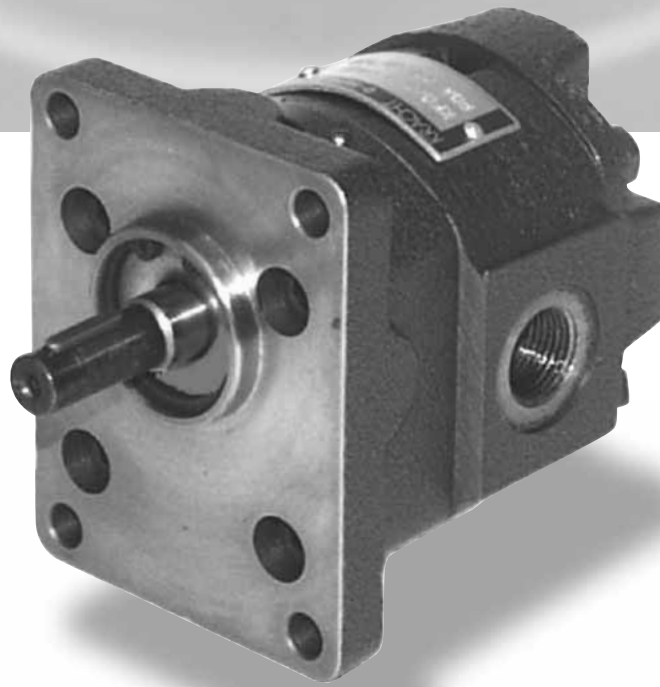


KRACHT



**Gear Pumps  
KF 0**

# Gear Pump KF 0

## KF 0 – A pump for process engineering

The central element in numerous technical processes is the metering of liquids. PUR components, plasticisers, resins, adhesives, laquers and paints are just a few of the important liquids with a broad application spectrum.

The accuracy, uniformity and reproducibility with which these liquids can be processed is also decisive for the quality of the final product.

Ideal for these applications is the KRACHT Gear Pump with the size KF 0.

The KF 0 is an external gear pump with a delivery volume of 0.5 cm<sup>3</sup>/r to 4 cm<sup>3</sup>/r. Optimum graduation of the total of 8 rated capacities facilitates adjustment to the required metering ratios. Precision gearing with an adequate number of teeth ensures low-pulse delivery.

Even in standard version, all gear parts and bearing bushes are protected against wear and corrosion by means of a special coating, so that also filled media up to a certain particle size and hardness of the fillers can be pumped.

Guide values in this respect are a maximum particle size of 30 µm and a Mohs hardness of 6. Optimum clearance dimensioning in conjunction with precise manufacture enable a KF 0 to operate with excellent volumetric efficiency over a wide pressure range.

Various sealing variants, such as standard rotary shaft seals and double rotary shaft seals can be selected to suit the particular application; the latter two variants enable operation with sealing liquid (quensch) to prevent hardening or crystallising of the pumped medium.

In connection with KRACHT volume counters and electronic the KF 0 can be used as a very exact dosing unit.

## General characteristics

Mounting	Flange type
Pipe connection	Threaded ports
Direction of rotation	Clockwise <b>or</b> Anticlockwise
Fitting position	Optional
Weight	2.2 kg

## Operation characteristics

Displacement	$V_g = 0.5/0.8/1/1.6/2/2.5/3/4 \text{ cm}^3/\text{r}$
Operating pressure	<b>Suction side / Inlet port</b> $p_{e \text{ min}} = -0.4 \text{ bar}$ (- 0.6 for short time, e. g. start up)  $p_{e \text{ max}} = 2 \text{ bar}$
	<b>Pressure side / Outlet port</b> $p_{e \text{ max}} = 120 \text{ bar}$ (depends on fluid to be operated and on pump displacement)
Speed	$n = \dots 3000 \text{ rpm}$ (depends on viscosity)
Viscosity	$v_{\text{min}} = 10 \text{ mm}^2/\text{s}$ $v_{\text{max}} = 20\,000 \text{ mm}^2/\text{s}$
Fluid temperature	$\vartheta_{m \text{ max}} = 90 \text{ }^\circ\text{C NBR}$ $150 \text{ }^\circ\text{C FKM}$ $200 \text{ }^\circ\text{C PTFE}$
Ambient temperature	$\vartheta_{m \text{ min}} = -20 \text{ }^\circ\text{C}$ $\vartheta_{m \text{ max}} = +60 \text{ }^\circ\text{C}$

