KRACHT®

Transfer Gear Pumps

KF 3/100 ... KF 6/730

Applications, Suitable Fluids

Applications

Centrifuge construction,
Coating machines, Compressors

Engine construction

Filling stations, Filter systems

Generator construction

Heat transfer systems, Heavy electrical machines

Lubricant manufacturers, Lubricating oil systems

Machine-building industry, Machine tools,
Marine engine construction,
Metal-forming machines, Metering systems

Paint industry, Plain bearing production,
Printing machines, PUR machines

Refrigerators, Rubber and tire production

Tank plant construction,
Transmission building
Turbine construction

Vacuum machines

Waste oils - disposal
- conveying
- treatment

Suitable fluids

Adhesives, Antifreeze

Bore oils, Brake fluids

Cutting oils

Diesel oils, Drawing compound

Emulsions

Fuel oils

Gear oils, Grease

Hardening oils, Heat transfer media,
Heavy oils, Hydraulic fluids

Isocyanate

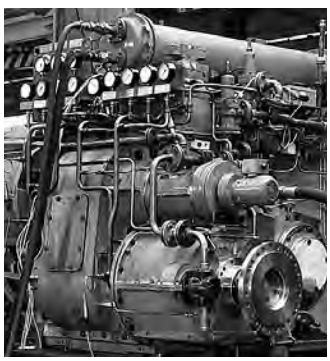
Lubricating oils, Lacquers

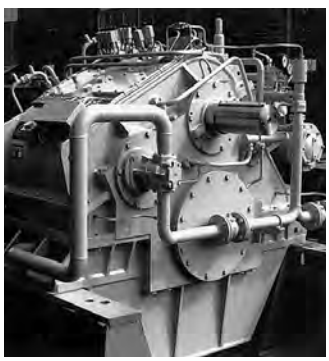
Motor oils

Paint, Paraffins, Plastics, Polyols
Printing inks, Processing oils

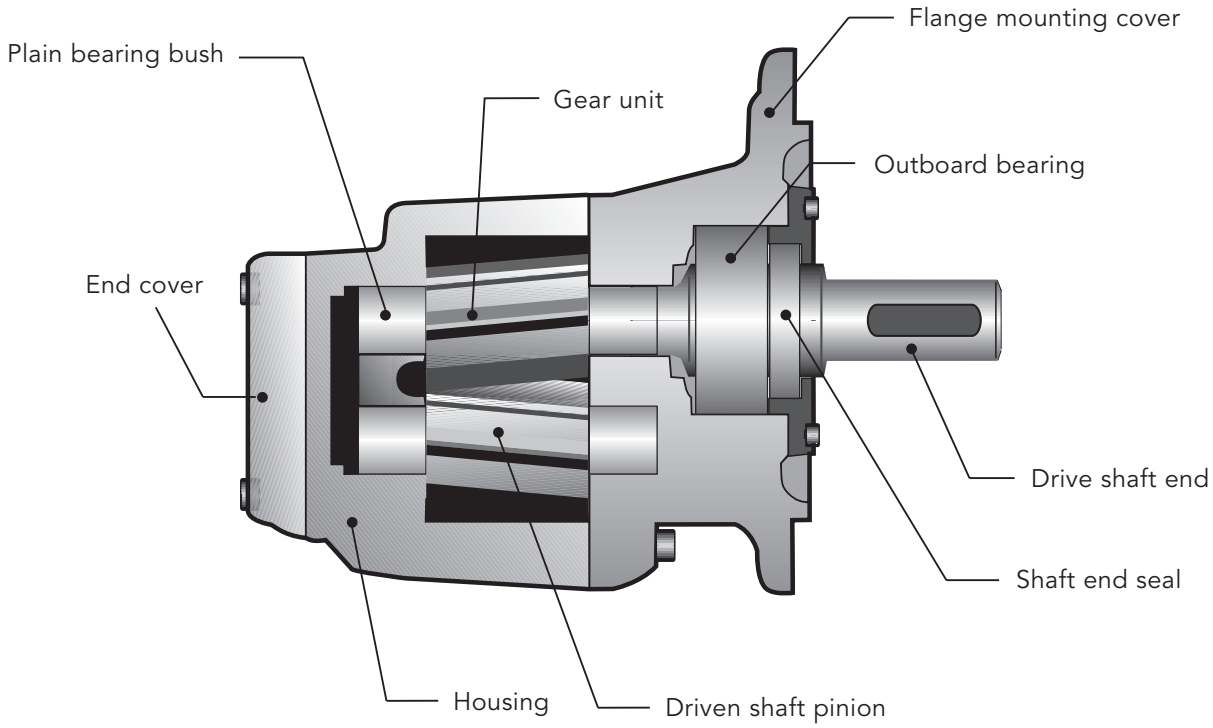
Resins, Rolling oils

Waste oils, Waxes





Construction



Function

KF gear pumps are used for pumping a wide variety of fluids.

KF gear pumps are distinguished especially by their wide range of variants which are assembled as required on the modular principle and also permit subsequent upgrade.

The pumps are also suitable for media with low lubricating properties.

The standard housing sections are of gray cast iron. The gear units are manufactured from high strength case hardening steel, hardened and mounted in special multicompound plain bearing bushes.

The standard drive shaft is sealed by rotary shaft lip type seal.

All pump sizes incorporate helical tooth system. This feature, combined with special gear geometry, results in extremely low noise levels and reduced pressure pulsation.

Working Notes

- The fluids should ensure a certain minimum lubricating properties, should not contain solids and should be chemically compatible.
- Avoid dry operation.
- The pumps may only be operated in the specified direction of rotation, as otherwise the shaft seal will be destroyed.
- In order to prevent excessive overpressure, a safety valve should be provided in the system or on the pump.
- The pressure relief valve attached to the pump may only be used as safety valve for short-term operation.
- A separate pressure relief valve with return line shall be used for the discharge of a partial flow volume over a longer period of time

Variants

- Sealing of the drive shaft:
  - Rotary shaft lip-type seal
  - Double rotary shaft lip-type seal (quench)
  - Mechanical seal
- Outboard bearing to take up input drive-side radial load.
- Pressure relief valve as safety valve for pump and system.
- Uniform discharge flow direction with changing direction of rotation by means of flange-mounting valve combination (universal device).

Special Design

Special constructions are available on request to meet your individual requirements: for instance mounting flange models, various types of plane bearings, etc.

Our sales engineers will be pleased to provide assistance.

Accessories

Connecting flanges (4-bolt type)

Mounting angles

Pressure relief valves (for subsequent installation)

Electric motors

Foot mounting flanges for the adaptor flanges below

Base plates

Couplings

Adaptor flanges (pump carrier)

Design Types

Pump, electric motor and bell housing assembled as pump unit on special request.

Kinematic viscosity ν cSt

<	300	300	500	1000	2000	3000	6000	10000	20000	30000
≥	1500	1250	1000	750	600	500	400	300	200	100

Speed n_{max} rpm

Note

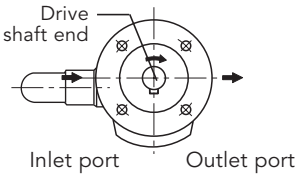
The specified minimum and maximum characteristics are NOT applicable for some specific working conditions: maximum working pressure is NOT permissible in conjunction with low speeds and low viscosities.
Please contact us whenever such critical ranges are encountered.

Direction of Rotation

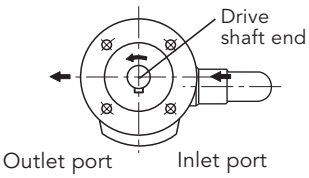
The following should be noted for the direction of rotation:

- when looking at the pump shaft end, the direction of pumping is from left to right if the shaft rotates clockwise.
- when looking at the pump shaft end, the direction of pumping is from right to left if the shaft rotates counterclockwise.

