

Retrofitting Filter Systems for Permanent Off-Line Filtration at Wind Power Gears



**US 10 with
control unit**



**US 10 without
control unit**



Description:

The stationary filter unit is designed for the oil-service for gears with lubricants of high viscosity for the off-line filtration. The compact construction on a base plate without tube is the precondition for the small dimensions and the high reliability.

The device is equipped with a gear pump driven by an e-motor. The flow of the gear pump is conducted through a filter element according to DIN 24550, section 4 - nominal size 250.

The options for filter fineness are 5, 7, 10, 15 or 20 μm based upon a filtration quotient $\beta_{x(c)} \geq 200$.

The contamination level of the filter element can be read on a pressure indication in the cover of the filter.

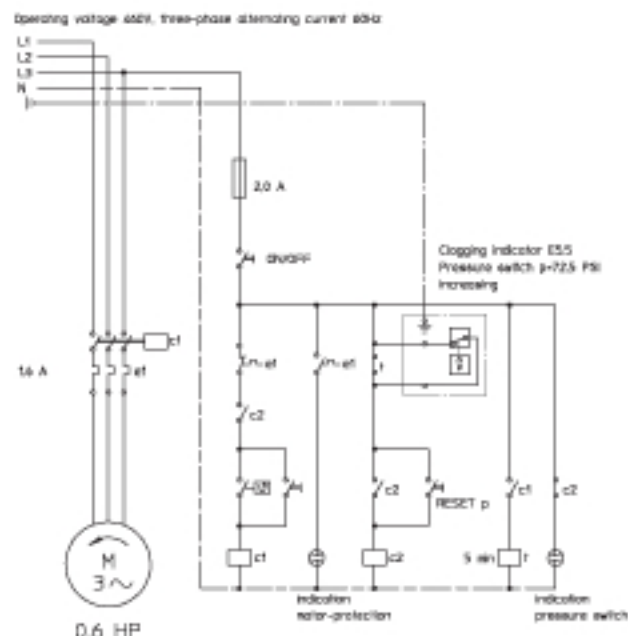
At a pressure of > 36,25 PSI (red sector of the scale) the filter element is dirty and should be replaced by a new one (valid for viscosities < 1854 SUS). The filter element can be replaced without any tools. After screwing off the straining screw and removing the housing cover the filter element is accessible and can be replaced. The filter elements are supplied complete including the sealings. As a purification of the elements is not possible, the user should always have sufficient spare elements available on stock. To protect against excess pressure the filter unit is equipped with a security valve with a pressure set about 116 PSI. The stationary filter unit can be operated unattended.

The electric security and switch elements of the filter unit perform the following functions:

- motor protective switch e1, e-motor turns off, when overloaded
- thermostat to switch on the pump depending on the respective gear temperature
- pressure switch (clogging indication E5.5) as protection against permanent overload > 72,5 PSI
- time lag relay to bridge the cold start of E 5.5

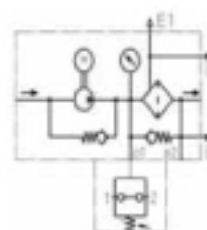
The conduct, deaeration and diversion connections are marked corresponding to their function. The diversion is necessary for the purification of the filter unit and the appropriate replacement of the filter element as well as the change of the fluid to be filtered.

Current diagram



Symbolic hydraulic diagram

Online filter unit with bypass valve, with electric clogging indicator Relay E5



Technical data

Flow rate :	3,58 Gal/min at 840 rpm
E-motor:	0,6 HP, about 840 rpm
Alternating current :	265/460 V, 60 Hz
Pressure resistance :	max. 116 PSI
Filter fineness :	5, 7, 10, 15 or 20 μm
(based on filtration quotient $\beta_{x(c)} \geq 200$)	
Weight :	approx. 77 lb
Medium :	Hydraulic oil on mineral oil base 46,4 up to 13905 SUS, others on request