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

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

**Mounting Requirement**
Customer is responsible to cut an appropriately sized hole on top of their tank. This adapter has two (2) ports: one for Suction and one for Return. Also includes a breather port.
Reservoir pattern is six (6) .18" holes on a 4.94" BCD with a 4.25" diameter center hole. See Drawing S-1048.

**Specifications**

<table>
<thead>
<tr>
<th>Reservoir Mounting Pattern</th>
<th>Fits standard 6-bolt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Port Thread Size</td>
<td>1.25&quot; SAE O-Ring Boss Suction Port</td>
</tr>
<tr>
<td>Return Port Thread Size</td>
<td>1.00&quot; SAE O-Ring Boss Return Port</td>
</tr>
<tr>
<td>Breather Port Thread Size</td>
<td>¼&quot; NPT</td>
</tr>
<tr>
<td>Return Tubes</td>
<td>Suction and Return downtubes included and recommended to be cut to length and bent for proper fluid turnover in reservoir</td>
</tr>
</tbody>
</table>
Reservoir Filtration System Adapter

Parts List Drawing

Installation Details

Model Number Selection

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

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>RFSA</td>
<td></td>
</tr>
</tbody>
</table>

Example: NOTE: Box 2 can have multiple options.

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>RFSA</td>
<td></td>
</tr>
</tbody>
</table>

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

Parts List

Drawing

Access Adapter

Reservoir Kidney Loop

Dimensions and Installation

Model Number

Selection

Notes:

- The turnover of the oil in the reservoir. Caution must be taken to avoid kinking a small volume of oil from being filtered and will provide for complete filtration from the suction line. The latter is preferred as this will prevent only a small volume of oil from being filtered and will provide for complete filtration from the suction line.
- For final installation, the return tube should be cut approximately 5.00 inches shorter than the suction tube or bent 45 to 90 degrees away from the return port.
- For final installation, the return tubing should be sourced to reach near the floor of the reservoir. If the stock length of the tubing is too short, then new tubing should be sourced to reach near the floor of the reservoir. If the stock length of the tubing is too short, then new tubing should be sourced to reach near the floor of the reservoir.
- The suction tube should remain straight and be cut (if necessary) using a tubing cutter. The suction tubing should be sourced to reach near the floor of the reservoir, if the stock length of the tubing is too short, then new tubing should be sourced to reach near the floor of the reservoir.

<table>
<thead>
<tr>
<th>ITEM NO.</th>
<th>QTY.</th>
<th>DESCRIPTION</th>
<th>PART NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>1</td>
<td>TUBING, RD, STL, DOM, 1.25X1.12X.065</td>
<td>7624701</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>TUBING, RD, STL, DOM, 1.00X.90X.049</td>
<td>7624699</td>
</tr>
<tr>
<td>9</td>
<td>6</td>
<td>MS, PH, PHIL, #10-32UNF x .75, SS, 410</td>
<td>7600575</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>SLEEVE, TUBE, 20, 1-5/8-12</td>
<td>7622656</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>NUT, TUBE, 20, 1-5/8-12</td>
<td>7618263</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>SLEEVE, TUBE FLARE, 16, 1-5/16-12</td>
<td>7622658</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>CONNECTOR, MALE JIC X PIPE, 16MJ-16MP</td>
<td>7608265</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>GASKET, FILL CAP, CORK</td>
<td>7610277</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>NUT, TUBE, 16, 1-5/16-12</td>
<td>7618262</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>CONNECTOR, MALE JIC X PIPE, 20MJ-20MP</td>
<td>7629131</td>
</tr>
</tbody>
</table>

SCHROEDER INDUSTRIES 101

CNNC1000
CNS 1939
CSI-C-11
HY-TRAX
RBSA
CSM
FCU
MCS
FS
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
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

<table>
<thead>
<tr>
<th>Specification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow Rating:</td>
<td>4 gpm (15.14 L/min) max</td>
</tr>
<tr>
<td>Maximum Viscosity:</td>
<td>1,600 SUS (350 cSt)</td>
</tr>
<tr>
<td>Hose Pressure Rating:</td>
<td>30 psig (2.0 bar) @ 150°F (65.6°C)</td>
</tr>
<tr>
<td></td>
<td>Full vacuum @ 150°F (65.6°C)</td>
</tr>
<tr>
<td>Fluid Temperature:</td>
<td>25°F to 150°F (-4°C to 65°C)</td>
</tr>
<tr>
<td>Material:</td>
<td>Element case: Aluminum</td>
</tr>
<tr>
<td>Seal Material:</td>
<td>Buna N</td>
</tr>
<tr>
<td>Compatibility:</td>
<td>All petroleum based hydraulic fluid. Contact factory for use with other fluids.</td>
</tr>
<tr>
<td>Motor:</td>
<td>115 VAC single phase .25 hp</td>
</tr>
<tr>
<td>Weight:</td>
<td>Single housing - 40 lbs</td>
</tr>
<tr>
<td></td>
<td>Dual housing - 44 lbs</td>
</tr>
<tr>
<td></td>
<td>Backpack version - 39 lbs (Does not include weight of hose/wands)</td>
</tr>
</tbody>
</table>

For replacement element part numbers, please see “Appendix Section - Replacement Elements” of this catalog.
# How to Build a Valid Model Number for a Schroeder HFS-BC:

- **Model**: 
  - **Box 1**: HFS-BC
  - **Box 2**: A
  - **Box 3**: 2
  - **Box 4**: 09
  - **Box 5**: H10
  - **Box 6**: H05
  - **Box 7**: B
  - **Box 8**: E

- **Voltage**: 
  - **Box 2**: A = 120VAC / 1-Phase / 60 Hz
  - **Box 3**: T = 12 Volt DC Option

- **Number of Filter Housings**: 
  - **Box 4**: 09
  - **Box 5**: 1 = Single
  - **Box 6**: 2 = Dual

- **Element Media First Housing**: 
  - **Box 5**: H03 = 3 μm Excellement® Z-Media® (synthetic)
  - **Box 6**: H05 = 5 μm Excellement® Z-Media® (synthetic)
  - **Box 7**: H10 = 10 μm Excellement® Z-Media® (synthetic)
  - **Box 8**: H25 = 25 μm Excellement® Z-Media® (synthetic)
  - **Box 9**: GW = Water Removal

- **Element Media Second Filter (Dual Only)**: 
  - **Box 5**: H03 = 3 μm Excellement® Z-Media® (synthetic)
  - **Box 6**: H05 = 5 μm Excellement® Z-Media® (synthetic)
  - **Box 7**: H10 = 10 μm Excellement® Z-Media® (synthetic)
  - **Box 8**: H25 = 25 μm Excellement® Z-Media® (synthetic)
  - **Box 9**: GW = Water Removal

- **Seal Material**: 
  - **Box 7**: B = Buna

- **Clogging Indicator**: 
  - **Box 8**: E = Standard Visual Indicator

- **Options**: 
  - **Box 9**: BP = BackPack Version (Single Housing Only)
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.

### 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

### Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>HFS-15-E: 4 gpm (15 L/min) HFS-15-P: 2.6 gpm (9.84 L/min)</td>
<td>Flow Rating: HFS-15-E: 4 gpm (15 L/min) HFS-15-P: 2.6 gpm (9.84 L/min)</td>
</tr>
<tr>
<td>Vane pump</td>
<td>Pump Type: Vane pump</td>
</tr>
<tr>
<td>58 psi (4.0 bar)</td>
<td>Maximum Operating Pressure: 58 psi (4.0 bar)</td>
</tr>
<tr>
<td>-5.8 to 8.7 psi (-0.4 bar to + 0.6 bar)</td>
<td>Permitted Suction Pressure At Port: -5.8 to 8.7 psi (-0.4 bar to + 0.6 bar)</td>
</tr>
<tr>
<td>HFS-15-E: 42 to 1623 SUS (5 ... cSt)</td>
<td>Viscosity Range: HFS-15-E: 42 to 1623 SUS (5 ... cSt) HFS-15-P: 42 to 927 SUS (5 ... cSt)</td>
</tr>
<tr>
<td>HFS-15-P: 42 to 927 SUS (5 ... cSt)</td>
<td>Fluid Temperature: 14°F to 176°F (-10°C to +80°C)</td>
</tr>
<tr>
<td>14°F to 104°F (-10°C to +40°C)</td>
<td>Ambient Temperature: 14°F to 104°F (-10°C to +40°C)</td>
</tr>
<tr>
<td>FKM (FPM, Viton®)</td>
<td>Seal Material: FKM (FPM, Viton®)</td>
</tr>
<tr>
<td>30.9 lbs. (14 kg) HFS-15-P: 36.4 lbs. (16.5 kg)</td>
<td>Weight: HFS-15-E: 30.9 lbs. (14 kg) HFS-15-P: 36.4 lbs. (16.5 kg)</td>
</tr>
<tr>
<td>Suction hose length: 8.2' (2.5m)</td>
<td>Hoses w/ crimped wands (standard): Suction hose length: 8.2' (2.5m)</td>
</tr>
<tr>
<td>Return hose length: 8.2' (2.5m)</td>
<td>Return hose length: 8.2' (2.5m)</td>
</tr>
<tr>
<td>Zinc-plated steel</td>
<td>Hose material: PVC</td>
</tr>
<tr>
<td></td>
<td>Wand material: Zinc-plated steel</td>
</tr>
</tbody>
</table>
Hand Held Portable Filter

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

**BOX 1**

<table>
<thead>
<tr>
<th>Model</th>
<th>Size</th>
<th>Type</th>
<th>Element Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>HFS</td>
<td>15</td>
<td>E</td>
<td>09</td>
</tr>
<tr>
<td>10</td>
<td>2.6 gpm (10 L/min) (for type “P” only)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**BOX 2**

