

## BKF Off-line filter / cooler unit



- Compact design
- Easy installation
- DIN filter elements
- Low- noise pump
- Efficient plate heat exchanger

## Why off-line filters?

Experience shows off-line filtration has very effective results for many applications in fluid power and lubrication systems. Independent from pressure ripples and flow surges, off-line filters develop the best possible retention of particles and offer the highest possible dirt holding capacity.

In combination with other system components, eg. coolers or heaters, installation cost and space requirements can be minimized.

## Why Bühler?

The Fluidcontrol division of Bühler has focused on the fluid power and lubrication industries for a long time and has developed an intimate understanding of the requirements for these applications. Although not a filter manufacturer in the classical sense, we contribute some advanced developments to off-line filter units for the benefit of this market. The filter housing can accommodate filter elements according to DIN 24550 available from major filter suppliers world wide .

If you do not find an adequate solution for your application in this literature please do not hesitate to contact us for a specific application proposal.

## Description

### BKF 18/30

This unit offers a very compact design with an integrated low-noise, dirt-repellant gerotor pump. Placement of motor and filter element result in minimal installation space. Suction and pressure hose are installed directly downwards into the reservoir. This minimizes installation work.

As the basic frame provides additional connections at the front, the unit may be installed on the side of the reservoir.

The unit contains a limiting valve and filter elements of size DIN NG 250.

