1. Maintenance

1.1 General
Please follow the maintenance instructions.

1.2 Installation
The filters of type RFB are designed for tank mounting. Suitable connection flanges aligned for mounting must be present on the tank side.

The RFB filter is installed in the tank from above and fastened with screws of the machine manufacturer (M10), with attention given to the alignment of the interface in the filter base.

The filter is connected to the hydraulic return line via a plug-in tube connector. Please observe the removal height of the filter element. Observe the name plate of the filter.

1.3 Commissioning
Check that the correct filter element is installed. Install cover and screw in cover bolts alternately. Switch on hydraulic system and vent filter at a suitable point in the system. Check the filter for leakage.

1.4 Maintenance Tools

<table>
<thead>
<tr>
<th>RFB</th>
<th>Torque value</th>
<th>Key Int. hex.</th>
</tr>
</thead>
<tbody>
<tr>
<td>0170, 0300</td>
<td>20 Nm (15 ft-lbs)</td>
<td>SW 8</td>
</tr>
<tr>
<td>0400, 0600</td>
<td>25 Nm (18.5 ft-lbs)</td>
<td>SW 8</td>
</tr>
</tbody>
</table>

1.5 Torque Values for Clogging Indicators

<table>
<thead>
<tr>
<th>Type</th>
<th>Max. Torque</th>
</tr>
</thead>
<tbody>
<tr>
<td>0170, 0300, 0400, 0600</td>
<td>33 Nm (24 ft-lbs)</td>
</tr>
</tbody>
</table>

2. Element Replacement

2.1 Element Removal
1. Switch off hydraulic system and release filter pressure (if necessary, release the pressure in the tank).
2. Loosen the cover screws and remove the cover.
3. Pull the filter element from the filter housing and let the residual oil drip into the filter housing.
4. Examine element surface for dirt residues and larger particles since these can be an indication of damage to components.
5. Exchange filter element.
6. Clean cover with bypass valve plug.
7. Examine filter, especially sealing surfaces, for mechanical damage.
8. Check seals – and replace if necessary

2.2 Element Installation
1. Lubricate the sealing surfaces on the filter housing and cover, as well as the molded seal, with clean operating fluid.
2. When installing a new filter element, check that the designation corresponds to that of the old element.
3. Insert the filter element into the filter housing and press into the seal seat.
4. Put on the cover, paying attention to the alignment for holding the clogging indicator. Press the cover down against the bypass spring and unscrew nuts by hand. Then tighten alternately and observe the torques specified by the machine manufacturer.
5. If necessary, refill hydraulic oil.
6. Switch on hydraulic system and vent filter at a suitable point in the system.
7. Check the filter for leakage.

NOTE:
Filter elements which cannot be cleaned must be disposed of in accordance with environmental protection regulations.
# 3. Spare Parts

## 3.1 Spare Parts Drawing RFB 0170, 0300

<table>
<thead>
<tr>
<th>Item</th>
<th>RFB 0170</th>
<th>RFB 0300</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Cover RFB 0170 – 0300 (part no.: 200127)</td>
<td></td>
</tr>
</tbody>
</table>
| 2.   | Seal kit RFB 0170 – 0300 (part no.: 200128)  
Housing: O-ring 148.59x-5.33-N-NBR-70Sh  
O-ring 35x3.5-NBR-70Sh |  |
| 3.   | Filter element  
ULP-00xx-101-X512-S-N-RT  
UMC-00xx-101-X512-S-N-RT | Filter element  
ULP-00xx-101-X518-S-N-RT  
UMC-00xx-101-X518-S-N-RT |

For special model FKM seal, please contact our sales.

xx = filtration rating
3. Spare Parts

3.1 Spare Parts Drawing RFB 0400, 0600

<table>
<thead>
<tr>
<th>Item</th>
<th>RFB 0400</th>
<th>RFB 0600</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Cover RFB 0400 – 0600 (part no.: 200129)</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Seal kit RFB 0400 – 0600</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Housing connection H and V (part no. 200131)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>O-ring 161x3.5-NBR-70Sh</td>
<td></td>
</tr>
<tr>
<td></td>
<td>O-ring 56x7.5-NBR-70Sh</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Filter element</td>
<td>Filter element</td>
</tr>
<tr>
<td></td>
<td>ULP-00xx-121-X517-S-N-RT</td>
<td>ULP-00xx-121-X523-S-N-RT</td>
</tr>
<tr>
<td></td>
<td>UMC-00xx-121-X517-S-N-RT</td>
<td>UMC-00xx-121-X523-S-N-RT</td>
</tr>
</tbody>
</table>

xx = filtration rating

For special model FKM seal, please contact our sales.
4. Maintenance Instructions

4.1 User Instructions for Filters

This symbol is followed by user tips and particularly useful information.