<table>
<thead>
<tr>
<th>Filter Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>NX = Particulate Removal Element</td>
</tr>
<tr>
<td>AM = Water Removal</td>
</tr>
</tbody>
</table>

**BOX 3**

<table>
<thead>
<tr>
<th>Element Media</th>
</tr>
</thead>
<tbody>
<tr>
<td>03 = 3 μm Excellement® Z-Media® (synthetic)</td>
</tr>
<tr>
<td>05 = 5 μm Excellement® Z-Media® (synthetic)</td>
</tr>
<tr>
<td>10 = 10 μm Excellement® Z-Media® (synthetic)</td>
</tr>
<tr>
<td>25 = 25 μm Excellement® Z-Media® (synthetic)</td>
</tr>
</tbody>
</table>

**BOX 4**

<table>
<thead>
<tr>
<th>Power Supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Omit = 120 V, 60 Hz, 1 Ph (0.25 kW)</td>
</tr>
<tr>
<td>M = 230 VAC 50 hertz single phase</td>
</tr>
</tbody>
</table>

**BOX 5**

<table>
<thead>
<tr>
<th>Clogging Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>E = Back-pressure indicator</td>
</tr>
</tbody>
</table>

**Description**

- **Suction Hose/Pressure Hose**
- **Thread**
- **Material Suction/Pressure Hose**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part no.</th>
<th>Suction Hose/Pressure Hose</th>
<th>Thread</th>
<th>Material Suction/Pressure Hose</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFU-15-SKDF5</td>
<td>4270516</td>
<td>2.5 m / 5 m</td>
<td>M30x2 / M26x1.5</td>
<td>1SN / 2TE</td>
</tr>
</tbody>
</table>

**Accessories For Hoses With Threaded Connection**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part No.</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFU-15-SKDF5-LF</td>
<td>4270559</td>
<td>Wand (length of 1.30 m)</td>
</tr>
<tr>
<td>MFU-15-SKDF5-SF</td>
<td>4270560</td>
<td>Suction filter</td>
</tr>
<tr>
<td>MFU-15-SKDF5-ZVF</td>
<td>4270518</td>
<td>Counter</td>
</tr>
<tr>
<td>MFU-15-SKDF5-ZPF</td>
<td>4270561</td>
<td>Pump Nozzle</td>
</tr>
<tr>
<td>MFU-15-SKDF5-ZPWF</td>
<td>4270519</td>
<td>Pump Nozzle + Counter</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow Rating</td>
<td>10 gpm (37.9 L/min) max</td>
</tr>
<tr>
<td>Viscosity Range</td>
<td>46 - 1,000 SUS (6 - 216 cSt)</td>
</tr>
<tr>
<td>Hose Pressure Rating</td>
<td>30 psig (2.0 bar) @ 150°F (65.6°C)</td>
</tr>
<tr>
<td></td>
<td>Full vacuum @ 150°F (65.6°C)</td>
</tr>
<tr>
<td>Fluid Temperature</td>
<td>25°F to 150°F (-4°C to 65°C)</td>
</tr>
<tr>
<td>Bypass Valve Setting</td>
<td>Cracking: 25 psi (1.7 bar)</td>
</tr>
<tr>
<td>Material</td>
<td>Element Case: Aluminum</td>
</tr>
<tr>
<td>Seal Material</td>
<td>Buna N</td>
</tr>
<tr>
<td>Compatibility</td>
<td>All petroleum based hydraulic fluid. Contact factory for use with other fluids.</td>
</tr>
<tr>
<td>Motor</td>
<td>115 VAC Single phase 1 hp</td>
</tr>
<tr>
<td>Weight</td>
<td>102 lbs. (46.3 kg)</td>
</tr>
</tbody>
</table>

For replacement element part numbers, please see “Appendix Section - Replacement Elements” of this catalog.
How to Build a Valid Model Number for Schroeder MFDBC:

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFDBC</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

Example: NOTE: One option per box

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFDBC</td>
<td>1</td>
<td>09</td>
<td>H10</td>
<td>H05</td>
<td>–</td>
</tr>
</tbody>
</table>

= MFDBC109H10H05

**Model Number Selection**

**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

**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

**Voltage**

- Omnit = 115 V / 60 Hz
- A = 220 V / 60 Hz
- B = 220 V / 50 Hz

**NOTES:**

Box 6. If 220V, 50 Hz option selected, flow rating is reduced to ~8-gpm and will have plug cutoff.
Mobile Filtration Systems
U.S. Patents 6568919 7604738

Features and Benefits
- Single, double and triple bowl length option allows the flexibility of additional dirt-holding capacity
- Modular base eliminates hoses between components and minimizes leakage
- Base-ported filter provides easy element service from the top cap
- DS 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.

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)
- Hose Pressure Rating: 30 psig (2.0 bar) @ 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
<table>
<thead>
<tr>
<th>gpm</th>
<th>MFS-2K lb (kg)</th>
<th>MFS-3K lb (kg)</th>
<th>MFD-2K lb (kg)</th>
<th>MFD-3K lb (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>180 (82)</td>
<td>190 (86)</td>
<td>203 (92)</td>
<td>220 (100)</td>
</tr>
<tr>
<td>14</td>
<td>187 (85)</td>
<td>197 (89)</td>
<td>210 (95)</td>
<td>227 (103)</td>
</tr>
</tbody>
</table>

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.

CSI-C-11 Compatible Product

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

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

Example: NOTE: One option per box

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFS</td>
<td>G10</td>
<td>G05</td>
<td>B</td>
<td>07</td>
<td>07</td>
<td>07</td>
<td>07</td>
</tr>
</tbody>
</table>

= MFD1-27G10G05B07

**Model Number Selection**

**NOTES:**
- Box 6. H.5 seal designation may be used with 3, 5, 10, and 25 μm 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 versions.
- Box 9. Particle counter option only available on 115 VAC Hertz carts. Particle counter is not available with Skydrol fluids.
- For replacement element part numbers, please see *Appendix Section - Replacement Elements* of this catalog.

**SCHROEDER INDUSTRIES 109**
**HY-TRAX® Retrofit System Assembly**

**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 ConditionSensor 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**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measuring Range</td>
<td>Display ISO ranges between 25/24/23 and 9/8/7 Calibration within the range ISO 13/11/10 to 23/21/18</td>
</tr>
<tr>
<td>Self-Diagnosis</td>
<td>Continuously with error indication via status LED</td>
</tr>
<tr>
<td>Pressure Rating</td>
<td>50 psi (3.4 bar) max</td>
</tr>
<tr>
<td>Fluid Inlet/Outlet</td>
<td>SAE ORB, Size 4</td>
</tr>
<tr>
<td>Seal Material</td>
<td>Fluorocarbon elastomer (FKM)</td>
</tr>
<tr>
<td>Pump Speed</td>
<td>500-5000 rpm (adjustable)</td>
</tr>
<tr>
<td>Optimal Sampling Pump Flow Rate</td>
<td>0.0008-0.079 gpm (30-300 mL/min)</td>
</tr>
<tr>
<td>Fluid Temperature Range</td>
<td>32°F to 185°F (0°C to +85°C)</td>
</tr>
<tr>
<td>Ambient Temperature Range</td>
<td>-22°F to 176°F (-30°C to +80°C)</td>
</tr>
<tr>
<td>Max Viscosity</td>
<td>up to 350 cSt (1622 SUS)</td>
</tr>
<tr>
<td>Pump Type</td>
<td>Gear Pump</td>
</tr>
<tr>
<td>Power Supply</td>
<td>115 V AC/60Hz/1 PH</td>
</tr>
<tr>
<td>Electrical Safety Class</td>
<td>III (low voltage protection), IP 52 enclosure</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYR</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example: NOTE: One option per box

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYR</td>
<td>12</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

= 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

**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

NOTE: One option per box
Medium Viscosity Mobile Filtration Systems

6 or 10 gpm
22.7 to 37.9 L/min

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

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow Rating</td>
<td>6 or 10 gpm (22.7 or 37.9 L/min) max</td>
</tr>
<tr>
<td>Maximum Viscosity</td>
<td>up to 5,000 SUS (1000 cSt)</td>
</tr>
<tr>
<td>Hose Pressure Rating</td>
<td>30 psig (2.0 bar) at 150°F (65.6°C)</td>
</tr>
<tr>
<td></td>
<td>Full vacuum at 150°F (65.6°C)</td>
</tr>
<tr>
<td>Maximum Operating Temperature</td>
<td>-20°F to 150°F (-29°C to 65°C)</td>
</tr>
<tr>
<td>Bypass Valve Setting</td>
<td>Cracking: 30 psi (2 bar)</td>
</tr>
<tr>
<td>Material</td>
<td>Manifold and cap: Cast Aluminum</td>
</tr>
<tr>
<td></td>
<td>Element case: Steel</td>
</tr>
<tr>
<td>Compatibility</td>
<td>All petroleum based hydraulic fluid. Contact factory for use with other fluids.</td>
</tr>
<tr>
<td>Motor</td>
<td>1.0 hp 110 VAC/60 Hz TEFC (6 gpm)</td>
</tr>
<tr>
<td></td>
<td>1.5 hp 110 VAC/60 Hz TEFC (10 gpm)</td>
</tr>
</tbody>
</table>
Medium Viscosity Mobile Filtration Systems

**BOX 1**

<table>
<thead>
<tr>
<th>Model</th>
<th>No. of Elements</th>
<th>Element Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFD-MV</td>
<td>1</td>
<td>18</td>
</tr>
</tbody>
</table>

**BOX 3**

<table>
<thead>
<tr>
<th>Element Media First Filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>G03 = 3 μm Excellement® Z-Media® (synthetic) w/GeoSeal®</td>
</tr>
<tr>
<td>G05 = 5 μm Excellement® Z-Media® (synthetic) w/GeoSeal®</td>
</tr>
<tr>
<td>G10 = 10 μm Excellement® Z-Media® (synthetic) w/GeoSeal®</td>
</tr>
<tr>
<td>G25 = 25 μm Excellement® Z-Media® (synthetic) w/GeoSeal®</td>
</tr>
<tr>
<td>GWR = Water Removal w/GeoSeal®</td>
</tr>
</tbody>
</table>

