Series DU 101
464 PSI

Position I: Left filter-side in operation
Position II: Right filter-side in operation

1) Connection for the potential equalization, only for application in the explosive area.

weight: approx. 51 lbs.

Dimensions: inches
Designs and performance values are subject to change.
Description:

Pressure filter change over series DU 101 have a working pressure up to 464 PSI. Pressure peaks can be absorbed with a sufficient safety margin.

A three-way-change-over valve which is integrated in the middle of the housing makes it possible to switch from the dirty filter-side to the clean filter-side without interrupting operation. These filters can be installed as suction filters.

The filter element consists of star-shaped, pleated filter material, which is supported on the inside by a perforated core tube and is bonded to the end caps with a high-quality adhesive. The flow direction is from outside to inside.

For cleaning the stainless steel mesh element (see special leaflets 21070-4 and 39448-4) or changing the filter element, remove the cover and take out the element. The mesh elements are not guaranteed to maintain 100% performance after cleaning.

For filtration finer than 40 μm, use the disposable elements made of microglass. Filter elements as fine as 5 μm(c) are available; finer filter elements are available upon request.

Eaton filter elements are known for a high intrinsic stability and an excellent filtration capability, a high dirt-retaining capacity and a long service life.

Eaton filter can be used for petroleum-based fluids, HW emulsions, water glycols, most synthetic fluids and lubrication fluids. Consult factory for specific fluid applications.

Ship classifications available upon request.

Type index:

**Complete filter:** (ordering example)

<table>
<thead>
<tr>
<th>series:</th>
<th>01N. 100. 10VG. 16. E. P. -</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>01N = filter element according to company standard</td>
</tr>
<tr>
<td>2</td>
<td>nominal size: 100</td>
</tr>
<tr>
<td>3</td>
<td>- 7 see type index complete filter</td>
</tr>
</tbody>
</table>

**Pressure Filter, change over Series DU 101**

**464 PSI**

**Accessories:**

- gauge port and bleeder connection, see sheet-no. 1650
- drain- and bleeder connection, see sheet-no. 1651 resp. 1659
- SAE-counter flanges, see sheet-no. 1652
- shut-off valve, see sheet-no. 1655

To add an indicator/sensor to your filter, use the corresponding indicator data sheet to find the indicator details and add them to the filter assembly model code.

**Filter element:** (ordering example)

<table>
<thead>
<tr>
<th>series:</th>
<th>01N. 100. 10VG. 16. E. P. -</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>01N = filter element according to company standard</td>
</tr>
<tr>
<td>2</td>
<td>nominal size: 100</td>
</tr>
</tbody>
</table>

**Accessories:**

- gauge port and bleeder connection, see sheet-no. 1650
- drain- and bleeder connection, see sheet-no. 1651 resp. 1659
- SAE-counter flanges, see sheet-no. 1652
- shut-off valve, see sheet-no. 1655
Technical data:
operating temperature: +14°F to +212°F
operating medium: mineral oil, other media on request
max. operating pressure: 464 PSI
test pressure: 900 PSI
max. operating pressure with IS20: 232 PSI
test pressure with IS20: 464 PSI
max. operating pressure with IS63: 914 PSI
test pressure with IS63: 1827 PSI
process connection: SAE-flange connection 3000 PSI
housing material: EN-GJS-400-18-LT
sealing material: Nitrile (NBR) or Viton (FPM), other materials on request
installation position: vertical
measuring connections: BSPP ¼
drain- and bleeder connections: BSPP ½
volume tank: 2x .23 Gal.

Classified under the Pressure Equipment Directive 2014/68/EU for mineral oil (fluid group 2), Article 4, Para. 3.
Classified under ATEX Directive 2014/34/EU according to specific application (see questionnaire sheet-no. 34279-4).

