**High-Pressure Sandwich Filter**

**Features and Benefits**
- Sandwich filter configured for D05 subplate
- Withstands high pressure surges, high static pressure loads
- 3000 psi collapse elements

Model No. of filter in photograph is NOF301NNZX305D5.

**Specifications**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow Rating</td>
<td>Up to 12 gpm (45 L/min) for 150 SUS (32 cSt) fluids</td>
</tr>
<tr>
<td>Max. Operating Pressure</td>
<td>3000 psi (210 bar)</td>
</tr>
<tr>
<td>Min. Yield Pressure</td>
<td>10,000 psi (690 bar), per NFPA T2.6.1</td>
</tr>
<tr>
<td>Rated Fatigue Pressure</td>
<td>Contact Factory</td>
</tr>
<tr>
<td>Temp. Range</td>
<td>-20°F to 225°F (-29°C to 107°C)</td>
</tr>
<tr>
<td>Non-Bypass Model</td>
<td>High collapse elements are standard</td>
</tr>
<tr>
<td>Porting Head</td>
<td>Aluminum</td>
</tr>
<tr>
<td>Element Case</td>
<td>Aluminum</td>
</tr>
<tr>
<td>Weight of NOF30-1NN</td>
<td>6.6 lbs. (3.0 kg)</td>
</tr>
<tr>
<td>Element Change Clearance</td>
<td>4.50&quot; (115 mm)</td>
</tr>
</tbody>
</table>

**Applications**

- AUTOMOTIVE MANUFACTURING
- MINING TECHNOLOGY
- MACHINE TOOL
- PULP & PAPER
- MOBILE VEHICLES

**Filter Housing**

**Cartridge Elements**

- HS60
- MHS60
- KFH50

**Cartridge Elements**

- NOF30
- NFS30
- YF30
- CFX30
- PLD
- DF40
- CF40
- PF40
- RFS50
- RF60
- CF60
- CTF60
- VF60
- LW60
- KF30
- TF50
- KF50
- KC50
- MKF50
- KC65

**Cartridge Elements**

- NOF30-05
- NOF50-760
- FOF60-03
- NMF30
- RMF60

**Cartridge Elements**

- SCHROEDER INDUSTRIES 121
NOF30-05

High-Pressure Sandwich Filter

Element Performance Information

<table>
<thead>
<tr>
<th>Element</th>
<th>Filtration Ratio Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402</th>
<th>Filtration Ratio wrt ISO 16889 Using APC calibrated per ISO 11171</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$\beta_x \geq 75$</td>
<td>$\beta_x \geq 100$</td>
</tr>
<tr>
<td>NNZX3</td>
<td>&lt;1.0</td>
<td>&lt;1.0</td>
</tr>
<tr>
<td>NNZX10</td>
<td>7.4</td>
<td>8.2</td>
</tr>
</tbody>
</table>

Dirt Holding Capacity

<table>
<thead>
<tr>
<th>Element</th>
<th>DHC (gm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NNZX3</td>
<td>11*</td>
</tr>
<tr>
<td>NNZX10</td>
<td>13*</td>
</tr>
</tbody>
</table>

Element Collapse Rating: 3000 psid (210 bar) for high collapse (ZX) versions
Flow Direction: Outside In
Element Nominal Dimensions: 1.75" (45 mm) O.D. x 8.00" (200 mm) long

Metric dimensions in ( ).
**High-Pressure Sandwich Filter**

**Type Fluid**
- Petroleum Based Fluids
  - All Z-Media® (synthetic)
- High Water Content
  - 3, 10 and 25 µ Z-Media® (synthetic)
- Invert Emulsions
  - 10 and 25 µ Z-Media® (synthetic)
- Water Glycols
  - 3, 10 and 25 µ Z-Media® (synthetic)

**Fluid Compatibility**

**Element Selection Based on Flow Rate**

**Pressure Drop Information Based on Flow Rate and Viscosity**

Sizing of elements should be based on element flow information provided in the Element Selection chart above.