**BOX 5**

<table>
<thead>
<tr>
<th>Element Media Second Filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>G03 = 3 μm Excellement® Z-Media® (synthetic) w/GeoSeal®</td>
</tr>
<tr>
<td>G05 = 5 μm Excellement® Z-Media® (synthetic) w/GeoSeal®</td>
</tr>
<tr>
<td>G10 = 10 μm Excellement® Z-Media® (synthetic) w/GeoSeal®</td>
</tr>
<tr>
<td>G25 = 25 μm Excellement® Z-Media® (synthetic) w/GeoSeal®</td>
</tr>
<tr>
<td>GWR = Water Removal w/GeoSeal®</td>
</tr>
</tbody>
</table>

**BOX 6**

<table>
<thead>
<tr>
<th>Seal Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>V = Viton®</td>
</tr>
</tbody>
</table>

**BOX 7**

<table>
<thead>
<tr>
<th>Pump Size (gpm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
</tr>
<tr>
<td>10</td>
</tr>
</tbody>
</table>

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

**NOTES:**
Box 5. When MFD is ordered, the number of elements, element length, and seals will be identical for both filter housings.
High Viscosity Mobile Filtration Systems
U.S. Patents 6568919 7604738

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

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow Rating:</td>
<td>3 gpm (7.5 L/min) max</td>
</tr>
<tr>
<td>Maximum Viscosity:</td>
<td>15,000 SUS (3236 cSt)</td>
</tr>
<tr>
<td>Hose Pressure Rating:</td>
<td>30 psig (2.0 bar) @ 150°F (65.6°C)</td>
</tr>
<tr>
<td></td>
<td>Full vacuum @ 150°F (65.6°C)</td>
</tr>
<tr>
<td>Fluid Temperature:</td>
<td>25°F to 150°F (-4°C to 65°C)</td>
</tr>
<tr>
<td>Bypass Valve Setting:</td>
<td>Cracking: 40 psi (2.8 bar)</td>
</tr>
<tr>
<td>Material:</td>
<td>Manifold and cap: Cast Aluminum</td>
</tr>
<tr>
<td></td>
<td>Element case: Steel</td>
</tr>
<tr>
<td>Compatibility:</td>
<td>All petroleum based hydraulic fluid. Contact factory for use with other fluids.</td>
</tr>
<tr>
<td>Motor:</td>
<td>115 VAC Single phase 1.5 hp</td>
</tr>
<tr>
<td>Element Change Clearance:</td>
<td>8.50 (215 mm) 1K (9, 18 or 27” depending on model configuration)</td>
</tr>
<tr>
<td>Weight:</td>
<td>MFS-HV - 230 lbs (104 kg); MFD-HV - 260 lbs (118 kg)</td>
</tr>
</tbody>
</table>
How to Build a Valid Model Number for a Schroeder MFS-HV:

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFD-HV</td>
<td></td>
<td>Z10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MFS-HV</td>
<td>1</td>
<td>27</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example: NOTE: One option per box

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFD-HV</td>
<td>27</td>
<td>Z10</td>
<td>Z05</td>
<td>B</td>
<td>03</td>
<td></td>
</tr>
</tbody>
</table>

**Model Number Selection**

<table>
<thead>
<tr>
<th>Model</th>
<th>No. of Elements</th>
<th>Element Length</th>
<th>Element Media First Filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFS-HV</td>
<td>1</td>
<td>18</td>
<td>Z03 = 3 μm Excellement® Z-Media® (synthetic)</td>
</tr>
<tr>
<td>MFD-HV</td>
<td>1</td>
<td>27</td>
<td>Z05 = 5 μm Excellement® Z-Media® (synthetic)</td>
</tr>
<tr>
<td>MFD-HV</td>
<td>1</td>
<td>27</td>
<td>Z10 = 10 μm Excellement® Z-Media® (synthetic)</td>
</tr>
<tr>
<td>MFD-HV</td>
<td>1</td>
<td>27</td>
<td>Z25 = 25 μm Excellement® Z-Media® (synthetic)</td>
</tr>
</tbody>
</table>

**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) |

**Seal Material**

<table>
<thead>
<tr>
<th>Seal Material</th>
<th>Pump Size (gpm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>B = Buna</td>
<td>03</td>
</tr>
<tr>
<td>V = Viton®</td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:**

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

For replacement element part numbers, please see "Appendix Section - Replacement Elements" of this catalog.
Air-Operated Mobile Filtration Systems

**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

- 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)
- **Housing Pressure Rating:** 250 psi (17.2 bar) max operating\(^1\)
- **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
  - Element media: 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.

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

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

BOX 1: AMS 1-18
BOX 2: G10
BOX 3: B 14

**AMS1-18G10B14**

### Model Number Selection

**Box 1:** Model
**Box 2:** No. of Elements/ Element Length
**Box 3:** Element Media First Filter
**Box 4:** Element Media Second Filter (AMD Only)
**Box 5:** Seal Material
**Box 6:** Pump Size (gpm)

**AMS, AMD**

**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®**

**B = Buna**

**07**

**14**

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

**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

**Specifications**

<table>
<thead>
<tr>
<th>Flow Rating: 9 gpm (34 L/min) fixed or 3-8 gpm (11-30 L/min) variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor: 1.5 HP - 15 amps at 120 volts AC for fixed flow</td>
</tr>
<tr>
<td>1 HP - 10 amps at 120 volts AC for variable flow</td>
</tr>
<tr>
<td>Viscosity: 60 - 1,000 SUS (10-216 cSt)</td>
</tr>
<tr>
<td>Fluid Temperature Range: -20°F to 150°F (-29°C to 65°C)</td>
</tr>
<tr>
<td>Bypass Valve Setting: Cracking: 30 psi (2 bar) x 2</td>
</tr>
<tr>
<td>Compatibility: All petroleum-based hydraulic fluid. Contact factory for use with other fluids.</td>
</tr>
<tr>
<td>Element Change Clearance: 8.50” (215 mm) 1K</td>
</tr>
<tr>
<td>Weight: 195 lbs (89 kg)</td>
</tr>
<tr>
<td>Protection Class: IP43 (DIN 40050)</td>
</tr>
</tbody>
</table>

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

**Element Performance Information**

<table>
<thead>
<tr>
<th>Element</th>
<th>Filtration Rating Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402</th>
<th>Filtration Rating wrt ISO 16889 Using APC calibrated per ISO 11171</th>
<th>Dirt Holding Capacity gm</th>
</tr>
</thead>
<tbody>
<tr>
<td>KZ5/KKZ5</td>
<td>$\beta_X \geq 75$ $\beta_X \geq 100$ $\beta_X \geq 200$</td>
<td>$\beta_X(c) \geq 200$ $\beta_X(c) \geq 1000$</td>
<td>119 / 238</td>
</tr>
<tr>
<td>KZ10/KKZ10</td>
<td>7.4 8.2 10.0</td>
<td>8.0 10.0</td>
<td>108 / 216</td>
</tr>
<tr>
<td>KZ25/KKZ25</td>
<td>18.0 20.0 22.5</td>
<td>19.0 240.0</td>
<td>93 / 186</td>
</tr>
</tbody>
</table>
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

Example: NOTE: One option per box

FS – A – 27 – Z05 – Z03 – B – 9 – W = FSA127Z05Z03B9W

Model Number Selection

<table>
<thead>
<tr>
<th>Model</th>
<th>Voltage</th>
<th>No. of Elements</th>
<th>Element Media First Filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>FS</td>
<td>A = 120 V / 60 Hz</td>
<td>1</td>
<td>Z01 = 1 μm Excellement® Z-Media® (synthetic)</td>
</tr>
<tr>
<td></td>
<td>B = 220 V / 60 Hz</td>
<td>2</td>
<td>Z03 = 3 μm Excellement® Z-Media® (synthetic)</td>
</tr>
<tr>
<td></td>
<td>C = 220 V / 50 Hz</td>
<td>3</td>
<td>Z05 = 5 μm Excellement® Z-Media® (synthetic)</td>
</tr>
</tbody>
</table>

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

Seal Material

| B = Buna |
| V = Viton® |

Pump Size

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

Water Sensor

| W = TestMate® |

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.

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

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

Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow Rating</td>
<td>5 gpm (19 L/min)</td>
</tr>
<tr>
<td>Motor</td>
<td>1.5 HP - 15 FLA at 120 volts AC</td>
</tr>
<tr>
<td>Viscosity Range</td>
<td>60 - 1,000 SUS (10 - 216 cSt)</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-20°F to 150°F (-29°C to 65°C)</td>
</tr>
<tr>
<td>Bypass Valve Setting</td>
<td>Cracking: 30 psi (2 bar) x 2</td>
</tr>
<tr>
<td>Compatibility</td>
<td>All petroleum-based hydraulic fluid compatible with Viton®</td>
</tr>
<tr>
<td>Element Change Clearance</td>
<td>17.5” KK / 26.5” 27K</td>
</tr>
<tr>
<td>Weight</td>
<td>200 lbs (440 kg) approx.</td>
</tr>
<tr>
<td>Dimensions</td>
<td>26.6” x 25.25” x 50.0” (675 x 641 x 1270 mm)</td>
</tr>
</tbody>
</table>

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

Filtration Rating Per ISO 4572/NFPA T3.10.8.8
Using automated particle counter (APC) calibrated per ISO 4402

<table>
<thead>
<tr>
<th>GeoSeal® Element</th>
<th>$\beta_\lambda \geq 75$</th>
<th>$\beta_\lambda \geq 100$</th>
<th>$\beta_\lambda \geq 200$</th>
</tr>
</thead>
<tbody>
<tr>
<td>KKGZ3/27KGZ3</td>
<td>&lt;1.0</td>
<td>&lt;1.0</td>
<td>&lt;2.0</td>
</tr>
<tr>
<td>KKGZ5/27KGZ5</td>
<td>2.5</td>
<td>3.0</td>
<td>4.0</td>
</tr>
<tr>
<td>KKGZ10/27KGZ10</td>
<td>7.4</td>
<td>8.2</td>
<td>10.0</td>
</tr>
</tbody>
</table>

Filtration Rating wrt ISO 16889
Using APC calibrated per ISO 11171

<table>
<thead>
<tr>
<th>GeoSeal® Element</th>
<th>$\beta_\Lambda (c) \geq 200$</th>
<th>$\beta_\Lambda (c) \geq 1000$</th>
</tr>
</thead>
<tbody>
<tr>
<td>KKGZ3V</td>
<td>4.0</td>
<td>4.8</td>
</tr>
<tr>
<td>KKGZ5V</td>
<td>4.8</td>
<td>6.3</td>
</tr>
<tr>
<td>KKGZ10V</td>
<td>8.0</td>
<td>10.0</td>
</tr>
</tbody>
</table>

Metric dimensions in ( ).

