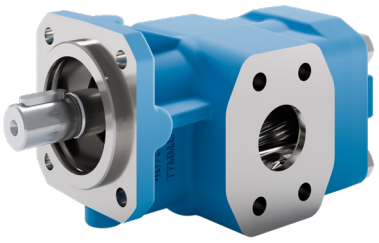
KRACHT®
FLUID TECHNOLOGY AND SYSTEMS

Pump technology

Gear pumps

KF 2.5 ... 630



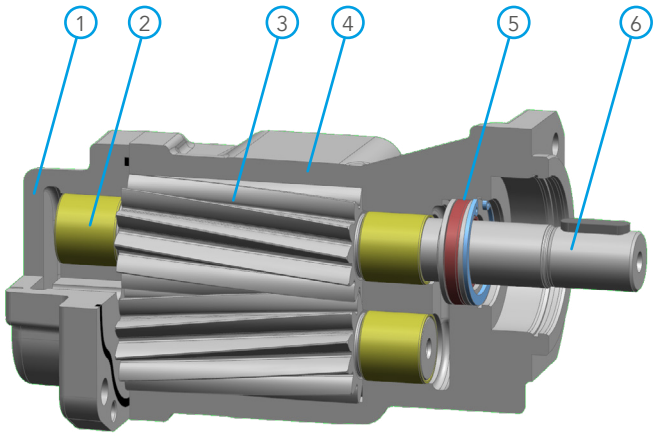
KRACHT®

FLUID TECHNOLOGY AND SYSTEMS

Content

General

Construction

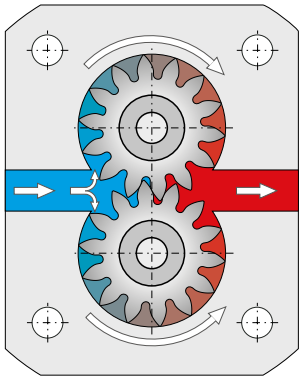


1 End cover
2 Plain bearing bushes
3 Gear unit
4 Housing
5 Shaft seal
6 Drive shaft end

Function

KF series gear pumps are external gear pumps that operate according to the positive displacement principle. Here, the fluid is transported from the suction to the discharge end by rotation of the two gear shafts in the tooth gaps along the housing wall. The geometric displacement volume V_g is displaced per wheel revolution. A value that is stated in technical documentation as the nominal volume V_{gn} to identify the pump size. Gear pumps are in principle self-priming - extremely high viscosities may require upstream pressure. The displacement cycle described initially takes place without exhibiting appreciable pressure build-up. Only after external loads have been specified, e.g. by delivery head, pressure drops, pipe elements, etc., is the working pressure required to overcome these resistances established.

Suction side



Pressure side

Characteristics

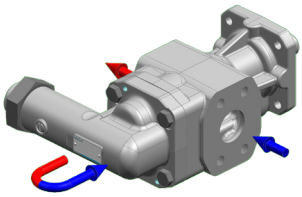
- Gear pumps KF are used for pumping a wide variety of fluids.
- Diversity of variants through modular design. Pumps and optional components (see pages 5 … 7) can be combined as required and subsequently expanded.
- The standard housing sections are of grey cast iron.
- The gear units are manufactured from high-strength case-hardening steel, hardened and mounted in special multi-compound plain bearing bushes.
- The standard drive shaft is sealed by single radial lip-type seal. Double designs, mechanical seals and magnetic couplings are also optionally available.
- 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.
- 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.
- Avoid dry operation.
- The pressure relief valve attached to the pump may only be used as safety valve for short-term operation. Otherwise there is a risk of the pump overheating. A separate pressure relief valve with return line to the reservoir must be foreseen, if a partial discharge flow has to be drained over a prolonged period (see valve options on page 5).

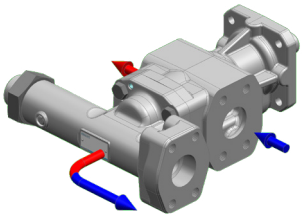
Valve options

Valves that can be attached to gear pumps



Pressure relief valves D15/D25

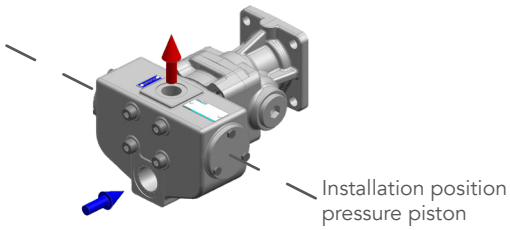
Gear pumps of the KF series can optionally be equipped with a directly controlled pressure relief valve (D-valve D15/D25) to protect the pump from impermissibly high-pressure peaks. The valve has an adjustment facility within the permitted pressure range and is designed for a brief overflow of the discharge flow. Special pressure relief and pressure control valves (SPV, DV B, DV R, T) with an external outflow are available for permanent discharge of a volume flow.



T-valve T15/T25

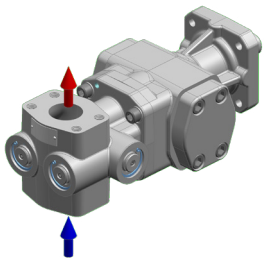
The KF gear pumps can be optionally equipped with the T-valve. The T-valve is an attached, directly controlled pressure relief valve with separate tank connection. To dissipate heat, the handled fluid flowing out via the T-valve is fed directly into the storage tank. Thanks to adapted damping, the valve offers very good control characteristics and outstanding dynamics with vibration-free operation at all operating points of the pump.

Gear pumps with a universal valve also deliver to the same connection when the direction of rotation changes.



Universal valve U for KF 2.5 … 25

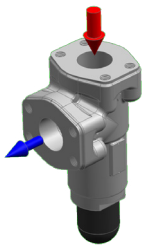
The universal valve U is available for nominal sizes 2.5 … 25. The valve must be installed with the pressure piston lying horizontally.



Universal valve U2 for KF 32 … 112

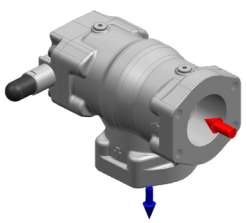
The universal valve U2 is available for nominal sizes 32 … 112. The installation position is optional.

Valves that can be integrated in pipelines



SPV valve

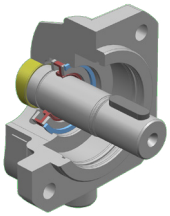
The SPV pressure relief valve is a directly controlled slide valve for installation in pipelines and is used to safeguard hydraulic circuits. (Details: see SPV data sheet)



DV valve

DV valves are hydraulically piloted and as
- Pressure relief valve DV B
- Pressure stage control valve DV S
- Pressure control valve DV R available.
  (Details: see DV data sheet)

Shaft end seals

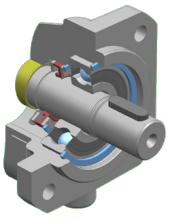


Single radial lip-type seal

Example: for general fluid pumping

Fixing type: F/W

Sealing materials:
NBR = Sealing type 1
FKM = Sealing type 2
PTFE = Sealing type 3
EPDM = Sealing type 9
FKM low temperature = Sealing type 23/31/49

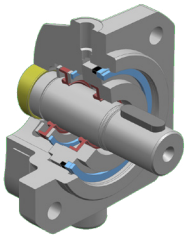


Single radial lip-type seal with outboard bearing

Example: for the absorption of radial forces

Fixing type: G/X

Sealing materials:
NBR = Sealing type 1
FKM = Sealing type 2
PTFE = Sealing type 3

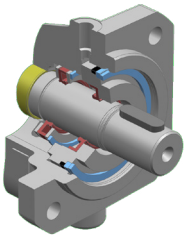


Double radial lip-type seal with connection possibility for quench

Example: for crystallising media

Fixing type: F/W

Sealing materials:
NBR = Sealing type 19
FKM = Sealing type 7
PTFE = Sealing type 4
EPDM = Sealing type 32



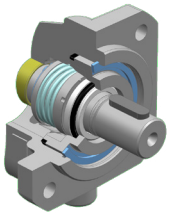
Double radial lip-type seal for vacuum operation with connection possibility for quench

Example: for vacuum applications

Fixing type: F/W

Sealing materials:
NBR = Sealing type 19
FKM = Sealing type 7
PTFE = Sealing type 4

Special number: 74

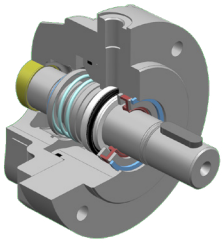


Mechanical seal

Example: for increased upstream pressures

Fixing type: F/W

Sealing materials:
FKM = Sealing type 40
PTFE = Sealing type 6
FFKM = Sealing type 46, 48



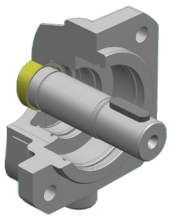
Mechanical seal and connection possibility for quench

Example: for increased upstream pressures in conjunction with crystallising media

Fixing type: F/W

Sealing material:
FKM = Sealing type 40

Special number: 198

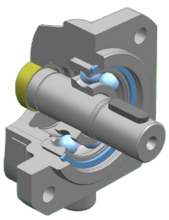


Without shaft sealing

Example: Direct attachment to the engine or gearbox

Fixing type: F/W

Sealing materials:
FKM (O-ring) = Sealing type 30
NBR (O-ring) = Sealing type 36

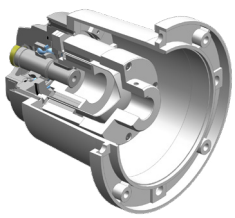


Without shaft sealing with outboard bearing

Example: Direct attachment to the motor or gearbox in connection with the absorption of radial forces

Fixing type: F/W

Sealing materials:
FKM (O-ring) = Sealing type 30
NBR (O-ring) = Sealing type 36



Magnetic coupling

Example: for high inlet pressures and absolute tightness

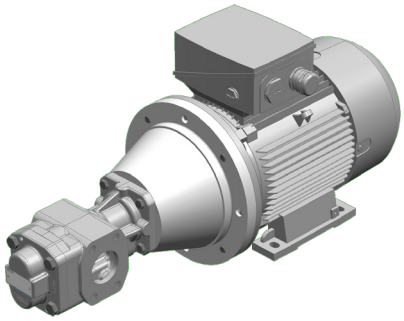
Fixing type: G

Variants / Options

Noise optimized for medias with increased air percentage

The noise optimized pumps in the KF series are available from nominal size 4 and are designed for conveying for medias with increased air content. Special measures prevent the otherwise normally increased noise present in auriferous gear oil. The noise levels do not exceed or only barely exceed the measurements with non-auriferous oils. Also, there is no noise spectrum shift to higher, unpleasant frequencies. In applications without auriferous portions in the media, it is not recommended to use this version as it will not bring about noise reduction effects there. The use of a noise-optimized pump design reduces the flow rate approx. 3%.

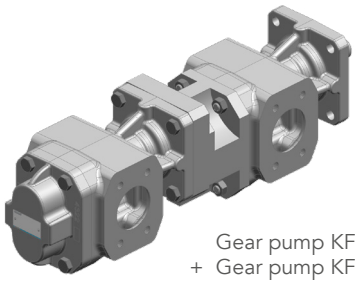
Motor-pump units



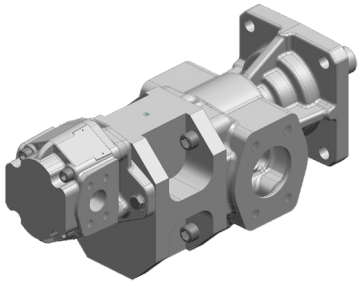
Motors that can be combined with KF pumps

- Air motors
- Gear motors
- Hydraulic motors (for details see data sheet KM)
- IEC electric motors in all common efficiency classes (up to IE4)
- Motors in ATEX version
- Marine approved engines
- NEMA motors

Multiple pumps



Gear pump KF
+ Gear pump KF



Gear pump KF
+ High pressure gear pump KP

Characteristics and versions

- Opposite flow direction possible
- High cold start viscosities at high idling speed possible
- High efficiency over large ranges of speed
- Hydraulically separated

Mounting flanges

- 2- and 4-hole versions
- DIN (standard)
- SAE
- Special adapter according to customer requirements

Shaft ends

- Inner thread
- Conical
- With built-in nozzle
- SAE / DIN toothed
- Cylindrical (standard)

Equipment

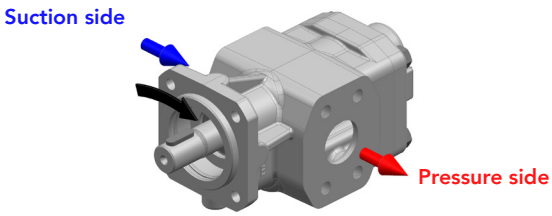
- Welding flanges, threaded flanges BSPP, NPT, UN / UNF
- Quench tank
- Foot flange
- IEC electric motors
- Claw couplings, curved tooth couplings, metal bellows couplings, magnetic coupling
- Bellhousing

Direction of rotation and flow

Gear pump without valve

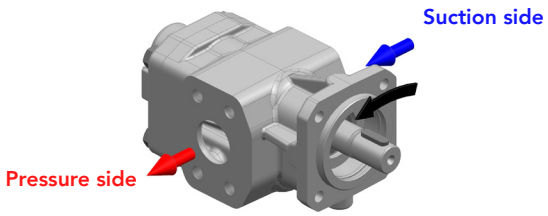
- when looking at the pump shaft end, the direction of pumping is from left to right if the shaft rotates **clockwise**.

Pump running cw

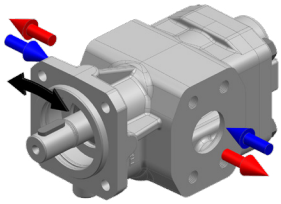


- when looking at the pump shaft end, the direction of pumping is from right to left if the shaft rotates **counterclockwise**.

Pump running ccw



Gear pump without valve / Direction of rotation B

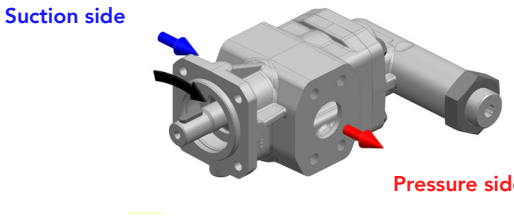


Direction of rotation right and left,
direction of flow changing,
without valve option

Gear pump with pressure relief valve

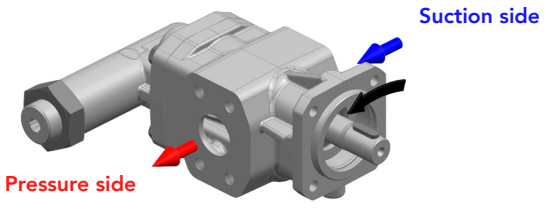
- when looking at the pump shaft end, the direction of pumping is from left to right if the shaft rotates **clockwise**.

Pump running cw



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

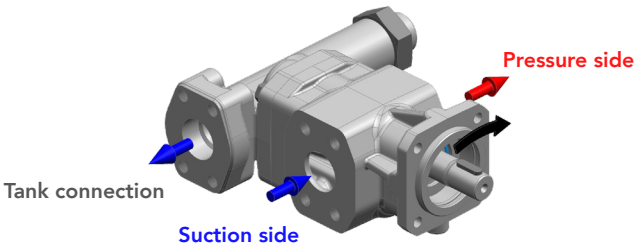
Pump running ccw



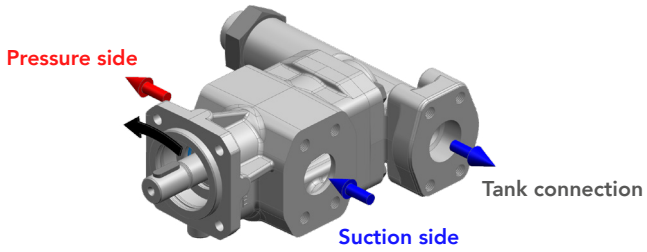
Direction of rotation and flow

Gear pump with T-valve

Pump running cw



Pump running ccw

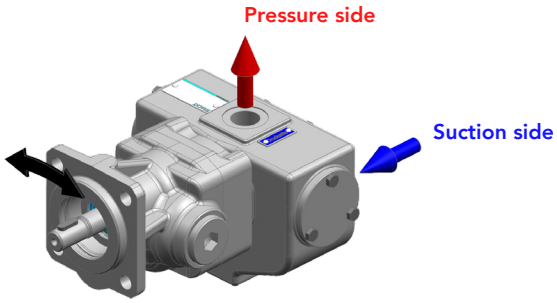


Gear pump with U / U2 valve

Direction of rotation right and left, direction of flow constant

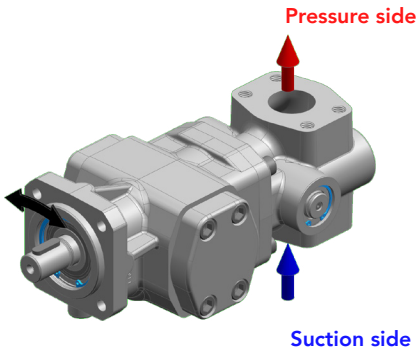
Universal valve U for KF 2.5 … 25

Pump right / left running



Universal valve U2 for KF 32 … 112

Pump right / left running



Technical data KF 2.5 … 630 without valve / with D-valve / with T-valve

Materials

Housing pump	Grey cast iron – EN-GJL-250 (GG 25) Spheroidal cast iron – EN-GJS-400-15 (GGG 40)
Housing D-valve	Grey cast iron – EN-GJL-250 (GG 25) Spheroidal cast iron – EN-GJS-400-15 (GGG 40)
Housing T-valve	Spheroidal cast iron – EN-GJS-400-15 (GGG 40)
Gear	Steel 1.7139
Plain bearing bushes	Standard: Multi-layer plain bearing Optional: Plastic plain bearing White metal bearing bushes
Shaft seals	Single radial lip-type seal, double radial lip-type seal, mechanical seal, magnetic coupling
Sealing materials	NBR, FKM, PTFE, EPDM, FKM low temperature, HNBR, CR (other sealing materials on request)
Corrosion protection	Standard painting C2m - RAL 7024 on a 2-component basis. Other corrosion protection classes (according to DIN EN ISO 12944) e.g. C4 or C5 and colors on request.

Characteristics

Nominal sizes in cm^3/rev	without valve / with D-valve 2.5 · 4 · 5 · 6 · 8 · 10 · 12 · 16 · 20 · 25 · 32 · 40 · 50 · 63 · 80 · 100 · 112 · 125 · 150 · 180 · 200 · 250 · 315 · 400 · 500 · 630 with T-valve 32 · 40 · 50 · 63 · 80
Mounting position	without quench: optional with quench: horizontal, quench connection above
Direction of rotation	R/L right **or** left B right **and** left (changing direction of flow)
Fixing type	Flange / mounting angle (optional)
Pipe connection	2.5 … 25 Whitworth pipe thread, SAE flange 32 … 630 SAE flange
Drive shaft end	Cylindrical with feather key (ISO R 775), see shaft ends (page 7)
Working pressure suction side	see tables of operating characteristics / permissible differential pressure (page 16)
Working pressure	p_b max. 25 bar / 363 psi (higher pressures on request, see chart permissible differential pressure (page 16))
Speed	see table operating characteristics (page 16)
Viscosity (dependent on pressure and rotational speed)	ν_{min} 1.4 … 12 cSt (see tables of permissible differential pressure (page 16)) ν_{max} 100 000 cSt (higher viscosities on request)
Viscosity with T-valve (dependent on pressure and rotational speed)	ν_{min} 12 cSt (see tables of permissible differential pressure (page 16)) ν_{max} 5 000 cSt (higher viscosities on request)
Filtration	recommended filter fineness ≤ 60 µm / 2362.20 µin
Media temperature	see chart temperature ranges (page 17)
Ambient temperature	see chart temperature ranges (page 17)

Type key KF 2.5 ... 630 without valve / with D-valve / with T-valve

I Type key

KF	40	R	F	1	/...	-	D15	...	-	...	...
1	2	3	4	5	6		7	8		9	10

1 Product

2 Nominal size
2.5 · 4 · 5 · 6 · 8 · 10 · 12 · 16 · 20 · 25 · 32 · 40 · 50 · 63 · 80 · 100 · 112 · 125 · 150 · 180 · 200 · 250 · 315 · 400 · 500 · 630

3 Direction of rotation	
R	right
L	left
B	right and left (only possible without valve)

4 Mounting	
F	DIN flange without outboard bearing
G	DIN flange with outboard bearing
W	Mounting angle without outboard bearing (KF 2.5 … 200)
X	Mounting angle with outboard bearing (KF 2.5 … 200)

5 Sealing types
See table sealing types (page 14)

6 Special number
See table special numbers (page 15)

7 Valve		
	without valve	
T15	adjustable from 0 up to 15 bar / 0 up to 218 psi	(only nominal sizes 32 … 80)
T25	adjustable from 15 up to 25 bar / 218 up to 363 psi	(only nominal sizes 32 … 80)
D15	adjustable from 0 up to 15 bar / 0 up to 218 psi	
D25	adjustable from 15 up to 25 bar / 218 up to 363 psi	

8 Viscosity range (only with T-valve)	
	12 … 300 cSt
A	300 … 1000 cSt
B	1000 … 5000 cSt

9 Housing material	
	Pump / D-valve: Grey cast iron – EN-GJL-250 (GG 25) / T-valve: Spheroidal cast iron – EN-GJS-400 (GGG 40)
GJS	Pump / D-valve: Spheroidal cast iron – EN-GJS-400 (GGG 40) / T-valve: Spheroidal cast iron – EN-GJS-400 (GGG 40)

10 Variants	
	Standard version
- ATEX	ATEX-version (Nominal sizes 2.5 … 200)

Technical data KF 2.5 … 112 with universal valve U / U2

Materials

Housing pump	Grey cast iron – EN-GJL-250 (GG 25) Spheroidal cast iron – EN-GJS-400-15 (GGG 40)
Housing valve	Spheroidal cast iron – EN-GJS-400-15 (GGG 40)
Gear	Stahl 1.7139
Plain bearing bushes	Standard: Multi-layer plain bearing Optional: Plastic plain bearing White metal bearing bushes
Shaft seals	Single radial lip-type seal, double radial lip-type seal, mechanical seal, magnetic coupling
Sealing materials	NBR, FKM, PTFE, EPDM, FKM low temperature, HNBR, CR (other sealing materials on request)
Corrosion protection	Standard painting C2m - RAL 7024 on 2-component basis. Other corrosion protection classes (according to DIN EN ISO 12944) e.g. C4 or C5 and colors on request.

