

## Oil Filter Module Pi 83116

Flow rate 220/260 l/min

### 1. Features

**Compact, ready-to-connect oil filter modules for modern gearboxes, hydraulic and lubrication systems**

- Low noise gear pump
- Minimal power losses due to high efficiencies and streamlined design of all components
- Integrated non-return valve
- Integrated pressure relief valve
- Optical/electrical maintenance indicator
- Integrated thermo valve
- Pressure sensor
- Drain on dirt side
- Equipped with highly efficient FG Premium Select filter elements
- Compact and weight-optimized design
- Garantierte Abscheideraten gemäß Multipass-Test nach ISO 16889
- High dirt holding capacity
- Achievement of defined purity classes according to ISO 4406
- Easy to service
- Worldwide sales and service



## 2. Mode of operation

The main components of the oil filter module are filter, adapter, electric pump and thermo valve. The adapter, with CFD analysis optimized channel guidance, ensures a flow with lowest flow resistance. A pressure relief valve is integrated into the adapter so that the oil can flow back into the tank if the viscosity is too high.

The low-noise gear pump is characterised by very good suction properties and excellent mechanical and volumetric efficiency.

In wind power, 3 or 2-stage filter elements are used for filtration (see the corresponding element data sheets). With these FG PS filter elements incl. PulseShield™ Pro fixation fleece, excellent cleanliness classes according to ISO 4406/1999 are achieved.

A differential pressure indicator is used to monitor the filter elements.

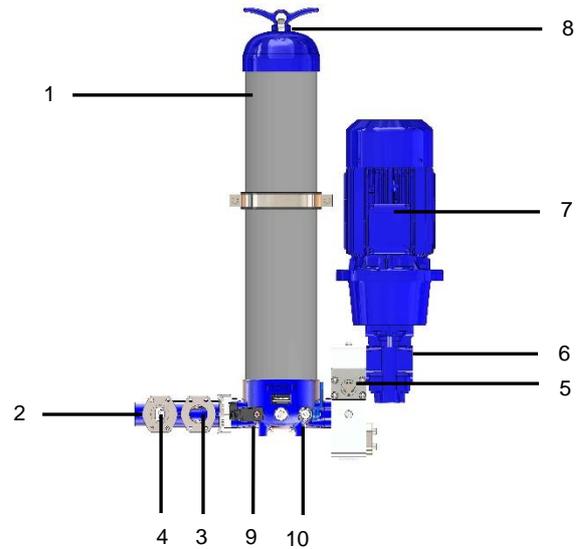
The oil filter module is suitable for all hydraulic and lubricating oils based on mineral oil. The standard delivery includes the complete unit with electric motor, gear pump, filter housing, maintenance indicator, pressure sensor, filter element and thermo valve. The oil filter module is designed for an operating pressure of up to 25 bar.

The gear pump (7) sucks the oil out of the tank via the inlet (6) and pumps it through the adapter into the filter housing. In the filter housing, the oil flows through the filter element (1) and the filter head. In the thermo valve (2), the oil is conducted to the cooler (outlet 3) or directly to the gear unit (outlet 4) depending on the temperature.

When the maximum differential pressure is reached, the maintenance indicator (9) emits an electrical signal. The filter element (1) must then be replaced and disposed of properly.

The vent line (8) is screwed to the tank on site to prevent the formation of an air cushion in the filter housing. The hose line can be supplied as an option.

The pressure relief valve (5) protects the system from excessive pressure. The backflow of the oil through the oil filter module into the tank is prevented by a check valve integrated in the filter head.



- 1 Filter element (inside)
- 2 Thermo valve
- 3 Outlet cooler
- 4 Outlet gearbox
- 5 Outlet pressure relief valve\*
- 6 Inlet
- 7 Motor
- 8 Vent connection
- 9 Electrical maintenance indicator
- 10 Drain dirt side

\* The pressure relief valve must be connected by the customer.

## 3. Technical specifications

### 3.1 Oil filter module/pump

Nominal volume flow:	
at 50 Hz:	73/156 l/min
at 60 Hz:	80/188 l/min
Max. ambient temperature:	60 °C
Media temperature range:	-30 °C to +100 °C
Connection suction side:	SAE 2"
Outlet thermo valve cooler or gearbox:	SAE 2"
Max. viscosity:	10000 cSt
Rated speed at	
50 Hz:	705/1440 U/min
60 Hz:	850/1745 U/min
Rated power at 40 °C	
50 Hz:	4.5/6.0 kW
60 Hz:	5.4/7.2 kW
Rated voltage at	
50 Hz:	400 V
60 Hz:	460 V
Rated current at	
50 Hz:	9.9/11.5 A
60 Hz:	8.2/11.5 A
Rated frequency:	50 Hz 60 Hz
Protection class:	IP55
Setting pressure limiting valve:	12 ± 10 % bar

### 3.2 Maintenance indicator PiS 3119/3.5

Switching pressure:	3.5 ± 10 % bar
Voltage range:	12 -150 V AC/DC
Max. switching current:	1 A
Max. switching capacity:	20 W
Contact type:	Normally closed
Protection class:	IP65
Switching point 1:	75 %
Switching point 2:	100 %



Filtration Group GmbH  
Schleifbachweg 45  
D-74613 Öhringen  
Phone +49 7941 6466-0  
Fax +49 7941 6466-429  
industrial.sales@filtrationgroup.com  
industrial.filtrationgroup.com  
04/2021  
[Oil Filter Module Pi 83116](#)