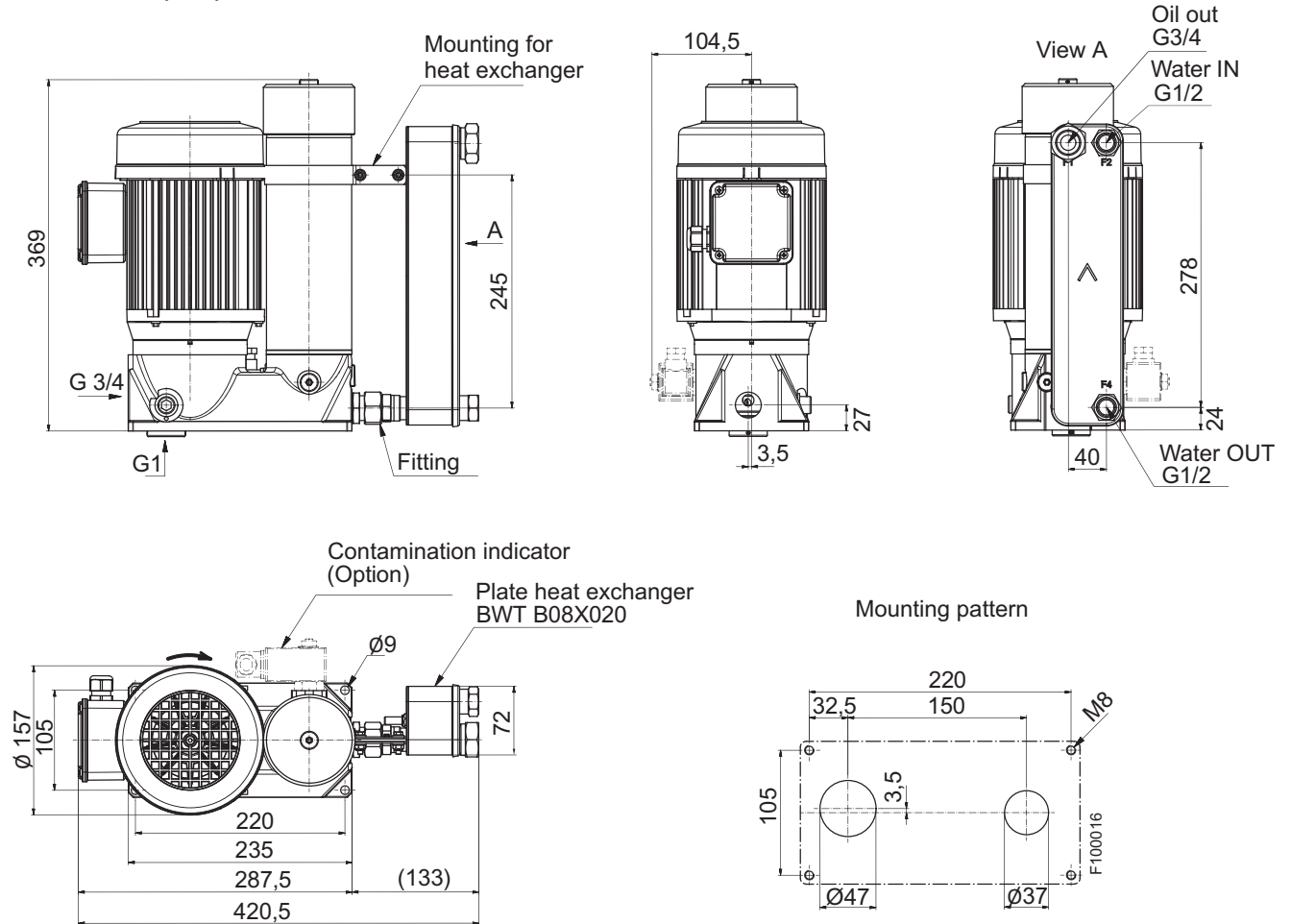
### BKF 60/90

Due to the larger pump and filter housing this unit is assembled on a rugged frame for vertical attachment. This unit offers the same principal details as the BKF 18/30 but does not have an integrated by-pass valve in the pump.

If closely coupled to the filter unit, the complete cooler installation requires just a little more space than the filter unit.

The heat dissipation can be as high as 60 hp.

## Dimensions (mm)



### Installation hints:

- All threads according to DIN EN ISO 228
- If installed on the side of a reservoir make sure that the pump gets free flow of oil in the suction line
- Make sure that indicator is visible when installing on tank top

### Technical Data BKF 18 / 30

Flow rate	BKF 18	18 l/min
	BKF 30	28 l/min
Pressure		6 bar
Suction height		2 m
Relief valve setting		6 bar
Indication pressure		2.2 bar
E-motor*		230 / 400 V, 50 Hz $\pm$ 5%
		276 / 480 V, 60 Hz $\pm$ 5%
Protection class		IP 55
Power	BKF 18	0.55kW-6 pol.
	BKF 30	0.75kW-4 pol.
Current (at 400 V / 50 Hz)	BKF 18	approx. 1.7 A
	BKF 30	approx. 2 A
Cooling capacity		see diagrams on page 5.
Weight		18 kg

### Please indicate with order

Part-No.	Model
3902010	BKF 18 - without contamination indicator NBR
3902110	BKF 18 - mechanical contamination indicator NBR
3902210	BKF 18 - electric contamination indicator NBR
3903020	BKF 30 - without contamination indicator NBR
3903120	BKF 30 - mechanical contamination indicator NBR
3903220	BKF 30 - electric contamination indicator NBR

Part-No.	Filter element	Pore size	Cleanliness**
3825003	N 0250 DN 3	3 $\mu$ m	13/10
3825006	N 0250 DN 6	6 $\mu$ m	14/10
3825010	N 0250 DN 10	10 $\mu$ m	15/11