Characteristics

Nominal sizes in cm^3/rev	Universal valve U: 2.5 · 4 · 5 · 6 · 8 · 10 · 12 · 16 · 20 · 25 Universal valve U2: 32 · 40 · 50 · 63 · 80 · 100 · 112
Mounting position	Universal valve U: Pressure piston horizontal Universal valve U2: optional
Direction of rotation	right **and** left (direction of discharge consistent)
Fixing type	Flange / mounting angel (optional)
Pipe connection on the valve	KF 2.5 … 25 Suction connection: Whitworth pipe thread G 3/4 Pressure connection: Whitworth pipe thread G 1/2 KF 32 … 80 Flange connection: SAE 1 1/2 KF 100/112 Flange connection: SAE 2
Drive shaft end	Cylindrical with feather key (ISO R 775), see shaft ends (page 7)
Working pressure suction side	see tables of operating characteristics / permissible differential pressure (page 16)
Working pressure	p_b max. 25 bar / 363 psi (higher pressures on request, see table permissible differential pressure (page 16))
Speed	see table operating characteristics (page 16)
Viscosity (dependent on pressure and rotational speed)	ν_{min} 1.4… 12 cSt, (see table permissible differential pressure (page 16)) ν_{max} 100 000 cSt (higher viscosities on request)
Filtration	recommended filter fineness ≤ 60 µm / 2362.20 µin
Media temperature	see chart temperature ranges (Page 17)
Ambient temperature	see chart temperature ranges (Page 17)

Type key KF 2.5 ... 112 with universal valve U / U2

I Type key

KF	40	B	F	1	/...	-	U2	-	...
1	2	3	4	5	6		7		8

1 Product

2 Nominal size
2.5 · 4 · 5 · 6 · 8 · 10 · 12 · 16 · 20 · 25 · 32 · 40 · 50 · 63 · 80 · 100 · 112

3 Direction of rotation	
B	right and left – direction of discharge consistent (only universal valve U2 32 ... 112)
U	right and left – direction of discharge consistent (only universal valve U 2.5 ... 25)

4 Mounting	
F	DIN flange without outboard bearing
G	DIN flange with outboard bearing
W	Mounting angle without outboard bearing (only universal valve U 2.5 ... 25)
X	Mounting angle with outboard bearing (only universal valve U 2.5 ... 25)

5 Sealing types
See table sealing types (page 14)

6 Special number
See table special numbers (Page 15)

7 Universal valve	
U2	New design (only nominal sizes 32 ... 112)

8 Housing material	
	Grey cast iron – EN-GJL-250 (GG 25)
GJS	Spheroidal cast iron – EN-GJS-400 (GGG 40)

Sealing types

Single radial lip-type seal	Sealing typ
Single radial lip-type seal NBR	1
Single radial lip-type seal FKM	2
Single radial lip-type seal PTFE	3
Single radial lip-type seal EPDM (not resistant to mineral oil)	9
Low friction single radial lip-type seal FKM	18
Single radial lip-type seal FKM low temperature (KF 2.5 … 25)	23
Single radial lip-type seal FKM low temperature (KF 32 … 80)	31
Single radial lip-type seal FKM low temperature (KF 100 … 200)	49
Double radial lip-type seal	
Double radial lip-type seal NBR	19
Double radial lip-type seal FKM	7
Double radial lip-type seal PTFE	4
Double radial lip-type seal EPDM (not resistant to mineral oil)	32
Mechanical seal	
Mechanical seal mit FKM secondary seals, hard-soft pairing for general applications, not relieved, direction of rotation independent, good emergency running properties	40
Mechanical seal hard-soft pairing, with FFKM secondary seals, not relieved, direction of rotation independent, good emergency running properties	46
Mechanical seal hard-soft pairing, with FFKM secondary seals, not relieved, direction of rotation independent, good wear resistance	48
Mechanical seal with FFKM secondary seals (AX30), direction of rotation independent	6
Without shaft seal	
Without shaft seal, o-ring NBR	36
Without shaft seal, o-ring FKM	30

Special numbers

Housing connections	Special number
SAE instead of threaded connections KF 2.5 … 12: Flange connection SAE 3/4" KF 16 … 25: Flange connection SAE 1"	**158**
NPT instead of threaded connections KF 2.5 … 12 3/4 -14 NPT KF 16 … 25 1-11-1/2 NPT	**173**
Enlarged SAE ports KF 50 … 80: Flange connection SAE 2" KF 100 … 112: Flange connection SAE 2 1/2" KF 125 … 150: Flange connection SAE 3" KF 180 … 200: Flange connection SAE 3 1/2"	**232**
Threaded hole M8 x 16/20 in the housing, noise-optimized design (special number 197) KF 125 … 150: Suction connection SAE 3" / Standard pressure connection 2 1/2" KF 180 … 200: Suction connection SAE 3 1/2" / Standard pressure connection 3"	**452**
Noise-optimized versions (for KF 4 … 630)	
Noise-optimized version for aerated oils and vacuum(1)	**197**
Combination of special numbers 45 and 197(1)	**326**
Combination of special numbers 158 and 197(1) (only for KF 4 … 25)	**359**
Combination of special numbers 197 and 304	**317**
Combination of special numbers 158, 197 and 304 (only for KF 4 … 25)	**355**
Combination of special numbers 74 and 197 (1)	**309**
Combination of special numbers 197(1) and 232	**391**
Combination of special numbers 197(1) and 397	**398**
Combination of special numbers 197(1) and 277	**455**
Bearing variants	
White metal bearing bushes in combination with special number 197(1)	**273**
Plastic plain bearings iglidur® X (non-ferrous metal free) Δp_{max} = 10 bar / 145 psi	**304**
Combination of special numbers 304 und 158 (only for KF 2.5 … 25)	**363**
Noise-optimized version for aerated oils (197(1)) Multilayer plain bearings DP4 (unleaded)	**353**
Seal variants	
Double radial lip-type seal (for vacuum operation), connection borehole G 1/8" (for quench)	**74**
KF 2.5 … 25: Combination of special numbers 74 and 158 KF 50 … 200: Combination of special numbers 74 and 232	**402**
KF 2.5 … 25: Combination of special numbers 74, 197(1) and 158 KF 50 … 200: Combination of special numbers 74, 197(1) and 232	**459**
Mechanical seal with quench	**198**
Triple radial lip-type seal (for normal operation + for vacuum operation), Connection borehole G 1/8" (for quench), Plastic plain bearings iglidur® X (non-ferrous metal free), Δp_{max} = 10 bar / 145 psi (304) Housing connection: KF 32; 40: Flange connection SAE 1 1/2" (Standard) KF 50 … 80: Flange connection SAE 2" (232)	**322**
Shaft end variants	
Shaft end with center hole according to DIN 332 type D: KF 4 … 25 = M5 / 12.5 mm / 0.4921 inch deep KF 32 … 80 = M8 / 19 mm / 0.7480 inch deep KF 100 … 200 = M10 / 22 mm / 0.8661 inch deep KF 315 … 630 = M12 / 28 mm / 1.1023 inch deep	**45**
ATEX versions	
Vertical installation, shaft end at the top, separate lubrication for radial shaft sealing, reduced flow rate	**277**
General versions	
All screws in stainless steel	**397**

(1) Measures for noise optimisation are only possible for one rotational direction and only effective for aerated oils or vacuum (only in connection with seal versions that are suitable for vacuum operation). Can lead to a reduction of flow rate.
Note to sealing types and special numbers: We have developed numerous special solutions that are not listed in this data sheet. Please contact us if necessary.

Technical data

Operating characteristics

Nominal size V_{gn}	Geom. displacement	Working pressure	Certification test pressure/ test pressure*	Speed range**		Permissible radial forces*** (n=1500 1/min)	Sound level in dB (A)		
	V_g in cm^3/rev	p_b in bar / psi	p_{max} in bar / psi	n_{min} in rpm	n_{max}**** in rpm	F_{radial} in N	p = 5 / 73 bar /psi	p = 15 / 218 bar / psi	p = 25 / 363 bar / psi
2.5	2.55	25 / 363	40 / 580	200	3600	700	≤ 65	≤ 66	≤ 67
4	4.03	25 / 363	40 / 580	200	3600	700	≤ 65	≤ 66	≤ 67
5	5.05	25 / 363	40 / 580	200	3600	700	≤ 65	≤ 66	≤ 67
6	6.38	25 / 363	40 / 580	200	3600	700	≤ 65	≤ 66	≤ 67
8	8.05	25 / 363	40 / 580	200	3600	700	≤ 65	≤ 66	≤ 67
10	10.11	25 / 363	40 / 580	200	3600	700	≤ 65	≤ 66	≤ 67
12	12.58	25 / 363	40 / 580	200	3600	700	≤ 65	≤ 66	≤ 67
16	16.09	25 / 363	40 / 580	200	3600	700	≤ 65	≤ 66	≤ 67
20	20.10	25 / 363	40 / 580	200	3600	700	≤ 65	≤ 66	≤ 67
25	25.10	25 / 363	40 / 580	200	3600	700	≤ 65	≤ 66	≤ 67
32	32.12	25 / 363	40 / 580	200	3600	700	≤ 65	≤ 66	≤ 67
40	40.21	25 / 363	40 / 580	200	3600	1500	≤ 67	≤ 68	≤ 68
50	50.20	25 / 363	40 / 580	200	3600	1500	≤ 67	≤ 68	≤ 68
63	63.18	25 / 363	40 / 580	200	3600	1500	≤ 67	≤ 68	≤ 68
80	80.50	25 / 363	40 / 580	200	3000	1500	≤ 67	≤ 68	≤ 68
100	101.50	25 / 363	40 / 580	200	3000	1500	≤ 67	≤ 68	≤ 69
112	113.50	25 / 363	40 / 580	200	3000	1500	≤ 67	≤ 68	≤ 69
125	129.40	25 / 363	40 / 580	200	3000	1500	≤ 65	≤ 65	≤ 65
150	155.60	25 / 363	40 / 580	200	3000	1500	≤ 65	≤ 65	≤ 65
180	186.60	25 / 363	40 / 580	200	3000	1500	≤ 65	≤ 65	≤ 65
200	206.20	25 / 363	40 / 580	200	2500	1500	≤ 65	≤ 65	≤ 65
250	245.10	25 / 363	40 / 580	200	2000	2500	≤ 75	≤ 75	≤ 75
315	312.90	25 / 363	40 / 580	200	2000	2500	≤ 75	≤ 75	≤ 75
400	399.50	25 / 363	35 / 508	200	2000	2500	≤ 77	≤ 77	≤ 77
500	496.50	25 / 363	35 / 508	200	2000	2500	≤ 77	≤ 77	≤ 77
630	622.50	25 / 363	30 / 435	200	2000	2500	≤ 78	≤ 78	≤ 80

* Certification test pressure/test pressure
for max. 5 seconds at a viscosity of 12 … 1200 cSt

** Speed limitation KF 32 … 112 with U2-valve
Nominal size 32 … 50, n_{max} = 3000 rpm
Nominal size 63 … 112, n_{max} = 2200 rpm

*** Radial forces only for version with outboard bearing.
F_{radial} at centre of shaft end.
Axial forces are not allowed.

**** The speed of the pump is to be selected so that a complete filling of the pump is guaranteed. This is the case if the relative pressure at the pump inlet does not fall below -0.4 bar / -5.8 psi (briefly -0.6 bar / -8.7 psi, e.g. during a cold start).

For certain working conditions, the minimum or maximum characteristics should not be used. For example, the max. working pressure is not permissible in combination with low speed and low viscosity. In such limit ranges, please consult us.

Sound level measured in dB(A) at 1 m / 39.4 inch distance with motor.
Installation site: Works hall.
Pump unit on rigid fastening angle, Suction and pressure conduits: Hose measured with gear oil,
Oil viscosity ν = 34 cSt, Speed n = 1500 rpm.

Permissible differential pressure

Bearing	Δp max in bar / psi		
	≥ 1.4 cSt	≥ 6 cSt	≥ 12 cSt
Multi-layer plain bearing containing lead	3 / 44	12 / 174	25 / 363
Plastic plain bearing*	-	6 / 87	10 / 145
White metal plain bearing*	-	6 / 87	10 / 145

* Is defined in the special number (Page 15)

Technical data

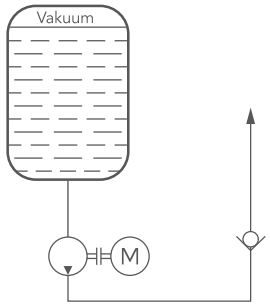
I Characteristics shaft seals

	Sealing material	Speed in rpm	Pressure suction side in bar / psi (short term during start-up status: -0.6 bar / -8.7 psi)			
			KF 2.5 … 80	KF 100 … 200	KF 250 … 315	KF 400 … 630
Single radial lip-type seal Single radial lip-type seal with outboard bearing Double radial lip-type seal with connection possibility for quench	NBR / FKM	max. 750	-0.4 … 6.0 / -5.8 … 87.0	-0.4 … 6.0 / -5.8 …87.0	-0.4 … 5.5 / -5.8 … 79.8	-0.4 … 5.0 / -5.8 … 72.5
		max. 1000	-0.4 … 5.0 / -5.8 … 72.5	-0.4 … 5.0 / -5.8 … 72.5	-0.4 … 4.5 / -5.8 … 65.3	-0.4 … 4.0 / -5.8 … 58.0
		max. 1500	-0.4 … 4.0 / -5.8 … 58.0	-0.4 … 3.5 / -5.8 … 50.8	-0.4 … 3.0 / -5.8 … 43.5	-0.4 … 2.5 / -5.8 … 36.3
		max. 2000	-0.4 … 3.0 / -5.8 … 43.5	-0.4 … 2.5 / -5.8 … 36.3	-0.4 … 2.0 / -5.8 … 29.0	-0.4 … 1.5 / -5.8 … 21.8
		max. 2500	-0.4 … 2.5 / -5.8 … 36.3	-0.4 … 2.0 / -5.8 … 29.0	-	-
		max. 3000*	-0.4 … 2.0 / -5.8 … 29.0	-0.4 … 1.5 / -5.8 … 21.8	-	-
		max. 3600**	-0.4 … 1.5 / -5.8 … 21.8	-	-	-
	FKM low temperature	speed independent	-0.4 … 0.5 / -5.8 … 7.3		-	
	EPDM	speed independent	-0.4 … 0.5 / -5.8 … 7.3			
	PTFE	speed independent	-0.4 … 2.0 / -5.8 … 29.0			
Mechanical seal	FKM / PTFE / EPDM*	speed independent	-0.4 … 10.0 / -5.8 … 145.0			
Magnetic coupling***	FKM, FKM low temperature, EPDM, FEP with FKM core, FEP with silicone core, CR, HNBR	speed independent	-0.9 … 60 / -13.1 … 870.2 depending on the pump and magnetic coupling			
Double radial lip-type seal for vacuum operation with connection possibility for quench	NBR / FKM / PTFE	speed independent	-0.9 … 0.2 / -13.1 … 2.9			

* KF 80 …180
** KF 2.5 … 63
*** See data sheet KF 2.5 … 630 with magnetic coupling
The specified maximum values depend on the other operating conditions.
With universal valve U pressure on suction side -0.35 bar. Installation position pressure piston horizontal. Other sealing materials on request.

Suction line for vacuum operation

If suction is to take place from a container under vacuum, the pump must be positioned approx. 1 m / 39.4 inch below the container. The suction line must be laid in a straight line and without resistance. The container may only be subjected to a vacuum when the line system and the pump are filled with liquid. Only pumps suitable for vacuum operation may be used for this purpose: special number 74 or pumps with magnetic coupling.



I Permissible Temperatures

Media temperature		Ambient temperature		Sealing material	Material housing and cover
$\vartheta_{m\ min}$ in °C / °F	$\vartheta_{m\ max}$ °C / °F	$\vartheta_{m\ min}$ in °C / °F	$\vartheta_{m\ max}$ in °C / °F		
-20 / -4	90 / 194	-20 / -4	60 / 140	NBR	EN-GJL-250 (GG 25)* / EN-GJS-400-15 (GGG 40)**
	120 / 248			EPDM	EN-GJL-250 (GG 25)* / EN-GJS-400-15 (GGG 40)**
	200 / 392			PTFE	EN-GJL-250 (GG 25)* / EN-GJS-400-15 (GGG 40)**
-20 / -4	150 / 302	-20 / -4		FKM	EN-GJL-250 (GG 25)* / EN-GJS-400-15 (GGG 40)**
	200 / 392			FFKM / FEP with FKM core	EN-GJL-250 (GG 25)* / EN-GJS-400-15 (GGG 40)**
-30 / -22	150 / 302	-40 / -40		FKM low temperature	EN-GJL-250 (GG 25)*
-40 / -40	150 / 302	-50 / -58		FKM low temperature	EN-GJS-400-15 (GGG 40)**