With pressure relief valve



Pump running cw



Pump running ccw

KRACHT CORP. · 8600 S Wilkinson Way Unit A · Perrysburg, OH 43551 · USA · P +1 419 874 1007 · F +1 419 874 1006 · pumps@krachtcorp.com · www.krachtcorp.com

Materials

Type of material and sealing*	Housing / Cover	Gears	Bearing	Shaft end sealing	O-ring
0DP1/7DP1	EN-GJL-250 (GG 25)	Case-hardened steel (1.7139)	P 10	NBR	NBR
0DP2/7DP2				FKM	FKM
0VP1/7VP1	EN-GJS-400-15 (GGG 40)			NBR	NBR
0VP2/7VP2				FKM	FKM

***** See type key on the pump: KF...

Characteristics

Mounting position			optional (exception see universal device)
Direction of rotation			clockwise **or** counterclockwise clockwise **and** counterclockwise
Mounting			flange- and angle foot type
Pipe connection			flange connection, welding connection, thread connection
Working pressures Inlet port	**standard**	$p_{e\ min}$	– 0.4 bar / – 5.8 psi (vacuum) for short time duty e.g. when starting: down to – 0.6 bar / – 8.7 psi are permissible. Observe limit of $p_{e\ min}$ for universal device.
		$p_{e\ max}$	0.5 bar / 7.3 psi for PTFE rotary shaft lip-type seals 1.0 bar / 14.5 psi for NBR- and FKM rotary shaft lip-type seals 10 bar / 145 psi for mechanical seals with universal device
	309	$p_{e\ min}$	– 0.9 bar / – 13.1 psi
		$p_{e\ max}$	0.2 bar / 2.9 psi
	196	$p_{e\ min}$	– 0.4 bar / – 5.8 psi, starting condition – 0.6 bar / – 8.7 psi
		$p_{e\ max}$	25 bar / 363 psi
	197	$p_{e\ min}$	– 0.4 bar / – 5.8 psi, starting condition – 0.6 bar / – 8.7 psi
		$p_{e\ max}$	1 bar / 14.5 psi
Working pressure Outlet port		P_n	25 bar / 363 psi *
Speed		n_{min}	200 rpm
		n_{max}	2000 rpm The permissible max. speed depends upon the viscosity of the medium operated acc. to the table on page 8
Viscosity		ν_{min}	12 cSt
		ν_{max}	15 000 cSt (Viscosities other than within this range on request)
Weight		kg / lbs	refer to dimensional sheets
Temperature range		t_{min}	– 10 °C / 14°F
		t_{max}	90 °C / 194 °F for NBR rotary shaft lip-type seals 150 °C / 302 °F for FKM rotary shaft lip-type seals and mechanical seals SAVGG 200 °C / 392 °F for PTFE rotary shaft lip-type seals 200 °C / 392 °F for mechanical seals SATGG or ord. code refer to p. 9
Ambient temperature		t_{min}	– 20 °C / – 4°F
		t_{max}	60 °C / 140°F
Low temperature			on request
Filter			Filter fineness ≤ 60 µm

***** Higher pressures are subject to prior approval by KRACHT CORP.

General

The noise optimized pumps of the KF series are primarily designed for the conveying of mediums with an increased share of air, whereas both normal operation and vacuum operation is possible.
In applications with no air content in the medium, this type of utilization is not recommended since in such case the noise reduction does not take effect.
In these cases, the targeted application of noise reduction elements and also flexible hoses is recommended for achieving noise reduction. Our sales engineers will be pleased to provide assistance.

The following illustrations show the construction of the KF models described on Page 7. Models **196** and **197** are designed for the conveying of aeriferous transmission oils, therefore for application as a lubricating oil pump in ship gears and stationary gears. Special construction measures prevent the otherwise normal noise increase associated with air-content transmission oils and high degrees of negative pressure. The noise levels do not exceed or only negligibly exceed the measurement valued with non-aerifererous oils. A shift in the noise spectrum to higher, unpleasant frequencies also does not occur.

Pumps with the special code **197** are built as mounted pumps or pumps in combination with an electric motor. The mounted pump (Fig. 1) is equipped with an outboard bearing for the absorption of external radial forces of the type which appears when using a floating pinion. The pump in combination with an electric motor (Fig. 2) has no outboard bearing and needs to be driven via flexible coupling. Mounted pump and electric motor are sealed at the shaft end by a rotary shaft seal.

The pumps with the special code **196** are built as mounted pumps both with (Fig. 3) and without an outboard bearing. This model has no seal at the shaft end, making it possible to operate it with pressure on the suction side. The accruing leakage oil is fed off into the gear space. The pumps with the special code **309** (Fig. 4) are designed for deployment in vacuum facilities for the degassing and cleaning of oils. These pumps are built as pumps in combination with an electric motor and have no outboard bearing for the absorption of external radial forces. For this version, a triple sealing with quench is used as shaft sealing. The middle shaft sealing is mounted for suction operation.

Sound Level

	p = 5 bar / 73 psi	p = 15 bar / 218 psi	p = 25 bar / 363 psi
KF 3/100	70	71	71
KF 3/112	71	72	72
KF 4/125	71	72	73
KF 4/150	72	73	73
KF 4/180	72	73	74
KF 5/200	75	77	77
KF 5/250	76	77	78
KF 5/315	76	76	79
KF 6/400	79	79	80
KF 6/500	81	81	82
KF 6/630	81	81	83
KF 6/730	–	–	–

Sound level measured in dB(A) at a distance of 3.3 feet
Sound level measured with drive motor, installation site: Working hall, low noise level = 40 dB(A)

Pump assembly on rigid fastening angle,
Suction and pressure conduits: Hose
Measured with transmission oil, oil viscosity ν = 100 cSt, oil with app. 4% air content, Speed n = 1500 rpm

Construction Noise Optimized Design

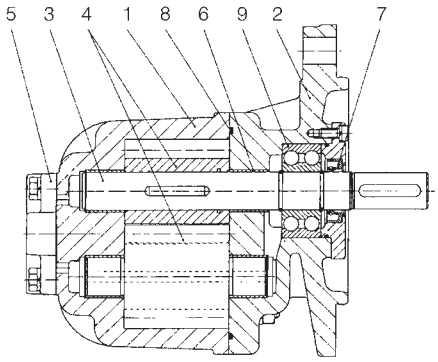


Fig. 1 **Pump with outboard bearing, special code 197 (with shaft-end sealing)**

1 Housing
2 Flange cover
3 Driving shaft
4 Gears
5 End cover
6 Bearing bush
7 Shaft-end sealing
8 O-ring
9 Outboard bearing

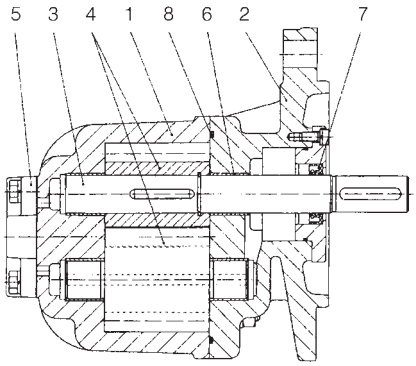


Fig. 2 **Pump without outboard bearing, special code 197 (with shaft-end sealing)**

1 Housing
2 Flange cover
3 Driving shaft
4 Gears
5 End cover
6 Bearing bush
7 Shaft-end sealing
8 O-ring

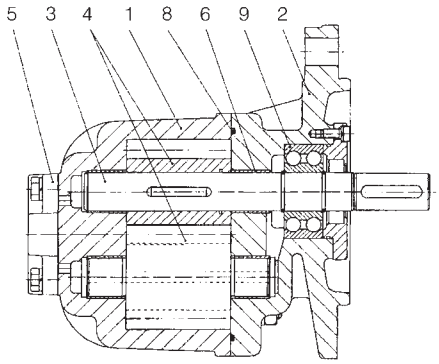


Fig. 3 **Pump with outboard bearing, special code 196 (without shaft-end sealing)**

1 Housing
2 Flange cover
3 Driving shaft
4 Gears
5 End cover
6 Bearing bush
7 Shaft-end sealing
8 O-ring
9 Outboard bearing

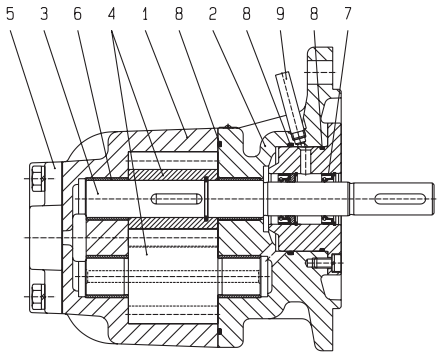


Fig. 4 **Pump without outboard bearing, special code 309 (Vacuum design)**

1 Housing
2 Flange cover
3 Driving shaft
4 Gears
5 End cover
6 Bearing bush
7 Shaft-end sealing
8 O-ring
9 Connection pipe

Note: Dimensions conformable standard Transfer Gear Pumps KF.

Technical Data

Size	Nominal displacement	Geometric displaced volume V_g cm³	Working pressure p_b bar / psi	Maximum pressure p_{max} bar / psi	Speed range n_{min} rpm	Speed range n_{max} rpm	Perm. forces (n = 1450 rpm) F_{radial} N	Perm. forces (n = 1450 rpm) F_{axial} N	Moment of inertia (without coupling x10⁻⁴) J kgm²
3 /	100	100.8	25 / 363	30 / 435	200	2000	1500	200	6.75
	112	112.6	25 / 363	25 / 363	200	2000	1500	200	7.5
4 /	125	129	25 / 363	40 / 580	200	2000	1500	200	13.75
	150	153	25 / 363	30 / 435	200	2000	1500	200	16
	180	184	25 / 363	25 / 363	200	2000	1500	200	19.25
5 /	200	204	25 / 363	30 / 435	200	2000	2000	300	27.5
	250	255	20 / 290	25 / 363	200	2000	2000	300	34.5
	315	321	16 / 232	20 / 290	200	2000	2000	300	43
6 /	400	405	25 / 363	30 / 435	200	2000	3000	500	105
	500	505	20 / 290	25 / 363	200	2000	3000	500	130
	630	629	16 / 232	20 / 290	200	2000	3000	500	160
	730	730	14 / 203	16 / 232	200	1500	3000	500	160

Note: Working pressure p_b = permissible continuous pressure
Maximum pressure p_{max} = only applicable to the operation with mineral oils
At speed n > 700 rpm and viscosities ν = 30 cSt up to 1000 cSt
Permissible forces only applicable to the types fitted with outboard bearing F_{radial} to the middle of the shaft end.

