Manual and maintenance instructions
for INTERNORMEN-line filters LF 15, 60, 63

These instructions refer to data sheets 1104 and 1109, and they contain general requirements in order to ensure the perfect operation of the filter. In appropriate cases, these requirements should be expanded by the user’s special regulations.

1. Installing the filter
The filter should be connected tension-free in a vertical position to the tapholes of the conduit in such a way that
- the contamination indicator is accessible and visible
- the discharge connection G 1/2 is also accessible
- the required demounting height for removing the filter unit is available.

The threaded joints of the conduit system must be correctly screwed on to the "IN" and "OUT" filter flange facings in such a way that no or very little force is transmitted from the conduits onto the filter flange facings. During this procedure measures should be taken to ensure that no dirt or foreign bodies can get into the filter.

The following tightening torques are recommended for the screwed plugs of the screwed pipe joints:

<table>
<thead>
<tr>
<th></th>
<th>G 3/8</th>
<th>G 3/4</th>
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<tbody>
<tr>
<td>Torque</td>
<td>60 Nm</td>
<td>150 Nm</td>
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For filters with an electric or electronic contamination indicator, the appliance plugs must be connected to the corresponding current supply.

2. Commissioning
Prior to initial commissioning of the system or the machine, i.e., prior to filling with oil, the filter must be opened by removing the filter cover or the screw plug and its internal condition checked (housing clean, filter unit and seals present, etc.). After closing the filter housing by installing the filter cover or the screw plug the filter may be commissioned.

3. Maintenance
Filters with a contamination indicator must be exchanged or cleaned when the indicator reads “Filter unit contaminated”.

Caution!
Sufficient replacement units must be kept in stock for filters with a disposable unit, i.e., with units awaiting replacement.

3.1. Exchanging the filter unit
The procedure for exchanging the filter unit is as follows:
- Switch off the installation and decompress filter
- Open discharge connection G 1/2 or G 3/8 “dirt side”
- Remove filter cover with the compression spring (compression spring only with LF 15 and 60) and collect oil running out of the filter housing
- Remove the filter unit
- Close the discharge connection and remove the cover near the centring pivot
- Check the filter cover seal and exchange the O-ring if necessary
- Unpack the replacement unit, ensure that the order number concurs with the order number on the used unit and insert into the filter housing (prior to doing so the seals forming part of the unit should be determined and checked to ensure that they are intact).
- Install the filter cover with compression spring (compression spring only with LF 15 and 60)
  - the tightening torque of the screw plug M 60x2 is 20 Nm
  - the tightening torque of the hexagonal head bolt M6 is 5 Nm

3.2 Cleaning the filter unit
Metallic tissue filter units can be reused provided they have been cleaned properly. Cleaning must be carried out in compliance with Regulations for Cleaning INTERNORMEN Metallic Tissue Filter Units No. 21070-4.

4. Measuring the pressure differential
The drop in pressure via the filter is determined and shown internally by the flanged contamination indicator.