

This manual is effective for all filters of the type NF 250, 631, 1000 and related specifications. It contains certain requirements and instructions which ensure unobjectionable operation of the filter. It can be completed with specific additional instructions by the operator himself if necessary.

## **1. Installing the Filter**

The filter must be secured to the installation wall in a vertical position so that it is free of stresses, and so that:

- the contamination indicator is accessible and visible
- the connections for drainage (E2, E3 below), venting (E1 above) and pressure measurement (p1, p2) are also accessible
- the dismantling height required to remove the filter element is provided.

The counter flanges, respectively tube connections of the tube system have to be properly mapped and have to be screwed to the filter connections „IN“ and „OUT“ in such way that there is no or just little transmission of forces from the tube system of the filter housing.

When carrying out this process, dirt or foreign bodies must be prevented from penetrating into the filter.

The following tightening torques are recommended for the companion flanges:

NF 250	NF 631, NF1000
50 Nm (36 lbf.-ft.)	100 Nm (73 lbf.-ft.)

For filters with an electrical or electronic contamination indicator, the equipment plugs must be connected to the appropriate power supply.

For line connections with tube fittings the tightening torques according to the manufacturers' instructions are applicable.

For filters being used in hazardous locations the Eaton documentation N° 41269 "Supplementation of the Operating Manual for the use of filters in potential explosive areas.

## **2. Starting Operation**

Before the system or the plant is operated for the first time, that is to say before it is filled with oil, the filter must be opened by dismantling the filter cover, and its interior condition must be checked (i.e. whether the housing is clean, whether the filter element and the filter element seals are present, etc.).

After the filter housing has been sealed by fitting the filter cover and venting while the filling process takes place (to do this, the drainage and venting connections G 1/2 A (1/2 BSPP) can be used as per dimension sheet 1651), the filter can be operated.

The filter is vented through the connection E1 in the upper part of the filter.

## **3. Maintenance**

For filters with a contamination indicator, the filter element must be changed and/or cleaned when the "Filter Element Contaminated" signal is given.

### **Attention!**

For a filter with a disposable element - i.e. when an exchange of element is due - sufficient spare elements must be kept in store.

### **3.1. Exchanging the Filter Elements**

- turn the system off and relieve the pressure from the filter
- open drainage connection E2, "Contamination Side"
- dismantle the filter cover and collect the oil which runs out of the filter housing
- remove the filter element by gently swiveling it to and fro, and then by pulling it out
- cover or close off the locating journal in the filter housing and clean the interior of the housing
- close off the drainage connection and remove the covering on the locating journal
- check the seal in the filter cover and exchange the O-ring if necessary
- remove the replacement element from its packaging; check that the order number matches the order number on the used element; and insert the new element into the filter housing (before doing this, the seals which belong to the element must be fixed and inspected for integrity)
- fit the filter cover and the filter, fill and vent

### **3.2 Cleaning the Filter Elements**

Metallic fabric filter elements can be used again after they have been suitably cleaned.

Cleaning must be carried out according to the cleaning instructions for Eaton filter elements made of metal fabric, no. 21070-4 and 39448-4.

## **4. Pressure Difference Measurement**

The fall in pressure over the filter is internally determined and reproduced by the flange-mounted contamination indicator.

Filter without flanged clogging indicator can equipped with mini-measuring connections MA.1.ST according to data sheet 1650, connected to the measuring points p1, p2.