



Wind power industry filter system

Large filter area High pollution capacity Cycle monitoring
// The user can customize according to the actual working conditions //

Product Description Features Working Principle Component display Product display

Product Description

The speed-increasing gearbox, one of the important components of wind turbines, operates under high stress and harsh environments, and the key components of its bearings and gears must be effectively lubricated and protected. Its lubricating oil must be equipped with the best high-efficiency filtration to ensure the normal and effective operation of the gearbox and fan.

The wind series filter elements developed and produced by our company have a complete range of models, which are suitable for most fan gear boxes currently in operation, and can replace the currently used imported filter elements. Exactly the same. It is manufactured under the guarantee of ISO9001/ISO14001 and OHSAS18001 management system, and the quality is trustworthy.

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Features

- The oil filter element of wind turbine gearbox adopts double-effect filter material with pleated structure, high-efficiency glass fiber filter material and stainless steel wire mesh filter material. During normal operation, the oil is filtered and purified through glass fiber filter material. When poor filter and purify through stainless steel wire mesh filter material.
- The filter element is equipped with a special differential pressure valve, which automatically switches the oil to pass through different filter materials under the set pressure difference to ensure that the filter element is not damaged under the high pressure difference.
- High-efficiency glass fiber filter material consolidated by resin, high pollution-tolerant space and capacity, fixed pore structure, no filter material fibers migrate and fall off, and the polluted particles intercepted by filtration will not be unloaded due to pressure difference and flow fluctuation.
- The glass fiber filter material has a variety of filtration precisions to choose from, and the interception and removal of polluting particles is fast and efficient.
- The high-strength polyester support material and outer wrapping structure of the upstream and downstream of the filter element ensure the strength of the filter element and the stability of the filter area.

Working Principle

The filter in the wind power industry is a double-precision filter. When the pressure difference of the filter element is lower than 4bar, the bypass valve on the filter element is closed, and the lubricating oil is filtered through the 10um filter element. When the pressure difference of the filter element is greater than 4bar, the bypass valve on the filter element is opened, and the oil only passes through 50um of coarse filtration. In any case, unfiltered oil does not enter the lubricated parts of the gearbox. A differential pressure transmitter is installed on the filter. When the filter element is blocked and the pressure difference reaches 3bar, the differential pressure transmitter will send a signal to remind the filter element to be replaced. The top of the filter is equipped with an exhaust pipe, which can remove air bubbles in the system at any time to prevent air bubbles from causing damage to the gearbox.

Component display

Filter elements for lubrication systems

Air dryer filter for gearbox

Wind power gearbox lubrication and cooling system

Filter element for gearbox

technical parameter

| | |
|--|--|
| Operating temperature | -40°C-90°C |
| Oil cleanliness: The initial grade of oil is ISO4406-19/17/14 (grade 8), and it can reach the grade of ISO4406-17/15/12 (grade 6) after filtration | |
| Filtration accuracy | 10um, β10(c)=400 (fine filter element), 50um (safety filter element), (can be customized according to customer requirements) |
| Filtration efficiency | ≥ 99.75% |
| Initial pressure drop | < 47KPa |
| Filter element replacement alarm differential pressure: | Bypass valve opening pressure: 4bar |
| | 3.5bar |
| Pollution holding capacity | ≥350g (under standard operating conditions and standard dust test conditions) |

Working Principle

The filter is double-precision filtration. The filter element is composed of two parts: the fine filter element and the safety filter element. When the pressure difference of the filter element is lower than 4bar, the check valve on the filter element is closed. The working medium enters the next actuator after being filtered by the 10um fine filter element. When the pressure difference of the filter element is greater than 4bar, the one-way valve on the filter element is opened, and the working medium is filtered through the 50um safety filter element. In any case, unfiltered oil does not enter the lubricated parts of the gearbox. A differential pressure transmitter is installed on the filter. When the filter element is blocked and the pressure difference reaches 3.5bar, the differential pressure transmitter will send a signal to remind the filter element to be replaced.

Performance characteristics

- Strictly select the filter material, and test the filter material for filtration accuracy, dirt holding capacity, pressure drop, gram weight, structural integrity, etc., and test in strict accordance with international standards.
- Carry out 100% bypass valve bypass test to prevent the bypass valve from being unable to be opened or bypassing at 0 pressure.
- After the filter element is formed, perform a performance test to ensure that the filter element is 100% qualified.
- The filter element has reached the international level, completely replacing imported filter elements such as HYDAC and PALL.
- The filter element has been widely used in the wind power industry and has been well received by many customers.