Discharge flow / Input power

Version standard – Speed n = 1740 rpm

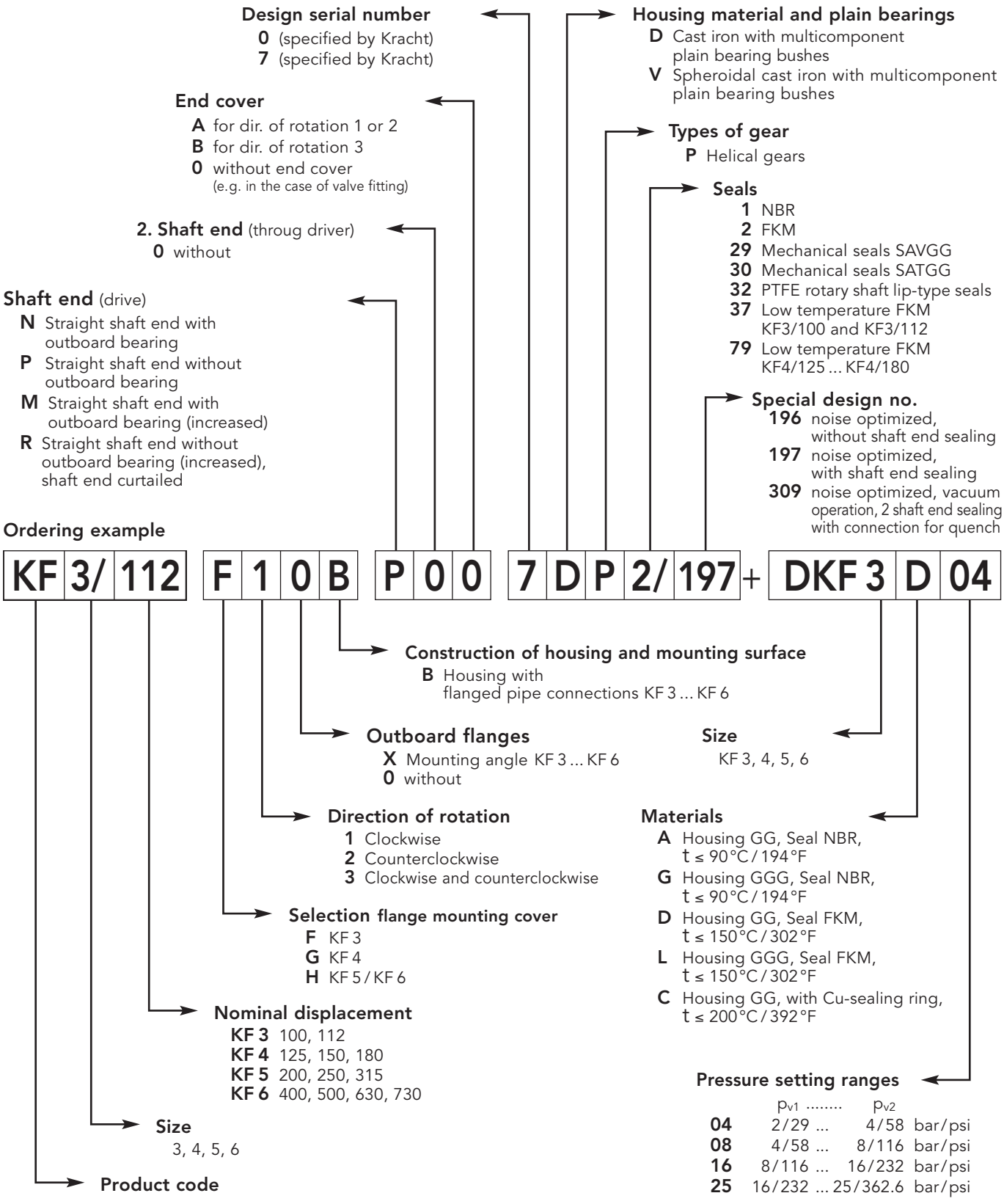
Working pressure p_b in bar / psi													Nom. displ. size	Working pressure p_b in bar / psi											
2 / 29	4 / 58	6 / 87	8 / 116	10 / 145	12 / 174	14 / 203	16 / 232	18 / 261	20 / 290	22 / 319	25 / 363			2 / 29	4 / 58	6 / 87	8 / 116	10 / 145	12 / 174	14 / 203	16 / 232	18 / 261	20 / 290	22 / 319	25 / 363
171/45	170/45	169/45	168/44	167/44	166/44	165/44	164/43	163/43	162/43	161/43	159/42		3/ 100	1.2	1.7	2.2	2.7	3.2	3.7	4.2	4.7	5.2	5.7	6.2	6.9
190/50	189/50	188/50	187/49	186/49	185/49	184/49	183/48	182/48	181/48	180/48	178/47		112	1.4	2.0	2.6	3.1	3.7	4.3	4.7	5.3	5.8	6.4	7.0	7.8
217/57	215/57	213/56	212/56	210/55	208/55	206/54	205/54	203/54	201/53	199/53	197/52		125	1.6	2.2	2.8	3.4	4.0	4.6	5.2	5.8	6.4	7.0	7.6	8.5
259/68	257/68	256/68	254/67	252/67	250/66	249/66	247/65	245/65	243/64	241/64	239/63		4/ 150	1.9	2.6	3.3	4.0	4.8	5.5	6.2	7.0	7.7	8.4	9.2	10.6
315/83	313/83	311/82	310/82	308/81	307/81	306/81	304/80	303/80	301/79	300/79	298/79		180	2.2	3.0	3.9	4.8	5.7	6.6	7.5	8.4	9.3	10.2	11.0	12.4
344/91	342/90	340/90	338/89	337/89	335/88	333/88	332/88	330/87	328/87	326/86	324/86		200	2.4	3.4	4.4	5.4	6.5	7.5	8.6	9.6	10.7	11.7	12.7	14.2
430/114	428/113	425/112	423/112	421/111	418/110	416/110	414/109	412/109	409/108				5/ 250	3.0	4.3	5.5	6.8	8.1	9.4	10.7	12.0	13.3	14.6		
543/143	541/143	540/143	539/142	537/142	536/142	535/141	534/141						315	3.7	5.3	6.9	8.6	10.2	11.7	13.4	15.0				
692/183	689/182	686/181	683/180	680/180	677/179	674/178	671/177	668/176	665/176	662/175	657/173		400	5.8	7.7	9.6	11.6	13.5	15.5	17.5	19.5	21.4	23.3	25.3	28.3
861/227	857/226	853/225	849/224	845/223	841/222	837/221	834/220	831/219	827/218				6/ 500	7.3	9.8	12.3	14.7	17.2	19.6	22.0	24.5	27.0	29.4		
1077/284	1073/283	1069/282	1065/281	1060/280	1056/279	1052/278	1047/276						630	9.3	12.0	15.0	18.0	21.0	24.0	27.0	30.0				
1272/336	1256/332	1241/328	1226/324	1210/320	1192/315	1174/310							730	11.0	14.8	18.6	22.4	26.2	30.0	33.7					
Discharge flow Q in l/min / gal/min														Power input required P in kW											