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

Example: NOTE: One option per box

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMFS</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example: AMFS127G05G03

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®

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.
Kidney Loop Systems

7 or 14 gpm

26.5 or 53 L/min

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

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)  KLS-1: 117 lb (53.2 kg)
- KLS-2: 112 lb (50.9 kg)  KLS-2: 139 lb (63.2 kg)
- KLS-3: 123 lb (55.9 kg)  KLS-3: 161 lb (73.2 kg)

Element Change Clearance 8.50” (215 mm) 1K

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

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>KLD</td>
<td>1</td>
<td>27</td>
<td>Z05</td>
</tr>
<tr>
<td>KLD</td>
<td>2</td>
<td>18</td>
<td>Z03</td>
</tr>
<tr>
<td>KLD</td>
<td>3</td>
<td>27</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Element Media First Filter

<table>
<thead>
<tr>
<th>Model</th>
<th>No. of Elements</th>
<th>Element Length</th>
<th>Element Media First Filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>KLS</td>
<td>1</td>
<td>09</td>
<td>Z01 = 1 μm Excellement® Z-Media® (synthetic)</td>
</tr>
<tr>
<td>KLD</td>
<td>2</td>
<td>18</td>
<td>Z03 = 3 μm Excellement® Z-Media® (synthetic)</td>
</tr>
<tr>
<td>KLD</td>
<td>3</td>
<td>27</td>
<td>Z05 = 5 μm Excellement® Z-Media® (synthetic)</td>
</tr>
<tr>
<td>KLD</td>
<td></td>
<td></td>
<td>Z10 = 10 μm Excellement® Z-Media® (synthetic)</td>
</tr>
<tr>
<td>KLD</td>
<td></td>
<td></td>
<td>Z25 = 25 μm Excellement® Z-Media® (synthetic)</td>
</tr>
<tr>
<td>KLD</td>
<td></td>
<td></td>
<td>EWR = Water Removal</td>
</tr>
<tr>
<td>KLD</td>
<td></td>
<td></td>
<td>G03 = 3 μm Excellement® Z-Media® (synthetic) w/GeoSeal®</td>
</tr>
<tr>
<td>KLD</td>
<td></td>
<td></td>
<td>G05 = 5 μm Excellement® Z-Media® (synthetic) w/GeoSeal®</td>
</tr>
<tr>
<td>KLD</td>
<td></td>
<td></td>
<td>G10 = 10 μm Excellement® Z-Media® (synthetic) w/GeoSeal®</td>
</tr>
<tr>
<td>KLD</td>
<td></td>
<td></td>
<td>G25 = 25 μm Excellement® Z-Media® (synthetic) w/GeoSeal®</td>
</tr>
</tbody>
</table>

### Element Media Second Filter (KLD only)

<table>
<thead>
<tr>
<th>Element Media Second Filter (KLD only)</th>
<th>Seal Material</th>
<th>Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z01 = 1 μm Excellement® Z-Media® (synthetic)</td>
<td>B = Buna</td>
<td>Omit = 115 V / 60 Hz / 1-Phase</td>
</tr>
<tr>
<td>Z03 = 3 μm Excellement® Z-Media® (synthetic)</td>
<td>V = Viton®</td>
<td>A = 230 V / 60 Hz / 3-Phase</td>
</tr>
<tr>
<td>Z05 = 5 μm Excellement® Z-Media® (synthetic)</td>
<td></td>
<td>B = 460 V / 60 Hz / 3-Phase</td>
</tr>
<tr>
<td>Z10 = 10 μm Excellement® Z-Media® (synthetic)</td>
<td></td>
<td>C = 220 V / 50 Hz / 1-Phase</td>
</tr>
<tr>
<td>Z25 = 25 μm Excellement® Z-Media® (synthetic)</td>
<td></td>
<td>D = 230 V / 60 Hz / 1-Phase</td>
</tr>
<tr>
<td>EWR = Water Removal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G03 = 3 μm Excellement® Z-Media® (synthetic) w/GeoSeal®</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G05 = 5 μm Excellement® Z-Media® (synthetic) w/GeoSeal®</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G10 = 10 μm Excellement® Z-Media® (synthetic) w/GeoSeal®</td>
<td></td>
<td></td>
</tr>
<tr>
<td>G25 = 25 μm Excellement® Z-Media® (synthetic) w/GeoSeal®</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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.
Kidney Loop Systems

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

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

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

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>KLD-MV</td>
<td>1-27</td>
<td>G10</td>
<td>G05</td>
</tr>
</tbody>
</table>

Model Selection

<table>
<thead>
<tr>
<th>Model</th>
<th>No. of Elements</th>
<th>Element Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>KLD-MV</td>
<td>1</td>
<td>09</td>
</tr>
<tr>
<td>KLD-MV</td>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>KLD-MV</td>
<td>3</td>
<td>27</td>
</tr>
</tbody>
</table>

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®

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®

Pump Size
- 06
- 10

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

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.
**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**

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

Metric dimensions in ( ).

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

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>KLD-HV</td>
<td>18</td>
<td>G03, G05, G10 = Excellement® Z-Media® (synthetic) w/ GeoSeal®</td>
<td>G03, G05, G10 = Excellement® Z-Media® (synthetic) w/ GeoSeal®</td>
<td>G2820 = High Viscosity Filter Skid with rugged protective frame</td>
<td></td>
</tr>
</tbody>
</table>

Example: NOTE: One option per box

KLD-HV18G10G05VG2820

Series

<table>
<thead>
<tr>
<th>KLD-HV</th>
</tr>
</thead>
</table>

Element Length

| 18 |

Element Micron Rating

| G03, G05, G10 = Excellement® Z-Media® (synthetic) w/ GeoSeal® |

Seals

| V = FPM |

Options

| G2820 = High Viscosity Filter Skid with rugged protective frame |

U.S. Patents 6568919 7604738

SCHROEDER INDUSTRIES 127
**Kidney Loop with Change-Over**

**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 14 gpm 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**

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

Note: SAE connections when using supplied adapters; BSPP connections when supplied adapters are not used. Housing drain standard on all models.
### How to Build a Valid Model Number for a Schroeder KLCO:

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>KLCO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>KLCO</td>
<td>40</td>
<td>DNZ5</td>
<td>B</td>
<td></td>
<td>14</td>
<td></td>
</tr>
</tbody>
</table>

**Model Number**

KLCO25DNZB14

**Seal Material**

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

**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

**Dimensions in inches (mm)**

**Model Number Selection**

Consult Factory for special options.
Not all combinations available.
Fail-Safe In-Line Mechanical Clean Oil Dispenser

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 Beta 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

Schematics

Normal Operation

"Bypass" Operation

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

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

Example: NOTE: One option per box

BOX 1: MCO
BOX 2: 3
BOX 3: 27
BOX 4: G05
BOX 5: G03
BOX 6: G03
BOX 7: V
BOX 8: S
BOX 9: D5
BOX 10: RV

= MCO327G05G03G03VSD5RV

Model Number Selection

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)

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)

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)

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)

NOTES:
- Box 10. An upstream pressure relief valve must be used. Should be no greater than 650 psi.
- The “RV” option is supplied as a loose item. Users have to install the relief valve within their Hydraulic System.

Filter Housing Specifications

Trouble Check Plus
HMG2500
HMG4000
ET-100-6
HTB
RFS
HFS-BC
HFS-15
MFD-8C
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
**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.

**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

**Note:** Performance data represents a 4-vane model with no exhaust restriction.
### Air-Operated Kidney Loop Systems

**U.S. Patents 6568919 7604738**

---

**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.)
- AKS3 = 108 lbs. (49 kg.)
- AKD2 = 120 lbs. (54 kg.)
- AKD3 = 142 lbs. (64 kg.)