(Rotary Shaft Lip - Type seal)

## Materials

Housing	GG 30, DIN 1691
Gears	Special steel / Surface treated to provide wear- and corrosion protection
Plain bearing bushes	Special steel / Surface treated to provide wear- and corrosion protection
Seals	NBR, FKM, PTFE

# Gear Pump KF 0

## Characteristics max. permissible operating pressure depending on viscosity

Nominal displacement	max. permissible operating pressure in bar for viscosity of			
	10 mm <sup>2</sup> /s	30 mm <sup>2</sup> /s	100 mm <sup>2</sup> /s	> 500 mm <sup>2</sup> /s
0.5	10	30	50	60
0.8	15	40	60	70
1	15	40	60	70
1.6	20	60	80	100
2	20	60	80	100
2.5	30	60	100	120
3	30	60	100	120
4	40	80	120	120

Values available for a speed of  $n = 1000 \dots 3000 \text{ min}^{-1}$ .

For a speed  $< 1000 \text{ min}^{-1}$  the max. operating pressure has to be reduced.

## Discharge flow and power input

at speed of  $n = 1450 \text{ min}^{-1}$  and viscosity of  $34 \text{ mm}^2/\text{s}$

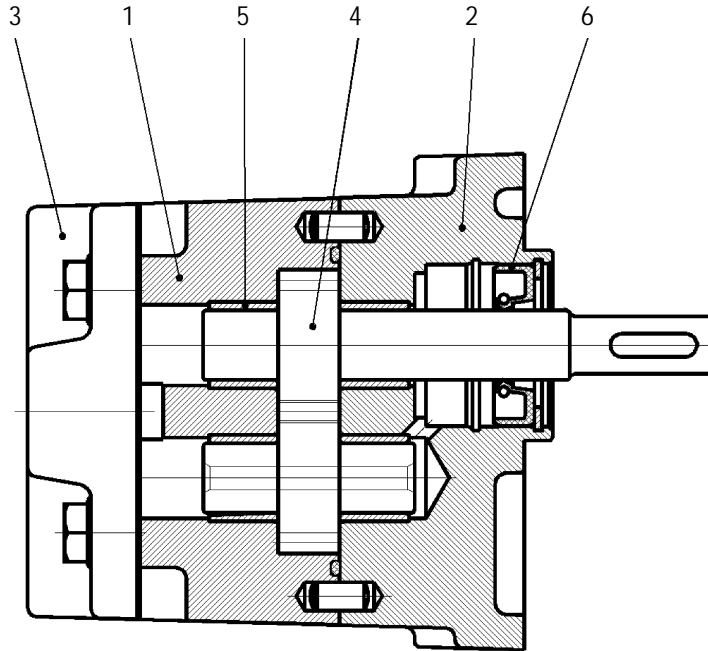
	Operating pressure p in bar								Nominal displacement	Operating pressure p in bar								Power input P in KW
	5	10	20	40	60	80	100	120		5	10	20	40	60	80	100	120	
	Discharge flow Q in l/min	0.7	0.6	0.5	-	-	-	-		-	0.5	0.06	0.07	0.09	-	-	-	
	1.1	1.1	1.0	0.8	-	-	-	-	0.8	0.06	0.08	0.11	0.17	-	-	-	-	
	1.4	1.3	1.3	1.1	-	-	-	-	1	0.07	0.08	0.12	0.19	-	-	-	-	
	2.2	2.2	2.0	1.8	1.5	-	-	-	1.6	0.08	0.12	0.18	0.31	0.45	-	-	-	
	2.8	2.7	2.6	2.3	2.0	-	-	-	2	0.09	0.13	0.20	0.35	0.50	-	-	-	
	3.5	3.4	3.3	3.0	2.7	-	-	-	2.5	0.09	0.14	0.22	0.39	0.55	-	-	-	
	4.2	4.2	4.0	3.7	3.5	-	-	-	3	0.10	0.15	0.24	0.42	0.60	-	-	-	
	5.6	5.5	5.4	5.0	4.7	4.3	-	-	4	0.12	0.17	0.29	0.53	0.76	0.99	-	-	

at speed of  $n = 1450 \text{ min}^{-1}$  and viscosity of  $120 \text{ mm}^2/\text{s}$