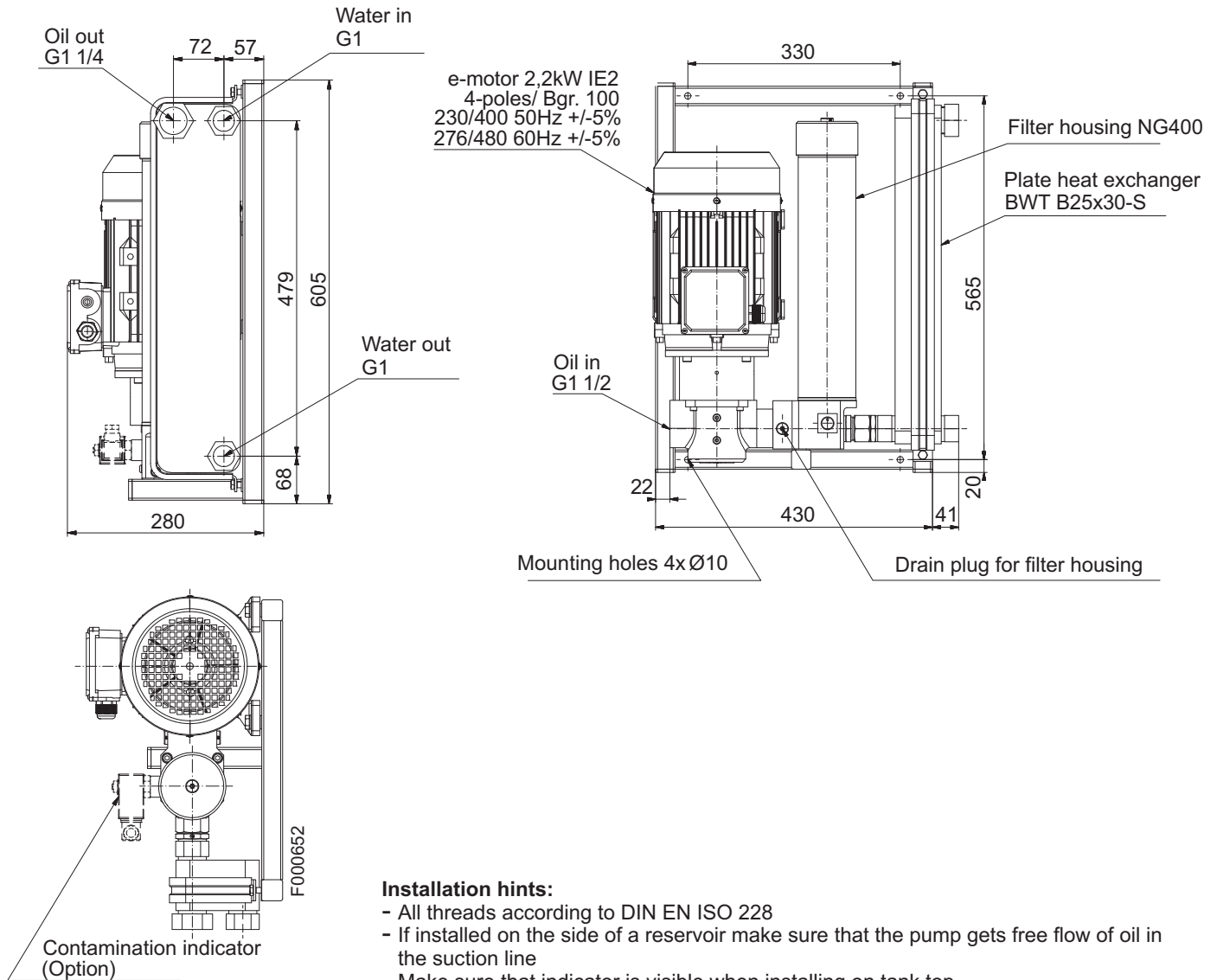
\*\* achievable cleanliness according to ISO 4406  
at volume V= 300 l and 24 h operating time (approx.)

### Fluids

Mineral oil according to DIN 51524  
Phosphate ester HFD-R according to CETOP RP 77 H

\*Other motors upon request

## Dimensions (mm)



### Installation hints:

- All threads according to DIN EN ISO 228
- If installed on the side of a reservoir make sure that the pump gets free flow of oil in the suction line
- Make sure that indicator is visible when installing on tank top

### Technical Data BKF 60 / 90

Flow rate	BKF 60	57 l/min
	BKF 90	86 l/min
Pressure		10 bar
Suction height		2 m
Relief valve setting		3,5 bar
Indication pressure		2.2 bar
E-motor*		230 / 400 V, 50 Hz ± 5%
		276 / 480 V, 60 Hz ± 5%
Protection class		IP 55
Power		2.2kW
Current (at 400V / 50 Hz)		
	BKF 60	approx. 4.6 A
	BKF 90	approx. 4.6 A
Cooling capacity		see diagrams on page 5
Weight		28 kg

### Please indicate with order

Part-No.	Description
3906030	BKF 60 - without contamination indicator NBR
3906130	BKF 60 - mechanical contamination indicator NBR
3906230	BKF 60 - electric contamination indicator NBR
3909030	BKF 90 - without contamination indicator NBR
3909130	BKF 90 - mechanical contamination indicator NBR
3909230	BKF 90 - electric contamination indicator NBR

Part-No.	Filter element	Pore size	Cleanliness**
3840003	N 0400 DN 3	3 µm	13/10
3840006	N 0400 DN 6	6 µm	14/10
3840010	N 0400 DN 10	10 µm	15/11

