Series DU 1001-1950
DN80 PN63

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

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

Weight DU1001: approx. 120 kg
Weight DU1950: approx. 173 kg

Dimensions: mm

Designs and performance values are subject to change.
Pressure Filter, change over
Series DU 1001-1950
DN80 PN63

Description:
Pressure filter change over series DU 1001-1950 have a working pressure up to 63 bar. 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.

The internal valves are integrated in the filter cover.

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)

01NR. 1000. 10VG. 10. B. P. -

1 | 2 | 3 | 4 | 5 | 6 | 7
---|---|---|---|---|---|---
1 | series: | 01NR | standard-return-line filter element according to DIN 24550, T4
2 | nominal size: | 1000, 1001 (only with DU1950)
3 | see type index complete filter

Accessories:
- gauge port and bleeder connection, see sheet-no. 1650
- drain- and bleeder connection, see sheet-no. 1659
- SAE-counter flanges, see sheet-no. 1652
- shut-off valve, see sheet-no. 1655
Technical data:

- design temperature: -10 °C to +100 °C
- operating temperature: -10 °C to +80 °C
- max. operating pressure: 63 bar
- test pressure: 126 bar
- process connection: SAE-flange connection 3000 PSI
- housing material: EN-GJS-400-18-LT, S355J2+N (filter cover)
- installation position: vertical
- measuring connections: G ¼
- drain- and bleeder connections: G ½
- volume tank DU1001: 2x 13.0 l
- volume tank DU1950: 2x 23.3 l

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:

\[
\Delta p_{\text{assembly}} = \Delta p_{\text{housing}} + \Delta p_{\text{element}}
\]

\[
\Delta p_{\text{housing}} = \left( \text{see } \Delta p = f(Q) - \text{characteristics} \right)
\]

\[
\Delta p_{\text{Element}} (\text{mbar}) = Q \left( \frac{l}{\text{min}} \right) \times 10 \left( \frac{mbar}{l/\text{min}} \right) \times \text{V} \left( \frac{m^3}{s} \right) \times \frac{p}{0.876} \left( \frac{kg}{dm^3} \right)
\]

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 30 mm²/s (139 SUS). 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>
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</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 bypass valve**
- **with electric indicator**
- **with visual-electric indicator**
- **with visual-electric indicator AOR/AOC/OP**
- **with visual-electric indicator OE**
- **with electronic sensor VS5**

Spare parts:

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<tr>
<th>item</th>
<th>designation</th>
<th>qty.</th>
<th>dimension / article-no.</th>
<th>qty.</th>
<th>dimension / article-no.</th>
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<td>1</td>
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Item 17 execution only without clogging indicator or clogging sensor

Test methods:

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

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