Version noise optimized – Speed n = 1740 rpm

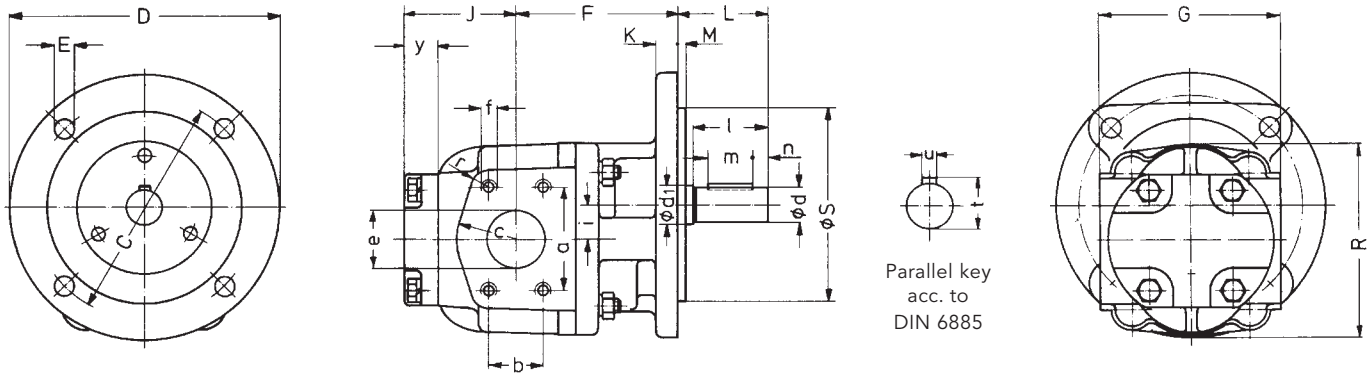
Working pressure p_b in bar / psi													Nom. displ. size	Working pressure p_b in bar / psi											
2 / 29	4 / 58	6 / 87	8 / 116	10 / 145	12 / 174	14 / 203	16 / 232	18 / 261	20 / 290	22 / 319	25 / 363			2 / 29	4 / 58	6 / 87	8 / 116	10 / 145	12 / 174	14 / 203	16 / 232	18 / 261	20 / 290	22 / 319	25 / 363
166/44	165/44	164/43	163/43	162/43	161/43	160/42	159/42	158/42	157/41	156/41	154/41		3/ 100	1.2	1.7	2.2	2.7	3.2	3.7	4.2	4.7	5.2	5.7	6.2	6.9
184/49	183/48	182/48	181/48	180/48	179/47	178/47	178/47	177/47	176/46	175/46	173/46		112	1.4	2.0	2.6	3.1	3.7	4.3	4.7	5.3	5.8	6.4	7.0	7.8
210/55	209/55	207/55	206/54	204/54	202/53	200/53	199/53	197/52	195/51	193/51	191/50		125	1.6	2.2	2.8	3.4	4.0	4.6	5.2	5.8	6.4	7.0	7.6	8.5
251/66	249/66	248/65	246/65	244/64	243/64	242/64	240/63	238/63	236/62	234/62	232/61		4/ 150	1.9	2.6	3.3	4.0	4.8	5.5	6.2	7.0	7.7	8.4	9.2	10.6
306/81	304/80	302/80	301/79	299/79	298/79	297/78	295/78	294/78	292/77	291/77	289/76		180	2.2	3.0	3.9	4.8	5.7	6.6	7.5	8.4	9.3	10.2	11.0	12.4
334/88	332/88	330/87	328/87	327/86	325/86	323/85	322/85	320/84	318/84	316/83	314/83		200	2.4	3.4	4.4	5.4	6.5	7.5	8.6	9.6	10.7	11.7	12.7	14.2
417/110	415/110	412/109	410/108	408/108	405/107	404/107	402/106	400/106	397/105				5/ 250	3.0	4.3	5.5	6.8	8.1	9.4	10.7	12.0	13.3	14.6		
527/139	525/139	524/138	523/138	521/138	520/137	519/137	518/137						315	3.7	5.3	6.9	8.6	10.2	11.7	13.4	15.0				
671/177	668/176	665/176	663/175	660/174	657/173	654/173	651/172	648/171	645/170	642/169	637/168		400	5.8	7.7	9.6	11.6	13.5	15.5	17.5	19.5	21.4	23.3	25.3	28.3
835/220	831/219	827/218	824/218	820/216	816/215	812/214	809/214	806/213	802/212				6/ 500	7.3	9.8	12.3	14.7	17.2	19.6	22.0	24.5	27.0	29.4		
1045/276	1041/275	1037/274	1033/273	1028/271	1024/270	1020/269	1016/268						630	9.3	12.0	15.0	18.0	21.0	24.0	27.0	30.0				
1234/326	1218/322	1204/318	1189/314	1174/310	1156/305	1139/301							730	11.0	14.8	18.6	22.4	26.2	30.0	33.7					
Discharge flow Q in l/min / gal/min														Power input required P in kW											

The dispersion of discharge flow Q as specified in the above table may be: Q + 2.5 % up to – 5 %.
At viscosities of ν < 30 cSt reduction of the discharge flow Q. At viscosities of ν > 300 cSt, the speed shall be reduced.
The drive motor output shall be selected 20 % higher than the data for P as specified in the above table
For viscosities of ν > 100 cSt the power input shall be increased. The values apply to oils without air fraction.

Type Key


Design serial number
0 (specified by Kracht)
7 (specified by Kracht)
End cover
A for dir. of rotation 1 or 2
B for dir. of rotation 3
0 without end cover
(e.g. in the case of valve fitting)
2. Shaft end (throug driver)
0 without
Shaft end (drive)
N Straight shaft end with outboard bearing
P Straight shaft end without outboard bearing
M Straight shaft end with outboard bearing (increased)
R Straight shaft end without outboard bearing (increased), shaft end curtailed
Housing material and plain bearings
D Cast iron with multicomponent plain bearing bushes
V Spheroidal cast iron with multicomponent plain bearing bushes
Types of gear
P Helical gears
Seals
1 NBR
2 FKM
29 Mechanical seals SAVGG
30 Mechanical seals SATGG
32 PTFE rotary shaft lip-type seals
37 Low temperature FKM KF3/100 and KF3/112
79 Low temperature FKM KF4/125 ... KF4/180
Special design no.
196 noise optimized, without shaft end sealing
197 noise optimized, with shaft end sealing
309 noise optimized, vacuum operation, 2 shaft end sealing with connection for quench
Ordering example
KF 3/ 112 F 1 0 B P 0 0 7 D P 2/ 197 + DKF 3 D 04
Construction of housing and mounting surface
B Housing with flanged pipe connections KF 3 ... KF 6
Outboard flanges
X Mounting angle KF 3 ... KF 6
0 without
Size
KF 3, 4, 5, 6
Direction of rotation
1 Clockwise
2 Counterclockwise
3 Clockwise and counterclockwise
Materials
A Housing GG, Seal NBR, t ≤ 90 °C / 194 °F
G Housing GGG, Seal NBR, t ≤ 90 °C / 194 °F
D Housing GG, Seal FKM, t ≤ 150 °C / 302 °F
L Housing GGG, Seal FKM, t ≤ 150 °C / 302 °F
C Housing GG, with Cu-sealing ring, t ≤ 200 °C / 392 °F
Selection flange mounting cover
F KF 3
G KF 4
H KF 5 / KF 6
Nominal displacement
KF 3 100, 112
KF 4 125, 150, 180
KF 5 200, 250, 315
KF 6 400, 500, 630, 730
Size
3, 4, 5, 6
Product code
Pressure setting ranges
pv1 ..... pv2
04 2/29 ... 4/58 bar/psi
08 4/58 ... 8/116 bar/psi
16 8/116 ... 16/232 bar/psi
25 16/232 ... 25/362.6 bar/psi

Flange-Type Pumps



Size	Inlet- and outlet port pipe thread																			Shaft end							Weight
	a	b	c	e	f		r	C	D	E	F	G	J	K	L	M	R	S_{h6}	i	y	d_1	d_{k6}	l	m	n	t	u	kg/lbs
3/100	69.9	35.7	40	40	M10	16 deep	12	150	180	14	108	120	92	15	60	5	130	130	23	20	25	24	50	30	10	27	8	13.5/29.8
112																					*20	19	50	30	5	21.5	6	
125											110		80															18.5/40.8
4/150	77.8	42.9	50	50	M12	18 deep	12	185	220	18	125	130	77	19	60	8	160	150	28.3	20	25	24	50	40	5	27	8	20/44.1
180											135		77															21/46.3
200	88.9	50.8	55	63			13				155		93															28/61.7
5/250	106.4	61.9	65	75	M12	20 deep	15	215	250	18	170	150	109	22	70	8	198	180	32	24	30	28	60	40	10	31	8	33/72.8
315	106.4	61.9	65	75			15				170		109															33/72.8
400											180		124															51/112.4
6/500	130.2	77.8	80	100	M16	32 deep	20	215	250	18	200	200	126	25	95	8	244	180	40	24	40	38	80	63	8	41	10	55/121.3
630											200		159															65/143.3
730											200		159															65/143.3

(Dimensions in mm)