Pressure drop flow curves:
Filter calculation/sizing
The pressure drop of the assembly at a given flow rate Q is the sum of the housing $\Delta p$ and the element $\Delta p$ and is calculated as follows:

$\Delta p_{assembly} = \Delta p_{housing} + \Delta p_{element}$

$\Delta p_{housing} = \text{(see } \Delta p = f(Q) \text{ - characteristics)}$

$\Delta p_{element} (\text{PSI}) = Q \left( \frac{\text{GPM}}{1000} \right) \times \frac{\text{PSI}}{\text{GPM}} \times \nu(SUS) \times \frac{\rho}{0.876} \left( \frac{\text{kg}}{\text{dm}^3} \right)$

For ease of calculation our Filter Selection tool is available online at www.eatonpowersource.com/calculators/ filtration/.

Material gradient coefficients (MSK) for filter elements
The material gradient coefficients in psi/gpm apply to mineral oil (HLP) with a density of 0.876 kg/dm³ and a kinematic viscosity of 139 SUS (30 mm²/s). The pressure drop changes proportionally to the change in kinematic viscosity and density.

<table>
<thead>
<tr>
<th>DU</th>
<th>3VG</th>
<th>6VG</th>
<th>10VG</th>
<th>16VG</th>
<th>25VG</th>
<th>25G</th>
<th>40G</th>
<th>80G</th>
<th>10P</th>
<th>10API</th>
<th>25API</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>2.473</td>
<td>1.717</td>
<td>1.099</td>
<td>0.957</td>
<td>0.654</td>
<td>0.0651</td>
<td>0.0607</td>
<td>0.0416</td>
<td>0.504</td>
<td>0.582</td>
<td>0.266</td>
</tr>
</tbody>
</table>

$\Delta p = f(Q)$ – characteristics according to ISO 3968
The pressure drop characteristics apply to mineral oil (HLP) with a density of 0.876 kg/dm³. The pressure drop changes proportionally to the density.
Symbols:

- without indicator: AE 30 and AE 40
- with electric indicator: AE 50 and AE 62
- with visual-electric indicator: AE 70 and AE 80
- with visual-electric indicator: AOR/AOC/OP
- with visual-electric indicator: OE
- with electronic sensor: VS5

Spare parts:

<table>
<thead>
<tr>
<th>item</th>
<th>qty.</th>
<th>designation</th>
<th>dimension</th>
<th>article-no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>filter element</td>
<td>01N.100...</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>O-ring</td>
<td>32 x 3.5</td>
<td>304378 (NBR)</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>O-ring</td>
<td>76 x 4</td>
<td>305590 (NBR)</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>O-ring</td>
<td>24 x 3</td>
<td>303038 (NBR)</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>O-ring</td>
<td>60 x 2.5</td>
<td>305601 (NBR)</td>
</tr>
<tr>
<td>6</td>
<td>8</td>
<td>screw plug</td>
<td>BSPP ½</td>
<td>304678</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>screw plug</td>
<td>BSPP ¾</td>
<td>305003</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>clogging indicator, visual</td>
<td>AOR or AOC</td>
<td>see sheet-no. 1606</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>clogging indicator, visual</td>
<td>OP</td>
<td>see sheet-no. 1628</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>clogging indicator, visual-electric</td>
<td>OE</td>
<td>see sheet-no. 1628</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>clogging indicator, visual-electric</td>
<td>AE</td>
<td>see sheet-no. 1629</td>
</tr>
<tr>
<td>12</td>
<td>1</td>
<td>clogging sensor, electronic</td>
<td>VS5</td>
<td>see sheet-no. 1641</td>
</tr>
<tr>
<td>13</td>
<td>2</td>
<td>screw plug</td>
<td>BSPP ¼</td>
<td>305003</td>
</tr>
<tr>
<td>14</td>
<td>1</td>
<td>pressure balance valve</td>
<td>DN10</td>
<td>305000</td>
</tr>
</tbody>
</table>

Item 13 execution only without clogging indicator or clogging sensor

Test methods:

Filter elements are tested according to the following ISO standards:

- ISO 2941: Verification of collapse/burst resistance
- ISO 2942: Verification of fabrication integrity
- ISO 2943: Verification of material compatibility with fluids
- ISO 3723: Method for end load test
- ISO 3724: Verification of flow fatigue characteristics
- ISO 3968: Evaluation of pressure drop versus flow characteristics
- ISO 16889: Multi-pass method for evaluating filtration performance