* Gray cast iron ** Spheroidal cast iron

Technical data

Discharge flow and required drive power for speed n = 950 1/rpm

Pressure p_b in bar / psi								Nominal size	Pressure p_b in bar / psi							
2 / 29	4 / 58	6 / 87	8 / 116	10 / 145	15 / 218	20 / 290	25 / 363	V_{gn}	2/ 29	4/ 58	6/ 87	8/ 116	10/ 145	1 / 218	20/ 290	25/ 363
2.5 / 0.7	2.4 / 0.6	2.4 / 0.6	2.3 / 0.6	2.2 / 0.6	2.1 / 0.6	2.0 / 0.5	1.8 / 0.5	**2.5**	0.03	0.04	0.05	0.06	0.08	0.09	0.11	0.13
3.7 / 1.0	3.7 / 1.0	3.6 / 1.0	3.6 / 1.0	3.6 / 1.0	3.5 / 0.9	3.4 / 0.9	3.3 / 0.9	**4**	0.04	0.05	0.07	0.08	0.09	0.13	0.16	0.20
4.6 / 1.2	4.6 / 1.2	4.5 / 1.2	4.5 / 1.2	4.4 / 1.2	4.2 / 1.1	4.1 / 1.1	3.9 / 1.0	**5**	0.04	0.06	0.08	0.10	0.11	0.16	0.20	0.25
5.8 / 1.5	5.7 / 1.5	5.6 / 1.5	5.5 / 1.5	5.5 / 1.5	5.3 / 1.4	5.1 / 1.3	4.9 / 1.3	**6**	0.05	0.07	0.09	0.12	0.14	0.19	0.25	0.30
7.3 / 1.9	7.3 / 1.9	7.2 / 1.9	7.1 / 1.9	7.0 / 1.8	6.8 / 1.8	6.6 / 1.7	6.4 / 1.7	**8**	0.06	0.09	0.11	0.14	0.17	0.24	0.31	0.38
9.2 / 2.4	9.1 / 2.4	9.0 / 2.4	8.9 / 2.4	8.8 / 2.3	8.5 / 2.2	8.2 / 2.2	7.9 / 2.1	**10**	0.07	0.10	0.14	0.17	0.21	0.29	0.38	0.47
11.4 / 3.0	11.3 / 3.0	11.2 / 3.0	11.1 / 2.9	11.0 / 2.9	10.8 / 2.9	10.5 / 2.8	10.3 / 2.7	**12**	0.08	0.12	0.16	0.21	0.25	0.36	0.47	0.58
14.2 / 3.8	14.0 / 3.7	13.8 / 3.6	13.6 / 3.6	13.4 / 3.5	12.9 / 3.4	12.3 / 3.2	11.8 / 3.1	**16**	0.09	0.15	0.20	0.26	0.31	0.45	0.60	0.74
18.0 / 4.8	17.6 / 4.6	17.3 / 4.6	16.9 / 4.5	16.6 / 4.4	15.7 / 4.1	14.9 / 3.9	14.0 / 3.7	**20**	0.10	0.18	0.25	0.32	0.39	0.56	0.74	0.92
22.8 / 6.0	22.5 / 5.9	22.3 / 5.9	22.0 / 5.8	21.7 / 5.7	21.1 / 5.6	20.4 / 5.4	19.8 / 5.2	**25**	0.12	0.21	0.30	0.39	0.48	0.70	0.92	1.14
29.0 / 7.7	28.0 / 7.4	27.0 / 7.1	27.0 / 27.1	26.0 / 6.9	25.0 / 6.6	23.0 / 6.1	22.0 / 5.8	**32**	0.16	0.30	0.40	0.50	0.60	0.90	1.20	1.50
36.0 / 9.5	36.0 / 9.5	35.0 / 9.2	34.0 / 9.0	34.0 / 9.0	32.0 / 8.5	30.0 / 7.9	28.0 / 7.4	**40**	0.25	0.40	0.50	0.60	0.80	1.10	1.50	1.80
45.0 / 11.9	44.0 / 11.6	43.0 / 11.4	42.0 / 11.1	41.0 / 10.8	39.0 / 10.3	36.0 / 9.5	34.0 / 9.0	**50**	0.30	0.50	0.60	0.80	1.00	1.40	1.90	2.30
57.0 / 15.1	56.0 / 14.8	54.0 / 14.3	53.0 / 14.0	52.0 / 13.7	50.0 / 13.2	46.0 / 12.2	43.0 / 11.4	**63**	0.40	0.60	0.80	1.00	1.20	1.80	2.40	2.90
74.0 / 19.6	73.0 / 19.3	72.0 / 19.0	71.0 / 18.8	70.0 / 18.5	67.0 / 17.7	65.0 / 17.2	62.0 / 16.4	**80**	0.60	0.80	1.10	1.40	1.60	2.30	3.00	3.70
92.0 / 24.3	90.0 / 23.8	88.0 / 23.5	86.0 / 22.7	84.0 / 22.2	79.0 / 20.9	73.0 / 19.3	67.0 / 17.7	**100**	0.70	1.00	1.30	1.60	1.90	2.70	3.60	4.50
102.0 / 26.9	99.0 / 26.2	97.0 / 25.6	94.0 / 24.8	91.0 / 24.0	84.0 / 22.2	77.0 / 20.3	70.0 / 18.5	**112**	0.90	1.20	1.60	2.00	2.40	3.30	4.30	5.20
114.0 / 30.1	112.0 / 29.6	109.0 / 28.8	106.0 / 28.0	103.0 / 27.2	96.0 / 25.4	89.0 / 23.5	82.0 / 21.7	**125**	1.00	1.40	1.80	2.30	2.80	3.90	5.00	6.10
139.0 / 36.7	137.0 / 36.2	134.0 / 35.4	132.0 / 34.9	129.0 / 34.1	123.0 / 32.5	116.0 / 30.6	110.0 / 29.1	**150**	1.10	1.60	2.10	2.60	3.20	4.50	5.80	7.20
169.0 / 44.6	166.0 / 43.9	163.0 / 43.1	160.0 / 42.3	156.0 / 41.2	148.0 / 39.1	140.0 / 37.0	132.0 / 34.9	**180**	1.20	1.80	2.40	3.00	3.60	5.10	6.60	8.10
187.0 / 49.4	184.0 / 48.6	180.0 / 47.6	177.0 / 46.8	174.0 / 46.0	167.0 / 44.1	159.0 / 42.0	151.0 / 39.9	**200**	1.40	2.10	2.80	3.40	4.00	5.70	7.30	9.00
230.0 / 60.8	226.0 / 59.7	223.0 / 58.9	219.0 / 57.9	216.0 / 57.1	209.0 / 55.2	203.0 / 53.6	197.0 / 52.0	**250**	1.50	2.30	3.10	4.00	4.80	6.80	8.90	10.90
295.0 / 77.9	290.0 / 76.6	286.0 / 75.6	282.0 / 74.5	279.0 / 73.7	272.0 / 71.9	265.0 / 70.0	259.0 / 68.4	**315**	2.00	3.00	4.00	5.10	6.10	8.70	11.20	13.80
376.0 / 99.3	369.0 / 97.5	363.0 / 95.9	358.0 / 94.6	353.0 / 93.3	341.0 / 90.1	330.0 / 87.2	320.0 / 84.5	**400**	2.60	3.80	5.10	6.40	7.70	11.00	14.30	17.50
467.0 / 123.4	461.0 / 121.8	454.0 / 119.9	449.0 / 118.6	443.0 / 117.0	430.0 / 113.6	418.0 / 110.4	407.0 / 107.5	**500**	3.30	4.90	6.50	8.10	9.80	13.90	18.00	22.10
587.0 / 155.1	578.0 / 152.7	570.0 / 150.6	562.0 / 148.5	554.0 / 146.5	537.0 / 141.6	523.0 / 138.2	511.0 / 135.0	**630**	4.50	6.60	8.70	10.70	12.80	18.10	23.30	28.60

Discharge flow Q in l / min – gal / min

Required drive power P in kW

Discharge flow and required drive power for speed n = 1150 1/rpm

Pressure p_b in bar / psi								Nominal size	Pressure p_b in bar / psi							
2 / 29	4 / 58	6 / 87	8 / 116	10 / 145	15 / 218	20 / 290	25 / 363	V_{gn}	2/ 29	4/ 58	6/ 87	8/ 116	10/ 145	15/ 218	20/ 290	25/ 363
2.9 / 0.8	2.9 / 0.8	2.8 / 0.7	2.8 / 0.7	2.7 / 0.7	2.6 / 0.7	2.5 / 0.7	2.4 / 0.6	**2.5**	0.03	0.04	0.06	0.08	0.10	0.11	0.13	0.16
4.5 / 1.2	4.5 / 1.2	4.4 / 1.2	4.4 / 1.2	4.4 / 1.2	4.3 / 1.1	4.2 / 1.1	4.1 / 1.1	**4**	0.05	0.06	0.08	0.10	0.11	0.16	0.20	0.24
5.5 / 1.5	5.5 / 1.5	5.4 / 1.4	5.4 / 1.4	5.3 / 1.4	5.2 / 1.4	5.1 / 1.3	4.9 / 1.3	**5**	0.05	0.08	0.10	0.12	0.14	0.20	0.26	0.32
7.0 / 1.8	6.9 / 1.8	6.9 / 1.8	6.8 / 1.8	6.7 / 1.8	6.5 / 1.7	6.3 / 1.7	6.1 / 1.6	**6**	0.06	0.09	0.11	0.14	0.17	0.24	0.31	0.37
8.9 / 2.4	8.9 / 2.4	8.8 / 2.3	8.7 / 2.3	8.6 / 2.3	8.4 / 2.2	8.2 / 2.2	8.0 / 2.1	**8**	0.07	0.11	0.14	0.17	0.21	0.29	0.37	0.46
11.2 / 3.0	11.1 / 2.9	11.0 / 2.9	10.9 / 2.9	10.8 / 2.9	10.5 / 2.8	10.2 / 2.7	9.9 / 2.6	**10**	0.09	0.12	0.17	0.21	0.25	0.35	0.46	0.57
13.9 / 3.7	13.8 / 3.6	13.7 / 3.6	13.6 / 3.6	13.5 / 3.6	13.2 / 3.5	13.0 / 3.4	12.8 / 3.4	**12**	0.10	0.15	0.20	0.25	0.31	0.44	0.57	0.70
17.4 / 4.6	17.2 / 4.5	17.0 / 4.5	16.7 / 4.4	16.5 / 4.4	15.9 / 4.2	15.3 / 4.0	14.8 / 3.9	**16**	0.12	0.19	0.27	0.34	0.41	0.60	0.79	0.98
22.0 / 5.8	21.6 / 5.7	21.2 / 5.6	20.9 / 5.5	20.5 / 5.4	19.6 / 5.2	18.7 / 4.9	17.8 / 4.7	**20**	0.13	0.22	0.31	0.39	0.47	0.68	0.90	1.12
27.8 / 7.3	27.5 / 7.3	27.3 / 7.2	27.0 / 7.1	26.7 / 7.1	26.0 / 6.9	25.3 / 6.7	24.6 / 6.5	**25**	0.17	0.26	0.37	0.48	0.58	0.85	1.12	1.38
35.0 / 9.2	34.0 / 9.0	33.0 / 8.7	33.0 / 8.7	32.0 / 8.5	31.0 / 8.2	29.0 / 7.7	28.0 / 7.4	**32**	0.20	0.40	0.50	0.60	0.80	1.10	1.50	1.80
44.0 / 11.6	44.0 / 11.6	43.0 / 11.4	42.0 / 11.1	42.0 / 11.1	40.0 / 10.6	38.0 / 10.0	36.0 / 9.5	**40**	0.30	0.50	0.70	0.80	1.00	1.40	1.80	2.20
55.0 / 14.5	54.0 / 14.3	53.0 / 14.0	52.0 / 13.7	51.0 / 13.5	49.0 / 12.9	46.0 / 12.2	44.0 / 11.6	**50**	0.40	0.60	0.80	1.00	1.20	1.80	2.30	2.80
69.0 / 18.2	68.0 / 18.0	67.0 / 17.7	66.0 / 17.4	65.0 / 17.2	62.0 / 16.4	59.0 / 15.6	56.0 / 14.8	**63**	0.50	0.80	1.00	1.30	1.50	2.20	2.90	3.50
90.0 / 23.8	89.0 / 23.5	88.0 / 23.2	87.0 / 23.0	86.0 / 22.7	83.0 / 21.9	81.0 / 21.4	79.0 / 20.9	**80**	0.70	1.00	1.40	1.70	2.00	2.80	3.60	4.50
113.0 / 29.9	111.0 / 29.3	109.0 / 28.8	107.0 / 28.3	105.0 / 27.7	100.0 / 26.4	95.0 / 25.1	91.0 / 24.0	**100**	0.90	1.20	1.60	2.00	2.30	3.30	4.40	5.50
126.0 / 33.3	123.0 / 32.5	121.0 / 32.0	118.0 / 31.2	115.0 / 30.4	109.0 / 28.8	103.0 / 27.2	97.0 / 25.6	**112**	1.10	1.50	2.00	2.40	2.90	4.10	5.30	6.40
141.0 / 37.3	138.0 / 36.5	135.0 / 35.7	132.0 / 34.9	129.0 / 34.1	122.0 / 32.2	115.0 / 30.4	108.0 / 28.5	**125**	1.30	1.80	2.20	2.80	3.40	4.70	6.00	7.30
171.0 / 45.2	169.0 / 44.6	166.0 / 43.9	164.0 / 43.3	161.0 / 42.5	155.0 / 41.0	148.0 / 39.1	142.0 / 37.5	**150**	1.50	2.00	2.70	3.20	3.90	5.50	7.00	8.70
207.0 / 54.7	204.0 / 53.9	201.0 / 53.1	198.0 / 52.3	194.0 / 51.3	186.0 / 49.1	178.0 / 47.0	170.0 / 44.9	**180**	1.60	2.40	3.10	3.80	4.50	6.30	8.10	9.90
229.0 / 60.5	226.0 / 59.7	229.0 / 60.5	219.0 / 57.9	216.0 / 57.1	209.0 / 55.2	201.0 / 53.1	193.0 / 51.0	**200**	1.90	2.70	3.50	4.30	5.00	7.10	9.00	11.00
280.0 / 74.0	276.0 / 72.9	273.0 / 72.1	269.0 / 71.1	266.0 / 70.3	259.0 / 68.4	253.0 / 66.8	247.0 / 65.3	**250**	2.10	3.10	4.10	5.10	6.10	8.60	11.10	13.50
359.0 / 94.8	354.0 / 93.5	350.0 / 92.5	346.0 / 91.4	343.0 / 90.6	336.0 / 88.8	329.0 / 86.9	323.0 / 85.3	**315**	2.80	4.10	5.30	6.60	7.80	10.90	14.00	17.20
457.0 / 120.7	451.0 / 119.2	445.0 / 117.6	440.0 / 116.2	435.0 / 114.9	423.0 / 111.8	412.0 / 108.9	402.0 / 106.2	**400**	3.80	5.30	6.90	8.40	10.00	14.00	17.90	21.90
568.0 / 150.1	561.0 / 148.2	555.0 / 146.6	550.0 / 145.3	544.0 / 143.7	532.0 / 140.6	520.0 / 137.4	509.0 / 134.5	**500**	4.90	6.90	8.80	10.70	12.80	17.70	22.70	27.70
713.0 / 188.4	704.0 / 186.0	697.0 / 184.1	689.0 / 182.0	682.0 / 180.0	665.0 / 175.7	652.0 / 172.3	640.0 / 169.1	**630**	6.70	9.20	11.80	14.30	16.80	23.30	29.60	36.10

Discharge flow Q in l / min – gal / min

Required drive power P in kW

Notes:
– Margin of error for the flow Q +2.5 % ... -5 % of the tabular value.
– The ratings refer to a mineral oil with a viscosity of 34 cSt.
– For viscosity < 30 cSt, take a reduction of the rated flow Q into account.
– The output of the drive motor should be selected 15 % higher than tabular value P.
– -3 % of discharge flow for the noise-optimized version.
– For viscosity > 100 cSt, an increase in the required power is necessary; then proceed as described below.

Technical data

Discharge flow and required drive power for speed n = 1450 1/rpm

Discharge flow Q in l / min – gal / min

Pressure p_b in bar / psi								Nominal size	Pressure p_b in bar / psi							
2 / 29	4 / 58	6 / 87	8 / 116	10 / 145	15 / 218	20 / 290	25 / 363	V_{gn}	2/ 29	4/ 58	6/ 87	8/ 116	10/ 145	15/ 218	20/ 290	25/ 363
3.6 / 1.0	3.6 / 1.0	3.5 / 0.9	3.5 / 0.9	3.5 / 0.9	3.4 / 0.9	3.3 / 0.9	3.2 / 0.8	2.5	0.04	0.05	0.08	0.10	0.12	0.14	0.16	0.20
5.7 / 1.5	5.7 / 1.5	5.6 / 1.5	5.6 / 1.5	5.5 / 1.5	5.4 / 1.4	5.4 / 1.4	5.3 / 1.4	4	0.06	0.08	0.10	0.12	0.15	0.20	0.25	0.30
6.9 / 1.8	6.8 / 1.8	6.8 / 1.8	6.7 / 1.8	6.7 / 1.8	6.6 / 1.7	6.5 / 1.7	6.4 / 1.7	5	0.07	0.10	0.12	0.15	0.19	0.27	0.35	0.43
8.9 / 2.4	8.8 / 2.3	8.8 / 2.3	8.7 / 2.3	8.6 / 2.3	8.4 / 2.2	8.2 / 2.2	8.0 / 2.1	6	0.08	0.11	0.15	0.18	0.22	0.32	0.39	0.47
11.3 / 3.0	11.2 / 3.0	11.1 / 2.9	11.0 / 2.9	10.9 / 2.9	10.8 / 2.9	10.6 / 2.8	10.4 / 2.7	8	0.09	0.14	0.18	0.22	0.26	0.37	0.47	0.58
14.2 / 3.8	14.1 / 3.7	14.1 / 3.7	13.8 / 3.6	13.7 / 3.6	13.4 / 3.5	13.1 / 3.5	12.8 / 3.4	10	0.11	0.16	0.21	0.27	0.32	0.45	0.58	0.72
17.6 / 4.6	17.5 / 4.6	17.4 / 4.6	17.3 / 4.6	17.2 / 4.5	16.9 / 4.5	16.7 / 4.4	16.5 / 4.4	12	0.12	0.19	0.26	0.32	0.39	0.55	0.72	0.89
22.2 / 5.9	21.9 / 5.8	21.7 / 5.7	21.4 / 5.7	21.2 / 5.6	20.5 / 5.4	19.9 / 5.3	19.3 / 5.1	16	0.16	0.26	0.37	0.47	0.57	0.82	1.08	1.33
27.9 / 7.4	27.5 / 7.3	27.1 / 7.2	26.8 / 7.1	26.4 / 7.0	25.5 / 6.7	24.5 / 6.5	23.6 / 6.2	20	0.17	0.28	0.39	0.49	0.60	0.87	1.14	1.41
35.3 / 9.3	35.0 / 9.2	34.7 / 9.2	34.4 / 9.1	34.1 / 9.0	33.3 / 8.8	32.6 / 8.6	31.8 / 8.4	25	0.24	0.34	0.47	0.61	0.74	1.08	1.41	1.75
45.0 / 11.9	44.0 / 11.6	43.0 / 11.4	43.0 / 11.4	42.0 / 11.1	41.0 / 10.8	39.0 / 10.3	37.0 / 9.8	32	0.30	0.50	0.70	0.80	1.00	1.40	1.90	2.30
57.0 / 15.1	56.0 / 14.8	55.0 / 14.5	55.0 / 14.5	54.0 / 14.3	52.0 / 13.7	50.0 / 13.2	48.0 / 12.7	40	0.40	0.60	0.90	1.10	1.30	1.80	2.30	2.90
70.0 / 18.5	69.0 / 18.2	68.0 / 18.0	67.0 / 17.7	66.0 / 17.4	64.0 / 16.9	61.0 / 16.1	58.0 / 15.3	50	0.50	0.80	1.10	1.30	1.60	2.30	2.90	3.60
88.0 / 23.2	87.0 / 23.0	86.0 / 22.7	85.0 / 22.5	84.0 / 22.2	81.0 / 21.4	78.0 / 20.6	75.0 / 19.8	63	0.70	1.00	1.30	1.70	2.00	2.90	3.70	4.50
114.0 / 30.1	113.0 / 29.9	112.0 / 29.6	111.0 / 29.3	110.0 / 29.1	107.0 / 28.3	105.0 / 27.7	103.0 / 27.2	80	0.90	1.40	1.80	2.20	2.60	3.60	4.60	5.70
144.0 / 38.0	142.0 / 37.5	140.0 / 37.0	138.0 / 36.5	137.0 / 36.2	131.0 / 34.6	128.0 / 33.8	126.0 / 33.3	100	1.20	1.60	2.00	2.50	3.00	4.30	5.70	7.00
161.0 / 42.5	159.0 / 42.0	157.0 / 41.5	154.0 / 40.7	152.0 / 40.2	147.0 / 38.8	142.0 / 37.5	138.0 / 36.5	112	1.40	2.00	2.60	3.10	3.70	5.20	6.70	8.20
181.0 / 47.8	178.0 / 47.0	175.0 / 46.2	172.0 / 45.4	169.0 / 44.6	162.0 / 42.8	155.0 / 41.0	147.0 / 38.8	125	1.70	2.30	2.90	3.60	4.20	5.80	7.40	9.00
218.0 / 57.6	216.0 / 57.1	213.0 / 56.3	211.0 / 55.7	209.0 / 55.2	203.0 / 53.6	197.0 / 52.0	191.0 / 50.5	150	2.00	2.70	3.50	4.20	5.00	6.90	8.90	11.00
264.0 / 69.7	261.0 / 69.0	257.0 / 67.9	254.0 / 67.1	251.0 / 66.3	242.0 / 63.9	234.0 / 61.8	226.0 / 59.7	180	2.30	3.20	4.10	5.00	5.90	8.20	10.40	12.70
293.0 / 77.4	290.0 / 76.6	287.0 / 75.8	283.0 / 74.8	280.0 / 74.0	272.0 / 71.9	264.0 / 69.7	256.0 / 67.6	200	2.60	3.60	4.60	5.60	6.60	9.10	11.60	14.00
356.0 / 94.1	352.0 / 93.0	348.0 / 91.9	344.0 / 90.9	341.0 / 90.1	334.0 / 88.2	327.0 / 86.4	321.0 / 84.8	250	3.10	4.30	5.60	6.80	8.10	11.20	14.30	17.40
455.0 / 120.2	450.0 / 118.9	446.0 / 117.8	442.0 / 116.8	439.0 / 116.0	431.0 / 113.9	424.0 / 112.0	418.0 / 110.4	315	4.10	5.70	7.20	8.80	10.40	14.30	18.30	22.20
579.0 / 153.0	573.0 / 151.4	567.0 / 149.8	562.0 / 148.5	557.0 / 147.2	545.0 / 144.0	535.0 / 141.3	524.0 / 138.4	400	5.60	7.50	9.50	11.50	13.50	18.40	23.40	28.50
719.0 / 190.0	712.0 / 188.1	707.0 / 186.8	701.0 / 185.2	696.0 / 183.9	684.0 / 180.7	673.0 / 177.8	662.0 / 174.9	500	7.40	9.80	12.20	14.70	17.20	23.40	29.70	36.10
902.0 / 238.3	894.0 / 236.2	887.0 / 234.3	880.0 / 232.5	874.0 / 230.9	858.0 / 226.7	845.0 / 223.2	834.0 / 220.3	630	10.10	13.20	16.40	19.60	22.90	31.00	39.10	47.40