	Operating pressure p in bar								Nominal displacement	Operating pressure p in bar								Power input P in KW
	5	10	20	40	60	80	100	120		5	10	20	40	60	80	100	120	
	Discharge flow Q in l/min	0.7	0.7	0.6	0.5	-	-	-		-	0.5	0.06	0.07	0.09	0.12	-	-	
	1.1	1.1	1.1	1.0	0.9	-	-	-	0.8	0.06	0.08	0.10	0.16	0.21	-	-	-	
	1.4	1.4	1.4	1.3	1.2	-	-	-	1	0.08	0.09	0.12	0.17	0.23	-	-	-	
	2.3	2.2	2.2	2.1	2.0	1.8	-	-	1.6	0.08	0.11	0.16	0.27	0.38	0.50	-	-	
	2.8	2.8	2.8	2.7	2.6	2.5	-	-	2	0.09	0.12	0.20	0.34	0.49	0.64	-	-	
	3.5	3.5	3.4	3.3	3.2	3.0	2.9	-	2.5	0.09	0.14	0.22	0.38	0.55	0.71	0.88	-	
	4.2	4.2	4.2	4.1	3.9	3.8	3.7	-	3	0.10	0.15	0.24	0.43	0.61	0.80	0.98	-	
	5.7	5.6	5.6	5.5	5.3	5.2	5.0	4.9	4	0.12	0.17	0.29	0.53	0.76	0.99	1.23	1.46	

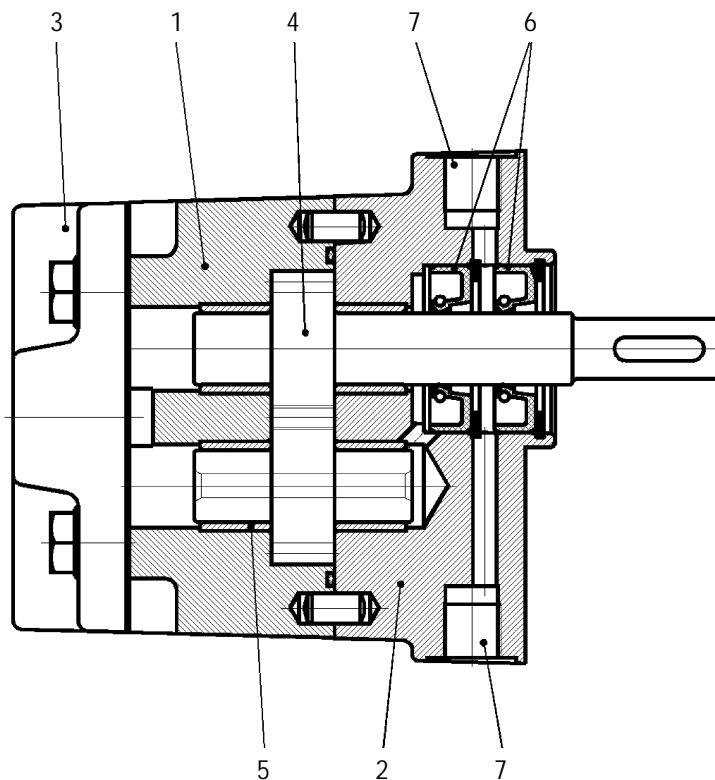
# Gear Pump KF 0

## Flange type pump with single rotary shaft lip – Type seal



- 1 Housing
- 2 Flange mounting cover
- 3 End cover
- 4 Gear
- 5 Plain bearing bush
- 6 Shaft end seal

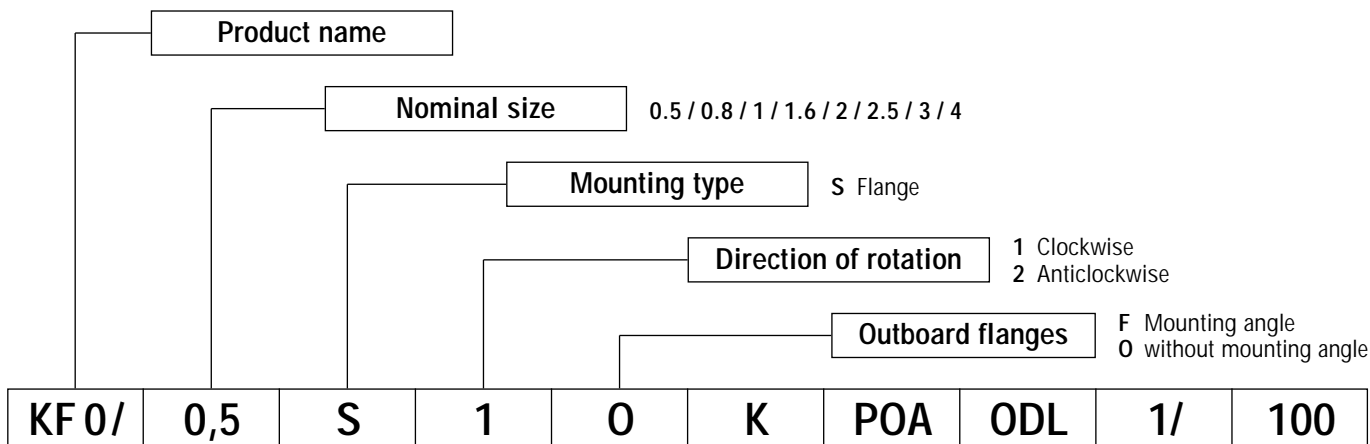
## Flange type pump with double rotary shaft lip – Type seal



