
N15DM010	10	3115180

Varnish Elimination Unit VEU

Dimensions
VEU-A-x-M



Dimensions
VEU-W-**x-M**-...



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
VEU						

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	
VEU	A	15	M	060	DM02	C	= **VEU-A-15M060DM02C**

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5
Model	**Cooling Method**	**Flow Rate**	**Version**	**Motor Voltage**
VEU	A = Air	10 = 10 gpm	S = Stationary	060 = 460V/ 3 Phase
	W = Water	15 = 15 gpm	M = Mobile	P60 = 575V/ 3 Phase

BOX 6	BOX 7
Motor Voltage	**Clogging Indicator**
DM02 = N15DM002, 2µm Absolute	C = Electrical differential pressure switch w/ indicator light in control panel
DM05 = N15DM005, 5µm Absolute	
DM10 = N15DM010, 10µm Absolute	

Model Number Selection

Preferred order codes designate shorter lead times and faster delivery.

VMU 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 surface.

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 Pressure at Suction Inlet IN:	2.9 to 14.5 psi (-0.2 to 1 bar)
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 boss
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)

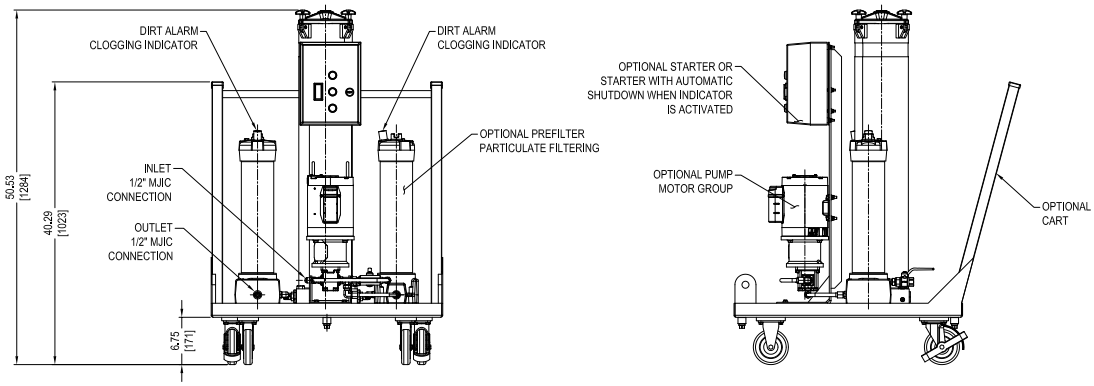
*Weight noted is for a stationary unit.

Varnish Mitigation Unit 1/4 Series

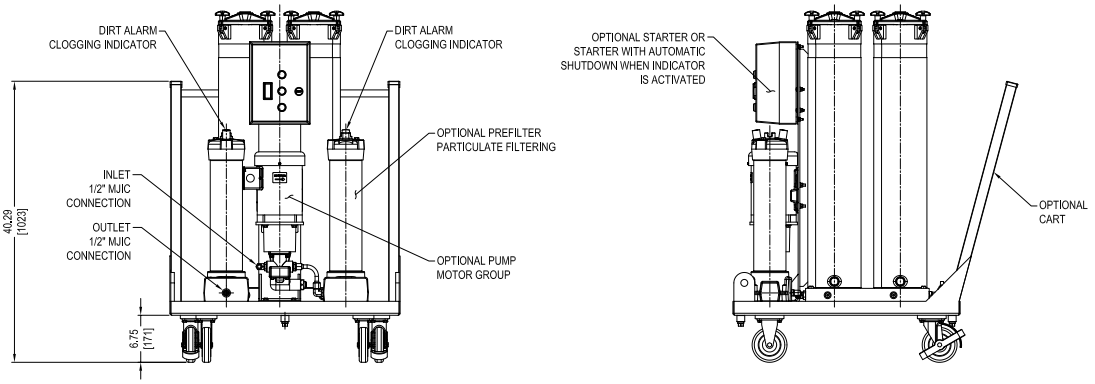
VMU

Dimensions

Dimensions
VMU1 Series



Dimensions
VMU4 Series



Dimensions in inches (mm).

Model Number Selection

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	
VMU	–	–	–	–	–	–	–	–	=

Example: *NOTE: One option 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

BOX 2

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

BOX 3

Type	
M =	Mobile
S =	Stationary

BOX 4

Type of Pump	
G =	Gear Pump
Z =	Without

BOX 5

Power Supply Voltage	
F =	230 V, 60 Hz, 3 Ph
K =	115 V, 60 Hz, 1 Ph
O =	460 V, 60 Hz, 3 Ph (standard)

BOX 6

Prefilter	
G05 =	With 5µm element
G10 =	With 10µm element

BOX 7

Clogging Indicator	
BM =	differential pressure indicator – visual
C =	differential pressure indicator – electrical