*KF3: Dimensions of shaft end line below for shaft P

Ordering code

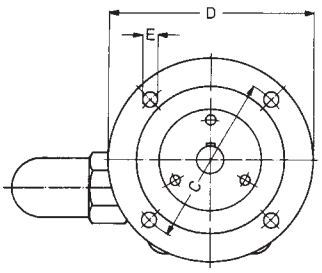
KF 3/.F 1/2/3 0B N/P 0 A/B 7DP V 1/2/32

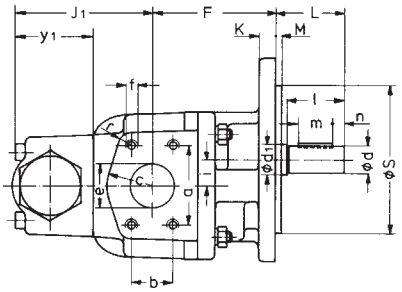
KF 4/.G 1/2/3 0B N/P 0 A/B 7DP V 1/2/32

KF 5/.H 1/2/3 0B N/P 0 A/B 0DP V 1/2/32

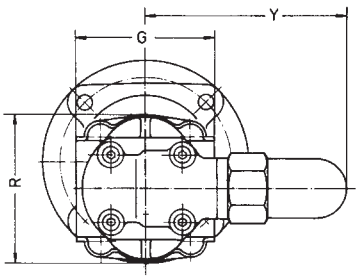
KF 6/.H 1/2/3 0B N/P 0 A/B 7DP V 1/2/32

Flange-Type Pumps with Pressure Relief Valve





Parallel key
acc. to
DIN 6885



Size	Inlet- and outlet port pipe thread																						Shaft end							Weight
	a	b	c	e	f		r	C	D	E	F	G	J_1	K	L	M	R	S_{h6}	Y	i	y_1	d_1	d_{k6}	l	m	n	t	u	kg/lbs
3/ 100	69.9	35.7	40	40	M10	16 deep	12	150	180	14	108	120	137	15	60	5	130	130	160	23	65	25	24	50	30	10	27	8	15/33.1
112																						*20	19	50	30	5	21.5	6	
125											110		132																20.0/44.1
4/ 150	77.8	42.9	50	50	M12	18 deep	12	185	220	18	125	130	129	19	60	8	160	150	171	28.3	72	25	24	50	40	5	27	8	21.5/47.1
180											135		129																21.5/47.1
200	88.9	50.8	55	63			13				155		149																30/66.1
5/ 250	106.4	61.9	65	75	M12	20 deep	15	215	250	18	170	150	165	22	70	8	198	180	196	32	80	30	28	60	40	10	31	8	35/77.2
315	106.4	61.9	65	75			15				170		165																35/77.2
400											180		217																59/130.1
6/ 500	130.2	77.8	80	100	M16	32 deep	20	215	250	18	200	200	219	25	95	8	244	180	238	40	117	40	38	80	63	8	41	10	63/138.9
630											200		252																73/160.9
730											200		252																73/160.9

(Dimensions in mm)

*KF3: Dimensions of shaft end line below for shaft P

Ordering code

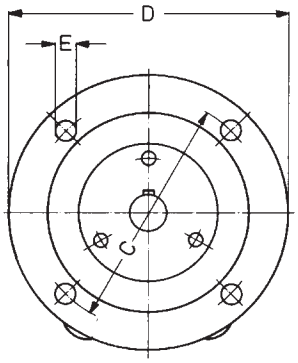
KF 3/. F $\frac{1}{2}$ 0B $\frac{N}{P}$ 00 $\frac{7DP}{V}$ $\frac{1}{2}$ $\frac{1}{32}$ + DKF 3 $\frac{A}{D}$ $\frac{C}{G}$ •

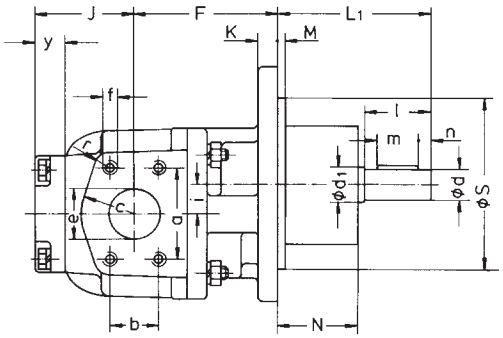
KF 4/. G $\frac{1}{2}$ 0B $\frac{N}{P}$ 00 $\frac{7DP}{V}$ $\frac{1}{2}$ $\frac{1}{32}$ + DKF 4 $\frac{A}{D}$ $\frac{C}{G}$ •

KF 5/. H $\frac{1}{2}$ 0B $\frac{N}{P}$ 00 $\frac{0DP}{V}$ $\frac{1}{2}$ $\frac{1}{32}$ + DKF 5 $\frac{A}{D}$ $\frac{C}{G}$ •

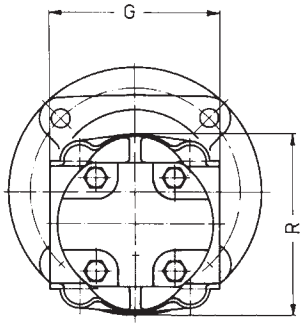
KF 6/. H $\frac{1}{2}$ 0B $\frac{N}{P}$ 00 $\frac{7DP}{V}$ $\frac{1}{2}$ $\frac{1}{32}$ + DKF 6 $\frac{A}{D}$ $\frac{C}{G}$ •

Flange-Type Pumps with Mechanical Seal





Parallel key acc. to DIN 6885



Size	Inlet- and outlet port pipe thread																				Shaft end							Weight
	a	b	c	e	f		r	C	D	E	F	G	J	K	L_1	M	N	R	S_{h6}	i	y	d_1	d_{k6}	l	m	n	t	u	kg/lbs
3/ 100	69.9	35.7	40	40	M10	16 deep	12	150	180	14	108	120	92	15	120	5	69	130	130	23	20	25	24	50	30	10	27	8	15/33.1
112											110		80															20/44.1
4/ 125	77.8	42.9	50	50	M12	18 deep	12	185	220	18	125	130	77	19	125	8	69	160	150	28.3	20	25	24	50	40	5	27	8	21.5/47.1
150											135		77															22.5/49.6
180																												
200	88.9	50.8	55	63			13				155		93															30/66.1
5/ 250	106.4	61.9	65	75	M12	20 deep	15	215	250	18	170	150	109	22	125	8	61	198	180	32	24	30	28	60	40	10	31	8	35/77.2
315	106.4	61.9	65	75			15				170		109															35/77.2
400	130.2	77.8	80	100	M16	32 deep	20	215	250	18	180	200	124	25	160	8	72	244	180	40	24	40	38	80	63	8	41	10	54/119.0
6/ 500											200		126															58/127.9
630											200		159															68/150.0
730											200		159															68/150.0

(Dimensions in mm)

Ordering code

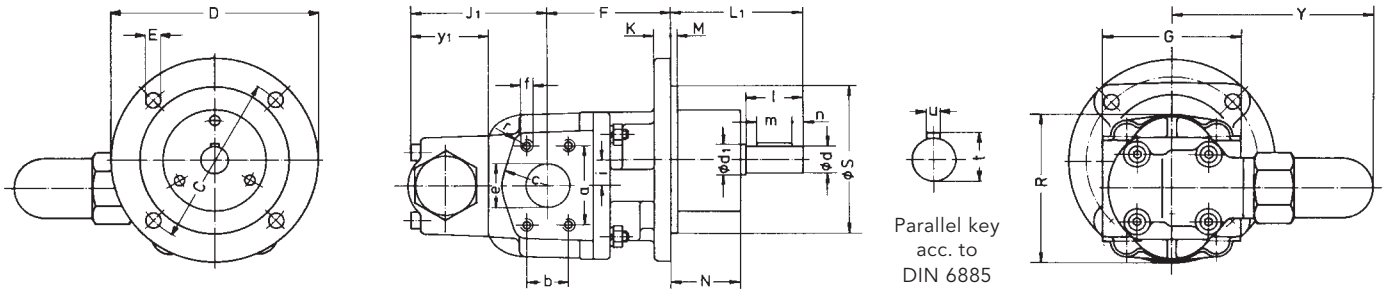
KF 3/.F 1/2 0B N0A 7DP 29 V 30

KF 4/.G 1/2 0B N0A 7DP 29 V 30

KF 5/.H 1/2 0B N0A 0DP 29 V 30

KF 6/.H 1/2 0B N0A 7DP 29 V 30

Flange-Type Pumps with Mechanical Seal and Pressure Relief Valve



Size	Inlet- and outlet port pipe thread																												Shaft end							Weight
	a	b	c	e	f		r	C	D	E	F	G	J_1	K	L_1	M	N	R	S_{h6}	i	Y	y_1	d_1	d_{k6}	l	m	n	t	u	kg/lbs
3/ 100	69.9	35.7	40	40	M10	16 deep	12	150	180	14	108	120	137	15	120	5	69	130	130	23	160	65	25	24	50	30	10	27	8	16.5/36.4
112																														
125											110		132																	21.5/47.4
4/ 150	77.8	42.9	50	50	M12	18 deep	12	185	220	18	125	130	129	19	125	8	69	160	150	28.3	171	72	25	24	50	40	5	27	8	23/50.7
180											135		129																	24/52.9
200	88.9	50.8	55	63			13				155		149																	32/70.5
5/ 250	106.4	61.9	65	75	M12	20 deep	15	215	250	18	170	150	165	22	125	8	61	198	180	32	196	80	30	28	60	40	10	31	8	35/77.2
315	106.4	61.9	65	75			15				170		165																	35/77.2
400											180		217																	62/136.7
6/ 500	130.2	77.8	80	100	M16	32 deep	20	215	250	18	200	200	219	25	160	8	72	244	180	40	238	117	40	38	80	63	8	41	10	66/145.5
630											200		252																	76/167.6
730											200		252																	76/167.6