Required drive power P in kW

Discharge flow and required drive power for speed n = 1750 1/rpm

Discharge flow Q in l / min – gal / min

Pressure p_b in bar / psi								Nominal size	Pressure p_b in bar / psi							
2 / 29	4 / 58	6 / 87	8 / 116	10 / 145	15 / 218	20 / 290	25 / 363	V_{gn}	2/ 29	4/ 58	6/ 87	8/ 116	10/ 145	15/ 218	20/ 290	25/ 363
4.3 / 1.1	4.3 / 1.1	4.2 / 1.1	4.2 / 1.1	4.3 / 1.1	4.2 / 1.1	4.1 / 1.1	4.0 / 1.1	2.5	0.05	0.06	0.10	0.12	0.14	0.17	0.19	0.24
6.9 / 1.8	6.9 / 1.8	6.8 / 1.8	6.8 / 1.8	6.6 / 1.7	6.5 / 1.7	6.6 / 1.7	6.5 / 1.7	4	0.07	0.10	0.12	0.14	0.19	0.24	0.3	0.36
8.3 / 2.2	8.1 / 2.1	8.2 / 2.2	8.0 / 2.1	8.1 / 2.1	8.0 / 2.1	7.9 / 2.1	7.9 / 2.1	5	0.09	0.12	0.14	0.18	0.24	0.34	0.44	0.54
10.8 / 2.9	10.7 / 2.8	10.7 / 2.8	10.6 / 2.8	10.5 / 2.8	10.3 / 2.7	10.1 / 2.7	9.9 / 2.6	6	0.10	0.13	0.19	0.22	0.27	0.40	0.47	0.57
13.7 / 3.6	13.5 / 3.6	13.4 / 3.5	13.3 / 3.5	13.2 / 3.5	13.2 / 3.5	13.0 / 3.4	12.8 / 3.4	8	0.11	0.17	0.22	0.27	0.31	0.45	0.57	0.70
17.2 / 4.5	17.1 / 4.5	17.2 / 4.5	16.7 / 4.4	16.6 / 4.4	16.3 / 4.3	16.0 / 4.2	15.7 / 4.1	10	0.13	0.20	0.25	0.33	0.39	0.55	0.70	0.87
21.3 / 5.6	21.2 / 5.6	21.1 / 5.6	21.0 / 5.5	20.9 / 5.5	20.6 / 5.4	20.4 / 5.4	20.2 / 5.3	12	0.14	0.23	0.32	0.39	0.47	0.66	0.87	1.08
27.0 / 7.1	26.6 / 7.0	26.4 / 7.0	26.1 / 6.9	25.9 / 6.8	25.1 / 6.6	24.5 / 6.5	23.8 / 6.3	16	0.20	0.33	0.47	0.60	0.73	1.04	1.37	1.68
33.8 / 8.9	33.4 / 8.8	33.0 / 8.7	32.7 / 8.6	32.3 / 8.5	31.4 / 8.3	30.3 / 8.0	29.4 / 7.8	20	0.21	0.34	0.47	0.59	0.73	1.06	1.38	1.70
42.8 / 11.3	42.5 / 11.2	42.1 / 11.1	41.8 / 11.0	41.5 / 11.0	40.6 / 10.7	39.9 / 10.5	39.0 / 10.3	25	0.31	0.42	0.57	0.74	0.90	1.31	1.70	2.12
55.0 / 14.5	54.0 / 14.3	53.0 / 14.0	53.0 / 14.0	52.0 / 13.7	51.0 / 13.5	49.0 / 12.9	46.0 / 12.2	32	0.40	0.60	0.90	1.00	1.20	1.70	2.30	2.80
70.0 / 18.5	68.0 / 18.0	67.0 / 17.7	68.0 / 18.0	66.0 / 17.4	64.0 / 16.9	62.0 / 16.4	60.0 / 15.9	40	0.50	0.70	1.10	1.40	1.60	2.20	2.80	3.60
85.0 / 22.5	84.0 / 22.2	83.0 / 21.9	82.0 / 21.7	81.0 / 21.4	79.0 / 20.9	76.0 / 20.1	72.0 / 19.0	50	0.60	1.00	1.40	1.60	2.00	2.80	3.50	4.40
107.0 / 28.3	106.0 / 28.0	105.0 / 27.7	104.0 / 27.5	103.0 / 27.2	100.0 / 26.4	97.0 / 25.6	94.0 / 24.8	63	0.90	1.20	1.60	2.10	2.50	3.60	4.50	5.50
138.0 / 36.5	137.0 / 36.2	136.0 / 35.9	135.0 / 35.7	134.0 / 35.4	131.0 / 34.6	129.0 / 34.1	127.0 / 33.6	80	1.10	1.70	2.20	2.70	3.20	4.40	5.60	6.90
175.0 / 46.2	173.0 / 45.7	171.0 / 45.2	169.0 / 44.6	169.0 / 44.6	162.0 / 42.8	162.0 / 42.8	161.0 / 42.5	100	1.50	2.00	2.40	3.00	3.70	5.30	7.00	8.50
196.0 / 51.8	195.0 / 51.5	193.0 / 51.0	190.0 / 50.2	189.0 / 49.9	185.0 / 48.9	181.0 / 47.8	179.0 / 47.3	112	1.70	2.50	3.20	3.80	4.50	6.30	8.10	10.00
221.0 / 58.4	218.0 / 57.6	215.0 / 56.8	212.0 / 56.0	209.0 / 55.2	202.0 / 53.4	195.0 / 51.5	186.0 / 49.1	125	2.10	2.80	3.60	4.40	5.00	6.90	8.80	10.70
265.0 / 70.0	263.0 / 69.5	260.0 / 68.7	258.0 / 68.2	257.0 / 67.9	251.0 / 66.3	246.0 / 65.0	240.0 / 63.4	150	2.50	3.40	4.30	5.20	6.10	8.30	10.80	13.30
321.0 / 84.8	318.0 / 84.0	313.0 / 82.7	310.0 / 81.9	308.0 / 81.4	298.0 / 78.7	290.0 / 76.6	282.0 / 74.5	180	3.00	4.00	5.10	6.20	7.30	10.10	12.70	15.50
357.0 / 94.3	354.0 / 93.5	351.0 / 92.7	347.0 / 91.7	344.0 / 90.9	335.0 / 88.5	327.0 / 86.4	319.0 / 84.3	200	3.30	4.50	5.70	6.90	8.20	11.10	14.20	17.00
432.0 / 114.1	428.0 / 113.1	423.0 / 111.8	419.0 / 110.7	416.0 / 109.9	409.0 / 108.1	401.0 / 105.9	395.0 / 104.4	250	4.10	5.50	7.10	8.50	10.10	13.80	17.50	21.30
551.0 / 145.6	546.0 / 144.3	542.0 / 143.2	538.0 / 142.1	535.0 / 141.3	526.0 / 139.0	519.0 / 137.1	513.0 / 135.5	315	5.40	7.30	9.10	11.00	13.00	17.70	22.60	27.20
701.0 / 185.2	695.0 / 183.6	689.0 / 182.0	684.0 / 180.7	679.0 / 179.4	667.0 / 176.2	658.0 / 173.8	646.0 / 170.7	400	7.40	9.70	12.10	14.60	17.00	22.80	28.90	31.50
870.0 / 229.9	863.0 / 228.0	859.0 / 226.9	852.0 / 225.1	848.0 / 224.0	836.0 / 220.9	826.0 / 218.2	815.0 / 215.3	500	9.90	12.70	15.60	18.70	21.60	29.10	36.70	44.50
1091.0 / 288.2	1084.0 / 286.4	1077.0 / 284.5	1071.0 / 283.0	1066.0 / 281.6	1051.0 / 277.7	1038.0 / 274.2	1028.0 / 271.6	630	13.50	17.20	21.00	24.90	29.00	38.70	48.60	58.70

Required drive power P in kW

Notes:
– Margin of error for the flow Q +2.5 % … -5 % of the tabular value.
– The ratings refer to a mineral oil with a viscosity of 34 cSt.
– For viscosity < 30 cSt, take a reduction of the rated flow Q into account.
– The output of the drive motor should be selected 15 % higher than tabular value P.
– -3 % of discharge flow for the noise-optimized version.
– For viscosity > 100 cSt, an increase in the required power is necessary; then proceed as described below.

Technical data

Calculation of input power

Calculation / Characteristics

$$P_{Pu} = P_{Tab} \cdot \frac{n}{1450\ rpm} + f_v \cdot Q$$

P_{Pu} Pump power consumption in kW

P_{Tab} Power consumption per table in kW at 1450 rpm (see page 19)

n Speed in rpm
Dependent on viscosity!

f_v Viscosity factor in (see diagram below) $\frac{kW}{l/min}$ $\frac{kW}{gal/min}$

Q Discharge flow in l/min (gal/min) with $\frac{V_g \cdot n}{1000}$

V_g Geometrical displacement in cm^3/rev

Input Power

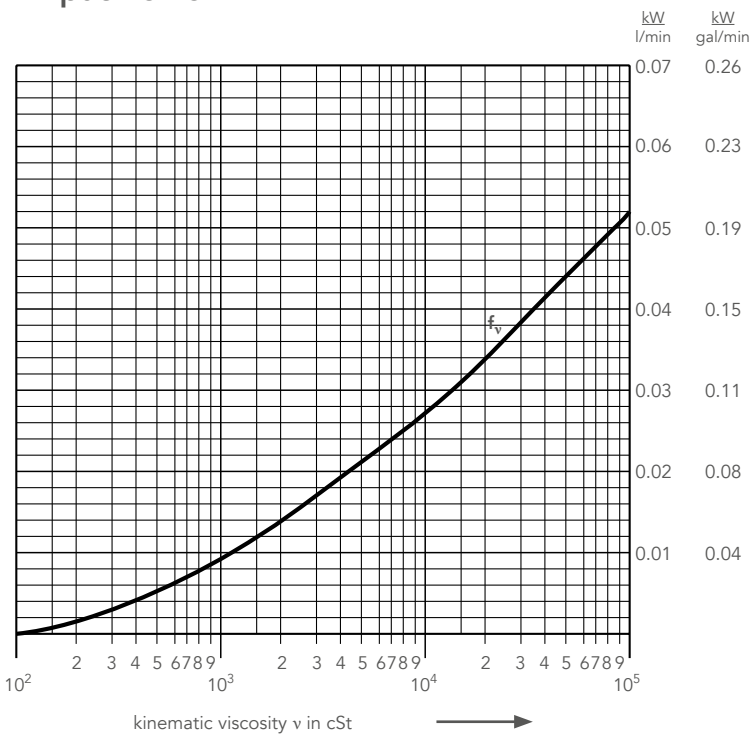


Diagram: $f_v = f(v)$

Note:
To determine the power consumption, always take the max. working viscosity at starting state into consideration.

The power of the drive motor should be selected 15% higher than the value determined.

Pump type KF 80
Sample calculation with metrical units:

Viscosity	ν	= 3000 cSt
Working pressure	p	= 15 bar
Power consumption per table	P_{Tab}	= 3.6 kW
Speed	n	= 500 rpm
Viscosity factor	f_v	= 0.017 $\frac{kW}{l/min}$

$$Q = \frac{80.5\ l/min \cdot 500}{1000} = 40\ l/min$$

$$P_{Pu} = 3.6\ kW \cdot \frac{500}{1450} + 0.017\ \frac{kW}{l/min} \cdot 40\ l/min$$

$$= 1.92\ kW$$

Calculation of engine output
$P_{Mot} = 1.2 \cdot P_{Pu}$
$= 1.2 \cdot 1.92\ kW = 2.4\ kW$

Motor version (next available power level)
P = 3.0 kW
n = 500 rpm

Sample calculation with imperial units:

Viscosity	ν	= 3000 cSt
Working pressure	p	= 218 psi
Power consumption per table	P_{Tab}	= 3.6 kW
Speed	n	= 500 rpm
Viscosity factor	f_v	= 0.064 $\frac{kW}{gal/min}$

$$Q = \frac{21.3\ gal/min \cdot 500}{1000} = 10.6\ gal/min$$

$$P_{Pu} = 3.6\ kW \cdot \frac{500}{1450} + 0.064\ \frac{kW}{gal/min} \cdot 10.6\ gal/min$$

$$= 1.92\ kW$$

Calculation of engine output
$P_{Mot} = 1.2 \cdot P_{Pu}$
$= 1.2 \cdot 1.92\ kW = 2.4\ kW$

Motor version (next available power level)
P = 3.0 kW
n = 500 rpm

Consultation

For competent advice, please get in touch with your responsible contact person in the sales department or give us a call (+49 2392 935 0).

ATEX version

Permitted areas of application

Depending on the labeling, our explosion-proof pump versions in accordance with directive 2014/34/EU may be used as follows:

1. In the zone 2 (Gas-Ex, category 3G) in the explosion groups IIA, IIB und IIC

2. In the zone 22 (Staub-Ex, category 3D) in the explosion groups IIIA und IIIB

3. In the zone 1 (Gas-Ex, category 2G) in the explosion groups IIA, IIB und IIC

4. In the zone 21 (Staub-Ex, category 2D) in the explosion groups IIIA und IIIB

Characteristics

Nominal size	2.5 · 4 · 5 · 6 · 8 · 10 · 12 · 16 · 20 · 25 · 32 · 40 · 50 · 63 · 80 · 100 · 112 · 125 · 150 · 180 · 200
Working pressure suction side	-0.4 … 0.5 bar / -5.801 … 7.2518 psi
Working pressure pressure side	25 bar / 363 psi
Differential pressure	See table permissible differential pressure (Page 16)
Mounting position	Horizontal or shaft end down, Versions with connection for horizontal liquid supply. Vertical installation with shaft end on top (Special number 277).
Ambient temperatures	NBR -20 … 60 °C / -4 … 140 °F FKM -15 … 60 °C / 5 … 140 °F
Media temperatures	NBR -20 … 80 °C (T4) / -4 … 176 °F (T4) FKM -15 … 80 °C (T4) / 5 … 176 °F (T4) FKM -15 … 110 °C (T3) / 5 … 230 °F (T3)
Device temperatures	NBR -20 … 80 °C (T4) / -4 … 230 °F (T4) FKM -15 … 130 °C (T3/T4) / 5 … 266 °F (T3/T4)

The maximum temperatures must not be exceeded.
An application-dependent self-heating of the devices must be taken into account.

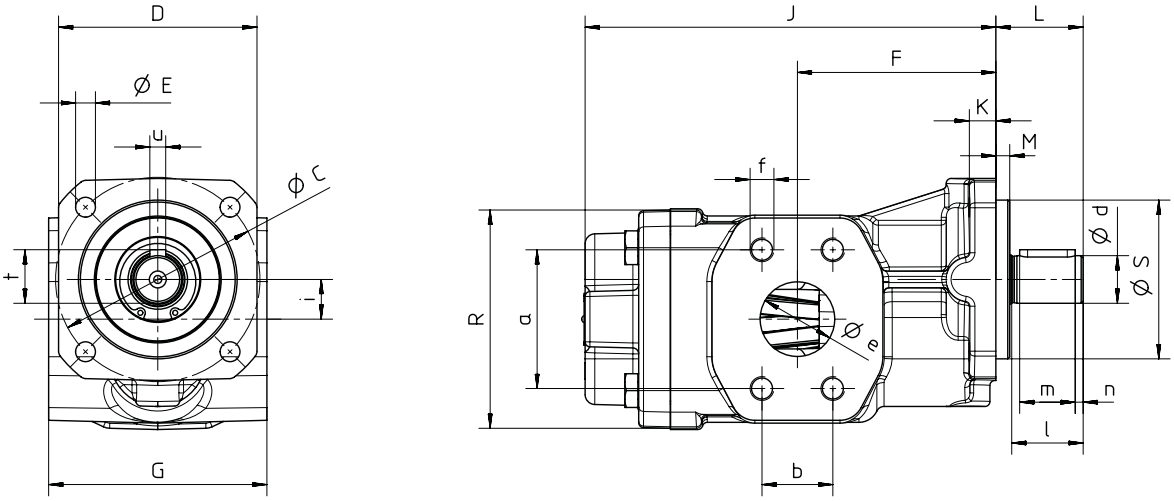
Consultation

For competent advice, please get in touch with your responsible contact person in the sales department or give us a call (+49 2392 935 0).

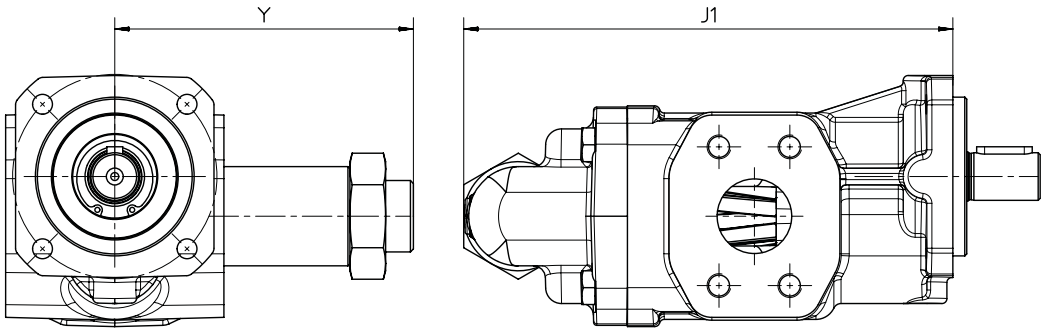
Dimensions and weights

KF 2.5 ... 25 – Gear pumps without/with D-valve and SAE connection (special number 158)
KF 32 ... 630 – Gear pumps without/with D-valve and SAE connection

without D-valve

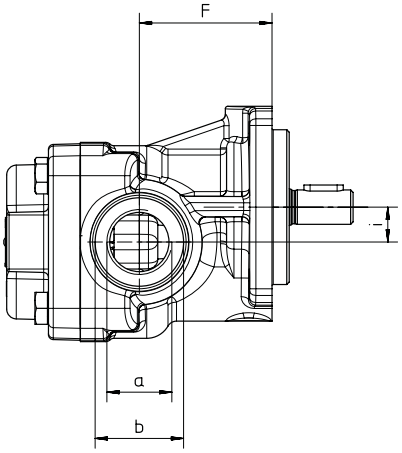


with D-valve

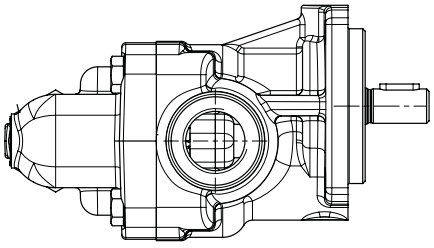


KF 2.5 ... 25 – Gear pumps without/with D-valve and pipe thread

without D-valve



with D-valve



Dimensions in mm / inch

Pumps of nominal sizes 2.5 ... 25 are supplied with a pipe connection as standard.