BOX 8

Postfilter	
G05 =	With 5µm element
G10 =	With 10µm element

BOX 9

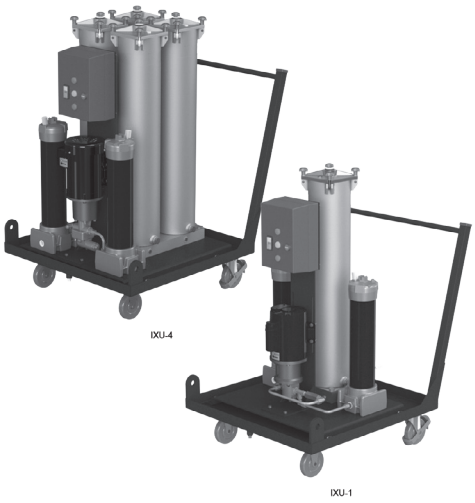
Supplementary Details
PKZ = with on-off switch and overload protective motor switch (standard)
FA1* = with on-off switch, overload protective motor switch and cut-out when filter clogged (requires neutral wire in power supply)
FA2* = with on-off switch, overload protective motor switch and cut-out when filter clogged (does not require neutral wire in power supply)

NOTE:

*Requires C indicator option

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.

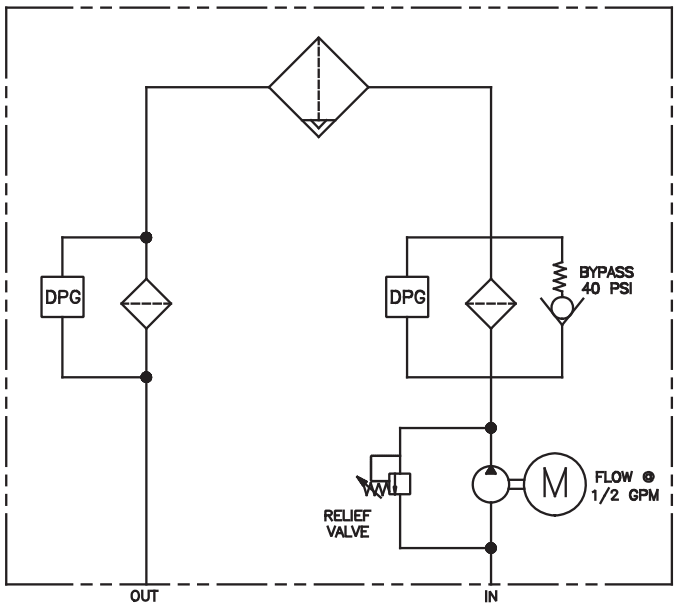
Applications

- 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

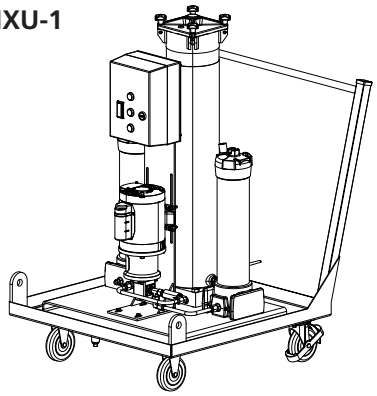


NOTES:

