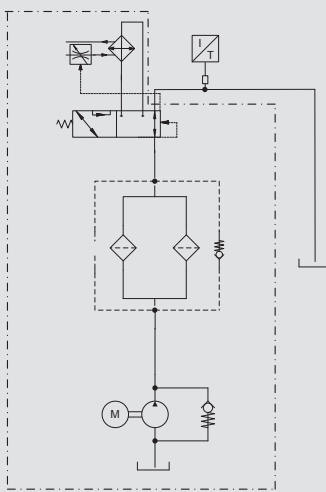


## Pump-Transfer Cooler Filtration Unit UKF for Gearboxes

### Symbol



### General

This pump transfer cooler filtration unit (UKF) has been specially designed for cooling and lubricating stationary gearboxes. It consists of a gear pump, a filter and a plate heat exchanger. Its compact design enables quick, simple integration into the offline circuit.

### Application Field

- Cooling and lubrication of gearboxes

### Operating Data

General	
Ambient temperature	-20 °C to +40 °C
Mounting position	Vertical
Pump	
Suction pressure across suction port	Max. -0.4 bar to 3 bar
Operating pressure (oil side)	Max. 16 bar
Medium (oil side)	Mineral oil to DIN 51524 Part 1 and Part 2
Temperature range (oil side)	-10 °C to +80 °C
Permissible contamination (oil side)	≤NAS12 or ISO4406: 22/21/18
Max. viscosity	20,000 mm <sup>2</sup> /s, depending on the motor rating
Drive	
Motor	Three-phase electric motor Insulation class: F Protection class: IP 55
RPM	1,000 / 1,500 1/min (50 Hz)
Heat exchanger	
Construction	<ul style="list-style-type: none"> <li>● Copper brazed plate heat exchanger HYDAC HEX S (standard)</li> <li>● Gasketed plate heat exchanger (on request)</li> </ul>
Medium (water side):	<ul style="list-style-type: none"> <li>● Water glycol (HFC)</li> <li>● Water</li> <li>● Oils</li> </ul>
Temperature range (water side)	+5 °C to +60 °C
Permissible contamination (water side)	The level of particles in suspension should be less than 10 mg/l Particle size <0.6 mm (spherical) Thread-like particles cause a rapid increase in pressure drops

## Product Features

Continuous cooling and offline filtration extend the service life of the oil and of the gears. The duplex filter enables the filter to be changed without switching off the unit. In addition, there is an integrated thermal bypass valve which ensures that the system continues to run even at low temperatures because the cold oil is not fed through the plate heat exchanger. Once the oil is warm enough it can flow through the heat exchanger to cool the unit.

To guarantee a constant oil temperature an optional water flow controller can be fitted which supplies just enough water to the plate heat exchanger as is necessary to achieve the required oil temperature. Pressure, temperature or flow rate sensors can also be added to the control block.

## Design

Different versions are possible depending on the requirements:

**UF** – Feed pump with filter

**UKF** – Feed pump with filter and plate heat exchanger

Offline unit consisting of:

- Gear pump
- Filter (duplex filter available as an option)
- Oil-water plate heat exchanger (brazed or gasketed)
- Thermal bypass valve (UKF-2 / UKF-3)
- The offline circuit is fitted with check valves to isolate the filter when used with a positive head tank when changing the filter element

### UKF-1

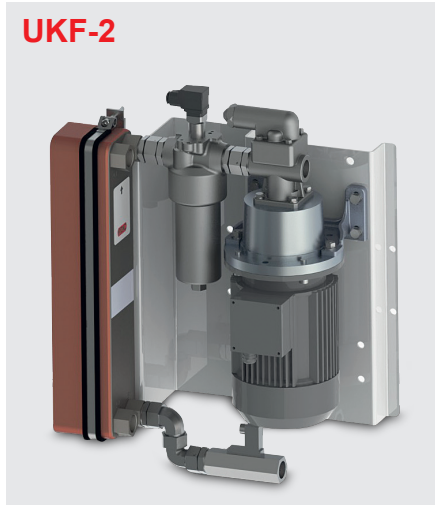


Flow rate:	2.5 – 14 l/min
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Motor rating:	0.55 kW
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Cooling capacity*:	1 – 10 kW
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### UKF-2



Flow rate:	15 – 30 l/min
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Motor rating:	0.75 – 1.5 kW
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Cooling capacity*:	5 – 20 kW
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### UKF-3



Flow rate:	30 – 100 l/min
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Motor rating:	1.5 – 5.5 kW
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Cooling capacity*:	10 – 75 kW
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\* Dependent on temperature difference and flow rate of the cold and warm medium

## Model Type

**UKF-3 - 5.2 - P+V - 32 - 2.2 - 615-80 - FLND400 - 10 - D**

### Type

UKF = Pump + heat exchanger + filter  
UF = Pump + filter

### Size

1 / 2 / 3

### Modification code

### Seals

P+V = Static seal Perbunan + dynamic seal Viton  
P = Static and dynamic seal Perbunan

### Pump flow rate in ccm<sup>3</sup>/rev

### Motor

0.55 kW / 0.75 kW / 1.5 kW / 2.2 kW / 4 kW

### Plate heat exchanger

Size 610 – 10-100 plates  
Size 615 – 10-100 plates  
Other sizes and gasketed plate heat exchangers on request.

### Filter

Inline filter HFM75 / FLN 250 / FLN 400  
Duplex filter FLND 250 / FLND 400  
with filter bypass

### Filtration rating in µm

For further information on filter elements, see Filtration catalogue.

### Differential pressure clogging indicator

D = VM 5 D.0 / -L24 (5 bar; visual-electrical)  
Other clogging indicators on request.  
For further information, see Filter Clogging Indicator brochure

## Note

The information in this brochure relates to the operating conditions and applications described.

For applications and/or operating conditions not described, please contact the relevant technical department.

Subject to technical modifications and corrections.



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