- This pressure equipment must only be put into operation in conjunction with a machine or system.
- The pressure equipment must only be used as stipulated in the operating instructions of the machine or system.
- This pressure equipment must only be operated using hydraulic or lubricating fluid.
- It is the responsibility of the operator to comply with the water regulations of the country concerned.

This symbol denotes safety precautions, the non-observance of which can endanger persons and the environment.

CAUTION

- The user must take appropriate action (e.g. venting) to prevent the formation of air pockets.
- Repairs, maintenance work and commissioning must only be carried out by trained personnel.
- Allow the pressure equipment to cool before handling.
- The stipulations of the operating instructions of the machine or the system must be followed.
- Statutory accident prevention regulations, safety regulations and safety data sheets for fluids must be observed.
- Filter housing must be grounded.
- When working on, or in the vicinity of, hydraulic systems, open flames, sparks and smoking are forbidden.
- Hydraulic oils and water-polluting fluids must not be allowed to enter the soil or watercourses or sewer systems. Please ensure safe and environmentally friendly disposal of hydraulic oils. The relevant regulations in the country concerned with regard to ground water pollution, used oil and waste must be complied with.
- Whenever work is carried out on the filter, be prepared for hot oil to escape which can cause injury or scalding as a result of its high pressure or temperature.
- Filters with switching valve are designed to have a permissible leakage depending on the operating medium. This is independent of the operating medium.

DANGER!

- Caution: pressure equipment! Before any work is carried out on the pressure equipment, ensure the pressure chamber concerned (filter housing) is depressurized.
- On no account must any modifications (welding, drilling, opening by force...) be carried out on the pressure equipment.
- When using electrical clogging indicators, the electrical power supply to the system must be switched off before removing the clogging indicator connector.

4.2 Maintenance, General

This section describes maintenance work which must be carried out periodically. The operational safety and life expectancy of the filter, and whether it is ready for use, depend to a large extent on regular and careful maintenance.

4.3 Maintenance Measures

- Spare parts must fulfil the technical requirements specified by the manufacturer.
- This is always ensured when using original HYDAC spare parts.
- Keep tools, working area and equipment clean.
- After disassembling the filter, clean all parts, check for damage or wear and replace parts if necessary.
- When changing a filter element, a high level of cleanliness must be observed.

4.4 Interval Between Element Changes

In principle we recommend that the filter element is changed every 6 months or upon indication, whichever occurs first.

We recommend installing the filter with a clogging indicator (visual and/or electrical or electronic) to monitor the filter element.

When no clogging indicator has been installed, we recommend changing the elements at specific intervals. (The frequency of changing the filter elements depends on the filter design and the conditions under which the filter is operated.) When filter elements are subject to high dynamic loading it may prove necessary to change them more frequently. The same applies when the hydraulic system is commissioned, repaired or when the oil is changed.

The standard clogging indicators only respond when fluid is flowing through the filter. With electrical indicators the signal can also be converted into a continuous display on the control panel. In this case the continuous display must be switched off during a cold start or after changing the element.

If the clogging indicator responds during a cold start only, it is possible that the element does not yet need to be changed.

Customer Information in respect of Machinery Directive 2006/42/EC

Hydraulic filters are defined as fluid power parts / components and are therefore excluded from the scope of the Machinery Directive, sections 1.4.1 - 1.4.3. They do not bear the CE mark.

Before using these components, ensure compliance with the specifications provided by HYDAC Technology Corporation. The specifications also contain information on the relevant essential health and safety requirements (based on Machinery Directive 2006/42/EC).

We hereby declare that the filters are intended to be incorporated into machinery within the terms of the Directive 2006/42/EC. It is prohibited to put the filters into service until the machinery as a whole is in conformity with the provisions of the Machinery Directive.

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NOTE
The information in this brochure relates to the operating conditions and applications described.
For applications or operating conditions not described, please contact the relevant technical department.
Subject to technical modifications.