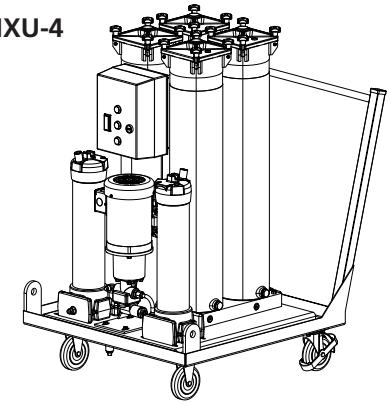
No connection lines included

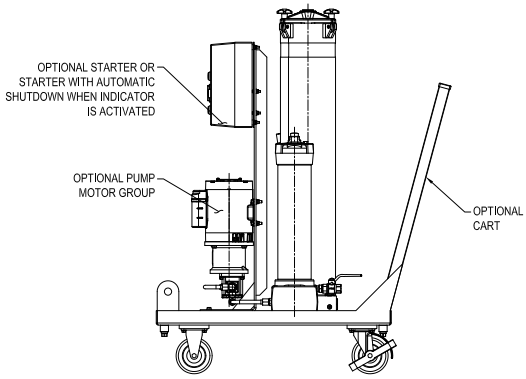
Ion eXchange Unit IXU

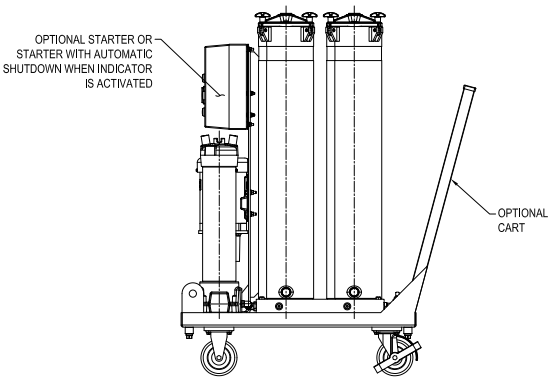
IXU-1

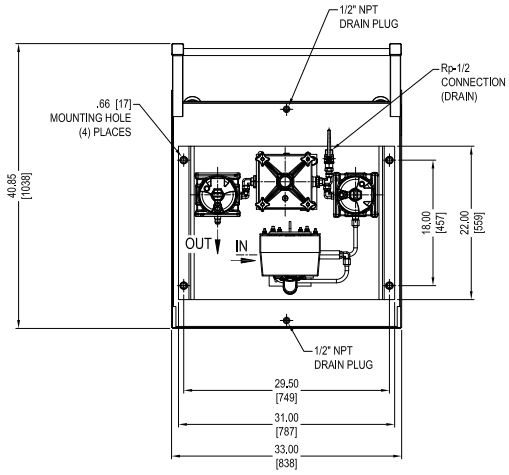


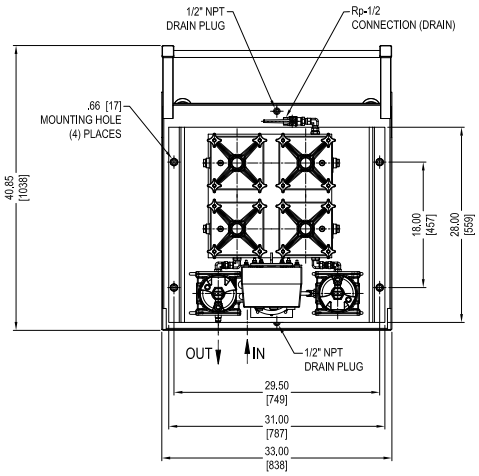
IXU-4

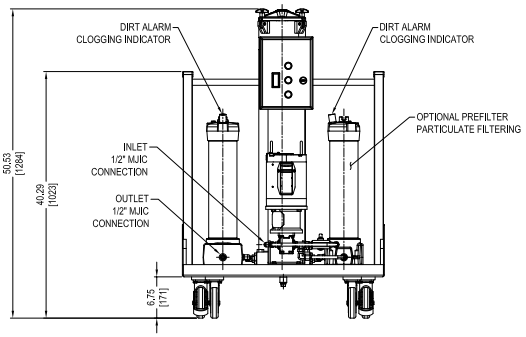


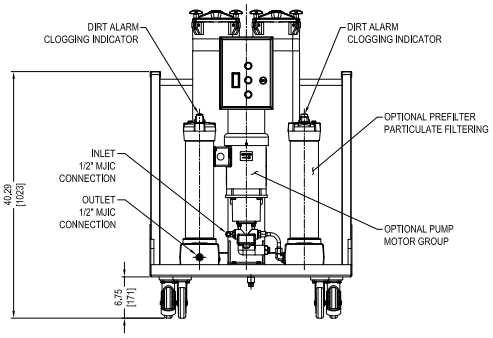












IXU Ion eXchange Unit

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°F to 104°F (0 to 40°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)
Noise Level:	<80 dB at 3 feet (1 m)
Storage Temperature:	32°F to 140°F (0°C to 60°C)

Model Number Selection

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

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

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	
IXU	1	M	G	J	G10	C	G05		**= IXU1MGJG10CG05**

BOX 1

Model
IXU

BOX 2

Flow Rate
1 = 0.5 gpm (1.9 l/min)
4 = 2.5 gpm (9.5 l/min)

BOX 3

Transport
M = Mobile
S = Stationary

BOX 4

Pump
G = Gear Pump

BOX 5

Connection Voltage
Omit = 115 V / 60 Hz, 3 Phase
B = 460 V / 60 Hz, 3 Phase
E = 575 V / 60 Hz, 3 Phase

BOX 6

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

BOX 7

Clogging Indicator
C = Differential Pressure Indicator – Electrical

BOX 8

Post-filter
05 = w/ 5µm element
10 = w/ 10µm element
G05 = 5 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

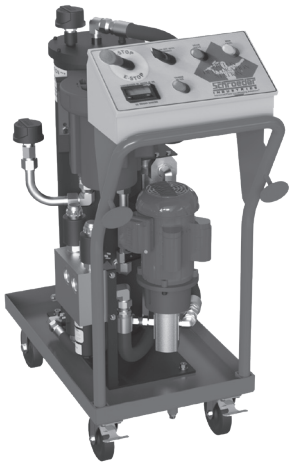
Model Code	P/N	Description
IXE36-5.5	3348961	Standard Ion Exchange Resin Element
KKZ5V	7615359	5 Micron Pre/ Post Element
KKZ10V	7628656	10 Micron Pre/ Post Element

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

Triton Dehydration Station®

Triton-A

U.S. Patent 8491785



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
- 2.4kW heater option for unheated reservoirs
- 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

Part of Schroeder Industries Energy Sustainability Initiative

2.0 gpm
7.6 L/min

Description

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.