(Dimensions in mm)

Ordering code

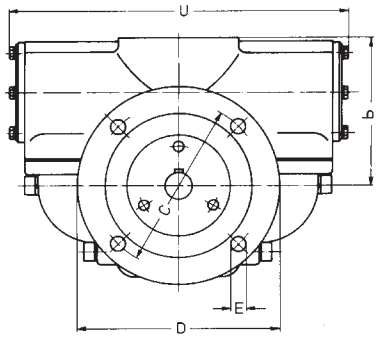
KF 3/. F $\frac{1}{2}$ 0B N00 $\frac{7DP}{V}$ $\frac{29}{30}$ + DKF 3 $\frac{D}{C}$ •
$\frac{}{G}$

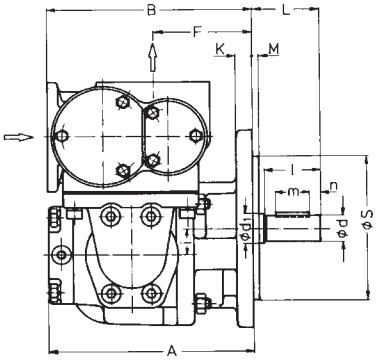
KF 4/. G $\frac{1}{2}$ 0B N00 $\frac{7DP}{V}$ $\frac{29}{30}$ + DKF 4 $\frac{D}{C}$ •
$\frac{}{G}$

KF 5/. H $\frac{1}{2}$ 0B N00 $\frac{0DP}{V}$ $\frac{29}{30}$ + DKF 5 $\frac{D}{C}$ •
$\frac{}{G}$

KF 6/. H $\frac{1}{2}$ 0B N00 $\frac{7DP}{V}$ $\frac{29}{30}$ + DKF 6 $\frac{D}{C}$ •
$\frac{}{G}$

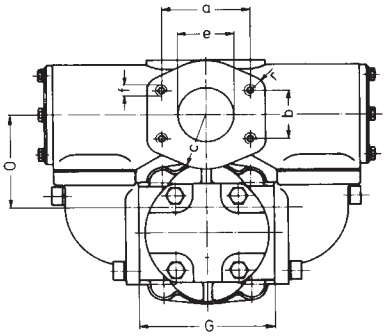
Flange-Type Pumps with Universal Arrangement





Fitting position: horizontal (ill.)

Parallel key acc. to DIN 6885



Size	Inlet- and outlet port pipe thread																												Shaft end							Weight	Permissible manometric vacuum at the pump inlet port
	a	b	c	e	f	r	A	B	C	D	E	F	G	K	L	M	O	P	S_{h6}	U	i	d_1	d_{k6}	l	m	n	t	u	kg / lbs	P_e in bar / psi
3/ 100 112	77.8	42.9	50	50	M12	12	200	183	150	180	14	93	120	15	60	5	90	140	130	298	23	25	24	50	30	10	27	8	34 / 75.0	0.36 / 5.22 0.35 / 5.08
4/ 125 150 180	77.8	42.9	50	50	M12	12	190 202 212	185 200 210	185	220	18	95 110 120	130	19	60	8	96	146	150	298	28.3	25	24	50	40	5	27	8	39 / 86.0 40 / 88.2 41 / 90.4	0.34 / 4.93 0.33 / 4.79 0.32 / 4.64
5/ 200 250 315	106.4	61.9	65	75	M12	15	248 279 279	252 267 267	215	250	18	122 137 137	150	22	70	8	129	199	180	442	32	30	28	60	40	10	31	8	80 / 176.4 85 / 187.4 85 / 187.4	0.38 / 5.51 0.37 / 5.37 0.36 / 5.22
6/ 400 500 630 730	Inlet port 130.2	77.8	80	100	M16	20	304 326 359	277 297 297	215	250	18	147 167 167	200	25	95	8	171	241	180	442	40	40	38	80	63	8	41	10	103 / 227.1 107 / 235.9 117 / 258.0	0.37 / 5.37 0.36 / 5.22 0.33 / 4.79
	Outlet port 106.4	61.9	65	75	M12	15	359	297				167																	117 / 258.0	0.30 / 4.35

(Dimensions in mm)

Ordering code

KF 3/ . F3 0B N0B $^{7DP}_{V}$. + KF4U 04
KF 4/ . G3 0B N0B $^{7DP}_{V}$. + KF4U 05
KF 5/200 H3 0B N0B $^{0DP}_{V}$. + KF5U 06
KF 5/250 H3 0B N0B $^{0DP}_{V}$. + KF5U 07
KF 5/315 H3 0B N0B $^{0DP}_{V}$. + KF5U 07
KF 6/ . H3 0B N0B $^{7DP}_{V}$. + KF6U 08

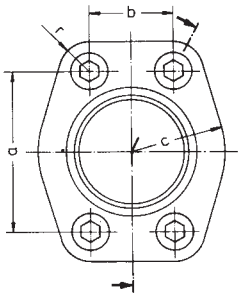
Accessories Connecting Flange

Welding connector KF 3, KF 4

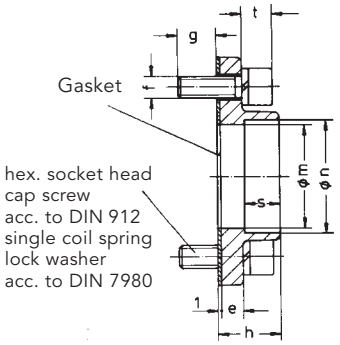
Ordering example

2 Pieces Welding Connector KF 4

complete welding connector with gasket and screws for the size KF 4



Material: ST 42–2

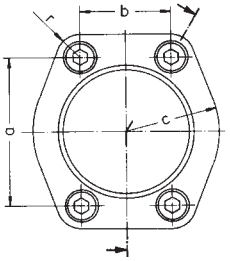


Welding connector KF 5, KF 6

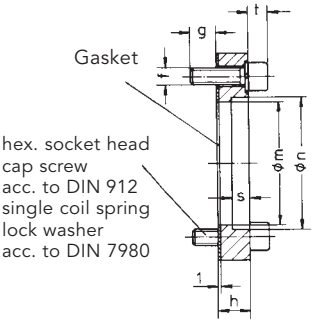
Ordering example

2 Pieces Welding Connector KF 5

complete welding connector with gasket and screws for the size KF 5 / 250



Material: ST 42–2



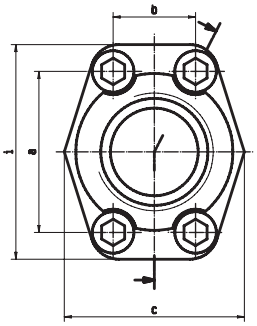
Size Nom. displacement	a	b	c	e	f	g	h	m	n	r	s	t	Screws DIN 912-8.8	Nom. size	Pipe external Ø	Weight kg / lbs
KF 3	69.9	35.7	40	9	M 10	13	26	45	49	13	15	–	M10x25	40	48.3	0.44 / 0.97
KF 4	77.8	42.9	50	9	M 12	17	26	57	61	13	15	–	M12x30	50	60.3	0.63 / 1.39
KF 5 / 200	88.9	50.8	55	–	M 12	16	18	68	77	15	12	12	M12x35	65	76.1	0.86 / 1.90
KF 5 / 250 / 315	106.4	61.9	65	–	M 12	16	18	82	90	15	12	12	M12x35	80	88.9	1.2 / 2.65
KF 6	130.2	77.8	80	–	M16	24	24	107	115.3	20	15	20	M16x50	100	114.3	2.5 / 5.51

Threaded connector KF 3, KF 4

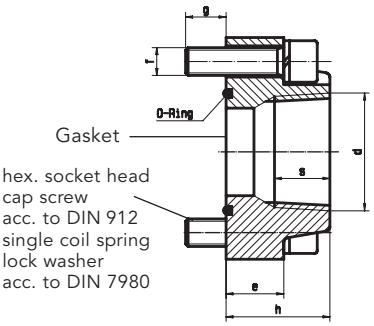
Ordering example

2 Pieces Threaded connector KF 4

complete threaded connector with gasket and screws for the size KF 4



Material: ST 42–2



Size	a	b	c	d	e	f	g	h	i	s	Screws DIN 912-8.8	O-ring	Weight kg / lbs
KF 3	69.9	35.7	78	NPT 1½	25	M 10	12.8	45	93	24	M10x40	47.22 x 3.53	1.05 / 2.31
KF 4	77.8	42.9	90	NPT 2	25	M 12	17.5	45	102	30	M12x45	56.74 x 3.53	1.19 / 2.62