- 1 Housing
- 2 Flange mounting mover
- 3 End mover
- 4 Gear
- 5 Plain bearing bush
- 6 Shaft end seal
- 7 Port for liquid sealing

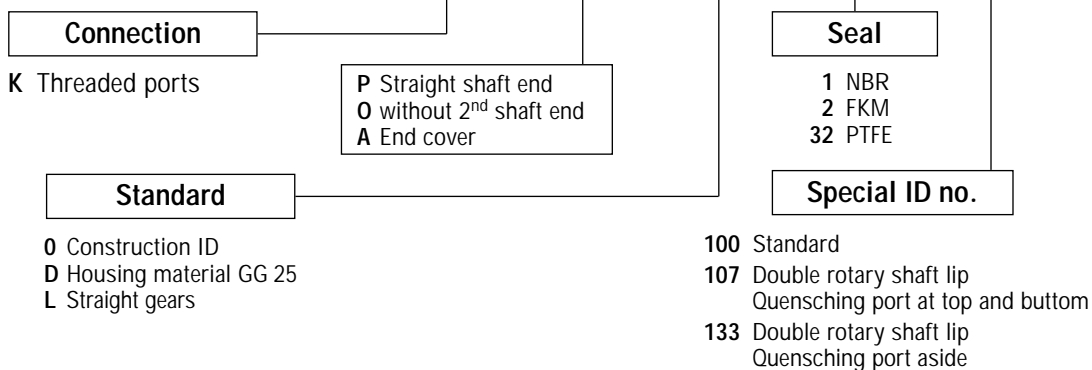
# Gear Pump KF 0

## Type code

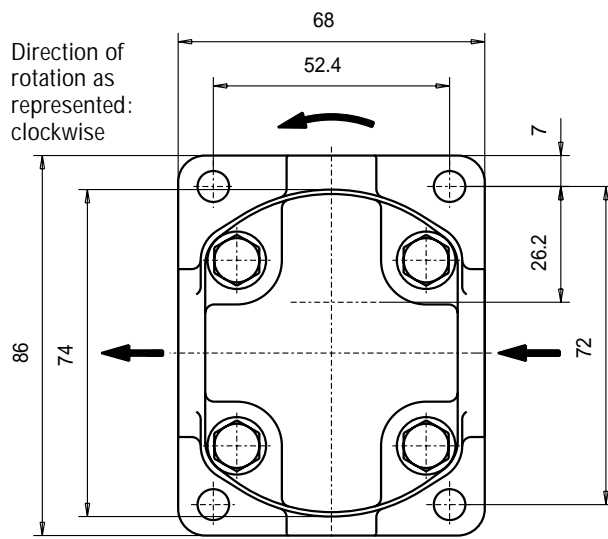
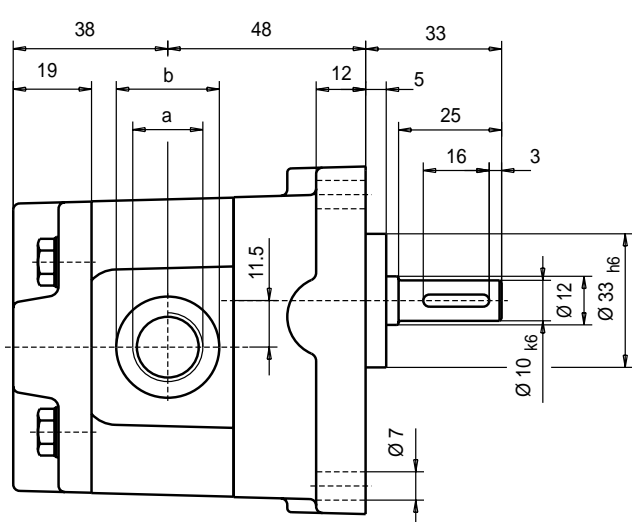