Principle of Operation

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 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.

Specifications

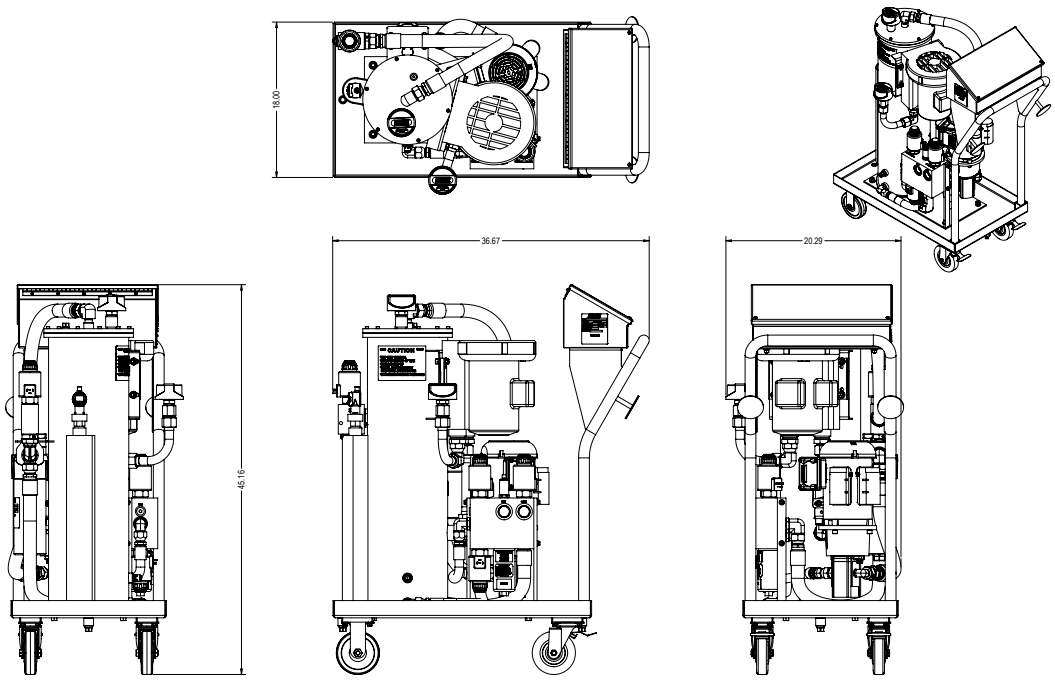
Dimensions:	45.2"(H) x 36.7"(W) x 20.3"(D)
Dry Mass:	295 lbs (134 kg)
Inlet Connections:	1" SAE
Outlet Connections:	1" SAE
Flow Rate:	120 gallons/hour or 2.0 gpm (7.6 L/min)
Permissible Inlet Pressure Range:	-5.8 psig (-0.4 bar) to 32 psia (2.2 bar)
Max. Permissible Outlet Pressure:	75 psig (5 bar)
Fluid 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

Element Performance

Media	Filter Rating	DHC (gm)
Z1	ß $4.2_{(C)}$ ≥1000	55
Z3	ß $4.8_{(C)}$ ≥1000	57
Z5	ß $6.3_{(C)}$ ≥1000	62
Z10	ß $10_{(C)}$ ≥1000	52
Z25	ß $24_{(C)}$ ≥1000	48

Triton-A Triton Dehydration Station®

U.S. Patent 8491785



TDSAVMABxx1

Dimensions in inches.

Model Number Selection

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
TDS							

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	
TDS	A	V	M	A	B	05	1	**= TDSAVMAB051H**

BOX 1

Model
TDS

BOX 2

Flow Rate
A = 2.0 gpm

BOX 3

Seals
V = Viton®

BOX 4

Mobility
S = Stationary
M = Caster Base

BOX 5

Voltage
A = 110V/60 Hz/ 1 Phase
B = 220V/60 HZ/ 1 Phase
C = 220V/50 Hz/ 1 Phase

BOX 6

Air Source
B = Integral Blower
C = Compressed Air (customer must supply clean, dry air)

BOX 7

Media
01
03
05
10
25

BOX 8

Option
X = Class 1, Div 2 explosion-proof
1 = Cart Version
Y = Built with CSA approved components (requires CSA inspection on-site)
H = 2.4 KW heater (only available in 220/60/1 phase voltage option)

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

Schroeder SMART TECHNOLOGY INSIDE

Triton Dehydration Station®

U.S. Patent 8491785

Triton-E

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 - 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 Sustainability Initiative

15 gpm
56.78 L/min

Description

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.

Principle of Operation

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.