Filter element for hydraulic station

Performance characteristics

| | | | |
|----------------------------------|---------------------------------------|-------------------------|---|
| Filtration precision | 10um, β10(c)=400 | Filtration efficiency | ≥ 99.75% |
| Filter element crushing pressure | ≥ 20bar | Working temperature | -20°C-120°C |
| Applicable fans | 750KW, 1MW, 1.5MW, 2MW, 3MW, 5MW, etc | Applicable pump station | Eaton, Parker, Inter Norman and other pump stations |

Filter selection table for lubricating system

| serial number | original model | replacement brand | filtration accuracy | Lifeferte model |
|---------------|--|-------------------|---------------------|---|
| 1 | 1300R010BN4HC/A-B4-KE50 | HYDAC | 10um/50um | LF-1300R010BN4HC/A-B4-KE50 |
| 2 | 2600R010BN4HC/A-B4-KE50 | HYDAC | 10um/50um | LF-2600R010BN4HC/A-B4-KE50 |
| 3 | 2200R010BN4HC/A-B4-KE50 | HYDAC | 10um/50um | LF-2200R010BN4HC/A-B4-KE50 |
| 4 | 1.06.30D02BN4HC | HYDAC | 10um/50um | LF-1.06.30D02BN4HC |
| 5 | 1.06.30D12BN4HC | HYDAC | 10um/50um | LF-1.06.30D12BN4HC |
| 6 | 2600R005-OP/K/B | HYDAC | 5um | LF-2600R005-OP/K/B |
| 7 | 0015D010BN4HC/O-14P-1-10Q1701-2024-003 | HYDAC | 10um | LF-0015D010BN4HC/O-14P-1-10Q1701-2024-003 |
| 8 | 0030D010BN4HC | HYDAC | 10um | LF-0030D010BN4HC |
| 9 | 0030D010BN4HC | HYDAC | 20um | LF-0280D020BN4HC |
| 10 | HC8300FKS39H-YC11B | PALL | 10um/50um | LF-HC8300FKS39H-YC11B |
| 11 | HC8300FKS39H-YC11 | PALL | 10um/50um | LF-HC8300FKS39H-YC11 |
| | MEP1575RN2F 10NM5 | Mintai | | LF-MEP1575RN2F 10NM5 |
| 12 | HC8300FKS39H-YC11 | PALL | 10um/50um | LF-HC8300FKS39H-YC11 |
| 13 | 01 NR 1000 3VG 10 B.P | INTERNORMEN | 3um | LF-01 NR 1000 3VG 10 B.P |
| 14 | 01 NR 1000 6V 10 B.V | INTERNORMEN | 6um | LF-01 NR 1000 6V 10 B.V |
| 15 | 01NR 1000 32227 10VG 25G 25 B.V S1 | INTERNORMEN | 10um/25um | LF-01NR 1000 32227 10VG 25G 25 B.V S1 |
| 16 | ECF15B1J3CV15 | EATON | 10um | LF-ECF15B1J3CV15 |
| 17 | 01E 30 10G 30 E P | INTERNORMEN | 10um | LF-01E 30 10G 30 E P |
| | HPF 30 51648 10VG 30 E | EATON | | LF-HPF 30 51648 10VG 30 E |
| 18 | 01E-210 10VG 1 S.P | INTERNORMEN | 10um | LF-01E-210 10VG 1 S.P |
| 19 | 73 0195-H10XL/G40-A00-Q-M | Revoth | 10um/40um | LF-73 0195-H10XL/G40-A00-Q-M |
| 20 | 65 1300H10XL/G40-000-B4-M | Revoth | 10um/40um | LF-65 1300H10XL/G40-000-B4-M |
| 21 | 65 2600H10XL/G40-000-B4-M | Revoth | 10um/40um | LF-65 2600H10XL/G40-000-B4-M |
| 22 | H-1300-RN-2-010/SONDER-WK | MAHLE | 10um/50um | LF-H-1300-RN-2-010/SONDER-WK |
| 23 | H-2600-RN-2-010/SONDER-WK | MAHLE | 10um/50um | LF-H-2600-RN-2-010/SONDER-WK |
| 24 | 7953-834-F10.6195-4006-00 | HAWE | 10um | LF-7953-834-F10.6195-4006-00 |
| 25 | G013690 | Parker | 10um | LF-G013690 |
| 26 | MEH1449RNTF 10NM50 | Mintai | 10um/50um | LF-MEH1449RNTF 10NM50 |
| 27 | MEH1449RNTF 10NM50 | Mintai | 10um/50um | LF-MEH1449RNTF 10NM50 |
| 28 | MEU0509PH1F5N | Mintai | 10um | LF-MEU0509PH1F5N |
| 29 | EET002-10F10W25B | Chuanrun | 10um/25um | LF-EET002-10F10W25B |
| 30 | PA25H80V10-1 | Puao | 10um | LF-PA25H80V10-1 |
| 31 | PA40H80N025 | Puao | 10um | LF-PA40H80N025 |
| 32 | FD70B-602000A014 | Dongfang Electric | 7um/25um | LF-FD70B-602000A014 |
| 33 | FD70B-602000A015 | Dongfang Electric | 10um/50um | LF-FD70B-602000A015 |
| 34 | FD70B-602000A016 | Dongfang Electric | 7um/25um | LF-FD70B-602000A016 |

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Product display



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