KF 0/	0,5	S	1	O	K	POA	ODL	1/	100
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### Ordering example:

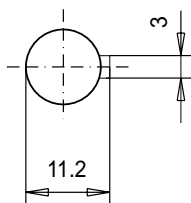


## KF 0/ . S . OK POA ODL . /100



Inlet and outlet port equally sized

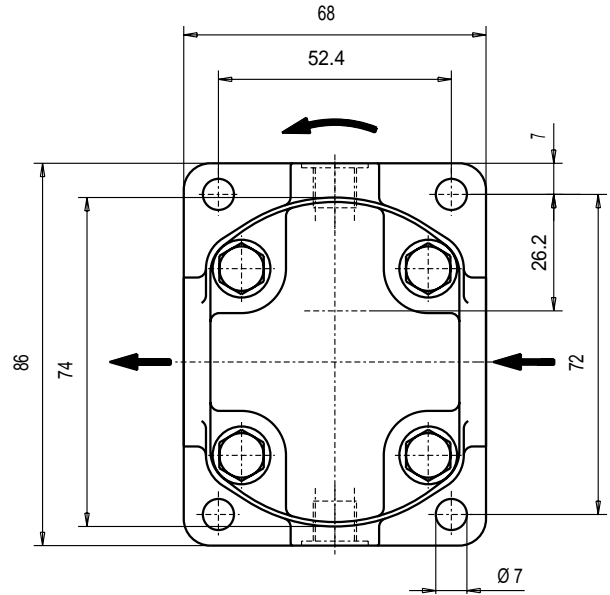
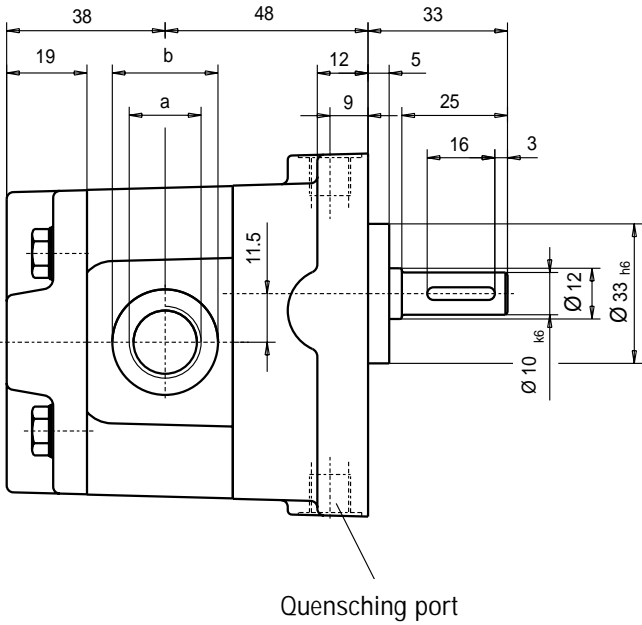
Parallel key  
A 3 x 3 x 16  
DIN 6885



Vg cm <sup>3</sup> /r	Nominal displacement							
	0.5	0.8	1	1.6	2	2.5	3	4
a	G 3/8 - 13 deep				G 1/2 - 15 deep			
b	25				29			