Specifications

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 page)
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

Element Performance

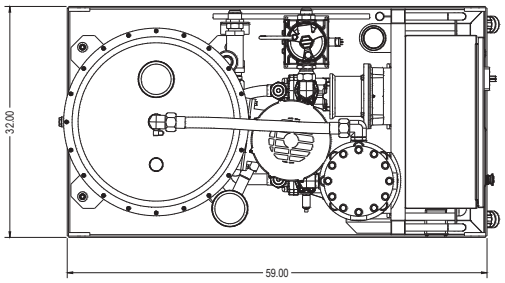
Media	Filter Rating	DHC (gm)	Media	Filter Rating	DHC (gm)
Z1	ß $4.2_{(c)}$ ≥1000	55	Z10	ß $10_{(c)}$ ≥1000	52
Z3	ß $4.8_{(c)}$ ≥1000	57	Z25	ß $24_{(c)}$ ≥1000	48
Z5	ß $6.3_{(c)}$ ≥1000	62			

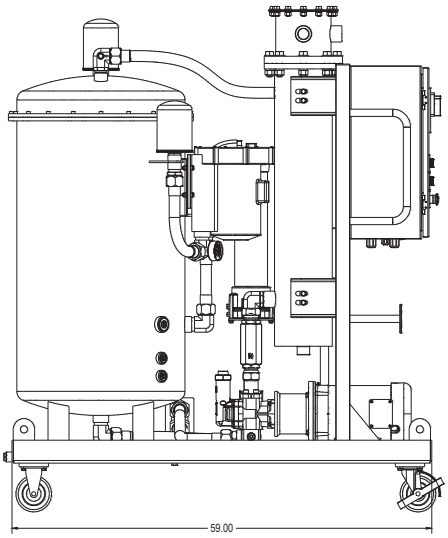
Triton-E

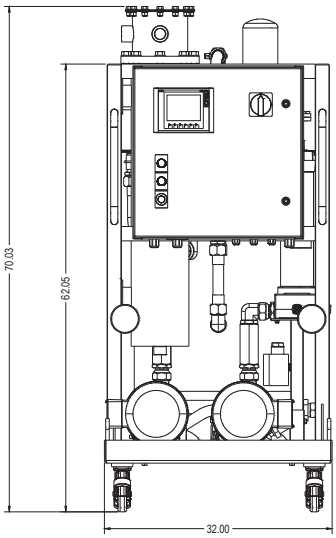
Triton Dehydration Station®

U.S. Patent 8491785

TRITON DEHYDRATION STATION®







Metric dimensions in ( ).

= TDSEVMABG05H

Model Number Selection

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9
TDSE–								

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	
TDSE–		V	M	A	B	K	G05	H	**= TDSEVMABKG05H**

BOX 1

Model
TDSE

BOX 2

Flow Rate
Omit = 15 gpm
22 = 22 gpm
VF = 3-15 gpm (Variable)

BOX 3

Seals
V = Viton®

BOX 4

Mobility
S = Stationary
M = Caster Base

BOX 5

Voltage
A = 460V/3/60 Hz
B = 575V/3/60 Hz

BOX 6

Air Source
B = Integral Blower

BOX 7

FIlter Housing
K = 27" filter housing
Q = 39" QF5 filter housing

BOX 8

Media*
01 = 1 µm Z-Media
03 = 3 µm Z-Media
05 = 5 µm Z-Media
10 = 10 µm Z-Media
25 = 25 µm Z-Media

BOX 9

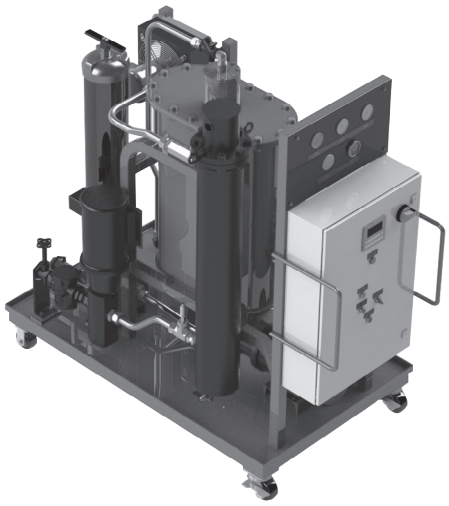
Option
H = 12500 W Heater

NOTES:

*K filter housing will use the GeoSeal® elements

Q filter housing will use the 39QCLQF Filter Systems elements

North American Vacuum Dehydrator 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 Sustainability Initiative