---

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

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>AKD</td>
<td>1-27</td>
<td>G10</td>
<td>G05</td>
<td>B</td>
<td>14</td>
</tr>
</tbody>
</table>

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

- BOX 1
- BOX 2
- BOX 3: AKD 1-27 G10 G05 B 14 = AKD1-27G10G05B14

---

### Specifications

- **Model Number Selection**
- **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 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

**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**

<table>
<thead>
<tr>
<th>Series</th>
<th>Viscosity Range</th>
<th>Filter Housing(s)</th>
<th>Maximum Flow</th>
</tr>
</thead>
<tbody>
<tr>
<td>X2</td>
<td>100 - 5000 SUS</td>
<td>(1) QF5</td>
<td>82 gpm (310 L/min)</td>
</tr>
<tr>
<td>X5</td>
<td>100 - 5000 SUS</td>
<td>(2) QF5</td>
<td>82 gpm (310 L/min)</td>
</tr>
<tr>
<td>X7</td>
<td>100 - 25,000 SUS</td>
<td>(1) QF5</td>
<td>6 gpm (23 L/min)</td>
</tr>
<tr>
<td>X8</td>
<td>100 - 25,000 SUS</td>
<td>(2) QF5 in parallel</td>
<td>30 gpm (114 L/min)</td>
</tr>
</tbody>
</table>

Part of Schroeder Industries Energy Sustainability Initiative
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

## 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 and Motor Data

<table>
<thead>
<tr>
<th>Skid Series</th>
<th>Flow (gpm)</th>
<th>Motor (hp)</th>
<th>Skid Series</th>
<th>Flow (gpm)</th>
<th>Motor (hp)</th>
</tr>
</thead>
<tbody>
<tr>
<td>X2</td>
<td>17</td>
<td>3</td>
<td>X7</td>
<td>06</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>37</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>82</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X5</td>
<td>17</td>
<td>5</td>
<td>X8</td>
<td>30</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>37</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>82</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Porting Data

<table>
<thead>
<tr>
<th>Model</th>
<th>Flow (gpm)</th>
<th>Inlet Port Sizes</th>
<th>Outlet Port Sizes with Q39 Filters</th>
</tr>
</thead>
<tbody>
<tr>
<td>X2</td>
<td>17</td>
<td>1.50° NPT</td>
<td>#32 SAE (2&quot;)</td>
</tr>
<tr>
<td></td>
<td>37</td>
<td>2&quot; NPT</td>
<td>#32 SAE (2&quot;)</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>2&quot; NPT</td>
<td>#32 SAE (2&quot;)</td>
</tr>
<tr>
<td></td>
<td>82</td>
<td>2&quot; NPT</td>
<td>#32 SAE (2&quot;)</td>
</tr>
<tr>
<td>X5</td>
<td>17</td>
<td>1.50° NPT</td>
<td>#32 SAE (2&quot;)</td>
</tr>
<tr>
<td></td>
<td>37</td>
<td>2&quot; NPT</td>
<td>#32 SAE (2&quot;)</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>2&quot; NPT</td>
<td>#32 SAE (2&quot;)</td>
</tr>
<tr>
<td></td>
<td>82</td>
<td>2&quot; NPT</td>
<td>#32 SAE (2&quot;)</td>
</tr>
<tr>
<td>X7</td>
<td>06</td>
<td>1.50° NPT</td>
<td>#32 SAE (2&quot;)</td>
</tr>
<tr>
<td>X8</td>
<td>30</td>
<td>2.50° NPT</td>
<td>#32 SAE (2&quot;)</td>
</tr>
</tbody>
</table>

## Weight Data

<table>
<thead>
<tr>
<th>Skid Series</th>
<th>Flow (gpm)</th>
<th>Weight (lb)*</th>
<th>Skid Series</th>
<th>Flow (gpm)</th>
<th>Weight (lb)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>X2</td>
<td>17</td>
<td>311-504</td>
<td>X7</td>
<td>06</td>
<td>Contact factory</td>
</tr>
<tr>
<td></td>
<td>37</td>
<td>348-577</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>Contact factory</td>
<td>597-705</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>82</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X5</td>
<td>17</td>
<td>396-684</td>
<td>X8</td>
<td>30</td>
<td>Contact factory</td>
</tr>
<tr>
<td></td>
<td>37</td>
<td>497-849</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>Contact factory</td>
<td>947-1054</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>82</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Weight dependent on options chosen.
How to Build a Valid Model Number for a Schroeder X Series Filter Skid:

Example: NOTE: One option per box

\[
\text{BOX 1: } X5 \quad \text{BOX 2: } 17 \quad \text{BOX 3: } 3Q \quad \text{BOX 4: } Q25 \quad \text{BOX 5: } Q10 \quad \text{BOX 6: } B \quad \text{BOX 7: } N \quad \text{BOX 8: } N \quad \text{BOX 9: } B \quad \text{BOX 10: } M \quad \text{BOX 11: } N \quad \text{BOX 12: } P = X5173Q25Q10BNBNBN
\]

<table>
<thead>
<tr>
<th>Model</th>
<th>Flow (gpm)</th>
<th>QFS Filter</th>
<th>Element Media</th>
<th>Element Media</th>
<th>Seal Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>X2</td>
<td>17</td>
<td>3Q</td>
<td>Q1 = 1 micron element</td>
<td>Q1 = 1 micron element</td>
<td>B = Buna (Standard)</td>
</tr>
<tr>
<td></td>
<td>37</td>
<td>3Q</td>
<td>Q3 = 3 micron element</td>
<td>Q3 = 3 micron element</td>
<td>H = EPR</td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>3Q</td>
<td>Q5 = 5 micron element</td>
<td>Q5 = 5 micron element</td>
<td>V = Viton®</td>
</tr>
<tr>
<td></td>
<td>82</td>
<td>3Q</td>
<td>Q10 = 10 micron element</td>
<td>Q10 = 10 micron element</td>
<td></td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>3Q</td>
<td>Q25 = 25 micron element</td>
<td>Q25 = 25 micron element</td>
<td></td>
</tr>
<tr>
<td>X5</td>
<td>37</td>
<td>3Q</td>
<td>Q3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>60</td>
<td>3Q</td>
<td>Q5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>82</td>
<td>3Q</td>
<td>Q10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X7</td>
<td>06</td>
<td>3Q</td>
<td>Q1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X8</td>
<td>30</td>
<td>3Q</td>
<td>Q3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **BOX 7**: Power
  - N = 230V / 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
  - M = MS11 Electric Cartridge
  - C = Differential Pressure Gauge with Electric Switch
- **BOX 10**: Dirt Alarm
  - N = DS Indicator on Filter Cap
  - G = Differential Pressure Gauge
  - E = 575 VAC

**X Series Filter Skids**

**SMART TECHNOLOGY INSIDE™**

- **BOX 1**: Model, Flow (gpm)
- **BOX 2**: QFS Filter
- **BOX 3**: Element Media
- **BOX 4**: Element Media
- **BOX 5**: Seal Material
- **BOX 6**: Box 1.
- **BOX 7**: Power
- **BOX 8**: Motor Frame
- **BOX 9**: Starter Control Options
- **BOX 10**: Dirt Alarm
- **BOX 11**: Miscellaneous Options
- **BOX 12**: Condition Monitoring

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.
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

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity</td>
<td>OLF-5/4 to 10,000 SUS, OLF-5 to 700 SUS, OLF-5/15 to 3,000 SUS</td>
</tr>
<tr>
<td>Operating Pressure</td>
<td>45 psi (3 bar) max</td>
</tr>
<tr>
<td>Suction Pressure</td>
<td>-6 psi to 87 psi max</td>
</tr>
<tr>
<td>Fluid Temperature</td>
<td>32°F to 175°F (0°C to 80°C)</td>
</tr>
<tr>
<td>Ambient Temperature</td>
<td>-4°F to 104°F (-20°C to 40°C)</td>
</tr>
<tr>
<td>Seals</td>
<td>Buna N</td>
</tr>
<tr>
<td>Maximum Flow Rate</td>
<td>OLF-5/4 1.3 gpm, OLF-5 1.6 gpm, OLF-5/15 4.9 gpm</td>
</tr>
<tr>
<td>Fluids</td>
<td>Standard mineral oils, water/oil based fluids (min 40% oil in fluid), consult factory for other fluids</td>
</tr>
<tr>
<td>Media</td>
<td>Dimicron with or without water removal capability - (2 µm, 20 µm)</td>
</tr>
<tr>
<td>Dirt Holding Capacity</td>
<td>200g ISO MTD (KLEXx particulate elements) / 185g ISO MTD (KLEAxx water elements)</td>
</tr>
<tr>
<td>Water Retention</td>
<td>Approximately 0.5 quarts (0.5 liters)</td>
</tr>
<tr>
<td>Beta Ratio</td>
<td>ßx &gt; 1000</td>
</tr>
<tr>
<td>Maximum ΔP</td>
<td>45 psi (3 bar)</td>
</tr>
<tr>
<td>Connections with Pump/Motor</td>
<td>OLF-5/4 5/16&quot;-12 SAE Female Straight Thread, OLF-5 3/4&quot;-16 SAE Female Straight Thread, OLF-5/15 5/16&quot;-12 SAE Female Straight Thread</td>
</tr>
<tr>
<td>Weight</td>
<td>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)</td>
</tr>
</tbody>
</table>

Note: SAE connections when using supplied adapters; BSPP connections when supplied adapters are not used. Housing drain standard on all models.
How to Build a Valid Model Number for a Schroeder OLF:

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OLF-5</strong></td>
<td><strong>S</strong></td>
<td><strong>120</strong></td>
<td><strong>K</strong></td>
<td><strong>KLE02</strong></td>
<td><strong>E</strong></td>
<td><strong>12</strong></td>
<td></td>
</tr>
</tbody>
</table>

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

**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
  - **C** = Differential electrical
  - **D** = Differential electrical/visual
  - **D4** = Differential electrical/visual with 24VDC Lamp
  - **DL110** = Differential electrical/visual with 115VAC Lamp

**BOX 7**
- **Mechanical Connections**
  - 12 = SAE Connections (standard)

**BOX 8**
- **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.

**OLF Compact**

Formally Known as “KLC - Kidney Loop Compact Systems”

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
Offline Filtration Systems

Formally Known as “MTS - Membrane Technology Systems”

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.