Dimensions and weights

I KF 2.5 ... 630 – Gear pumps with SAE connection and pipe thread

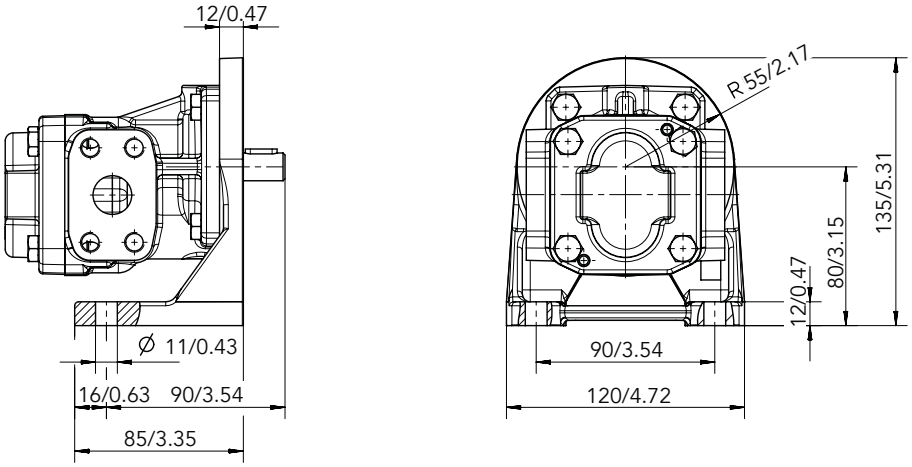
Nominal size	Sp.-No.*	SAE	Suction- and pressure connection				Dimensions														Shaft end						Weight in kg/lbs	
			a	b	e	f	C	D	E	F	G	J	J1	K	L	M	R	S_{h8}	i	Y	d_{j6}	l	m	n	t	u	without valve	with valve
2.5 ... 12	-	-	G 3/4	Ø 36 Ø 1.42	-	-	85 / 3.35	80 / 3.15	10 / 0.40	54 / 2.13	95 / 3.74	108.0 / 4.25	140 / 5.51	9 / 0.35	33 / 1.30	7 / 0.28	80 / 3.15	63 / 2.48	14.2 / 0.56	100.0 / 3.94	14 / 0.55	25 / 0.99	16 / 0.63	4 / 0.16	16 / 0.63	5 / 0.20	2.9 / 6.4	3.7 / 8.2
2.5 ... 12	158	3/4“	47.6 / 1.88	22.2 / 0.87	19.5 / 0.77	M10 15 / 0.60 deep	85 / 3.35	80 / 3.15	10 / 0.40	54 / 2.13	100 / 3.94	108.0 / 4.25	140 / 5.51	9 / 0.35	33 / 1.30	7 / 0.28	80 / 3.15	63 / 2.48	14.2 / 0.56	99.5 / 3.91	14 / 0.55	25 / 0.99	16 / 0.63	4 / 0.16	16 / 0.63	5 / 0.20	4.2 / 9.3	5.0 / 11.0
16 ... 25	-	-	G 1 19 / 0.75 deep	Ø 42 Ø 1.65	-	-	85 / 3.35	80 / 3.15	10 / 0.40	63 / 2.48	95 / 3.74	130.0 / 5.12	162 / 6.38	9 / 0.35	33 / 1.30	7 / 0.28	80 / 3.15	63 / 2.48	14.2 / 0.56	100.0 / 3.94	14 / 0.55	25 / 0.99	16 / 0.63	4 / 0.16	16 / 0.63	5 / 0.20	3.5 / 7.7	4.3 / 9.5
16 ... 25	158	1”	52.4 / 2.07	26.2 / 1.03	25.0 / 0.99	M10 17 / 0.70 deep	85 / 3.35	80 / 3.15	10 / 0.40	63 / 2.48	100 / 3.94	130.0 / 5.12	162 / 6.38	9 / 0.35	33 / 1.30	7 / 0.28	80 / 3.15	63 / 2.48	14.2 / 0.56	99.5 / 3.91	14 / 0.55	25 / 0.99	16 / 0.63	4 / 0.16	16 / 0.63	5 / 0.20	4.8 / 10.6	5.6 / 12.3
32 ... 50	-	1 1/2”	69.9 / 2.75	35.7 / 1.40	38.0 / 1.50	M12 20 / 0.80 deep	103 / 4.06	100 / 3.94	10 / 0.40	84 / 3.31	110 / 4.33	172.0 / 6.78	211.5 / 8.32	13 / 0.51	44 / 1.73	7 / 0.28	110 / 4.33	80 / 3.15	20.0 / 0.79	150.5 / 5.93	24 / 0.94	36 / 1.42	28 / 1.10	4 / 0.16	27 / 1.06	8 / 0.31	7.7 / 17.0	9.5 / 20.9
63/80	-	1 1/2”	69.9 / 2.75	35.7 / 1.40	38.0 / 1.50	M12 20 / 0.80 deep	103 / 4.06	100 / 3.94	10 / 0.40	100 / 3.94	110 / 4.33	207.0 / 8.14	246.5 / 9.70	13 / 0.51	44 / 1.73	7 / 0.28	110 / 4.33	80 / 3.15	20.0 / 0.79	150.5 / 5.93	24 / 0.94	36 / 1.42	28 / 1.10	4 / 0.16	27 / 1.06	8 / 0.31	9.4 / 20.7	11.2 / 25.0
50	232	2”	77.8 / 3.06	42.9 / 1.70	50.0 / 1.97	M12 20 / 0.80 deep	103 / 4.06	100 / 3.94	10 / 0.40	84 / 3.31	110 / 4.33	172.0 / 6.78	211.5 / 8.32	13 / 0.51	44 / 1.73	7 / 0.28	110 / 4.33	80 / 3.15	20.0 / 0.79	150.5 / 5.93	24 / 0.94	36 / 1.42	28 / 1.10	4 / 0.16	27 / 1.06	8 / 0.31	7.7 / 17.0	9.5 / 20.9
63/80	232	2”	77.8 / 3.06	42.9 / 1.70	50.0 / 1.97	M12 20 / 0.80 deep	103 / 4.06	100 / 3.94	10 / 0.40	100 / 3.94	110 / 4.33	207.0 / 8.14	246.5 / 9.70	13 / 0.51	44 / 1.73	7 / 0.28	110 / 4.33	80 / 3.15	20.0 / 0.79	150.5 / 5.93	24 / 0.94	36 / 1.42	28 / 1.10	4 / 0.16	27 / 1.06	8 / 0.31	9.4 / 20.7	11.2 / 25.0
100/112	-	2”	77.8 / 3.06	42.9 / 1.70	50.8 / 2.00	M12 20 / 0.80 deep	145 / 5.71	135 / 5.31	14 / 0.55	102 / 4.01	130 / 5.12	220.5 / 8.69	262.5 / 10.33	17 / 0.67	60 / 2.37	8 / 0.31	128 / 5.04	110 / 4.33	23.7 / 0.93	170.5 / 6.71	28 / 1.10	50 / 1.97	40 / 1.57	5 / 0.20	31 / 1.22	8 / 0.31	16.0 / 35.3	18.7 / 42.2
100/112	232	2 1/2”	88.9 / 3.50	50.8 / 2.00	63.5 / 2.50	M12 20 / 0.80 deep	145 / 5.71	135 / 5.31	14 / 0.55	102 / 4.01	130 / 5.12	220.5 / 8.69	262.5 / 10.33	17 / 0.67	60 / 2.37	8 / 0.31	128 / 5.04	110 / 4.33	23.7 / 0.93	170.5 / 6.71	28 / 1.10	50 / 1.97	40 / 1.57	5 / 0.20	31 / 1.22	8 / 0.31	16.0 / 35.3	18.7 / 42.2
125/150	-	2 1/2”	88.9 / 3.50	50.8 / 2.00	63.5 / 2.50	M12 20 / 0.80 deep	145 / 5.71	135 / 5.31	14 / 0.55	120 / 4.72	150 / 5.91	245.0 / 9.64	282 / 11.10	18 / 0.71	60 / 2.37	8 / 0.31	159 / 6.26	110 / 4.33	23.7 / 0.93	170.5 / 6.71	28 / 1.10	50 / 1.97	40 / 1.57	5 / 0.20	31 / 1.22	8 / 0.31	22.2 / 48.9	24.9 / 54.9
125/150	232	3”	106.4 / 4.20	61.9 / 2.44	76.2 / 3.00	M16 32 / 1.26 deep	145 / 5.71	135 / 5.31	14 / 0.55	120 / 4.72	150 / 5.91	245.0 / 9.64	282 / 11.10	18 / 0.71	60 / 2.37	8 / 0.31	159 / 6.26	110 / 4.33	23.7 / 0.93	170.5 / 6.71	28 / 1.10	50 / 1.97	40 / 1.57	5 / 0.20	31 / 1.22	8 / 0.31	22.2 / 48.9	24.9 / 54.9
180/200	-	3”	106.4 / 4.20	61.9 / 2.44	76.2 / 3.00	M16 32 / 1.26 deep	145 / 5.71	135 / 5.31	14 / 0.55	130 / 5.12	150 / 5.91	261.5 / 10.30	298.5 / 11.76	18 / 0.71	60 / 2.37	8 / 0.31	159 / 6.26	110 / 4.33	23.7 / 0.93	170.5 / 6.71	28 / 1.10	50 / 1.97	40 / 1.57	5 / 0.20	31 / 1.22	8 / 0.31	24.8 / 54.7	27.5 / 60.6
180/200	232	3 1/2”	120.7 / 47.52	69.9 / 2.75	88.9 / 3.50	M16 32 / 1.26 deep	145 / 5.71	135 / 5.31	14 / 0.55	130 / 5.12	150 / 5.91	261.5 / 10.30	298.5 / 11.76	18 / 0.71	60 / 2.37	8 / 0.31	159 / 6.26	110 / 4.33	23.7 / 0.93	170.5 / 6.71	28 / 1.10	50 / 1.97	40 / 1.57	5 / 0.20	31 / 1.22	8 / 0.31	24.8 / 54.7	27.5 / 60.6
250/315	-	3”	106.4 / 4.20	61.9 / 2.44	76.2 / 3.00	M16 32 / 1.26 deep	200 / 7.87	185 / 7.28	19 / 0.75	155 / 6.10	200 / 7.88	311.0 / 12.24	364 / 10.40	26 / 1.02	90 / 3.54	8 / 0.31	208 / 8.19	160 / 6.30	35.5 / 1.40	240.0 / 9.45	38 / 1.50	80 / 3.15	63 / 2.48	8 / 0.31	41 / 1.61	10 / 0.39	44.2 / 97.4	47.6 / 104.9
400/500	-	4”	130.2 / 5.13	77.8 / 3.10	101.6 / 4.00	M16 32 / 1.26 deep	200 / 7.87	185 / 7.28	19 / 0.75	200 / 7.88	200 / 7.88	373.0 / 14.67	426 / 16.78	26 / 1.02	90 / 3.54	8 / 0.31	208 / 8.19	160 / 6.30	35.5 / 1.40	240.0 / 9.45	38 / 1.50	80 / 3.15	63 / 2.48	8 / 0.31	41 / 1.61	10 / 0.39	54.7 / 120.6	58.2 / 128.3
630	-	4”	130.2 / 5.13	77.8 / 3.10	101.6 / 4.00	M16 32 / 1.26 deep	200 / 7.87	185 / 7.28	19 / 0.75	200 / 7.88	200 / 7.88	417.0 / 16.41	470 / 18.50	26 / 1.02	90 / 3.54	8 / 0.31	208 / 8.19	160 / 6.30	35.5 / 1.40	240.0 / 9.45	38 / 1.50	80 / 3.15	63 / 2.48	8 / 0.31	41 / 1.61	10 / 0.39	60.8 / 134.0	64.2 / 141.5

* Special numbers: see page 15.

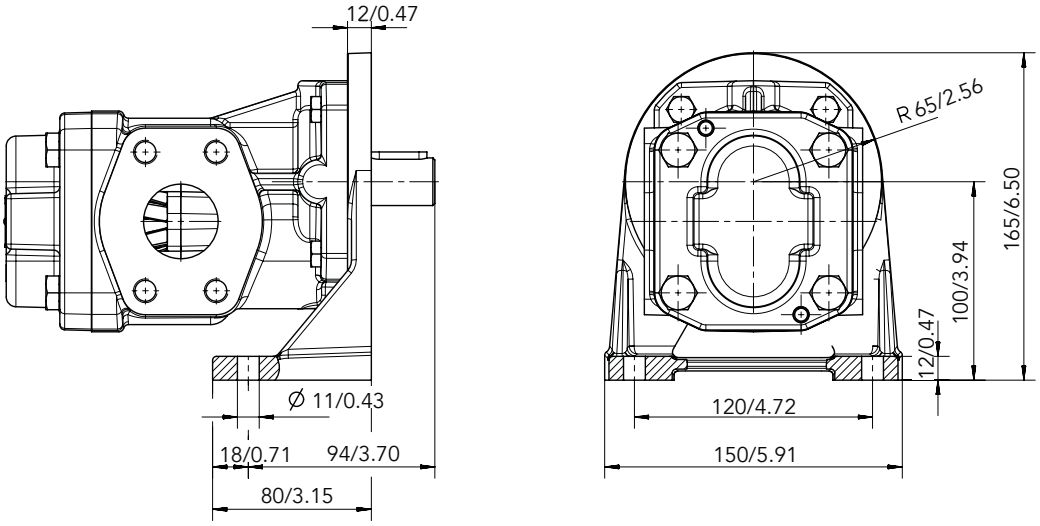
Dimensions in mm / inch

Dimensions and weights

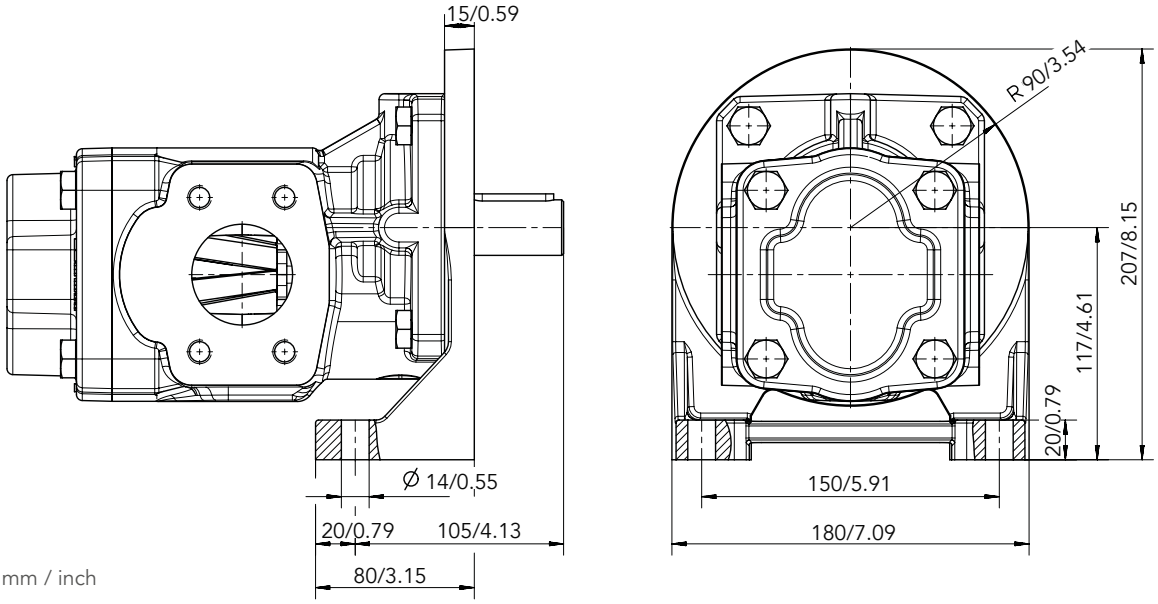
KF 2.5 ... 25 – Mounting angle for gear pumps



KF 32 ... 80 – Mounting angle for gear pumps



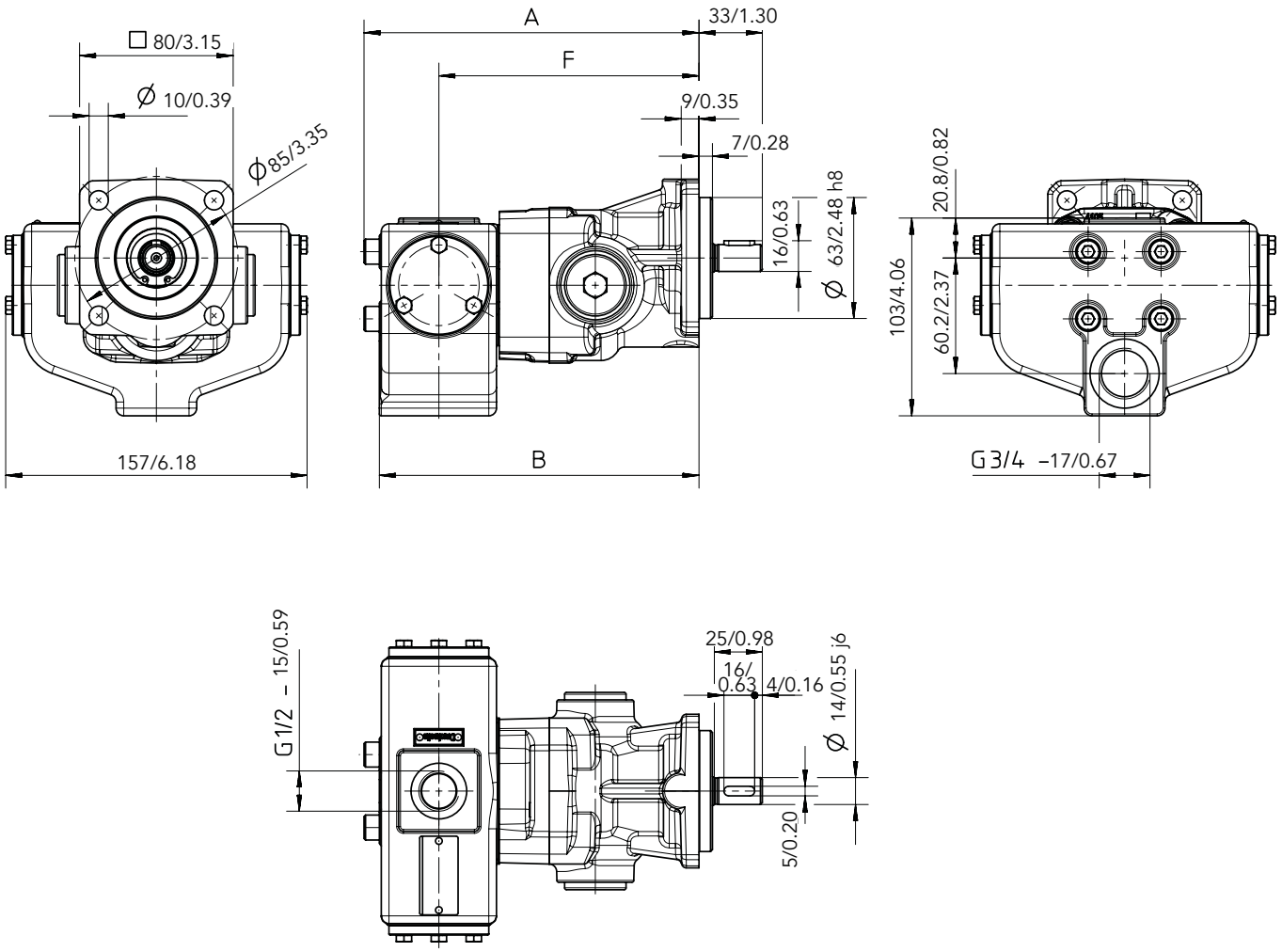
KF 100 ... 200 – Mounting angle for gear pumps



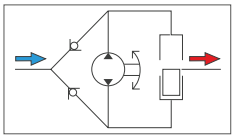
Dimensions in mm / inch

Dimensions and weights

KF 2.5 ... 25 – Gear pumps with universal valve U



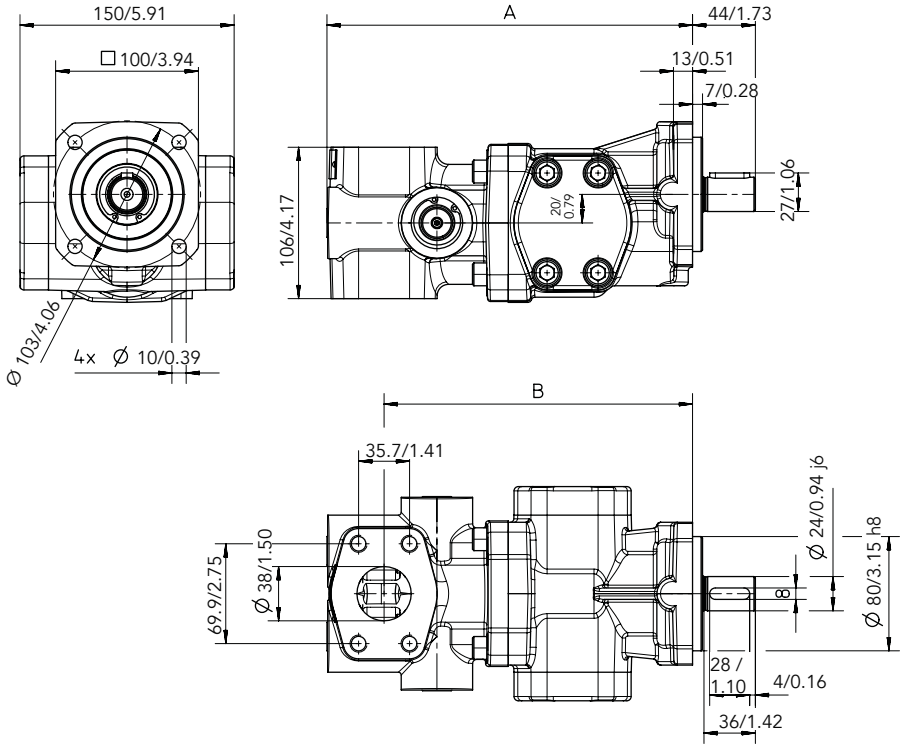
Nominal size	A	B	F	Weight in kg/lbs	Perm. manometric negative pressure at the pump suction connection P_e in bar/psi
4	174.5 / 6.87	166.5 / 6.56	135.5 / 5.33	6.9 / 15.2	0.35/5.1
5					
6					
8					
10					
12					
16	196.5 / 7.74	188.5 / 7.42	157.5 / 6.20	7.5 / 16.5	
20					
25					



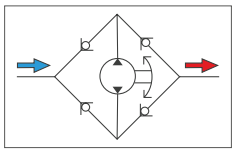
Dimensions in mm / inch

Dimensions and weights

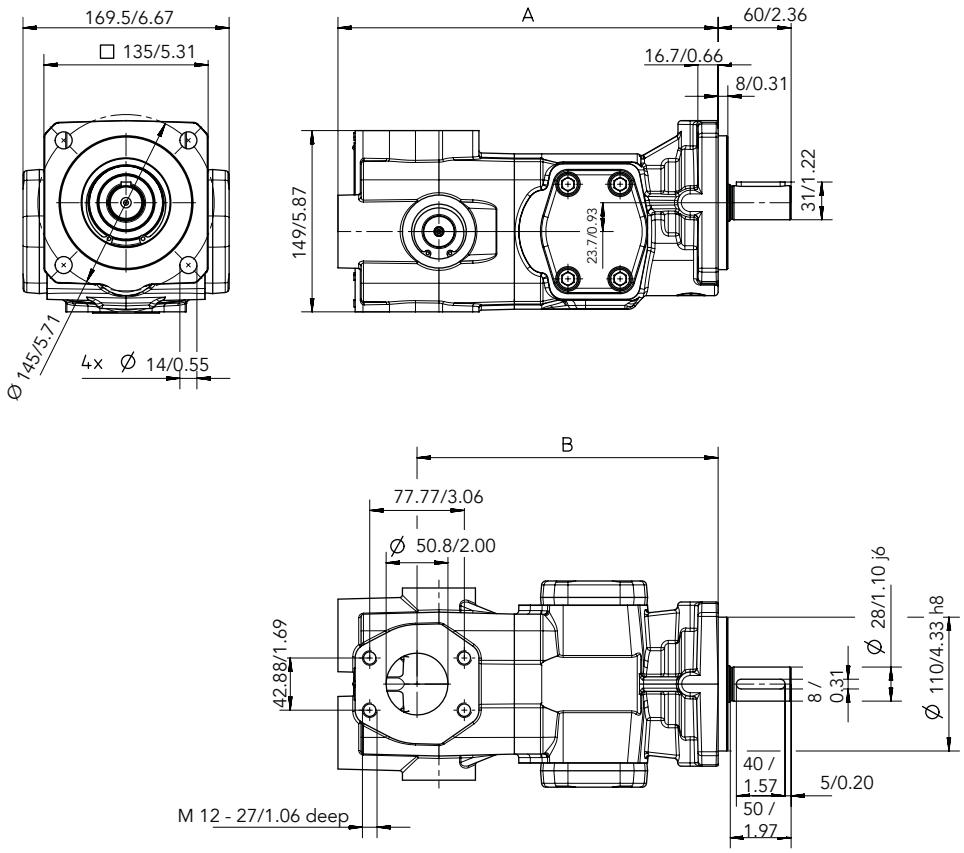
KF 32 ... 80 – Gear pumps with universal valve U2



