Series DU 63
914 PSI

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

Measuring connection III, IV: Drain BSPP ½ - clean side
Measuring connection V, VI: Air bleeding, pressure relief BSPP ½ - dirt side

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

weight: approx. 33 lbs.

Dimensions: inches

Designs and performance values are subject to change.
Pressure Filter, change over
Series DU 63
914 PSI

Description:
Pressure filter change over series DU63 have a working pressure up to 914 PSI. Pressure peaks can be absorbed with a sufficient safety margin.

A rotary slide valve 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 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.

The bypass valve is integrated in the filter cover. After reaching the bypass pressure setting, the bypass valve will send unfiltered partial flow around the filter.

Ship classifications available upon request.

Type index:

Complete filter: (ordering example)
DU. 63. 10VG. 30. E. P. -. UG. 4. -. -. - AE
     1 2 3 4 5 6 7 8 9 10 11 12 13
1 | series:        Du = pressure filter, change over
2 | nominal size:  63
3 | filter-material:
   80G, 40G, 25G stainless steel wire mesh
   25VG, 16VG, 10VG, 6VG, 3VG microglass
   25API, 10API microglass according to API
   10P paper
4 | filter element collapse rating:
   30 = Δp 435 PSI
5 | filter element design:
   E = single end open
6 | sealing material:
   P = Nitrile (NBR)
   V = Viton (FPM)
7 | filter element specification:
   - = standard
   VA = stainless steel
   IS06 = for HFC application, see sheet-no. 31601
8 | process connection:
   UG = thread connection
9 | process connection size:
   4 = -12 SAE
10 | filter housing specification:
    - = standard
11 | pressure vessel specification.
    - = standard (PED 2014/68/EU)
12 | internal valve:
    - = without
    S1 = with bypass valve Δp 51 PSI
13 | clogging indicator or clogging sensor:
    - = without
    AOR = visual, see sheet-no. 1606
    AOC = visual, see sheet-no. 1606
    AE = visual-electric, see sheet-no. 1615
    VGS = electronic, see sheet-no. 1819

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)
01NL. 63. 10VG. 30. E. P. -
     1 2 3 4 5 6 7
1 | series:
   01NL. = standard filter element according to DIN 24550, T3
2 | nominal size:  63
3 | - 7 see type index complete filter

Accessories:
- gauge port and bleeder connection, see sheet-no. 1650
- drain- and bleeder connection, see sheet-no. 1659
Technical data:
operating temperature: +14°F to +212°F
operating medium: mineral oil, other media on request
max. operating pressure: 914 PSI
test pressure: 1827 PSI
process connection: thread connection
housing material: EN-GJS-400-18-LT
sealing material: Nitrile (NBR) or Viton (FPM), other materials on request
installation position: vertical
measuring connections: BSPP ½
drain- and bleeder connections: BSPP ½
volume tank: 2x 0.17 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:

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

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

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>VG</th>
<th>G</th>
<th>P</th>
<th>API</th>
</tr>
</thead>
<tbody>
<tr>
<td>63</td>
<td>3VG</td>
<td>2.926</td>
<td>1.873</td>
<td>1.631</td>
</tr>
</tbody>
</table>

$\Delta p = f(Q) - \text{characteristics according to ISO 3968}$

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**
- **with electric indicator**
- **with visual-electric indicator**
- **with visual indicator**
- **AOR/AOC**
- **with electronic clogging sensor**

**filter without internal valve**

- **filter without indicator**
- **with electric indicator**
- **with visual-electric indicator**
- **with visual indicator**
- **AOR/AOC**
- **with electronic clogging sensor**

**filter with by-pass valve**

- **filter without indicator**
- **with electric indicator**
- **with visual-electric indicator**
- **with visual indicator**
- **AOR/AOC**
- **with electronic clogging sensor**

Spare parts:

<table>
<thead>
<tr>
<th>Item</th>
<th>qty.</th>
<th>designation</th>
<th>dimension</th>
<th>article-no.</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>filter element</td>
<td>Ø11L.63...</td>
<td>304341 (NBR)</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>O-ring</td>
<td>22 x 3.5</td>
<td>305072 (NBR)</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>O-ring</td>
<td>56 x 3</td>
<td>304352 (NBR)</td>
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<tr>
<td>4</td>
<td>1</td>
<td>O-ring</td>
<td>42.52 x 2.62</td>
<td>304359 (NBR)</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>O-ring</td>
<td>18 x 3</td>
<td>304357 (NBR)</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td>O-ring</td>
<td>48 x 3</td>
<td>304357 (NBR)</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>screw plug</td>
<td>BSPP 1 ¼</td>
<td>308530</td>
</tr>
<tr>
<td>8</td>
<td>6</td>
<td>screw plug</td>
<td>BSPP ¾</td>
<td>304678</td>
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<tr>
<td>9</td>
<td>1</td>
<td>adapter</td>
<td></td>
<td>314110</td>
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<tr>
<td>10</td>
<td>1</td>
<td>clogging indicator, visual</td>
<td>AOR or AOC</td>
<td>see sheet-no. 1606</td>
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<tr>
<td>11</td>
<td>1</td>
<td>clogging indicator, visual-electric</td>
<td>AE</td>
<td>see sheet-no. 1615</td>
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<tr>
<td>12</td>
<td>1</td>
<td>clogging sensor, electronic</td>
<td>VS5</td>
<td>see sheet-no. 1615</td>
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<td>13</td>
<td>2</td>
<td>screw plug</td>
<td>BSPP 1/4</td>
<td>306329</td>
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<tr>
<td>14</td>
<td>1</td>
<td>pressure balance valve</td>
<td>3/8”</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

For more information, please email us at filtration@eaton.com or visit www.eaton.com/filtration