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

Single Membrane Element

Element Cross Section

Metric dimensions in ( ).
## Offline Filtration Systems

Formally Known as “MTS - Membrane Technology Systems”

### Specifications

<table>
<thead>
<tr>
<th>Connections</th>
<th>OLF-15</th>
<th>OLF-30</th>
<th>OLF-45</th>
<th>OLF-60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing Inlet &amp; Outlet</td>
<td>1 1/16 - 12UN (SAE 12); G 3/4” BSPP</td>
<td>1 5/6 - 12UN (SAE 16); G 1” BSPP</td>
<td>1 7/8 - 12UN (SAE 24); G 1 1/2” BSPP</td>
<td></td>
</tr>
<tr>
<td>Pump Inlet: Gear</td>
<td>N15DMinxx(1x)</td>
<td>N15DMinxx(2x)</td>
<td>N15DMinxx(3x)</td>
<td>N15DMinxx(4x)</td>
</tr>
<tr>
<td>Filter Element</td>
<td>6.6lbs (3 kg)</td>
<td>13.2lbs (6 kg)</td>
<td>19.8lbs (9 kg)</td>
<td>26.4lbs (12 kg)</td>
</tr>
<tr>
<td>Contamination Retention Capacity</td>
<td>1.1lbs (500g)</td>
<td>2.2lbs (1000g)</td>
<td>3.3lbs (1500g)</td>
<td>4.4lbs (2000g)</td>
</tr>
<tr>
<td>Permissible Δp Across the Element</td>
<td>8x &gt; 1000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Element Weight</td>
<td>72.5 psi (5 bar)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material of Filter Housing</td>
<td>Stainless Steel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity of Pressure Vessel</td>
<td>5.25 gal. (20 l)</td>
<td>10.50 gal. (39.7l)</td>
<td>15.75 gal. (59.6 l)</td>
<td>20.5 gal. (28.1 l)</td>
</tr>
<tr>
<td>Max. Operating Pressure - Filter Housing</td>
<td>85 psi (5.86)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Material of Seals - Housing</td>
<td>Buna N</td>
<td>Buna N</td>
<td>Buna N</td>
<td>Buna N</td>
</tr>
<tr>
<td>Housing Weight</td>
<td>25lbs (11.3 kg)</td>
<td>33lbs (15 kg)</td>
<td>53lbs (24 kg)</td>
<td>62lbs (28.1 kg)</td>
</tr>
<tr>
<td>Fluid Temperature</td>
<td>15 to 175°F (-9.4 to 79.4°C)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor-Pump Units</td>
<td>5 gpm (18.9 lpm)</td>
<td>10 gpm (37.8 lpm)</td>
<td>15 gpm (56.8 lpm)</td>
<td>20 gpm (75.5 lpm)</td>
</tr>
<tr>
<td>Pump Operating Pressure</td>
<td>65 psi (4.5 bar)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gear Pump Viscosity Range</td>
<td>7-5000 SUS (14 to 1078 cSt)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gear Pump Motor Capacity</td>
<td>370 W</td>
<td>570 W</td>
<td>1500 W</td>
<td>1500 W</td>
</tr>
<tr>
<td>Material of Seals - Pumps</td>
<td>Buna N</td>
<td>Buna N</td>
<td>Buna N</td>
<td>Buna N</td>
</tr>
<tr>
<td>Dry Weight of OLF System</td>
<td>50 lbs. (22.7 kg)</td>
<td>77 lbs. (34.9 kg)</td>
<td>116 lbs. (57.6 kg)</td>
<td>132 lbs. (60 kg)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Type of System</th>
<th>Contamination Ingression (µg/gal)</th>
<th>Surrounded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Closed circuit</td>
<td>Clean 1</td>
<td>Normal 3</td>
</tr>
<tr>
<td>Injection molding machine</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Standard hydraulic system</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Lubrication system</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>Mobile equipment</td>
<td>10</td>
<td>13</td>
</tr>
<tr>
<td>Heavy industrial press</td>
<td>14</td>
<td>18</td>
</tr>
<tr>
<td>Flushing test equipment</td>
<td>42</td>
<td>60</td>
</tr>
</tbody>
</table>

**Step 2:** Make the correction required for off-line filtration. The contamination input selected above must be multiplied by the factor:

\[
\text{Main System Flow Rate} / \text{Desired Off-line Flow Rate}
\]

**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:

\[
\text{Contamination Factor} = \frac{\text{Contamination Input (µg/gal)} \times \text{Main System Flow Rate (gpm)}}{\text{Desired Off-line Flow Rate (gpm)}}
\]

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 ingestion 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.

\[
\text{Contamination Factor} = 18 \, \text{µg/gal} \times \frac{150 \, \text{gpm}}{20 \, \text{gpm}} = 135
\]

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

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>OLF</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>N15DM002</td>
<td>–</td>
<td>12</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>OLF</td>
<td>30</td>
<td>G</td>
<td>L60</td>
<td>30</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

= OLF-30/30-G-L60-N15DM002-E/-12

### Model Number Selection

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Size</td>
<td>Pump Flow Rate (must be ≤ to size)</td>
<td>Pump Type</td>
<td>Motor Voltage</td>
<td>Filter Element</td>
<td>Clogging Indicator</td>
<td>Model</td>
</tr>
<tr>
<td>OLF = Stationary offline filter</td>
<td>15 = 1 element</td>
<td>15 = 5 gpm</td>
<td>G = Gear Pump</td>
<td>L60 = 115V, Single Phase</td>
<td>N15DM002 = Dimicron® 2 μm Absolute</td>
<td>E = Standard gauge</td>
<td>12 = SAE adapters (BSPP connections are standard)</td>
</tr>
<tr>
<td>OLFCM = Stationary offline filter with integrated contamination monitoring sensors</td>
<td>30 = 2 elements</td>
<td>30 = 10 gpm</td>
<td>Z = Without motor-pump</td>
<td>O60 = 460V, Three Phase</td>
<td>N15DM010 = Dimicron® 10 μm Absolute</td>
<td>BM = Differential visual</td>
<td>V = Viton® Seals (NBR seals are standard)</td>
</tr>
<tr>
<td></td>
<td>45 = 3 elements</td>
<td>45 = 15 gpm</td>
<td></td>
<td></td>
<td>N15DM020 = Dimicron® 20 μm Absolute</td>
<td>C = Differential electrical</td>
<td>PK = On/Off Switch and Overload Protective Motor Switch</td>
</tr>
<tr>
<td></td>
<td>60 = 4 elements</td>
<td>60 = 20 gpm</td>
<td></td>
<td></td>
<td>N15DM030 = Dimicron® 30 μm Absolute</td>
<td>D = Differential visual/electrical</td>
<td>C = Cart-style mobile frame</td>
</tr>
<tr>
<td></td>
<td>Z = without pump</td>
<td></td>
<td></td>
<td></td>
<td>Z = No filter element supplied</td>
<td></td>
<td>PC = HyTrax-HV Contamination Monitoring Unit (only with L60 motor voltage; contact SI for other product configurations)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BOX 7</th>
<th>BOX 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clogging Indicator</td>
<td>Model</td>
</tr>
<tr>
<td>E = Standard gauge</td>
<td>12 = SAE adapters (BSPP connections are standard)</td>
</tr>
<tr>
<td>BM = Differential visual</td>
<td>V = Viton® Seals (NBR seals are standard)</td>
</tr>
<tr>
<td>C = Differential electrical</td>
<td>PK = On/Off Switch and Overload Protective Motor Switch</td>
</tr>
<tr>
<td>D = Differential visual/electrical</td>
<td>C = Cart-style mobile frame</td>
</tr>
</tbody>
</table>

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

**Description**

**Specifications**

<table>
<thead>
<tr>
<th>Fluid Compatibility:</th>
<th>Compatible with all petroleum based fluids and most synthetic and lubricating fluids</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature Range:</td>
<td>0°C to 80°C (32°F to 176°F)</td>
</tr>
<tr>
<td>Maximum Operating</td>
<td>4.0 bar (60 psid)</td>
</tr>
<tr>
<td>Differential Pressure:</td>
<td></td>
</tr>
<tr>
<td>Materials of Construction:</td>
<td>Filter Medium: Cellulose based</td>
</tr>
<tr>
<td></td>
<td>Hardware: Polypropylene</td>
</tr>
<tr>
<td></td>
<td>Seals: Fluorocarbon (standard)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Schroeder Reference Module</th>
<th>Absolute Rating (99.9% efficiency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N15DM002</td>
<td>2 µm</td>
</tr>
<tr>
<td>N15DM005</td>
<td>5 µm</td>
</tr>
<tr>
<td>N15DM010</td>
<td>10 µm</td>
</tr>
<tr>
<td>N15DM020</td>
<td>20 µm</td>
</tr>
<tr>
<td>N15DM030</td>
<td>30 µm</td>
</tr>
</tbody>
</table>
**Features and Benefits**

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

**Applications**

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

---

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).