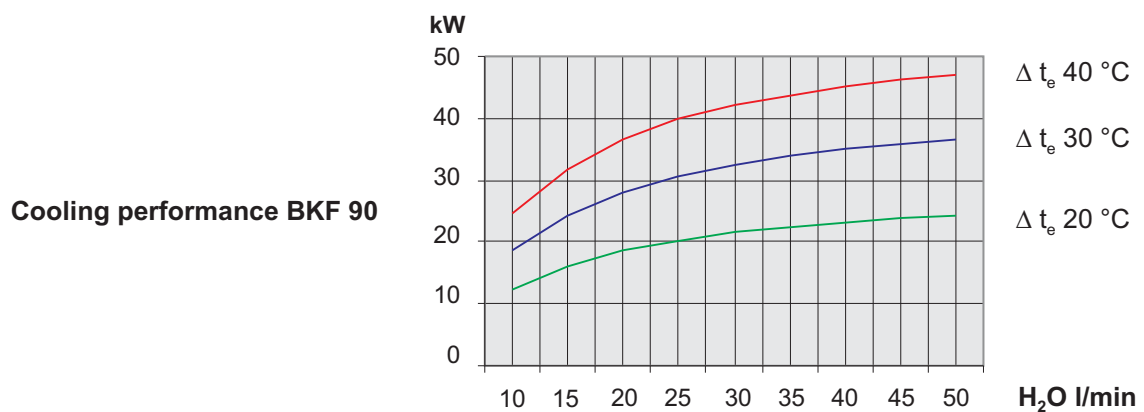
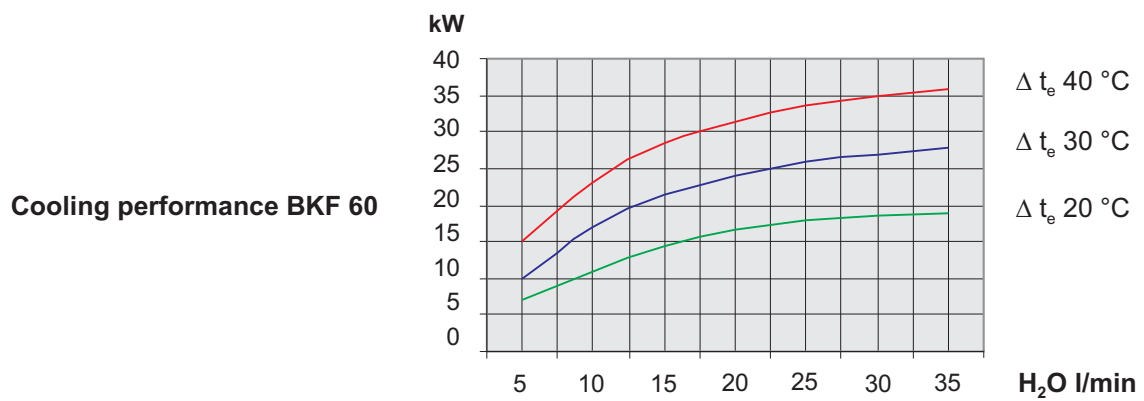
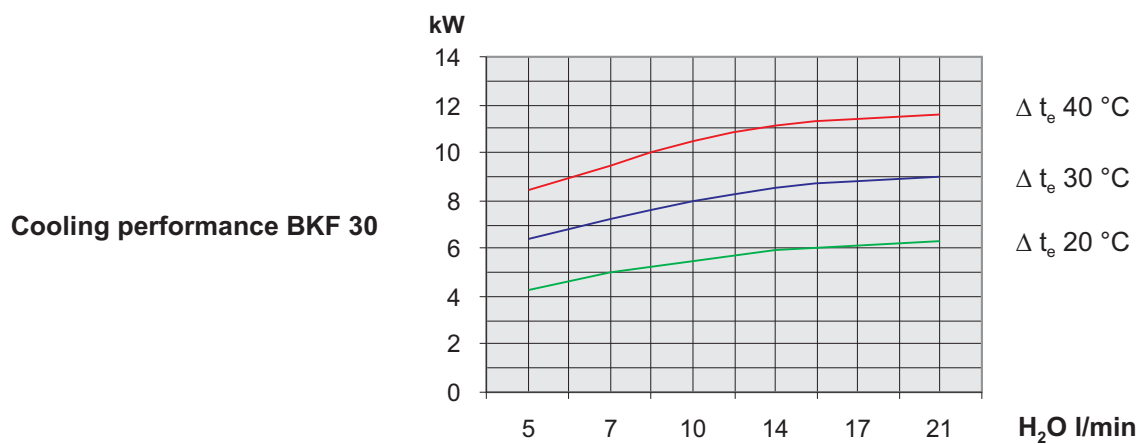
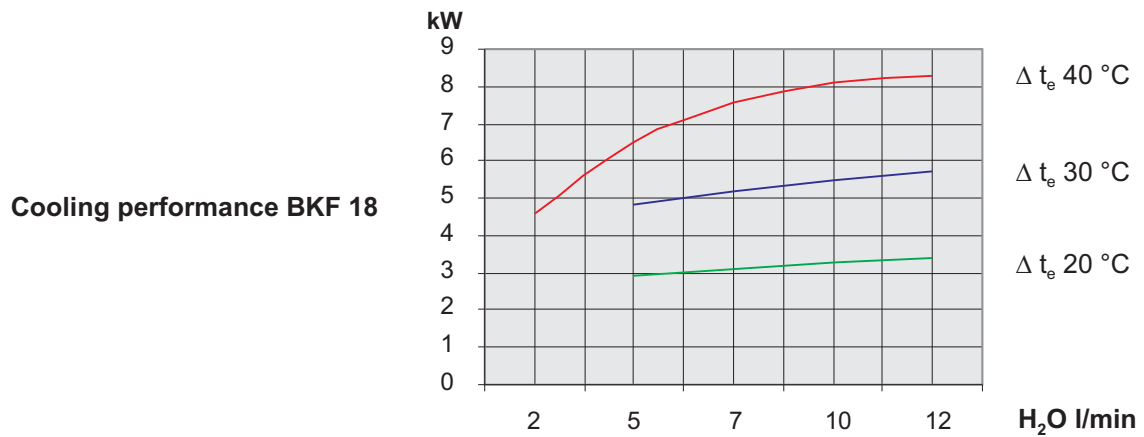
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### Fluids