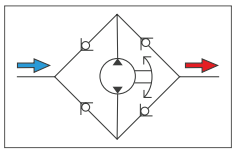
Discharge flow Nominal size	A	B	Weight in kg/lbs
32 40 50	256 / 10.08	216 / 8.50	15.5 / 34.2
63 80	291 / 11.46	251 / 9.88	17.5 / 38.6



KF 100/112 – Gear pumps with universal valve U2



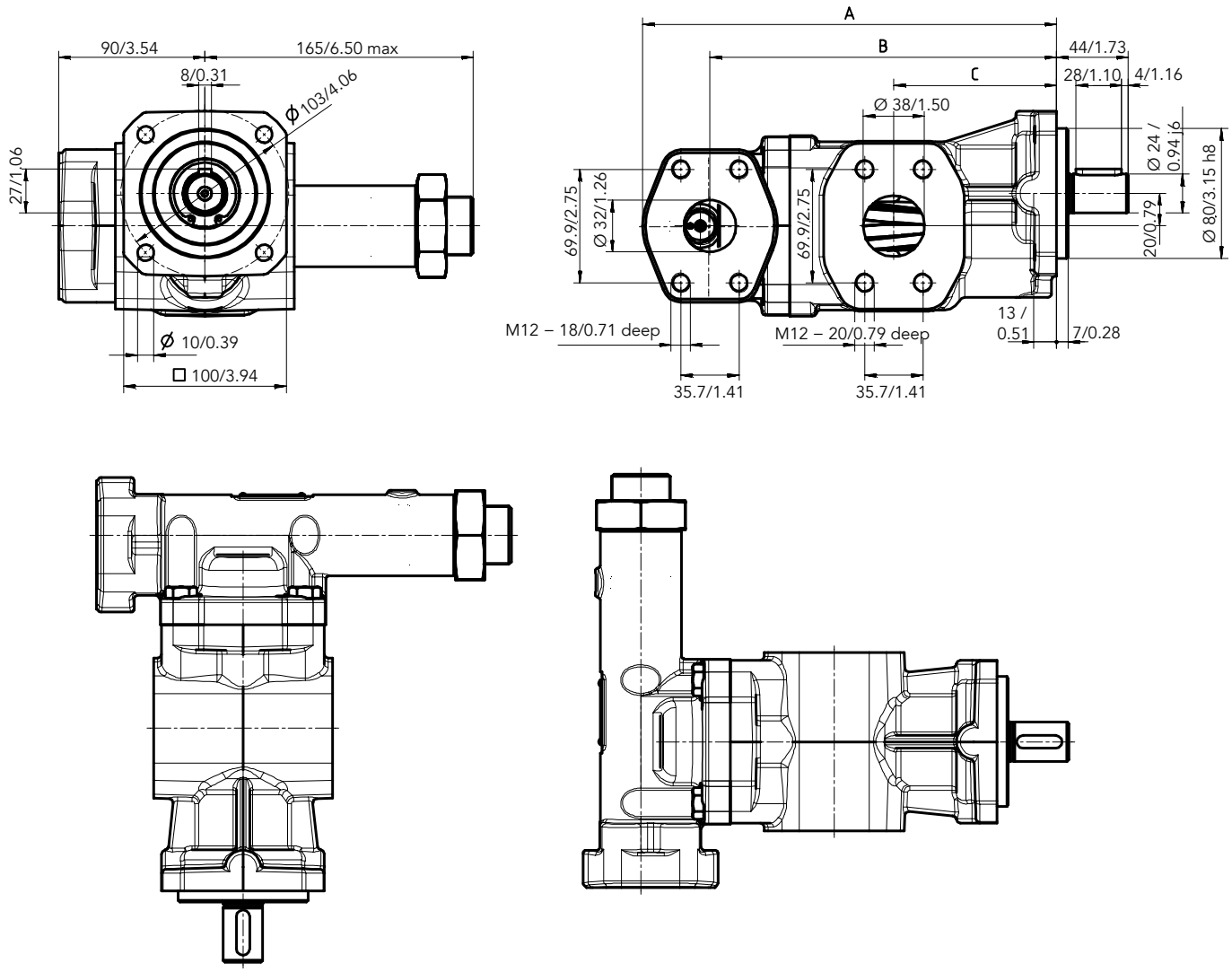
Discharge flow Nominal size	A	B	Weight in kg/lbs
100 112	312.5 / 12.30	247.5 / 9.74	21.6 / 47.6



Dimensions in mm / inch

Dimensions and weights

KF 32 ... 80 – Gear pumps with T-valve

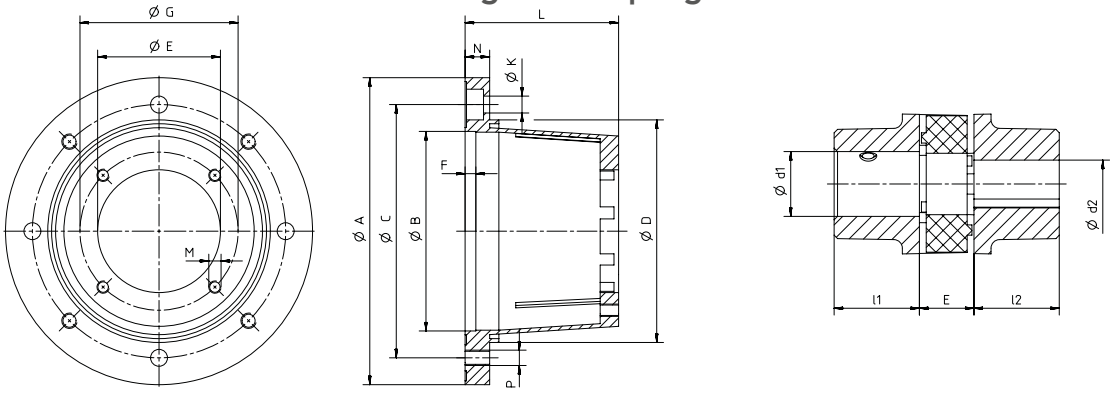


Nominal size	A	B	C	Weight in kg/lbs
32	220 / 8.66	184 / 7.24	84 / 3.31	9.5 / 20.9
40				
50				
63	255 / 10.04	213 / 8.39	100 / 3.94	11.2 / 24.7
80				

Dimensions in mm / inch

Technical data

I KF 2.5 ... 630 – Dimensions of bellhousing and couplings



KF 2.5 ... 25

IEC motor size	Dimensions bellhousing												Bellhousing description	Dimensions coupling					Coupling description
	A	B	C	D	E	F	G	K	L	M	N	P		d1	d2	l1	l2	E	
71 M	160 / 6.30	110 / 4.33	130 / 5.12	110 / 4.33	63 / 2.48	7 / 0.28	85 / 3.35	9 / 0.35	80 / 3.15	M8	13 / 0.51	M8	PT 160-A-063-80	14 / 0.55	14 / 0.55	25 / 0.98	25 / 0.98	16 / 0.63	RA 19-Z25/14-Z25/14
80 M	200 / 7.87	130 / 5.12	165 / 6.50	145 / 5.71	63 / 2.48	7 / 0.28	85 / 3.35	11 / 0.43	100 / 3.94	M8	16 / 0.63	M10	PT 200-A-063-100	14 / 0.55	19 / 0.75	25 / 0.98	25 / 0.98	16 / 0.63	RA 19-Z25/14-Z25/19
90 S/L	200 / 7.87	130 / 5.12	165 / 6.50	145 / 5.71	63 / 2.48	7 / 0.28	85 / 3.35	11 / 0.43	100 / 3.94	M8	16 / 0.63	M10	PT 200-A-063-100	14 / 0.55	24 / 0.94	25 / 0.98	25 / 0.98	16 / 0.63	RA 19-Z25/14-Z25/24
100 L / 112 M	250 / 9.84	180 / 7.09	215 / 8.46	190 / 7.48	63 / 2.48	7 / 0.28	85 / 3.35	14 / 0.55	120 / 4.72	M8	19 / 0.75	M12	PT 250-A-063-120	14 / 0.55	28 / 1.10	30 / 1.18	30 / 1.18	18 / 0.71	RA 24-Z30/14-Z30/28
132 S/M	300 / 11.81	230 / 9.06	265 / 10.43	234 / 9.21	63 / 2.48	7 / 0.28	85 / 3.35	14 / 0.55	144 / 5.67	M8	20 / 0.79	M12	PT 300-A-063-144	14 / 0.55	38 / 1.50	35 / 1.38	35 / 1.38	20 / 0.79	RA 28-Z35/14-Z35/38

KF 32 ... 80

IEC motor size	Dimensions bellhousing												Bellhousing description	Dimensions coupling					Coupling description
	A	B	C	D	E	F	G	K	L	M	N	P		d1	d2	l1	l2	E	
80 M	200 / 7.87	130 / 5.12	165 / 6.50	145 / 5.71	80 / 3.15	7 / 0.28	103 / 4.06	11 / 0.43	100 / 3.94	M8	16 / 0.63	M10	PT 200-A-080-100	24 / 0.94	19 / 0.75	25 / 0.98	25 / 0.98	16 / 0.63	RA 19-Z25/24-Z25/19
90 S/L	200 / 7.87	130 / 5.12	165 / 6.50	145 / 5.71	80 / 3.15	7 / 0.28	103 / 4.06	11 / 0.43	110 / 4.33	M8	16 / 0.63	M10	PT 200-A-080-110	24 / 0.94	24 / 0.94	30 / 1.18	30 / 1.18	18 / 0.71	RA 24-Z30/24-Z30/24
100 L /112 M	250 / 9.84	180 / 7.09	215 / 8.46	190 / 7.48	80 / 3.15	7 / 0.28	103 / 4.06	14 / 0.55	124 / 4.88	M8	18 / 0.71	M12	PT 250-A-080-124	24 / 0.94	28 / 1.10	30 / 1.18	30 / 1.18	18 / 0.71	RA 24-Z30/24-Z30/28
132 S/M	300 / 11.81	230 / 9.06	265 / 10.43	234 / 9.21	80 / 3.15	7 / 0.28	103 / 4.06	14 / 0.55	144 / 5.67	M8	20 / 0.79	M12	PT 300-A-080-144	24 / 0.94	38 / 1.50	35 / 1.38	35 / 1.38	20 / 0.79	RA 28-Z35/24-Z35/38
160 M/L	350 / 13.78	250 / 9.84	300 / 11.81	260 / 10.24	80 / 3.15	7 / 0.28	103 / 4.06	18 / 0.71	188 / 7.40	M8	26 / 1.02	M16	PT 350-A-080-188	24 / 0.94	42 / 1.65	45 / 1.77	45 / 1.77	24 / 0.94	RA 38-Z45/24-Z45/42

KF 100 ... 200

IEC motor size	Dimensions bellhousing												Bellhousing description	Dimensions coupling					Coupling description
	A	B	C	D	E	F	G	K	L	M	N	P		d1	d2	l1	l2	E	
100 L /112 M	250 / 9.84	180 / 7.09	215 / 8.46	190 / 7.48	110 / 4.33	7 / 0.28	145 / 5.71	14 / 0.55	135 / 5.31	M12	18 / 0.71	M12	PT 250-A-110-135	28 / 1.10	28 / 1.10	30 / 1.18	30 / 1.18	18 / 0.71	RA 24-Z30/28-Z30/28
132 S/M	300 / 11.81	230 / 9.06	265 / 10.43	234 / 9.21	110 / 4.33	7 / 0.28	145 / 5.71	14 / 0.55	168 / 6.61	M12	20 / 0.79	M12	PT 300-A-110-168	28 / 1.10	38 / 1.50	35 / 1.38	35 / 1.38	20 / 0.79	RA 28-Z35/28-Z35/38
160 M/L	350 / 13.78	250 / 9.84	300 / 11.81	260 / 10.24	110 / 4.33	7 / 0.28	145 / 5.71	18 / 0.71	188 / 7.40	M12	26 / 1.02	M16	PT 350-A-110-188	28 / 1.10	42 / 1.65	45 / 1.77	45 / 1.77	24 / 0.94	RA 38-Z45/28-Z45/42
180 M/L	350 / 13.78	250 / 9.84	300 / 11.81	260 / 10.24	110 / 4.33	7 / 0.28	145 / 5.71	18 / 0.71	204 / 8.03	M12	26 / 1.02	M16	PT 350-A-110-204	28 / 1.10	48 / 1.89	50 / 1.97	50 / 1.97	26 / 1.02	RA 42-Z50/28-Z50/48

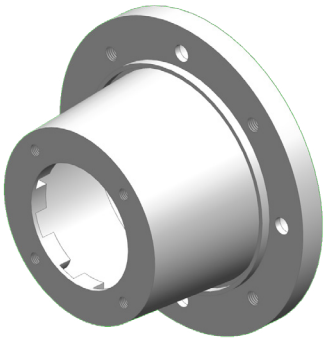
KF 250 ... 630

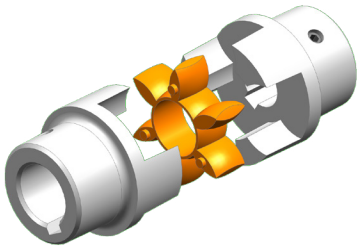
IEC motor size	Dimensions bellhousing												Bellhousing description	Dimensions coupling					Coupling description
	A	B	C	D	E	F	G	K	L	M	N	P		d1	d2	l1	l2	E	
132 S/M	300 / 11.81	230 / 9.06	265 / 10.43	234 / 9.21	160 / 6.30	7 / 0.28	200 / 7.87	14 / 0.55	196 / 7.72	M16	20 / 0.79	M12	PT 300-A-160-196	38 / 1.50	38 / 1.50	35 / 1.38	35 / 1.38	20 / 0.79	RA 28-Z35/38-Z35/38
160 M/L	350 / 13.78	250 / 9.84	300 / 11.81	260 / 10.24	160 / 6.30	7 / 0.28	200 / 7.87	18 / 0.71	228 / 8.98	M16	26 / 1.02	M16	PT 350-A-160-228	38 / 1.50	42 / 1.65	45 / 1.77	45 / 1.77	24 / 0.94	RA 38-Z45/38-Z45/42
180 M/L	350 / 13.78	250 / 9.84	300 / 11.81	260 / 10.24	160 / 6.30	7 / 0.28	200 / 7.87	18 / 0.71	228 / 8.98	M16	26 / 1.02	M16	PT 350-A-160-228	38 / 1.50	48 / 1.90	50 / 1.97	50 / 1.97	26 / 1.02	RA 42-Z50/38-Z50/48
200 M/L	400 / 15.75	300 / 11.81	350 / 13.78	300 / 11.81	160 / 6.30	7 / 0.28	200 / 7.87	18 / 0.71	228 / 8.98	M16	26 / 1.02	M16	PT 400-A-160-228	38 / 1.50	55 / 2.17	50 / 1.97	50 / 1.97	26 / 1.02	RA 42-Z50/38-Z50/55
225 S/M	450 / 17.72	350 / 13.78	400 / 15.74	350 / 13.78	160 / 6.30	7 / 0.28	200 / 7.87	18 / 0.71	262 / 10.32	M16	26 / 1.02	M16	PT 450-A-160-262	38 / 1.50	60 / 2.36	56 / 2.20	56 / 2.20	28 / 1.10	RA 48-Z56/38-Z56/60
250 M	550 / 21.65	450 / 17.72	500 / 19.69	450 / 17.72	160 / 6.30	6 / 0.24	200 / 7.87	18 / 0.71	265 / 10.43	M16	26 / 1.02	M16	PT 550-A-160-265	38 / 1.50	65 / 2.56	65 / 2.56	65 / 2.56	30 / 1.18	RG 55-Z65/38-Z65/65

Dimensions in mm / inch

Technical data

I KF 2.5 ... 630 – Accessories (Bellhousings, couplings, motor types)





Standard motors

IEC motor size	Power Motor 4-pole 1450 1/min bei 50 Hz 1750 1/min bei 60 Hz in kW	Power Motor 6-pole 950 1/min bei 50 Hz 1150 1/min bei 60 Hz in kW	Power Motor 8-pole 720 1/min bei 50 Hz 870 1/min bei 60 Hz in kW	Foot flange
71 M	0.25	0.18	0.09	PTFL 160
71 M	0.37	0.25	0.12	PTFL 160
80 M	0.55	0.37	0.18	PTFL 200
80 M	0.75	0.55	0.25	PTFL 200
90 S	1.10	0.75	0.37	PTFL 200
90 L	1.50	1.10	0.55	PTFL 200
100 L	2.20	-	0.75	PTFL 250
100 L	3.00	1.50	1.10	PTFL 250
112 M	4.00	2.20	1.50	PTFL 250
132 S	5.50	3.00	2.20	PTFL 300
132 M	7.50	4.00	3.00	PTFL 300
132 M	-	5.50	-	PTFL 300
160 M	11.00	7.50	4.00	PTFL 350
160 L	15.00	11.00	5.50	PTFS 350
180 M	18.50	-	-	PTFS 350
180 L	22.00	15.00	11.00	PTFS 350
200 L	30.00	18.50	-	PTFS 400
200 L	-	22.00	15.00	PTFS 400
225 S	37.00	-	18.50	PTFS 450
225 M	45.00	30.00	22.00	PTFS 450
250 M	55.00	37.00	30.00	PTFS 550

Type key bellhousing

PT	160	A	063	80
Short term bellhousing	Outer-Ø engine side	Type A = fixed	Center-Ø pump side	Bellhousing Overall length

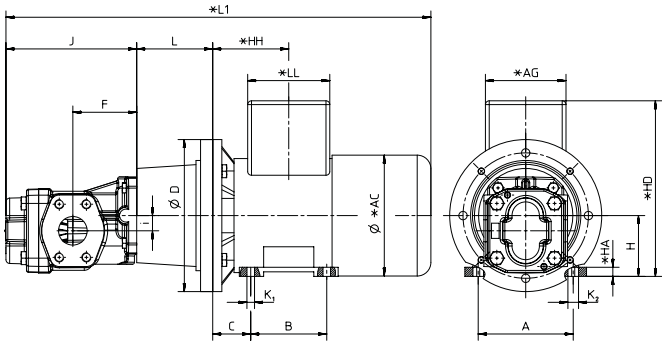
Type key coupling

R	A	19	Z	25	10	Z	25	10
Short term manufacturer	Material A = Aluminum G = Cast	Coupling size	Hub bore cylindrical pump side	Hub length pump side	Bore-Ø pump side	Hub bore cylindrical engine side	Hub length engine side	Bore-Ø engine side

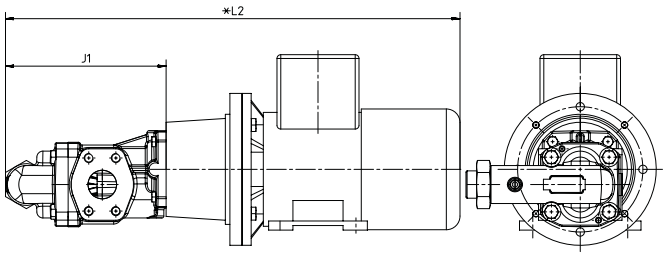
Dimensions

I KF 2.5 ... 25 – Motor-pump units with SAE connection

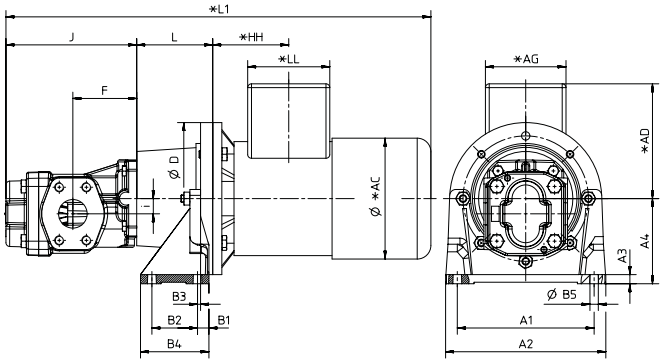
Version with bearing cover
Design IM B35



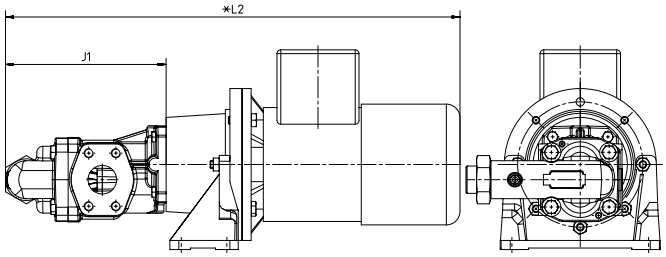
Version with pressure relief valve
Design IM B35



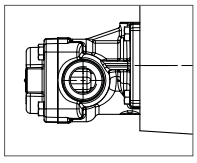
Version with bearing cover
Foot flange L (light version)
Design IM B5

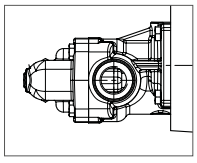


Version with pressure relief valve
Foot flange L (light version)
Design IM B5



I KF 2.5 ... 25 – Motor-pump units with pipe thread





Alternatively, pumps of nominal sizes 2.5 … 25 are also available with an SAE connection.