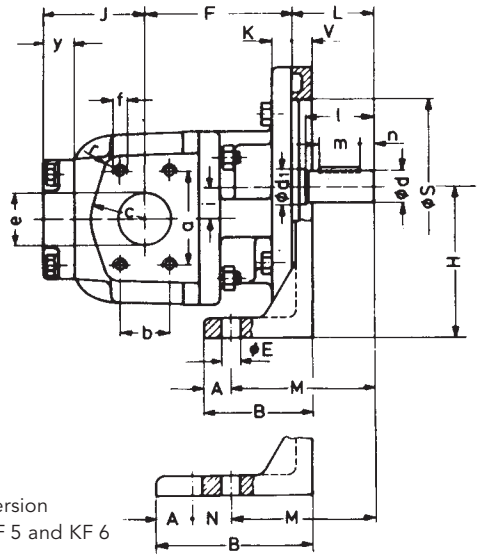
(Dimensions in mm)

Flange Type Pumps with Mounting Angle

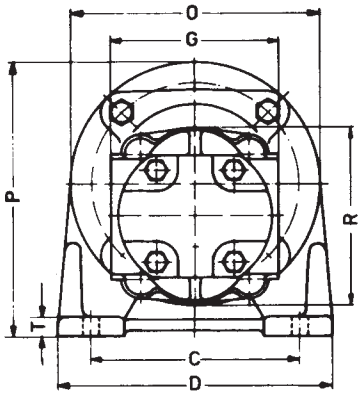
Materials

Housing: Cast iron with lamellar graphite acc. to DIN 1691

Shafts and gears: Case-hardened steel acc. to DIN 17210, surface-hardened and grinded



Parallel key
acc. to DIN 6885



Mounting angle dimensions

	A	B	C	D	E	H	M	N	O	P	T	V
KF 3	20	80	150	180	14	112	105	–	180	202	15	15
KF 4	20	95	170	200	14	132	115	–	220	242	15	20
KF 5	40	220	180	220	14	160	190	40	250	285	18	20
KF 6	45	285	250	300	18	200	240	70	250	325	22	25

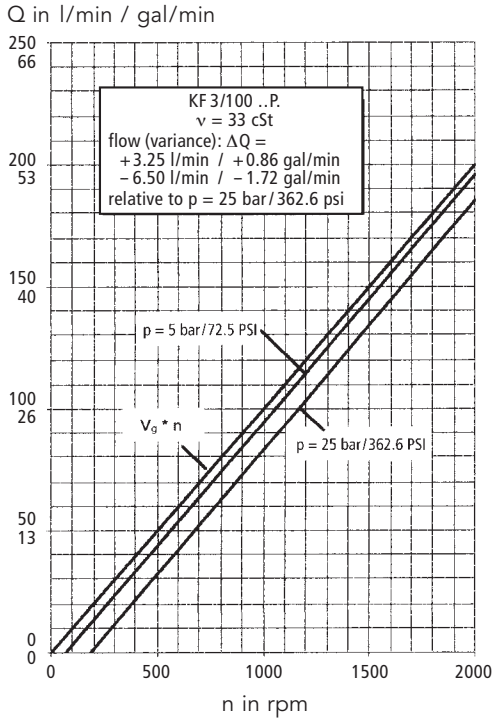
Size	Inlet- and outlet port flange																Shaft end							Weight
	a	b	c	e	f		r	F	G	J	K	L	R	S_{H7} S_{h6}	i	Y	d_1	d_{k6}	l	m	n	t	u	kg/lbs
3/ 100	69.9	35.7	40	40	M10	16 deep	12	108	120	92	15	60	130	130	23	20	25	24	50	30	10	27	8	14/30.9
112																	*20	19			5	21.5	6	
125								110		80														20/44.1
4/ 150	77.8	42.9	50	50	M12	18 deep	12	125	130	77	19	60	160	150	28.3	20	25	24	50	40	5	27	8	22/48.5
180								135		77														23/50.7
200	88.9	50.8	50	63			13	155		93														31.5/69.4
5/ 250	106.4	61.9	65	75	M12	20 deep	15	170	150	109	22	70	198	180	32	24	30	28	60	40	10	31	8	36.5/80.5
315	106.4	61.9	65	75			15	170		109														36.5/80.5
400								180		124														59/130.1
6/ 500	130.2	77.8	80	100	M16	32 deep	20	200	200	126	25	95	244	180	40	24	40	38	80	63	8	41	10	63/138.9
630								200		159														73/160.9
730								200		159														73/160.9

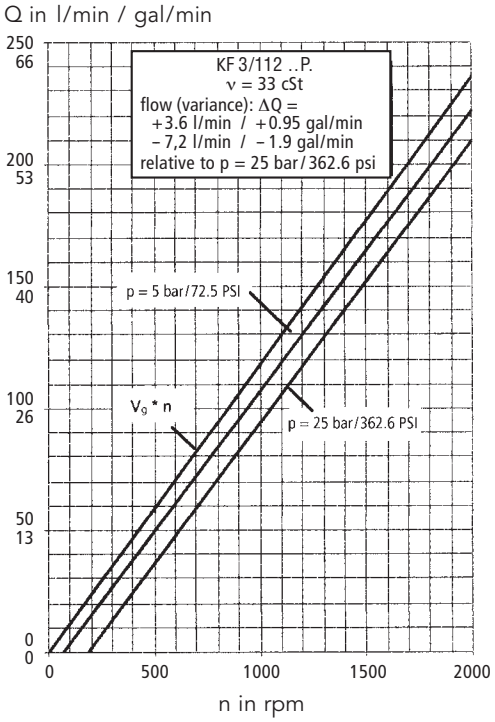
(Dimensions in mm)