---

<table>
<thead>
<tr>
<th>Multipass Test in Accordance with ISO 16889</th>
<th>N1TM003 / ECO p/n 7643926</th>
<th>N14TM003/-ECO 7643925</th>
<th>42.0TM/-ECO 7644096</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dirt Holding Capacity @ 2.5 bar $\Delta P$</td>
<td>&gt;250g</td>
<td>&gt;400g</td>
<td>&gt;550g</td>
</tr>
<tr>
<td>Filtration Efficiency $\beta_{5(c)}$</td>
<td>200</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Water Holding Capacity</td>
<td>400 mL</td>
<td>560 mL</td>
<td>500 mL</td>
</tr>
</tbody>
</table>

**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 $\mu$m
- Permitted Fluid Temperature Range: 14 to 176°F (-10 to 80°C)
- Storage Temperature Range: 41 to 104°F (5 to 40°C)

---

**Specifications**

- **Dimensions**
  - NxTM
  - Description
  - Specifications
  - Construction of Filter Element
  - Influences on Oil Composition
  - Contaminants Removed
  - Filter Element Design
  - Filtration Rating
  - Permitted Fluid Temperature Range
  - Storage Temperature Range
  - Multipass Test in Accordance with ISO 16889
  - Dirt Holding Capacity @ 2.5 bar $\Delta P$
  - Filtration Efficiency $\beta_{5(c)}$
  - Water Holding Capacity

---

**ECO TriMicron Element Series**
Varnish Elimination Unit

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

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

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

**Specifications**

Flow Rate:
- VEU-x-10-... = 10 gpm (38 L/min)
- VEU-x-15-... = 15 gpm (57 L/min)

Fluid Viscosity: 75 to 2,000 SUS

Permitted Operating Fluids: Mineral-based

Fluid Service Temperature:
- VEU-x-10-: 32°F to 140°F (0°C to 60°C)
- VEU-x-15-: 32°F to 176°F (0°C to 80°C)

Pump Operating Pressure: 87 psi (6 bar) max

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

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

INLET Port Connection:
- VEU-x-10-: 1-5/16 x 12 UN - Male
- VEU-x-15-: 1-7/8-12 UN - Male

OUTLET Port Connection:
- 1-5/16 x 12 UN - 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: 460 V AC / 60 Hz / 3 Ph.
- 575 V AC / 60 Hz / 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

<table>
<thead>
<tr>
<th>Tank Volume (gallons)</th>
<th>VEU-F Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>150 to 1200</td>
<td>VEU-x-10-</td>
</tr>
<tr>
<td>225 to 2000</td>
<td>VEU-x-15-</td>
</tr>
</tbody>
</table>

#### Model Code

<table>
<thead>
<tr>
<th>Model Code</th>
<th>Micron Rating</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>N15DM002</td>
<td>2</td>
<td>1251590</td>
</tr>
<tr>
<td>N15DM005</td>
<td>5</td>
<td>3252552</td>
</tr>
<tr>
<td>N15DM010</td>
<td>10</td>
<td>3115180</td>
</tr>
</tbody>
</table>
Varnish Elimination Unit

**VEU**

**Dimensions**

VEU-A-\(x\)-M

**Dimensions**

VEU-W-\(x\)-M...

**How to Build a Valid Model Number for a Schroeder VEU:**

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>VEU</td>
<td>A</td>
<td>15</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>BOX 6</td>
<td>BOX 7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Example:**

NOTE: One option per box

VEU-A-15M060DM02C

**Model Number Selection**

Preferred order codes designate shorter lead times and faster delivery.

**Model**

VEU

**Cooling Method**

- A = Air
- W = Water

**Flow Rate**

- 10 = 10 gpm
- 15 = 15 gpm

**Version**

- S = Stationary
- M = Mobile

**Motor Voltage**

- 060 = 460V / 3 Phase
- P60 = 575V / 3 Phase

**Motor Voltage**

DM02 = N15DM002, 2µm Absolute
DM05 = N15DM005, 5µm Absolute
DM10 = N15DM010, 10µm Absolute

**Clogging Indicator**

- C = Electrical differential pressure switch w/ indicator light in control panel

**Dimensions**

VEU-A-x-M

Dimensions in inches (mm).

VEU-W-\(x\)-M...

Dimensions in inches (mm).
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.

### 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

### Specifications

#### Hydraulic Data

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPC Values Achievable</td>
<td>&lt; 20</td>
</tr>
<tr>
<td>Flow Rate: VMU 1</td>
<td>0.58 gpm (≈ 2.2 l/min)</td>
</tr>
<tr>
<td>VMU 4</td>
<td>2.4 gpm (≈ 8.9 l/min)</td>
</tr>
<tr>
<td>Fluid Temperature</td>
<td>86 to 140 °F (30 to 60 °C)</td>
</tr>
<tr>
<td>Max. Operating Pressure</td>
<td>87 psi (6 bar)</td>
</tr>
<tr>
<td>Permissible Suction Pressure at Suction Inlet IN:</td>
<td>2.9 to 14.5 psi (-0.2 to 1 bar)</td>
</tr>
<tr>
<td>Viscosity Range</td>
<td>78 to 370 SUS (15 to 80 cSt)</td>
</tr>
<tr>
<td>Permissible Operating Fluid</td>
<td>Mineral-based fluids</td>
</tr>
<tr>
<td>Connections IN / OUT</td>
<td>1/2”-20 male JIC / 1/2-20 female o-ring boss</td>
</tr>
<tr>
<td>Pump Type</td>
<td>Gear</td>
</tr>
</tbody>
</table>

#### Electrical Data

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Supply Voltage</td>
<td>See ordering details</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>0.25 to 0.6 kW / 16 Amps</td>
</tr>
</tbody>
</table>

#### Ambient Conditions

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature Range</td>
<td>32 to 104 °F (0 to 40 °C)</td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>32 to 140 °F (0 to 60 °C)</td>
</tr>
<tr>
<td>Relative Humidity</td>
<td>0 to 80%, non-condensing</td>
</tr>
<tr>
<td>Protection Class to DIN 40050</td>
<td>IP 55</td>
</tr>
</tbody>
</table>

#### General Data

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of Electrical Connection Cable</td>
<td>5’ (1.5 m)</td>
</tr>
<tr>
<td>Sealing Material</td>
<td>FKM (Viton®)</td>
</tr>
<tr>
<td>Sound Level at 1m</td>
<td>&lt; 80 dB(A)</td>
</tr>
<tr>
<td>Weight* (empty)</td>
<td>VMU 1 = 155 lbs (70 kg), VMU 4 = 660 lbs (300 kg)</td>
</tr>
</tbody>
</table>

*Weight noted is for a stationary unit.