Dimensions in mm / inch

Dimensions

KF 2.5 ... 25 – Dimensions of motor-pump units, Design IM B35

Size	Dimensions																	
	4...12 L1*	16...25 L1*	4...12 L2*	16...25 L2*	L	øD	A	B	C	H	*HD	K1	K2	*AC	*HA	*LL	*HH	*AG
71	408 / 16.06	430 / 16.93	440 / 17.32	462 / 18.19	80 / 3.15	160 / 6.30	112 / 4.41	90 / 3.54	45 / 1.77	71 / 2.80	201 / 7.91	7 / 0.28	10 / 0.39	147 / 5.79	9 / 0.35	108 / 4.25	90 / 3.54	101 / 3.98
80	499 / 19.65	521 / 20.51	531 / 20.91	553 / 21.77	100 / 3.94	200 / 7.87	125 / 4.92	100 / 3.94	50 / 1.97	80 / 3.15	231 / 9.09	10 / 0.39	14 / 0.55	159 / 6.26	12 / 0.47	108 / 4.25	100 / 3.94	106 / 4.17
90S	505 / 19.88	527 / 20.75	537 / 21.14	559 / 22.01	100 / 3.94	200 / 7.87	140 / 5.51	100 / 3.94	56 / 2.20	90 / 3.54	251 / 9.88	10 / 0.39	14 / 0.55	179 / 7.05	13 / 0.51	115 / 4.53	106 / 4.17	109 / 4.29
90L	545 / 21.46	567 / 22.32	577 / 22.72	599 / 23.58	100 / 3.94	200 / 7.87	140 / 5.51	125 / 4.92	56 / 2.20	90 / 3.54	251 / 9.88	10 / 0.39	14 / 0.55	179 / 7.05	13 / 0.51	115 / 4.53	118.5 / 4.67	109 / 4.29
100	650.5 / 25.61	672.5 / 26.48	682.5 / 26.87	704.5 / 27.74	120 / 4.72	250 / 9.84	160 / 6.30	140 / 5.51	63 / 2.48	100 / 3.94	293 / 11.54	12 / 0.47	16 / 0.63	199 / 7.83	16 / 0.63	134 / 5.28	133 / 5.24	163 / 6.42
112	640 / 25.20	662 / 26.06	672 / 26.46	694 / 27.32	120 / 4.72	250 / 9.84	190 / 7.48	140 / 5.51	70 / 2.76	112 / 4.41	308 / 12.13	12 / 0.47	16 / 0.63	222 / 8.74	15 / 0.59	140 / 5.51	140 / 5.51	163 / 6.42

KF 2.5 ... 25 – Dimensions of motor-pump units with foot flange, Design IM B5

Size	Dimensions																		
	4...12 L1*	16...25 L1*	4...12 L2*	16...25 L2*	L	øD	A1	A2	A3	A4	B1	B2	B3	B4	B5	*AD	*HH	*LL	*AG	*AC
71	408 / 16.06	430 / 16.93	440 / 17.32	462 / 18.19	80 / 3.15	160 / 6.30	140 / 5.51	160 / 6.30	10 / 0.39	100 / 3.94	15 / 0.59	50 / 1.97	7 / 0.28	80 / 3.15	9 / 0.35	130 / 5.12	90 / 3.54	108 / 4.25	101 / 3.98	147 / 5.79
80	499 / 19.65	521 / 20.51	531 / 20.91	553 / 21.77	100 / 3.94	200 / 7.87	180 / 7.09	210 / 8.27	12 / 0.47	112 / 4.41	15 / 0.59	60 / 2.36	4 / 0.16	90 / 3.54	11 / 0.43	151 / 5.94	100 / 3.94	108 / 4.25	106 / 4.17	159 / 6.26
90S	505 / 19.88	527 / 20.75	537 / 21.14	559 / 22.01	100 / 3.94	200 / 7.87	180 / 7.09	210 / 8.27	12 / 0.47	112 / 4.41	15 / 0.59	60 / 2.36	4 / 0.16	90 / 3.54	11 / 0.43	161 / 6.34	106 / 4.17	115 / 4.53	109 / 4.29	179 / 7.05
90L	545 / 21.46	567 / 22.32	577 / 22.72	599 / 23.58	100 / 3.94	200 / 7.87	180 / 7.09	210 / 8.27	12 / 0.47	112 / 4.41	15 / 0.59	60 / 2.36	4 / 0.16	90 / 3.54	11 / 0.43	161 / 6.34	118.5 / 4.67	115 / 4.53	109 / 4.29	179 / 7.05
100	650.5 / 25.61	672.5 / 26.48	682.5 / 26.87	704.5 / 27.74	120 / 4.72	250 / 9.84	220 / 8.66	250 / 9.84	15 / 0.59	132 / 5.20	21 / 0.83	60 / 2.36	-	97 / 3.82	13 / 0.51	193 / 7.60	133 / 5.24	134 / 5.28	163 / 6.42	199 / 7.83
112	640 / 25.20	662 / 26.06	672 / 26.46	694 / 27.32	120 / 4.72	250 / 9.84	220 / 8.66	250 / 9.84	15 / 0.59	132 / 5.20	21 / 0.83	60 / 2.36	-	97 / 3.82	13 / 0.51	196 / 7.72	140 / 5.51	140 / 5.51	163 / 6.42	222 / 8.74

Note: With flange connection, the same external dimensions as with pipe connection.

KF 2.5 ... 25 – Dimensions of the pump

Nominal size	Dimensions			
	F	J	J1	i
2.5 ... 12	54 / 2.13	108 / 4.25	140 / 5.51	14.2 / 0.56
16 ... 25	63 / 2.48	130 / 5.12	162 / 4.38	14.2 / 0.56

Notes

* Dimensions dependent on motor manufacturer.

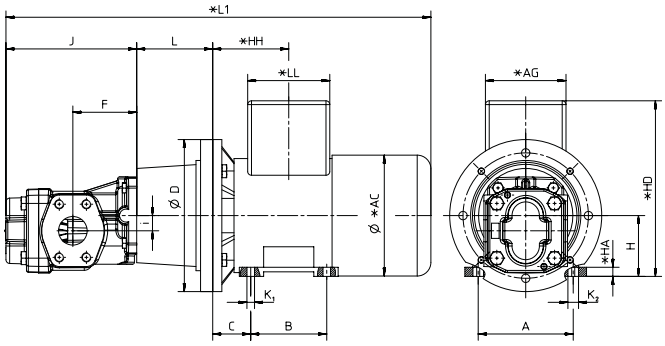
Motor frame sizes are based on DIN 42673/677.
All pump and motor sizes can be combined.

Dimensions in mm / inch

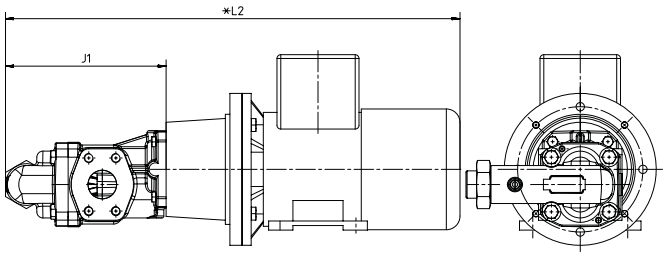
Dimensions

I KF 32 ... 80 – Motor-pump units with SAE connection

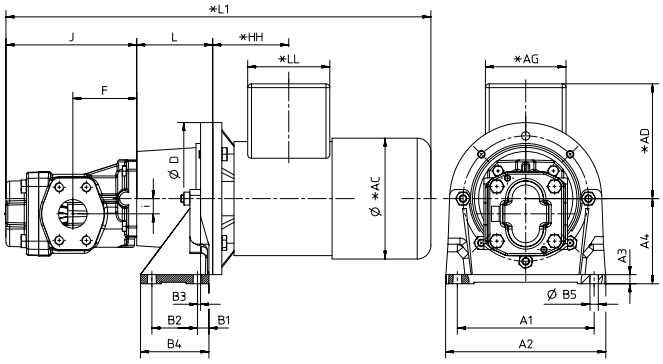
Version with bearing cover
Design IM B35



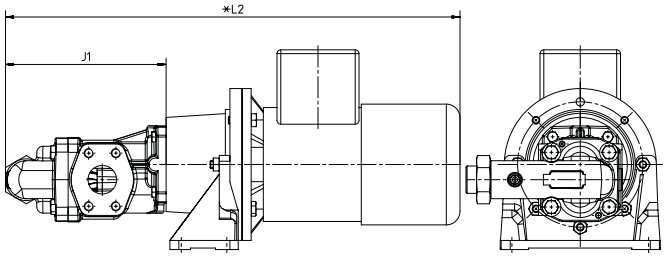
Version with pressure relief valve
Design IM B35



Version with bearing cover
Foot flange L (light version)
Design IM B5



Version with pressure relief valve
Foot flange L (light version)
Design IM B5



Dimensions in mm / inch

Dimensions

KF 32 ... 80 – Dimensions of motor-pump units, design IM B35

Size	Dimensions																	
	32 ... 50	63 ... 80	32 ... 50	63 ... 80	32 ... 80													
	L1*	L1*	L2*	L2*	L	i	a1	a	b	c*	e*	f*	g*	h	o*	p*	q*	w1
80	563 / 22.17	598 / 23.54	602.5 / 23.72	637.5 / 25.10	100 / 3.94	200 / 7.87	125 / 4.92	100 / 3.94	50 / 1.97	80 / 3.15	231 / 9.09	10 / 0.39	14 / 0.55	159 / 6.26	12 / 0.47	108 / 4.25	100 / 3.94	106 / 4.17
90S	579 / 22.80	614 / 24.17	618.5 / 24.35	653.5 / 25.73	110 / 4.33	200 / 7.87	140 / 5.51	100 / 3.94	56 / 2.20	90 / 3.54	251 / 9.88	10 / 0.39	14 / 0.55	179 / 7.05	13 / 0.51	115 / 4.53	106 / 4.17	109 / 4.29
90L	619 / 24.37	654 / 25.75	658.5 / 25.93	693.5 / 27.30	110 / 4.33	200 / 7.87	140 / 5.51	125 / 4.92	56 / 2.20	90 / 3.54	251 / 9.88	10 / 0.39	14 / 0.55	179 / 7.05	13 / 0.51	115 / 4.53	118.5 4.67	109 / 4.29
100	718.5 / 28.29	753.5 / 29.67	758 / 29.84	793 / 31.22	124 / 4.88	250 / 9.84	160 / 6.30	140 / 5.51	63 / 2.48	100 / 3.94	293 / 11.54	12 / 0.47	16 / 0.63	199 / 7.83	16 / 0.63	134 / 5.28	133 / 5.24	163 / 6.42
112	708 / 27.87	743 / 29.25	747.5 / 29.43	782.5 / 30.81	124 / 4.88	250 / 9.84	190 / 7.48	140 / 5.51	70 / 2.76	112 / 4.41	308 / 12.13	12 / 0.47	16 / 0.63	222 / 8.74	15 / 0.59	140 / 5.51	140 / 5.51	163 / 6.42
132S	752.5 / 29.63	787.5 / 31.00	792 31.18	827 / 32.56	144 / 5.67	300 / 11.81	216 / 8.50	140 / 5.51	89 / 3.50	132 / 5.20	350 / 13.78	12 / 0.47	16 / 0.63	271 / 10.67	20 / 0.79	140 / 5.51	159 / 6.26	163 / 6.42
132M	752.5 / 29.63	787.5 / 31.00	792 31.18	827 / 32.56	144 / 5.67	300 / 11.81	216 / 8.50	178 / 7.01	89 / 3.50	132 / 5.20	350 / 13.78	12 / 0.47	16 / 0.63	271 / 10.67	20 / 0.79	140 / 5.51	178 / 7.01	163 / 6.42
160M	916 / 36.06	951 / 37.44	955.5 / 37.62	990.5 / 39.00	188 / 7.40	350 13.78	254 / 10.00	210 / 8.27	108 / 4.25	160 / 6.30	437 / 17.20	15 / 0.59	19 / 0.75	329 / 12.95	22 / 0.87	198 / 7.80	213 / 8.39	190 / 7.48
160L	938 / 36.93	973 / 38.31	977.5 / 38.48	1012.5 / 39.86	188 / 7.40	350 13.78	254 / 10.00	254 / 10.00	108 / 4.25	160 / 6.30	437 / 17.20	15 / 0.59	19 / 0.75	329 / 12.95	22 / 0.87	198 / 7.80	235 / 9.25	190 / 7.48

KF 32 ... 80 – Dimensions of motor-pump units with foot flange, design IM B5

Size	Dimensions																		
	32 ... 50	63 ... 80	32 ... 50	63 ... 80	32 ... 80														
	L1*	L1*	L2*	L2*	L	øD	A1	A2	A3	A4	B1	B2	B3	B4	B5	*AD	*HH	*LL	*AG	*AC
80	563 / 22.17	598 / 23.54	602.5 / 23.72	637.5 / 25.10	100 / 3.94	200 / 7.87	180 / 7.09	210 / 8.27	12 / 0.47	112 / 4.41	15 / 0.59	60 / 2.36	4 / 0.16	90 / 3.54	11 / 0.43	151 / 5.94	100 / 3.94	108 / 4.25	106 / 4.17	159 / 6.26
90S	579 / 22.80	614 / 24.17	618.5 / 24.35	653.5 / 25.73	110 / 4.33	200 / 7.87	180 / 7.09	210 / 8.27	12 / 0.47	112 / 4.41	15 / 0.59	60 / 2.36	4 / 0.16	90 / 3.54	11 / 0.43	161 / 6.34	106 / 4.17	115 / 4.53	109 / 4.29	179 / 7.05
90L	619 / 24.37	654 / 25.75	658.5 / 25.93	693.5 / 27.30	110 / 4.33	200 / 7.87	180 / 7.09	210 / 8.27	12 / 0.47	112 / 4.41	15 / 0.59	60 / 2.36	4 / 0.16	90 / 3.54	11 / 0.43	161 / 6.34	118.5 / 4.67	115 / 4.53	109 / 4.29	179 / 7.05
100	718.5 / 28.29	753.5 / 29.67	758 / 29.84	793 / 31.22	124 / 4.88	250 / 9.84	220 / 8.66	250 / 9.84	15 / 0.59	132 / 5.20	21 / 0.83	60 / 2.36	-	97 / 3.82	13 / 0.51	193 / 7.60	133 / 5.24	134 / 5.28	163 / 6.42	199 / 7.83
112	708 / 27.87	743 / 29.25	747.5 / 29.43	782.5 / 30.81	124 / 4.88	250 / 9.84	220 / 8.66	250 / 9.84	15 / 0.59	132 / 5.20	21 / 0.83	60 / 2.36	-	97 / 3.82	13 / 0.51	196 / 7.72	140 / 5.51	140 / 5.51	163 / 6.42	222 / 8.74
132S	752.5 / 29.63	787.5 / 31.00	792 31.18	827 / 32.56	144 / 5.67	300 / 11.81	260 / 10.24	290 / 11.42	18 / 0.71	160 / 6.30	20 / 0.79	80 / 3.15	-	116 / 4.57	13 / 0.51	218 / 8.58	159 / 6.26	140 / 5.51	163 / 6.42	271 / 10.67
132M	752.5 / 29.63	787.5 / 31.00	792 31.18	827 / 32.56	144 / 5.67	300 / 11.81	260 / 10.24	290 / 11.42	18 / 0.71	160 / 6.30	20 / 0.79	80 / 3.15	-	116 / 4.57	13 / 0.51	218 / 8.58	178 / 7.01	140 / 5.51	163 / 6.42	271 / 10.67
160M	916 / 36.06	951 / 37.44	955.5 / 37.62	990.5 / 39.00	188 / 7.40	350 / 13.78	300 / 11.81	340 / 13.39	22 / 0.87	180 / 7.09	20 / 0.79	110 / 4.33	-	150 / 5.91	16 / 0.63	277 / 10.91	213 / 8.39	198 / 8.00	190 / 7.48	329 / 12.95
160L	938 / 36.93	973 / 38.31	977.5 / 38.48	1012.5 / 39.86	188 / 7.40	350 / 13.78	300 / 11.81	340 / 13.39	22 / 0.87	180 / 7.09	20 / 0.79	110 / 4.33	-	150 / 5.91	16 / 0.63	277 / 10.91	235 / 9.25	198 / 8.00	190 / 7.48	329 / 12.95

KF 32 ... 80 – Dimensions of the pump

Nominal size	Dimensions			
	F	J	J1	i
32 ... 50	84 / 3.31	172 / 6.77	211.5 / 8.33	20 / 0.79
63 / 80	100 / 3.94	207 / 8.15	246.5 / 9.70	20 / 0.79

Notes

* Dimensions dependent on motor manufacturer.

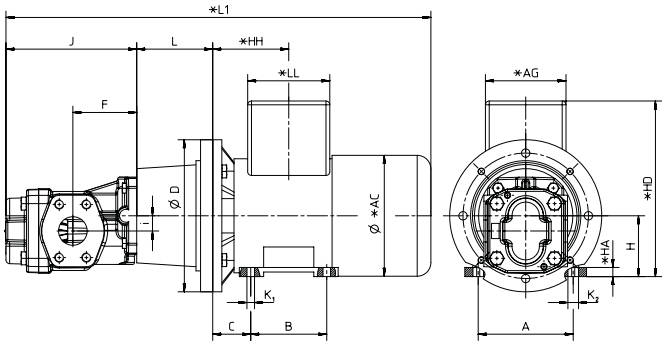
Motor frame sizes are based on DIN 42673/677.
All pump and motor sizes can be combined.