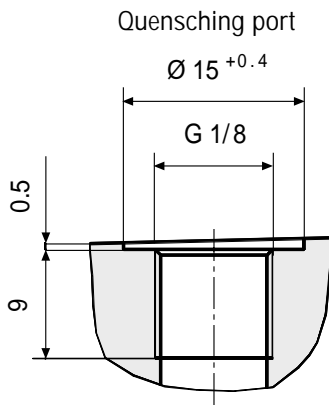
KF 0/ . S . OK POA ODL . /107

Direction of rotation as represented: clockwise

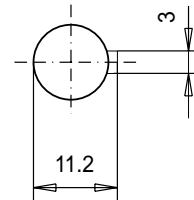


Inlet and outlet port equally sized

Mounting with quenching port at the top and at the bottom

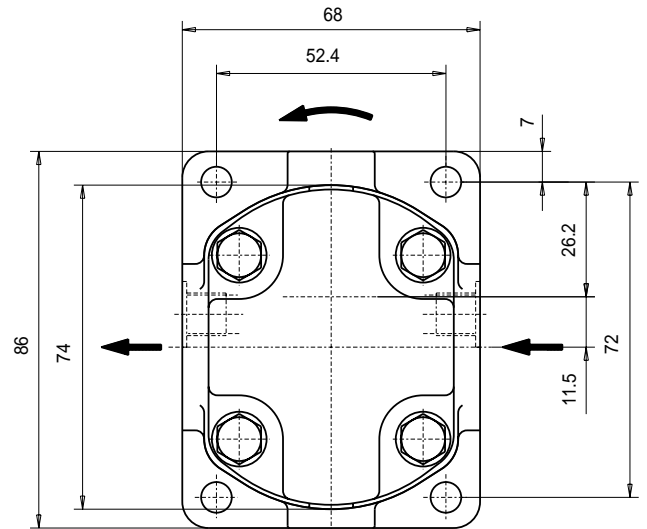
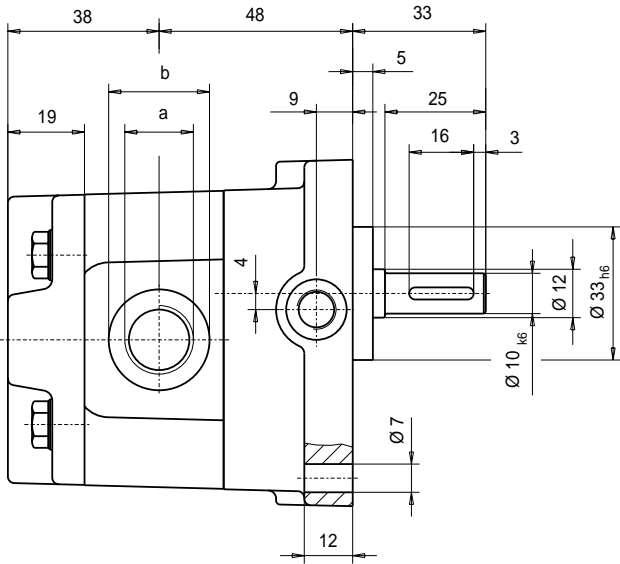


Parallel key  
A 3 x 3 x 16  
DIN 6885

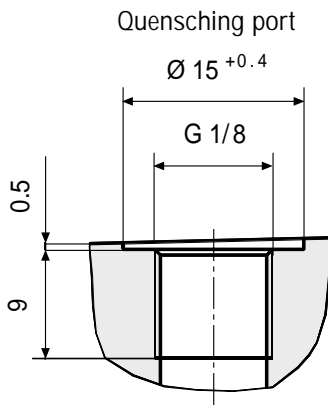


Vg cm <sup>3</sup> /r	Nominal displacement							
	0.5	0.8	1	1.6	2	2.5	3	4
a	G 3/8 - 13 deep			G 1/2 - 15 deep				
b	25			29				

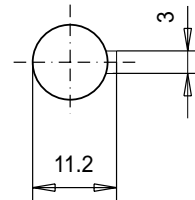
Direction of rotation as represented: clockwise



inlet and outlet port equally sized



Parallel key  
A 3 x 3 x 16  
DIN 6885



Vg cm <sup>3</sup> /r	Nominal displacement							
	0.5	0.8	1	1.6	2	2.5	3	4
a	G 3/8 - 13 deep			G 1/2 - 15 deep				
b	25			29				

## Overview of our complete program

### Transfer pumps

Transfer pumps for lubricating oil supply equipment, low pressure filling and feed systems, dosing and mixing systems.

### Flow Measurement

Gear and turbine flow meters and electronics for volume and flow metering technology in hydraulics, processing and laquering technology.

### Mobile hydraulics

Single and multistage high pressure gear pumps, hydraulic motors and valves for construction machinery, vehicle-mounted machines.

### Industrial hydraulics

Cetop directional control and proportional valves, hydraulic cylinders, pressure, quantity and stop valves for pipe and slab construction, hydraulic accessories for industrial hydraulics (mobile and stationary use).

With our decades of experience, we are at your side, world-wide, for the professional mastery of specific applications and complete solutions in hydraulics and process technology.



KF0/e/08.05