**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.
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
```

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

BOX 2
Box 2
Series
M = Mobile
S = Stationary

BOX 3
Type
G = Gear Pump
Z = Without

BOX 4
Type of Pump

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
Ion eXchange Unit

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.

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

Hydraulic Circuit

NOTES:
No connection lines included

.5 -2.5 gpm
1.9-9.5 L/min
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)

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

Example: NOTE: One option per box

OXU 1 2 3 4 5 6 7 8 9
BOX 1 BOX 2 BOX 3 BOX 4 BOX 5 BOX 6 BOX 7 BOX 8 BOX 9
IXU 1 MG J G10 C G05

Model Number Selection

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

Ion eXchange Unit Replacement Elements

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

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

Example: NOTE: One option per box

OXU 1 2 3 4 5 6 7 8 9
BOX 1 BOX 2 BOX 3 BOX 4 BOX 5 BOX 6 BOX 7 BOX 8 BOX 9
IXU 1 MG J G10 C G05

Notes:
- Ion Exchange Element is not included with unit and is to be ordered separately

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

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)
Triton Dehydration Station®

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

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.

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

<table>
<thead>
<tr>
<th>Media</th>
<th>Filter Rating</th>
<th>DHC (gm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z1</td>
<td>8.4.2(c) ≥1000</td>
<td>55</td>
</tr>
<tr>
<td>Z3</td>
<td>8.4.8(c) ≥1000</td>
<td>57</td>
</tr>
<tr>
<td>Z5</td>
<td>8.6.3(c) ≥1000</td>
<td>62</td>
</tr>
<tr>
<td>Z10</td>
<td>8.10(c) ≥1000</td>
<td>52</td>
</tr>
<tr>
<td>Z25</td>
<td>8.24(c) ≥1000</td>
<td>48</td>
</tr>
</tbody>
</table>

Part of Schroeder Industries Energy Sustainability Initiative
Triton Dehydration Station
U.S. Patent 8491785

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

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDS</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

Example: NOTE: One option per box

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDS</td>
<td>A</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

Model Number
Selection

<table>
<thead>
<tr>
<th>Box 1</th>
<th>Box 2</th>
<th>Box 3</th>
<th>Box 4</th>
<th>Box 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Flow Rate</td>
<td>Seals</td>
<td>Mobility</td>
<td>Voltage</td>
</tr>
<tr>
<td>TDS</td>
<td>A = 2.0 gpm</td>
<td>V = Viton®</td>
<td>S = Stationary</td>
<td>M = Caster Base</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Box 6</th>
<th>Box 7</th>
<th>Box 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Source</td>
<td>Media</td>
<td>Option</td>
</tr>
<tr>
<td>B = Integral Blower</td>
<td>01</td>
<td>X = Class 1, Div 2 explosion-proof</td>
</tr>
<tr>
<td>C = Compressed Air (customer must supply clean, dry air)</td>
<td>03</td>
<td>1 = Cart Version</td>
</tr>
<tr>
<td></td>
<td>05</td>
<td>Y = Built with CSA approved components (requires CSA inspection on-site)</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>H = 2.4 KW heater (only available in 220/60/1 phase voltage option)</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td></td>
</tr>
</tbody>
</table>

Dimensions in inches.

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

**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

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

The Triton Dehydration Station® uses patented mass transfer dewatering technology. Ambient air is conditioned to increase its water holding capability before injecting to the reaction chamber. Fluid is equally distributed and cascaded down through reticulated media and the conditioned air stream. Water is transformed to water vapor and is expelled from the unit as moist air/stream. The relative humidity of the incoming fluid is continually monitored by an integral TestMate® Water Sensor (TWS) and displayed real-time on the control panel in percent saturation.

### Specifications

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

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

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

**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

<table>
<thead>
<tr>
<th>Media</th>
<th>Filter Rating</th>
<th>DHC (gm)</th>
<th>Media</th>
<th>Filter Rating</th>
<th>DHC (gm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z1</td>
<td>8 4.2(c) ≥1000</td>
<td>55</td>
<td>Z10</td>
<td>8 10(c) ≥1000</td>
<td>52</td>
</tr>
<tr>
<td>Z3</td>
<td>8 4.8(c) ≥1000</td>
<td>57</td>
<td>Z25</td>
<td>8 24(c) ≥1000</td>
<td>48</td>
</tr>
<tr>
<td>Z5</td>
<td>8 6.3(c) ≥1000</td>
<td>62</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
How to Build a Valid Model Number for a Schroeder Triton-E:

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
<th>BOX 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Flow Rate</td>
<td>Seals</td>
<td>Mobility</td>
<td>Voltage</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TDSE</td>
<td>Omit = 15 gpm</td>
<td>V = Viton®</td>
<td>S = Stationary</td>
<td>A = 460V/3/60 Hz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>22 = 22 gpm</td>
<td></td>
<td>M = Caster Base</td>
<td>B = 575V/3/60 Hz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>VF = 3-15 gpm (Variable)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Example: NOTE: One option per box

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>TDSE</td>
<td>V</td>
<td>M</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>G05</td>
<td>H</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

= TDSEVMABG05H

NOTES:
*K filter housing will use the GeoSeal® elements
Q filter housing will use the 39QCLQF Filter Systems elements

Air Source
- B = Integral Blower

Filter Housing
- K = 27" filter housing
- Q = 39" QFS filter housing

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

Option
- H = 12500 W Heater
North American Vacuum Dehydrator

**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

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

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimensions</strong></td>
<td>39&quot; W x 76&quot; L x 74&quot; H (99.06 cm x 193.04 cm x 187.96 cm)</td>
</tr>
<tr>
<td><strong>Dry Mass</strong></td>
<td>1990 lbs (903 kg)</td>
</tr>
<tr>
<td><strong>Inlet Connections</strong></td>
<td>2&quot; NPT</td>
</tr>
<tr>
<td><strong>Outlet Connections</strong></td>
<td>1 ½&quot; NPT</td>
</tr>
<tr>
<td><strong>Flow Rate</strong></td>
<td>30 gpm (114 L/min)</td>
</tr>
<tr>
<td><strong>Inlet Pressure</strong></td>
<td>22 in. Hg - 10 psi</td>
</tr>
<tr>
<td><strong>Outlet Pressure</strong></td>
<td>110 psi (7.6 bar)</td>
</tr>
<tr>
<td><strong>Fluid Service Temperature</strong></td>
<td>39°F to 170°F (3.8°C to 77°C)</td>
</tr>
<tr>
<td><strong>Operating Temperature</strong></td>
<td>39°F to 105°F (3.8°C to 40.6°C)</td>
</tr>
<tr>
<td><strong>Fluid Viscosity</strong></td>
<td>150-3280 SUS (23-700 cSt)</td>
</tr>
<tr>
<td><strong>Power Supply</strong></td>
<td>460V or 575V</td>
</tr>
<tr>
<td><strong>Attainable Water Content</strong></td>
<td>&lt;10ppm</td>
</tr>
<tr>
<td><strong>Relative Humidity Display</strong></td>
<td>Standard, 0 - 99%</td>
</tr>
<tr>
<td><strong>Constructions</strong></td>
<td>Base Frame: Carbon Steel Vessel: Carbon Steel Seals: Viton</td>
</tr>
<tr>
<td><strong>Protection Class</strong></td>
<td>NEMA 4</td>
</tr>
<tr>
<td><strong>30 gpm</strong></td>
<td>113.6 L/min</td>
</tr>
</tbody>
</table>

The NAV is part of Schroeder Industries Energy Sustainability Initiative.
**How to Build a Valid Model Number for a Schroeder NAV:**

<table>
<thead>
<tr>
<th>Box 1</th>
<th>Box 2</th>
<th>Box 3</th>
<th>Box 4</th>
<th>Box 5</th>
<th>Box 6</th>
<th>Box 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Example:**

**NOTE:** One option per box

- Box 1: **NAV**
- Box 2: **30**
- Box 3: **2**
- Box 4: **A**
- Box 5: **H**
- Box 6: **10**

= NAV30M2AH10

<table>
<thead>
<tr>
<th>Box 1</th>
<th>Box 2</th>
<th>Box 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series</td>
<td>Flow Rate</td>
<td>Operating Fluid</td>
</tr>
<tr>
<td>NAV</td>
<td>30 = 30 gpm</td>
<td>M = Mineral Oils (including oils w/ max. Viscosity as identified in specifications)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Box 5</th>
<th>Box 6</th>
<th>Box 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage/Frequency</td>
<td>Heater</td>
<td>Filtration Rating</td>
</tr>
<tr>
<td>A = 460V / 60Hz / 3Ph+PE</td>
<td>H = Standard</td>
<td>3 = 3 Micron</td>
</tr>
<tr>
<td>B = 575V / 60Hz / 3Ph+PE</td>
<td></td>
<td>5 = 5 Micron</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 = 10 Micron</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25 = 25 Micron</td>
</tr>
</tbody>
</table>

**Model Number Selection**

*North American Vacuum Dehydrator*

*This drawing contains confidential technical data that is proprietary to PowerFlow Fluid Systems. Unauthorized use, copying, distribution to third parties, manufacture or reproduction in part or in whole is prohibited. All rights are reserved.*
Vacuum Dehydrator

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.

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)

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

Range**: 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 ***
### SVD01 Stationary

Dimensions in inches (millimeters).

### SVD01 Mobile

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

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>SVD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Example:**

NOTE: One option per box

SVD 01 H S 46 24H 05 TWS = SVD01HS4624H05TWS

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Flow Rate</td>
<td>Fluid Type</td>
<td>Mobility</td>
<td>Power</td>
<td>Media (OLF5 Element Filtration Rating)</td>
<td>Option</td>
<td></td>
</tr>
<tr>
<td>SVD</td>
<td>1.3 gpm at 50 Hz, ~1.6 gpm at 60 Hz</td>
<td>H = Hydraulic &amp; Synthetic Fluid, V = HDF-R, Biodegradable</td>
<td>S = Stationary, M = Caster Base</td>
<td>12X = 1000 Watts, 24H = 2400 Watts w/ Heater (230V AC = 1 kW, 460V AC = 2.4 kW)</td>
<td>02, 05, 10, 20</td>
<td>None, TWS, TCMTWS = Contamination and Water Sensor</td>
<td></td>
</tr>
</tbody>
</table>

### Seal Compatibility

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

*Supplied without connector

For replacement element part numbers, please see "Appendix Section - Replacement Elements" of this catalog.
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 (TWV-D)
- HNS electronic level sensor
- Breather filter and piping for individual components
- Gasket (interface to tank)
- Operating and maintenance instructions
- Instructions for tank installation
## Specifications

<table>
<thead>
<tr>
<th></th>
<th>OXS 30LID</th>
<th>OXS 45LID</th>
<th>OXS 70LID</th>
<th>OXS 150LID</th>
<th>OXS 250LID</th>
<th>OXS 325LID</th>
<th>OXS 500LID</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Differential Operating Volume:</strong></td>
<td>8 gal.</td>
<td>11.8 gal.</td>
<td>18.5 gal.</td>
<td>39.5 gal.</td>
<td>66 gal.</td>
<td>86 gal.</td>
<td>132 gal.</td>
</tr>
<tr>
<td><strong>Typical Degassing Rate</strong>*:</td>
<td>up to 2.3 gallons per hour</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. Viscosity:</td>
<td>up to 1,500 SUS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. Fluid Flow Rate IN/OUT:</td>
<td>238 gpm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluid Temperature:</td>
<td>50°F to 175°F (10°C to +80°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient Temperature**:</td>
<td>-4°F to 104°F (-20°C to 40°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage Temperature:</td>
<td>32°F to 104°F (0°C to 40°C)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative Humidity:</td>
<td>0 - 80%, non-condensing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Filtration Unit:</td>
<td>KLC05</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Filtration Unit Filter Element:</td>
<td>KLE02</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contamination Retention Capacity:</td>
<td>36 psi (2.5 bar)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pump Type:</td>
<td>Vane Pump</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Optimal Sampling Pump Flow Rate:</td>
<td>1.9 gpm (7.5 L/min)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Filtration Unit Operating Pressure:</td>
<td>145 psi (10 bar)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clogging Indicator:</td>
<td>Visual Differential Pressure Indicator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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

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 unit
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.
# OXiStop OXS LID Series

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

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
<th>BOX 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>OXS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
<th>BOX 8</th>
<th>BOX 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>OXS</td>
<td>30LID</td>
<td>O</td>
<td>1</td>
<td>Z</td>
<td>Z</td>
<td>1</td>
<td>2</td>
<td>WP</td>
</tr>
</tbody>
</table>

= OXS30LIDO1ZZ12WP

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>OXS</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Size</th>
<th>Voltage</th>
<th>Sealing Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>OXS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30LID</td>
<td>Operating volume 8 gal.</td>
<td>O = 460 V/60Hz/3-Phase</td>
<td>1 = NBR seals, PUR membrane</td>
</tr>
<tr>
<td>45LID</td>
<td>Operating volume 11.8 gal.</td>
<td>N = 400 V/50Hz/3-Phase</td>
<td></td>
</tr>
<tr>
<td>70LID</td>
<td>Operating volume 18.5 gal.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>150LID</td>
<td>Operating volume 39.5 gal.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>250LID</td>
<td>Operating volume 66 gal.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>325LID</td>
<td>Operating volume 86 gal.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>500LID</td>
<td>Operating volume 132 gal.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BOX 5</th>
<th>BOX 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return Line Filter</td>
<td>Plate Heat Exchanger + Pump Motor Group</td>
</tr>
<tr>
<td>Z = Omit</td>
<td>Z = Omit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BOX 7</th>
<th>BOX 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vacuum Pressure Monitoring, Degassing Unit</td>
<td>Level/Temperature Monitoring</td>
</tr>
<tr>
<td>1 = Pressure Gauge</td>
<td>2 = Electronic Level Sensor with integrated temperature sensor</td>
</tr>
<tr>
<td>2 = Electronic Pressure Sensor (EDS)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BOX 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measuring Equipment</td>
</tr>
<tr>
<td>Z = Omit</td>
</tr>
<tr>
<td>WP = Water Sensor (TWS-D) + Contamination Sensor (TCM)</td>
</tr>
</tbody>
</table>
This page is intentionally left blank