30 gpm
113.6 L/min

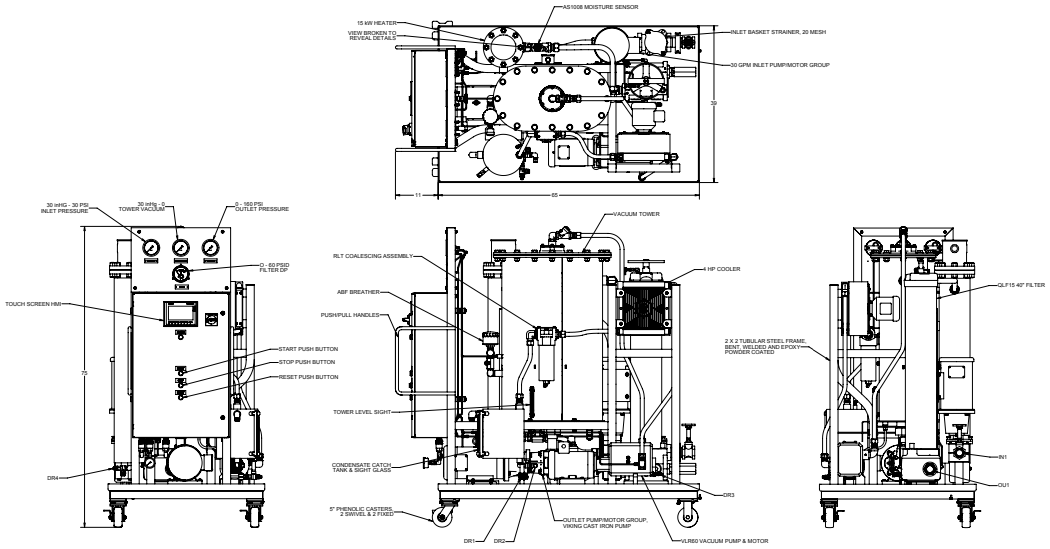
Description

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.

Specifications

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

NAV North American Vacuum Dehydrator



Model Number Selection

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7
NAV						

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	
NAV	30	M	2	A	H	10	**= NAV30M2AH10**

BOX 1

Series
NAV

BOX 2

Flow Rate
30 = 30 gpm

BOX 3

Operating Fluid
M = Mineral Oils (including oils w/ max. Viscosity as identified in specifications

BOX 4

Type
1 = Stationary
2 = Mobile

BOX 5

Voltage/Frequency
A = 460V / 60Hz / 3Ph+PE
B = 575V / 60HZ / 3PH+PE

BOX 6

Heater
H = Standard

BOX 7

Filtration Rating
3 = 3 Micron
5 = 5 Micron
10 =10 Micron
25 = 25 Micron

Vacuum Dehydrator SVD01

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 unit
- 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)

1.6 gpm
6 L/min

Description

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.

Specifications

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 (without suction hose):	-2.9 to 14.5 psi (-0.2 to 1 bar)
Permitted Pressure Viscosity Range**:	78 to 1623 SUS (15 to 350 mm2/cSt) – w/o integrated heater 78 to 2550 SUS (15 to 550 mm2/cSt) – with integrated heater
Permitted Viscosity Range for Particle Measurement:	15 to 200 mm²/s – with measuring 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 *(without heater)* / required external fuse*:	≈ 1 kW / 16 A for circuit breakers with trip characteristics type C
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
Achievable Residual Water Content:	<100 ppm — hydraulic & lubricating oils < 50 ppm — turbine oils (ISO VG 32/46) < 10 ppm — transformer oils ***

NOTES:

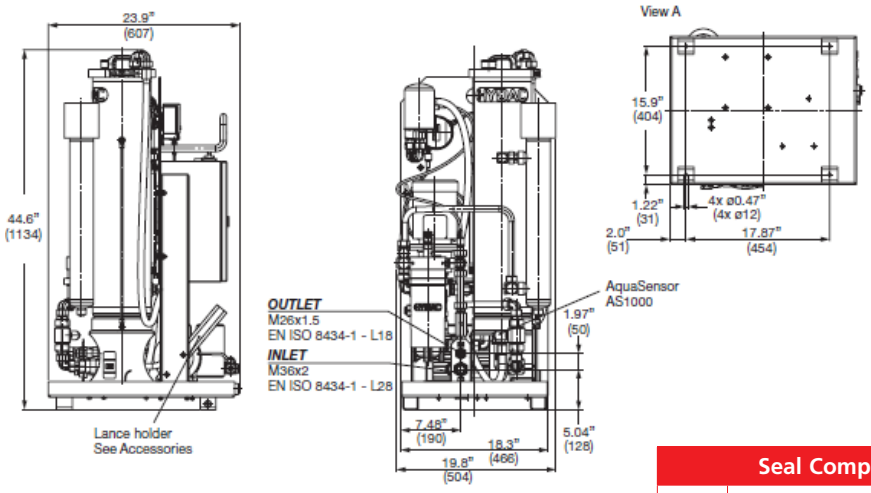
*Maximum specifications given, equipment-dependent

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

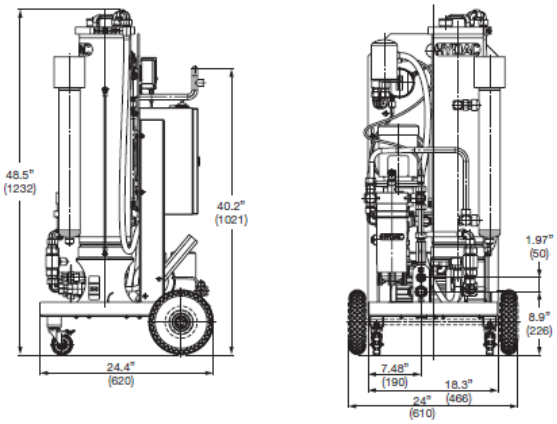
*** Units are not suitable for "Online" and "Onload" operation (transformer in operation and connected to grid).