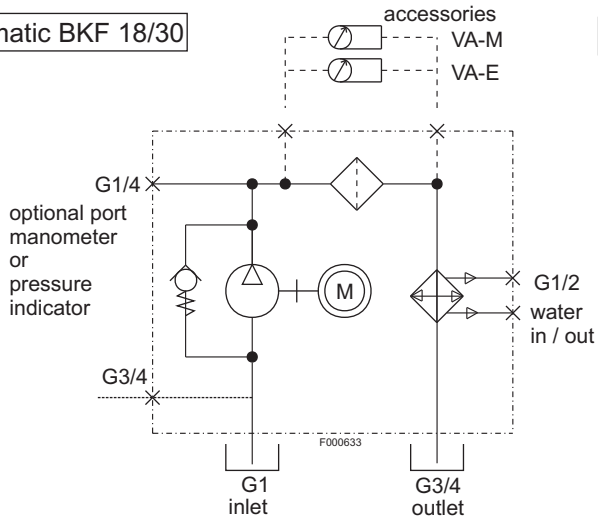
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\*Other motors upon request

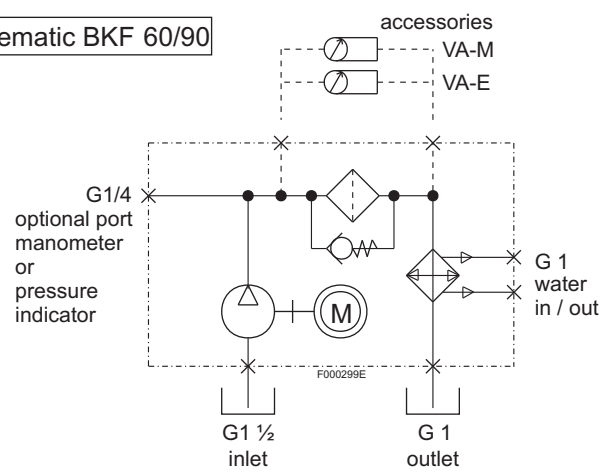
## Performance curves BKF 18 - 90



schematic BKF 18/30



schematic BKF 60/90



## Planning hints

### Installation Location

When mounting the BKF outdoors adequate weather protection is necessary. Leave access for servicing.

### Mounting

BKF's are mounted with four bolts. The strength of the base has to be strong enough to carry the BKF.

### Tubing

Tubing to the system has to be free of tension and vibration. This will be maintained by using flexible hoses.

Take care of local laws concerning environment protection due to accidental leakage (for example, by using drip pans).