1. Type index:

1.1. Complete filter: (ordering example)

DTEF. 1652. 10VG. 16. S. P. -. FS. B. -. E1. O. -.

Position I: left filter-side in operation
Position II: right filter-side in operation

1.2. Filter element: (ordering example)

01E. 631. 10VG. 16. S. P. -.

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3. 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>6</td>
<td>filter element</td>
<td>01.E 631</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>filter head  (^1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>filter bowl with discharge pipe  (^1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>filter cover (^1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>O-ring</td>
<td>355 x 5</td>
<td>314740 (NBR)</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>O-ring</td>
<td>120 x 4</td>
<td>305300 (NBR)</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>gasket</td>
<td>430 x 350 x 2</td>
<td>317271 (NBR)</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
<td>O-ring</td>
<td>63 x 3.5</td>
<td>311189 (NBR)</td>
</tr>
<tr>
<td>9</td>
<td>2</td>
<td>O-ring</td>
<td>150 x 4</td>
<td>313278 (NBR)</td>
</tr>
<tr>
<td>10</td>
<td>2</td>
<td>O-ring</td>
<td>24 x 3</td>
<td>305338 (NBR)</td>
</tr>
<tr>
<td>11</td>
<td>1</td>
<td>O-ring</td>
<td>110.72 x 3.53</td>
<td>316355 (NBR)</td>
</tr>
<tr>
<td>12</td>
<td>1</td>
<td>clogging indicator, visual</td>
<td>-</td>
<td>see sheet no. 1616</td>
</tr>
<tr>
<td>13</td>
<td>1</td>
<td>pressure switch, electrical</td>
<td>-</td>
<td>see sheet no. 1616</td>
</tr>
</tbody>
</table>

\(^1\) in case of ordering these spare parts use the complete type index

4. Description:

Return line filters change-over in the DTEF series are suitable for a working pressure up to 10 bar. Pressure peaks will be absorbed by a sufficient margin of safety. The DTEF filters are directly mounted to the reservoir and connected to the return line. A rotary slide 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. The filter element consists of a 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 is from outside to inside. Filters finer than 40 µm should use throw-away elements made of paper or Interpor fleece (glass fibre). Filter elements as fine as 5 µm \(^2\) are available; finer filter elements on request. Internormen Product Line filter can be used for petroleum-based fluids, HW emulsions, water glycols, most synthetic fluids and lubrication fluids. Consult factory for specific fluid applications. Internormen Product Line filter elements are known as stable elements which have excellent filtration capabilities and a high dirt retaining capacity, therefore having a long service life. Due to its practical design, the return-line filter is easy to service. When changing the filter element a detachable connection between the filter head and the filter bowl prevents a flow back of dirty oil into the tank.

5. Technical data:

- **temperature range:** - 10°C to +80°C (for a short time +100°C)
- **operating medium:** mineral oil, other media on request
- **max. operating pressure:** 10 bar
- **opening pressure by-pass valve:** 2.0 bar
- **housing material:** C-steel; glass fibre reinforced polyamide
- **sealing material:** Nitrile (NBR) or Viton (FPM), other materials on request
- **installation position:** vertical
- **volume tank:** 2x 22,0 l

Classified under the Pressure Equipment Directive 97/23/EC for mineral oil (fluid group 2), Article 3, Para. 3. Classified under ATEX Directive 94/9/EC according to specific application (see questionnaire sheet-no. 34279-4).

6. Symbols:

- without by-pass valve
- with by-pass valve
- clogging indicator at M1, M2, M3
- visual O
- electrical contact maker E1
- electrical contact breaker E5
- electrical contact maker/breaker E2

7. Pressure drop flow curves: Precise flow rates see ‘Interactive Product Specifier’, respectively \(\Delta p\) curves; depending on filter fineness and viscosity.

8. 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