SVD01 Vacuum Dehydrator

SVD01 Stationary



SVD01 Mobile



Seal Compatibility		
Seal Type	Fluid Type	Model Code Term (see Box 3.)
NBR	• Mineral oils to DIN 51524 • Gear oils to DIN 51517, 51524	H
FKM	• Synthetic esters (HEES) DIN 51524/2 • Vegetable oils (HETG, HTG) •HFD-R fluids (not for pure phosphate ester which require EPDM seals)	V

Dimensions in inches (millimeters).

Model Number Selection

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

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8
SVD							

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	
SVD	01	H	S	46	24H	05	TWS	**= SVD01HS4624H05TWS**

BOX 1

Model
SVD

BOX 2

Flow Rate	
01 =	1.3 gpm at 50 Hz; ~ 1.6 gpm at 60 Hz

BOX 3

Fluid Type	
H =	Hydraulic & Synthetic Fluid
V =	HDF-R, Biodegradable

BOX 4

Mobility	
S =	Stationary
M =	Caster Base

BOX 5

Voltage	
23 =	230VAC/60 Hz1-Phase
46 =	460VAC/60 Hz/3-Phase*
235 =	230VAC/50 Hz/1-Phase

BOX 6

Power	
12X =	1000 Watts
24H =	2400 Watts w/ Heater (230V AC = 1 kW) (460V AC - 2.4 kW)

BOX 7

Media (OLF5 Element Filtration Rating
02
05
10
20

BOX 8

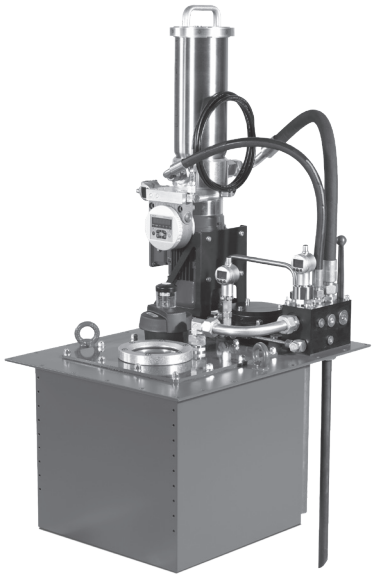
Option	
None =	Omit
TWS =	Water Sensor
TCMTWS =	Contamination and Water Sensor

*Supplied without connector

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

OXiStop OXS LID Series

OXS



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

Description

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.

What's Included

- OXiStop LID according to model code
- Membrane bag holder
- Integrated membrane
- MiniOx degassing unit
- KLC5 offline filtration unit with optional TestMate® Contamination Sensor (TCM)
- TestMate® 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

OXS OXiStop OXS LID Series

Specifications

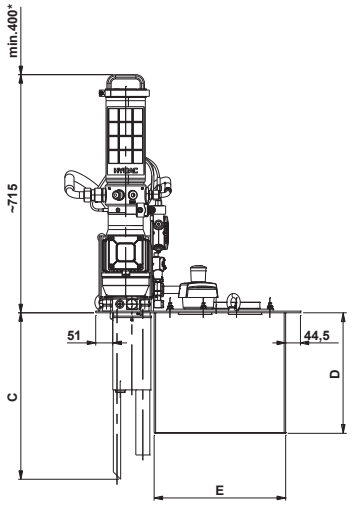
	OXS 30LID	OXS 45LID	OXS 70LID	OXS 150LID	OXS 250LID	OXS 325LID	OXS 500LID
Differential Operating Volume:	8 gal.	11.8 gal.	18.5 gal.	39.5 gal.	66 gal.	86 gal.	132 gal.
Typical Degassing Rate*:	up to 2.3 gallons per hour						
Max. Viscosity:	up to 1,500 SUS						
Max. Fluid Flow Rate IN/OUT:	238 gpm						
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						

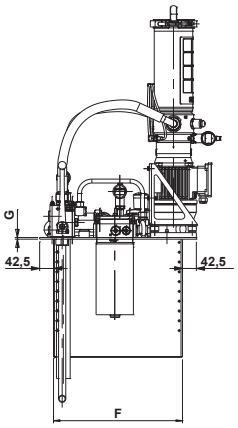
* Typical values for ISO VG 46, 40 °C when saturated with gas. The degassing rate depends on the total gas content in the oil, the oil temperature, and especially the oil viscosity. The degassing rate reduces as viscosity increases.