**Notes**

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**Exercise:**
Determine $\Delta P$ at 8 gpm (30 L/min) for NOF301NNZX1005D5 using 150 SUS (32 cSt) fluid.

**Solution:**

<table>
<thead>
<tr>
<th>$\Delta P$</th>
<th>Calculation</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\Delta P_{housing}$</td>
<td>$15.0 \text{ psi} = 100 \times [1.0 \text{ bar}]$</td>
</tr>
<tr>
<td>$\Delta P_{element}$</td>
<td>$8 \times (0.52 + 54.9) \times (32 + 32) = 0.3 \text{ bar}$</td>
</tr>
<tr>
<td>$\Delta P_{total}$</td>
<td>$15.0 + 4.2 = 19.2 \text{ psi}$</td>
</tr>
</tbody>
</table>

$\Delta P_{total} = \Delta P_{housing} + \Delta P_{element}$
**High-Pressure Sandwich Filter**

### Box 1: Filter Series
- **NOF30**

### Box 2: Number of Elements
- 1

### Box 3: Element Part Number
- **NNZX3** = NN size 3 µ high collapse media
- **NNZX10** = NN size 10 µ high collapse media
- **NNZX25** = NN size 25 µ high collapse media

### Box 4: Seal Material
- **Omit** = Buna N
- **V** = Viton®
- **W** = Buna N

### Box 5: Porting
- 05 = D05 subplate pattern

### Box 6: Options
- **Omit** = None
- **90** = Optional indicator setting

### Box 7: Dirt Alarm® Options
- **Omit** = None
- **Visual**
- **D5** = Visual pop-up (60 psid indicator setting)
- **Visual with Thermal Lockout**
- **D8** = Visual w/ thermal lockout

- **Option Electrical**
  - **MS5** = Electrical w/ 12 in. 18 gauge 4-conductor cable
  - **MS5LC** = Low current MS
  - **MS10** = Electrical w/ DIN connector (male end only)
  - **MS10LC** = Low current MS10
  - **MS11** = Electrical w/ 12 ft. 4-conductor wire
  - **MS12** = Electrical w/ 5 pin Brad Harrison connector (male end only)
  - **MS12LC** = Low current MS12
  - **MS16** = Electrical w/ weather-packed sealed connector
  - **MS16LC** = Low current MS16
  - **MS17LC** = Electrical w/ 4 pin Brad Harrison male connector

- **Option Electrical with Thermal Lockout**
  - **MS5T** = MS5 (see above) w/ thermal lockout
  - **MS5LCT** = Low current MS5T
  - **MS10T** = MS10 (see above) w/ thermal lockout
  - **MS10LCT** = Low current MS10T
  - **MS12T** = MS12 (see above) w/ thermal lockout
  - **MS12LCT** = Low current MS12T
  - **MS16T** = MS16 (see above) w/ thermal lockout
  - **MS16LCT** = Low current MS16T
  - **MS17LCT** = Low current MS17T

- **Option Electrical Visual**
  - **MS13** = Supplied w/ threaded connector & light
  - **MS14** = Supplied w/ 5 pin Brad Harrison connector & light (male end)

- **Option Electrical Visual with Thermal Lockout**
  - **MS13DCT** = MS13 (see above), direct current, w/ thermal lockout
  - **MS13DCLCT** = Low current MS13DCT
  - **MS14DCT** = MS14 (see above), direct current, w/ thermal lockout
  - **MS14DCLCT** = Low current MS14DCT

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**NOTES:**

- Box 3. Replacement element part numbers are identical to contents of Boxes 3 and 4.
- Box 4. For options V and W, all aluminum parts are anodized. Viton® is a registered trademark of DuPont Dow Elastomers.

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**How to Build a Valid Model Number for a Schroeder NOF30-05:**

<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>NOF30</td>
<td>NNZX3</td>
<td>05</td>
<td>D5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

\[ \text{NOF301NNZX305D5} \]