* KF 3: Dimensions of shaft end line below for shaft P

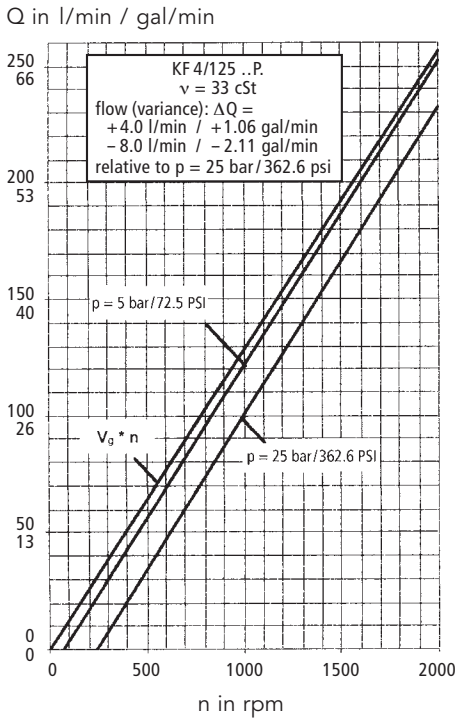
Characteristic Curves

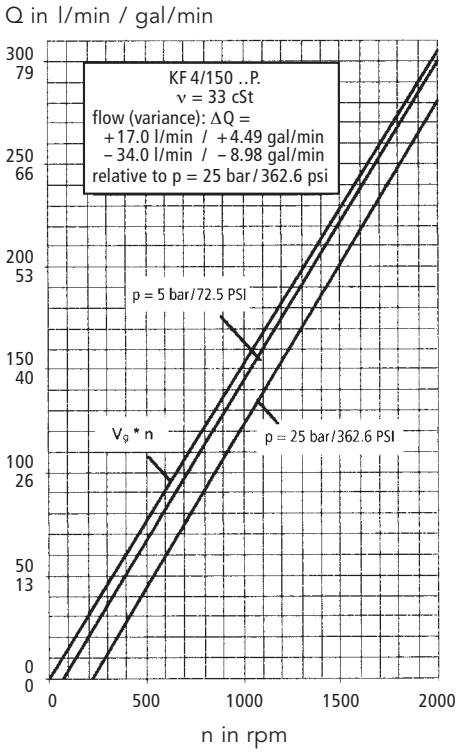
Charts for KF 3/100 ... KF 3/112

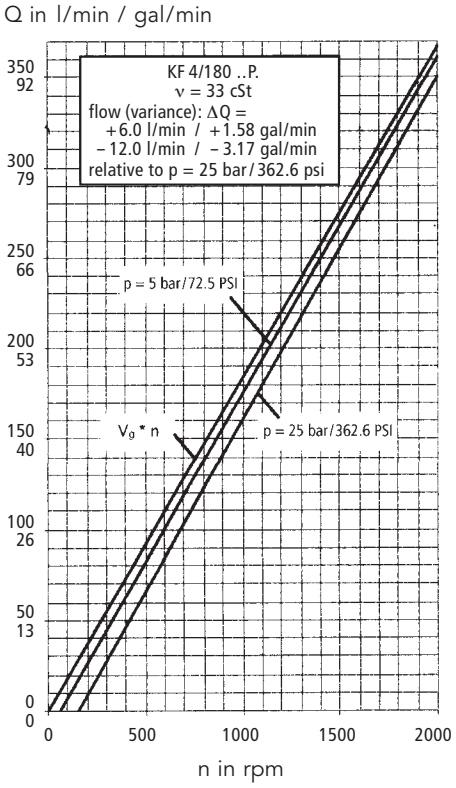




Charts for KF 4/125 ... KF 4/180

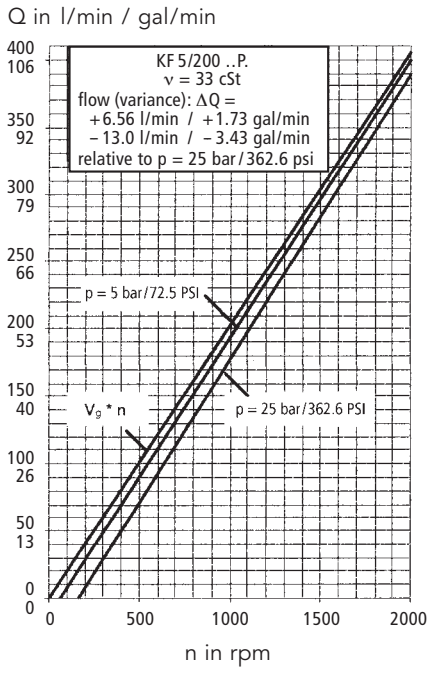


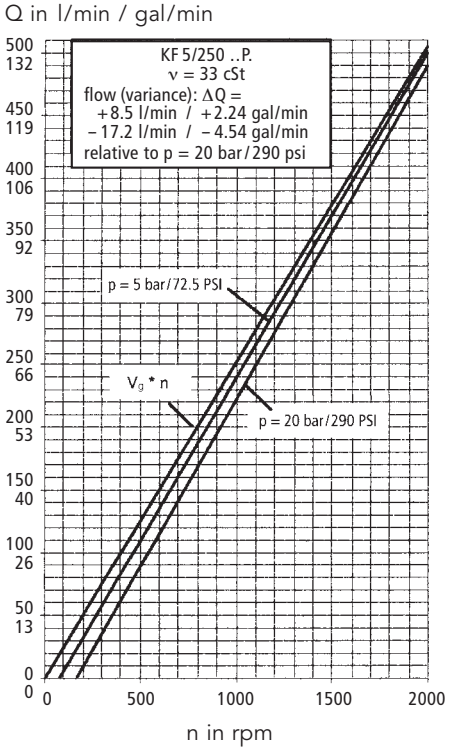


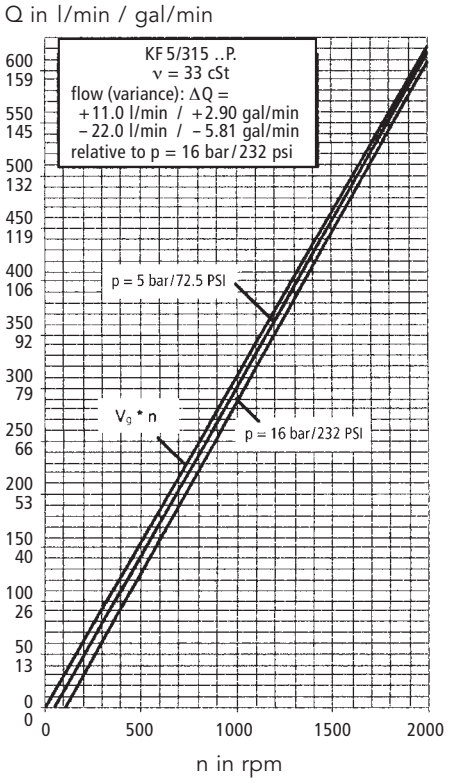


Characteristic Curves

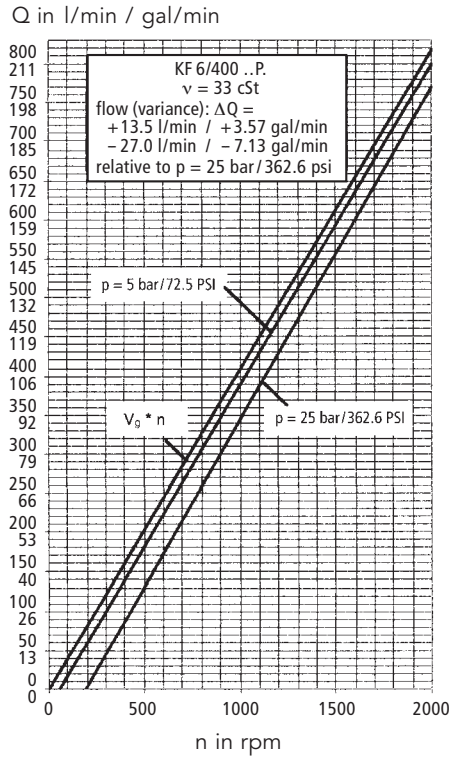
Charts for KF 5/200 ... KF 5/315

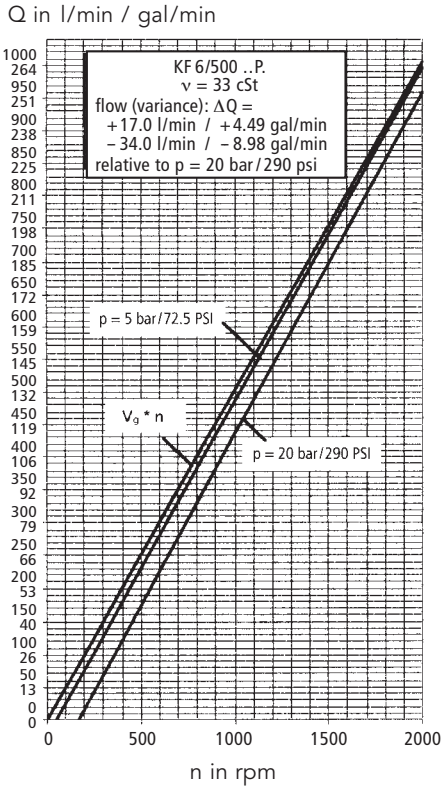


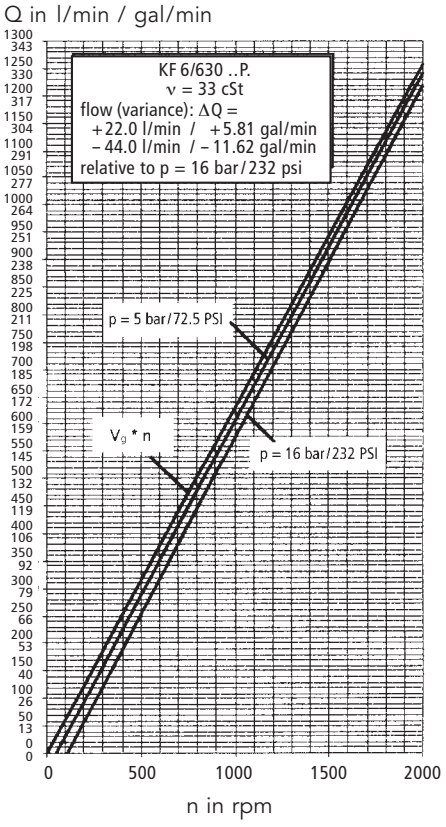




Charts for KF 6/400 ... KF 6/630



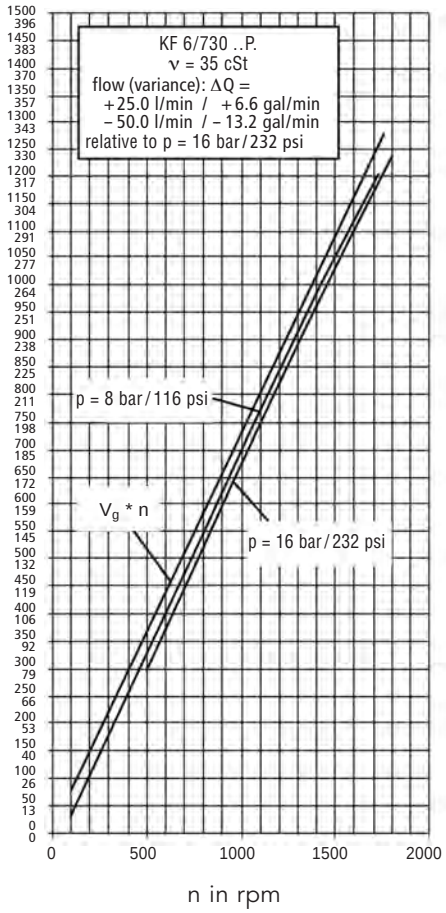




Characteristic Curves

Chart for KF 6/730

Q in l/min / gal/min



n in rpm

Product Portfolio

Transfer Pumps

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

Mobile Hydraulics

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

Flow Measurement

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

Industrial Hydraulics / Test Bench Construction

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).

Technology Test benches / Fluid Test benches.

KF3/100...KF6/730/USA/07.11

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