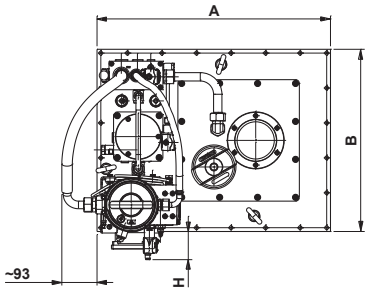
** Others on request

OXiStop OXS LID Series

OXS

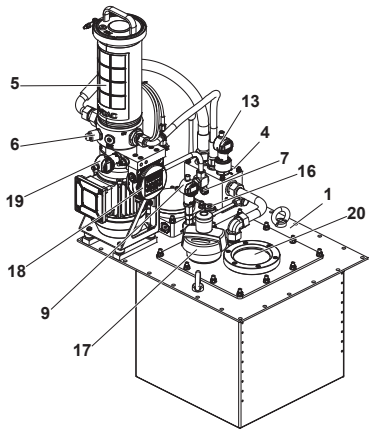


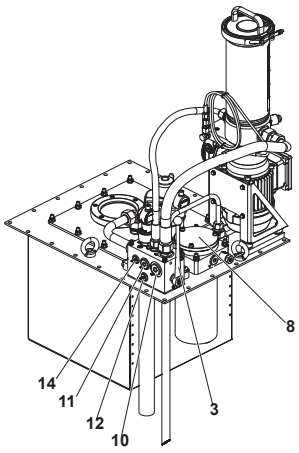




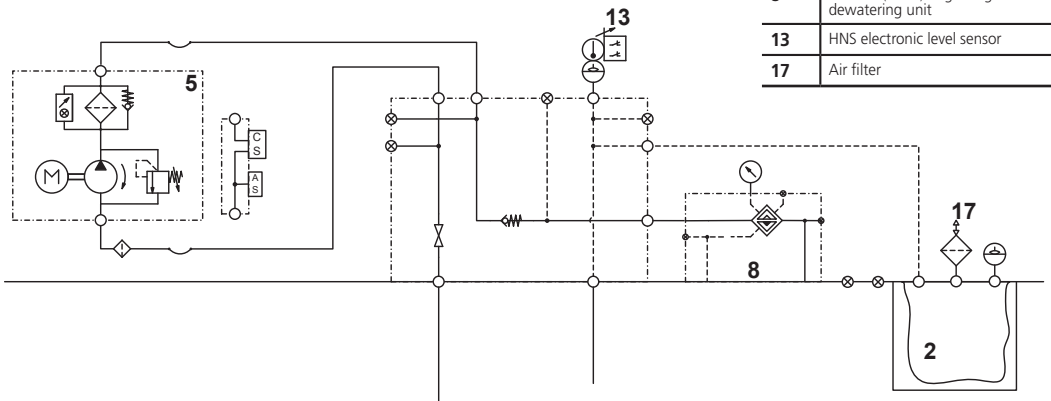
	A	B	C	D	E	F	G	H
OXS 30LID	615	480	500	362	395	395	5	74
OXS 45LID	615	480	610	472	395	395	5	74
OXS 70LID	615	480	820	682	395	395	5	74
OXS 150LID	1015	680	610	472	795	595	5	-27
OXS 250LID	1015	680	820	682	795	595	5	-27
OXS 325LID	1415	880	607	472	1195	795	8	-127
OXS 500LID	1415	880	817	682	1195	795	8	-127

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
2	Tank membrane
5	KLC5 offline filtration n
3	Valve and connection block
4	KLC5 offline filtration unit
8	MiniOX (MOX) degassing and dewatering unit
13	HNS electronic level sensor
17	Air filter



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

OXS OXiStop OXS LID Series

How to Build a Valid Model Number for a Schroeder OXiStop OXS LID Series:

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9
OXS –		–		–		–		–

Example: *NOTE: One option per box*

BOX 1	BOX 2	BOX 3	BOX 4	BOX 5	BOX 6	BOX 7	BOX 8	BOX 9	
OXS –	30LID –	O –	1 –	Z –	Z –	1 –	2 –	WP	**= OXS30LIDO1ZZ12WP**

BOX 1

Model
OXS

BOX 2

Size	
30LID =	Operating volume 8 gal.
45LID =	Operating volume 11.8 gal.
70LID =	Operating volume 18.5 gal.
150LID =	Operating volume 39.5 gal.
250LID =	Operating volume 66 gal.
325LID =	Operating volume 86 gal.
500LID =	Operating volume 132 gal.

BOX 3

Voltage
O = 460 V/60Hz/3-Phase
N = 400 V/50Hz/3-Phase

BOX 4

Sealing Material
1 = NBR seals, PUR membrane

BOX 5

Return Line Filter
Z = Omit

BOX 6

Plate Heat Exchanger + Pump Motor Group
Z = Omit

BOX 7

Vacuum Pressure Monitoring, Degassing Unit
1 = Pressure Gauge
2 = Electronic Pressure Sensor (EDS)

BOX 8

Level/Temperature Monitoring
2 = Electronic Level Sensor with integrated temperature sensor

BOX 9

Measuring Equipment	
Z =	Omit
WP =	Water Sensor (TWS-D) + Contamination Sensor (TCM)

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