Dimensions in mm / inch

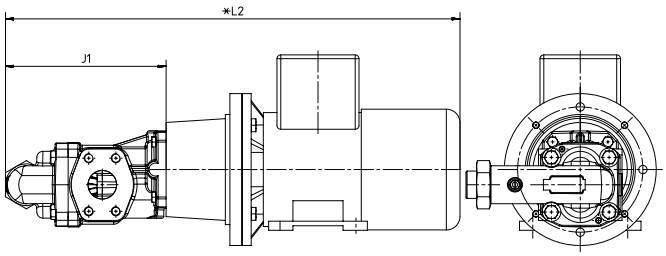
Dimensions

I KF 100 ... 200 – Motor-pump units with SAE connection

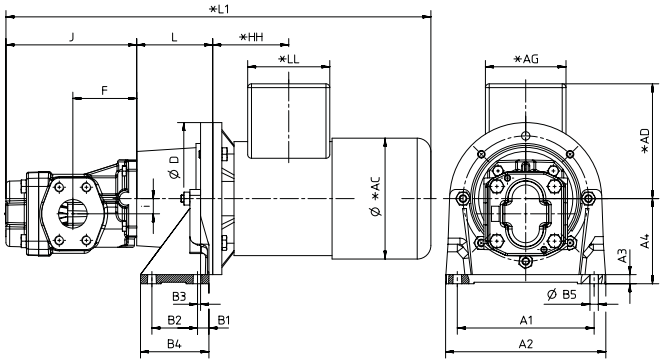
Version with bearing cover
Design IM B35



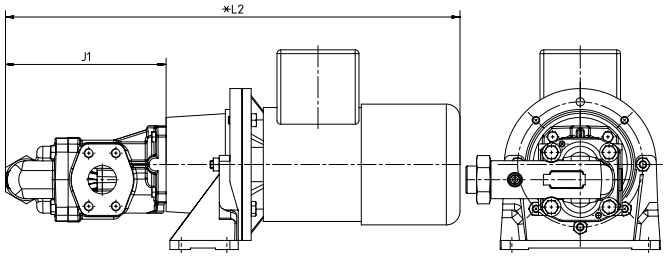
Version with pressure relief valve
Design IM B35



Version with bearing cover
Foot flange L (light version)
Design IM B5



Version with pressure relief valve
Foot flange L (light version)
Design IM B5



Dimensions in mm / inch

Dimensions

KF 100 ... 200 – Dimensions of motor-pump units, design IM B35

Size	Dimensions																		
	100/112	125/150	180/200	100/112	125/150	180/200													
	L1*	L1*	L1*	L2*	L2*	L2*	L	øD	A	B	C	H	*HD	K1	K2	*AC	*HA	*LL	*HH	*AG
100	778 / 30.63	802.5 / 31.59	819 / 32.24	820 / 32.28	839.5 / 33.05	856 / 33.70	135 / 5.31	250 / 9.84	160 / 6.30	140 / 5.51	63 / 2.48	100 / 3.94	293 / 11.54	12 / 0.47	16 / 0.63	199 / 7.83	16 / 0.63	134 / 5.28	133 / 5.24	163 / 6.42
112	767.5 / 30.22	792 / 31.18	808.5 / 31.83	809.5 / 31.87	829 / 32.64	845.5 / 33.29	135 / 5.31	250 / 9.84	190 / 7.48	140 / 5.51	70 / 2.76	112 / 4.41	308 / 12.13	12 / 0.47	16 / 0.63	222 / 8.74	15 / 0.59	140 / 5.51	140 / 5.51	163 / 6.42
132S	825 / 32.48	849.5 / 33.44	866 / 34.09	867 / 34.13	886.5 / 34.90	903 / 35.55	168 / 6.61	300 / 11.81	216 / 8.50	140 / 5.51	89 / 3.50	132 / 5.20	350 / 13.78	12 / 0.47	16 / 0.63	271 / 10.67	20 / 0.79	140 / 5.51	159 / 6.26	163 / 6.42
132M	825 / 32.48	849.5 / 33.44	866 / 34.09	867 / 34.13	886.5 / 34.90	903 / 35.55	168 / 6.61	300 / 11.81	216 / 8.50	178 / 7.01	89 / 3.50	132 / 5.20	350 / 13.78	12 / 0.47	16 / 0.63	271 / 10.67	20 / 0.79	140 / 5.51	178 / 7.01	163 / 6.42
160M	964.5 / 37.97	989 / 38.94	1005.5 / 39.59	1006.5 / 39.63	1026 / 40.39	1042.5 / 41.04	188 / 7.40	350 / 13.78	254 / 10.00	210 / 8.27	108 / 4.25	160 / 6.30	437 / 17.20	15 / 0.59	19 / 0.75	329 / 13.00	22 / 0.87	198 / 7.80	213 / 8.39	190 / 7.48
160L	986.5 / 38.84	1011 / 39.80	1027.5 / 40.45	1028.5 / 40.49	1048 / 41.26	1064.5 / 41.91	188 / 7.40	350 / 13.78	254 / 10.00	254 / 10.00	108 / 4.25	160 / 6.30	437 / 17.20	15 / 0.59	19 / 0.75	329 / 12.95	22 / 0.87	198 / 7.80	235 / 9.25	190 / 7.48
180M	1025.5 / 40.37	1050 / 41.34	1066.5 / 41.99	1067.5 / 42.03	1087 / 42.80	1103.5 / 43.44	204 / 8.03	350 / 13.78	279 / 10.98	241 / 9.49	121 / 4.76	180 / 7.09	477 / 18.78	15 / 0.59	19 / 0.75	360 / 14.17	28 / 1.10	198 / 7.80	241.5 / 9.51	190 / 7.48
180L	1060.5 / 41.75	1085 / 42.72	1101.5 / 43.37	1102.5 / 43.41	1122 / 44.17	1138.5 / 44.82	204 / 8.03	350 / 13.78	279 / 10.98	279 / 10.98	121 / 4.76	180 / 7.09	477 / 18.78	15 / 0.59	19 / 0.75	360 / 14.17	28 / 1.10	198 / 7.80	261 / 10.28	210 / 8.27

KF 100 ... 200 – Dimensions of motor-pump units mit Foot flange, design IM B5

Size	Dimensions																				
	100/112	125/150	180/200	100/112	125/150	180/200															
	L1*	L1*	L1*	L2*	L2*	L2*	L	øD	A1	A2	A3	A4	B1	B2	B3	B4	B5	*AD	*HH	*LL	*AG	*AC
100	778 / 30.63	802.5 / 31.59	819 / 32.24	820 / 32.28	839.5 / 33.05	856 / 33.70	135 / 5.31	250 / 9.84	220 / 8.66	250 / 9.84	15 / 0.59	132 / 5.20	21 / 0.83	60 / 2.36	-	97 / 3.82	13 / 0.51	193 / 7.60	133 / 5.24	134 / 5.28	163 / 6.42	199 / 7.83
112	767.5 / 30.22	792 / 31.18	808.5 / 31.83	809.5 / 31.87	829 / 32.64	845.5 / 33.29	135 / 5.31	250 / 9.84	220 / 8.66	250 / 9.84	15 / 0.59	132 / 5.20	21 / 0.83	60 / 2.36	-	97 / 3.82	13 / 0.51	196 / 7.72	140 / 5.51	140 / 5.51	163 / 6.42	222 / 8.74
132S	825 / 32.48	849.5 / 33.44	866 / 34.09	867 / 34.13	886.5 / 34.90	903 / 35.55	168 / 6.61	300 / 11.81	260 / 10.24	290 / 11.42	18 / 0.71	160 / 6.30	20 / 0.79	80 / 3.15	-	116 / 4.57	13 / 0.51	218 / 8.58	159 / 6.26	140 / 5.51	163 / 6.42	271 / 10.67
132M	825 / 32.48	849.5 / 33.44	866 / 34.09	867 / 34.13	886.5 / 34.90	903 / 35.55	168 / 6.61	300 / 11.81	260 / 10.24	290 / 11.42	18 / 0.71	160 / 6.30	20 / 0.79	80 / 3.15	-	116 / 4.57	13 / 0.51	218 / 8.58	178 / 7.01	140 / 5.51	163 / 6.42	271 / 10.67
160M	964.5 / 37.97	989 / 38.94	1005.5 / 39.59	1006.5 / 39.63	1026 / 40.39	1042.5 / 41.04	188 / 7.40	350 / 13.78	300 / 11.81	340 / 13.39	22 / 0.87	180 / 7.09	20 / 0.79	110 / 4.33	-	150 / 5.91	16 / 0.63	277 / 10.91	213 / 8.39	198 / 7.80	190 / 7.48	329 / 12.95
160L	986.5 / 38.84	1011 / 39.80	1027.5 / 40.45	1028.5 / 40.49	1048 / 41.26	1064.5 / 41.91	188 / 7.40	350 / 13.78	300 / 11.81	340 / 13.39	22 / 0.87	180 / 7.09	20 / 0.79	110 / 4.33	-	150 / 5.91	16 / 0.63	277 / 10.91	235 / 9.25	198 / 7.80	190 / 7.48	329 / 12.95
180M	1025.5 / 40.37	1050 / 41.34	1066.5 / 41.99	1067.5 / 42.03	1087 / 42.80	1103.5 / 43.44	204 / 8.03	350 / 13.78	300 / 11.81	340 / 13.39	22 / 0.87	180 / 7.09	20 / 0.79	110 / 4.33	-	150 / 5.91	16 / 0.63	297 / 11.69	241.5 / 9.51	198 / 7.80	190 / 7.48	360 / 14.17
180L	1060.5 / 41.75	1085 / 42.72	1101.5 / 43.37	1102.5 / 43.41	1122 / 44.17	1138.5 / 44.82	204 / 8.03	350 / 13.78	300 / 11.81	340 / 13.39	22 / 0.87	180 / 7.09	20 / 0.79	110 / 4.33	-	150 / 5.91	16 / 0.63	297 / 11.69	261 / 10.28	198 / 7.80	210 / 8.27	360 / 14.17

KF 100 ... 200 – Dimensions of the pump

Nominal size	Dimensions			
	F	J	J1	i
100 / 112	102 / 4.02	220.5 / 8.68	262.5 / 10.33	23.7 / 0.93
125 / 150	120 / 4.72	245.0 / 9.65	282.0 / 11.10	23.7 / 0.93
180 / 200	130 / 5.12	261.5 / 10.30	298.5 / 11.75	23.7 / 0.93

Notes

* Dimensions dependent on motor manufacturer.

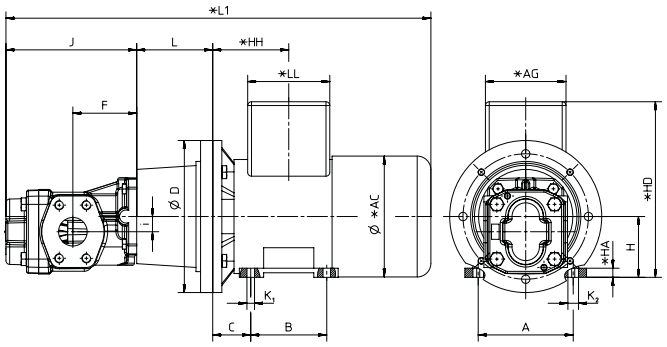
Motor frame sizes are based on DIN 42673/677.
All pump and motor sizes can be combined.

Dimensions in mm / inch

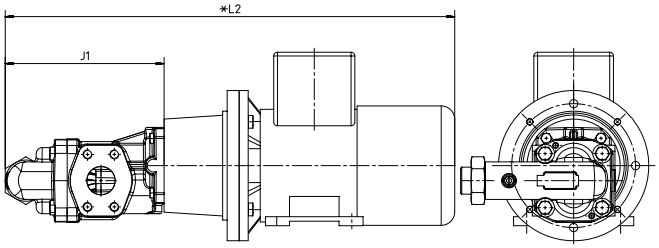
Dimensions

I KF 250 ... 630 – Motor-pump units with SAE connection

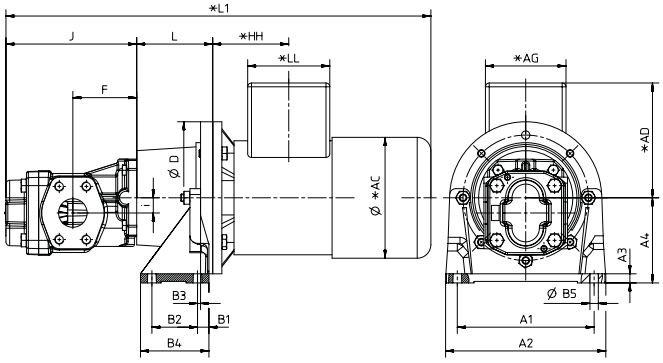
Version with bearing cover
Design IM B35



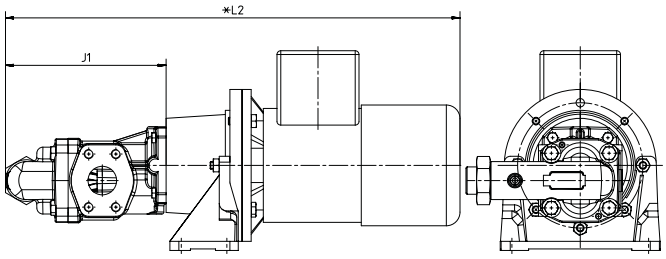
Version with pressure relief valve
Design IM B35



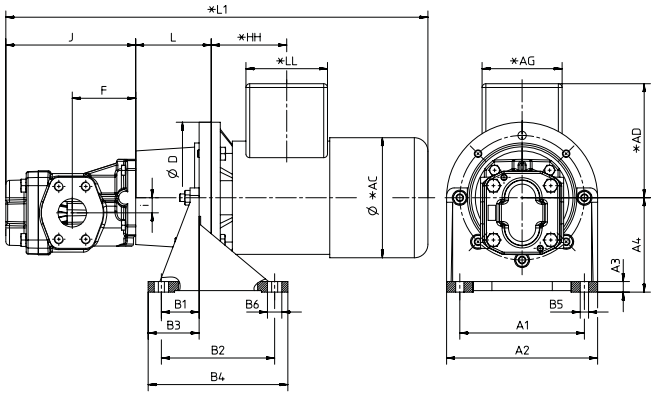
Version with bearing cover
Foot flange L (light version)
Design IM B5



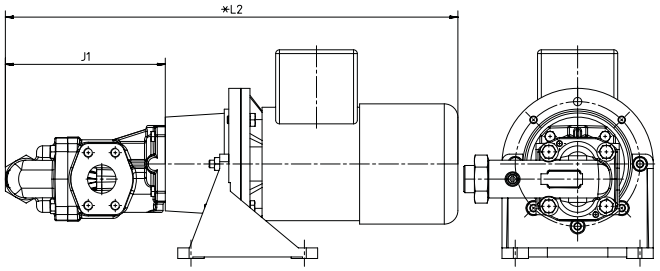
Version with pressure relief valve
Foot flange L (light version)
Design IM B5



Version with bearing cover
Foot flange S (heavy version)
Design IM B5



Version with pressure relief valve
Foot flange S (heavy version)
Design IM B5



Dimensions in mm / inch

Dimensions

KF 250 ... 630 – Dimensions of motor-pump units, Design IM B35

Size	Dimensions																				
	250/315	400/500	630	250/315	400/500	630															
	L1*	L1*	L1*	L2*	L2*	L2*	L	øD	A	B	C	H	*HD	K1	K2	*AC	*HA	*LL	*HH	*AG
132S	943.5 / 37.15	1005.5 / 39.59	1049.5 / 41.32	996.5 / 39.23	1058.5 / 41.67	1102.5 / 43.41	196 / 7.72	300 / 11.81	216 / 8.50	140 / 5.51	89 / 3.50	132 / 5.20	350 / 13.78	12 / 0.47	16 / 0.63	271 / 10.67	20 / 0.79	140 / 5.51	159.0 / 6.26	163 / 6.42
132M	943.5 / 37.15	1005.5 / 39.59	1049.5 / 41.32	996.5 / 39.23	1058.5 / 41.67	1102.5 / 43.41	196 / 7.72	300 / 11.81	216 / 8.50	178 / 7.01	89 / 3.50	132 / 5.20	350 / 13.78	12 / 0.47	16 / 0.63	271 / 10.67	20 / 0.79	140 / 5.51	178.0 / 7.01	163 / 6.42
160M	1095 / 43.11	1157 / 45.55	1201 / 47.28	1148 / 45.20	1210 / 47.64	1254 / 49.37	228 / 8.98	350 / 13.78	254 / 10.00	210 / 8.27	108 / 4.25	160 / 6.30	437 / 17.20	15 / 0.59	19 / 0.75	329 / 12.95	22 / 0.87	198 / 7.80	213.0 / 8.39	190 / 7.48
160L	1117 / 43.98	1179 / 46.42	1223 / 48.15	1170 / 46.06	1232 / 48.50	1276 / 50.24	228 / 8.98	350 / 13.78	254 / 10.00	254 / 10.00	108 / 4.25	160 / 6.30	437 / 17.20	15 / 0.59	19 / 0.75	329 / 12.95	22 / 0.87	198 / 7.80	235.0 / 9.25	190 / 7.48
180M	1140 / 44.88	1202 / 47.32	1246 / 49.06	1193 / 46.97	1255 / 49.41	1299 / 51.14	228 / 8.98	350 / 13.78	279 / 10.98	241 / 9.49	121 / 4.76	180 / 7.09	477 / 18.78	15 / 0.59	19 / 0.75	360 / 14.17	28 / 1.10	198 / 7.80	241.5 / 9.51	190 / 7.48
180L	1175 / 46.26	1237 / 48.70	1281 / 50.43	1228 / 48.35	1290 / 50.79	1334 / 52.52	228 / 8.98	350 / 13.78	279 / 10.98	279 / 10.98	121 / 4.76	180 / 7.09	477 / 18.78	15 / 0.59	19 / 0.75	360 / 14.17	28 / 1.10	198 / 7.80	261.0 / 10.28	210 / 8.27
200L	1275 / 50.20	1337 / 52.64	1381 / 54.37	1328 / 52.28	1390 / 54.72	1434 / 56.46	228 / 8.98	400 / 15.75	318 / 12.52	305 / 12.01	133 / 5.24	200 / 7.87	521 / 20.51	19 / 0.75	25 / 0.98	402 / 15.83	30 / 1.18	228 / 8.98	285.0 / 11.22	266 / 10.47
225S	1319 / 51.93	1381 / 54.37	1425 / 56.10	1372 / 54.02	1434 / 56.46	1478 / 58.19	262 / 10.32	450 / 17.72	356 / 14.02	286 / 11.26	149 / 5.87	225 / 8.86	609 / 23.98	19 / 0.75	25 / 0.98	465 / 18.31	34 / 1.34	261 / 10.28	283.0 / 11.14	292 / 11.50
225M	1361 / 53.58	1423 / 56.02	1467 / 57.76	1414 / 55.67	1476 / 58.11	1520 / 59.84	262 / 10.32	450 / 17.72	356 / 14.02	311 / 12.24	149 / 5.87	225 / 8.86	609 / 23.98	19 / 0.75	25 / 0.98	465 / 18.31	34 / 1.34	261 / 10.28	295.0 / 11.61	292 / 11.50
250M	1416 / 55.75	1478 / 58.19	1522 / 59.92	1469 / 57.83	1531 / 60.28	1575 / 62.01	265 / 10.43	550 / 21.65	406 / 15.98	349 / 13.74	168 / 6.61	250 / 9.84	660 / 25.98	24 / 0.94	30 / 1.18	506 / 19.92	43 / 1.69	261 / 10.28	342.0 / 13.46	319 / 12.56

KF 250 ... 630 – Dimensions of motor-pump units with foot flange L, Design IM B5

Size	Dimensions																					
	250/315	400/500	630	250/315	400/500	630																
	L1*	L1*	L1*	L2*	L2*	L2*	L	øD	A1	A2	A3	A4	B1	B2	B3	B4	B5	B6	*AD	*HH	*LL	*AG	*AC
132S	943.5 / 37.15	1005.5 / 39.59	1049.5 / 41.32	996.5 / 39.23	1058.5 / 41.67	1102.5 / 43.41	196 / 7.72	300 / 11.81	265 / 10.43	300 / 11.81	19 / 0.75	185 / 7.28	75 / 2.95	225 / 8.86	92 / 3.62	270 / 10.63	14 / 0.55	10 / 0.39	218 / 8.58	159 / 6.26	140 / 5.51	163 / 6.42	271 / 10.67
132M	943.5 / 37.15	1005.5 / 39.59	1049.5 / 41.32	996.5 / 39.23	1058.5 / 41.67	1102.5 / 43.41	196 / 7.72	300 / 11.81	265 / 10.43	300 / 11.81	19 / 0.75	185 / 7.28	75 / 2.95	225 / 8.86	92 / 3.62	270 / 10.63	14 / 0.55	10 / 0.39	218 / 8.58	178 / 7.01	140 / 5.51	163 / 6.42	271 / 10.67
160M	1095 / 43.11	1157 / 45.55	1201 / 47.28	1148 / 45.20	1210 / 47.64	1254 / 49.37	228 / 8.98	350 / 13.78	300 / 11.81	350 / 13.78	18 / 0.71	235 / 9.25	90 / 3.54	265 / 10.43	110 / 4.33	305 / 12.01	18 / 0.71	12 / 0.47	277 / 10.91	213 / 8.39	198 / 7.80	190 / 7.48	329 / 12.95

KF 250 ... 630 – Dimensions of motor-pump units with foot flange S, Design IM B5

Size	Dimensions																					
	250/315	400/500	630	250/315	400/500	630																
	L1*	L1*	L1*	L2*	L2*	L2*	L	øD	A1	A2	A3	A4	B1	B2	B3	B4	B5	B6	*AD	*HH	*LL	*AG	*AC
160L	1117 / 43.98	1179 / 46.42	1223 / 48.15	1170 / 46.06	1232 / 48.50	1276 / 50.24	228 / 8.98	350 / 13.78	300 / 11.81	350 / 13.78	18 / 0.71	235 / 9.25	90 / 3.54	265 / 10.43	110 / 4.33	305 / 12.01	18 / 0.71	12 / 0.47	277 / 10.91	235.0 / 9.25	198 / 7.80	190 / 7.48	329 / 12.95
180M	1140 / 44.88	1202 / 47.32	1246 / 49.06	1193 / 46.97	1255 / 49.41	1299 / 51.14	228 / 8.98	350 / 13.78	300 / 11.81	350 / 13.78	18 / 0.71	235 / 9.25	90 / 3.54	265 / 10.43	110 / 4.33	305 / 12.01	18 / 0.71	12 / 0.47	297 / 11.69	241.5 / 9.51	198 / 7.80	190 / 7.48	360 / 14.17
180L	1175 / 46.26	1237 / 48.70	1281 / 50.43	1228 / 48.35	1290 / 50.79	1334 / 52.52	228 / 8.98	350 / 13.78	300 / 11.81	350 / 13.78	18 / 0.71	235 / 9.25	90 / 3.54	265 / 10.43	110 / 4.33	305 / 12.01	18 / 0.71	12 / 0.47	297 / 11.69	261.0 / 10.28	198 / 7.80	210 / 8.27	360 / 14.17
200L	1275 / 50.20	1337 / 52.64	1381 / 54.37	1328 / 52.28	1390 / 54.72	1434 / 56.46	228 / 8.98	400 / 15.75	300 / 11.81	400 / 15.75	20 / 0.79	260 / 10.24	100 / 3.94	300 / 11.81	125 / 4.92	350 / 13.78	18 / 0.71	12 / 0.47	321 / 12.64	285.0 / 11.22	228 / 8.98	266 / 10.47	402 / 15.83
225S	1319 / 51.93	1381 / 54.37	1425 / 56.10	1372 / 54.02	1434 / 56.46	1478 / 58.19	262 / 10.32	400 / 15.75	400 / 15.75	450 / 17.72	20 / 0.79	295 / 11.61	110 / 4.33	335 / 13.19	138 / 5.43	385 / 15.16	18 / 0.71	12 / 0.47	384 / 15.12	283.0 / 11.14	261 / 10.28	292 / 11.50	465 / 18.31
225M	1361 / 53.58	1423 / 56.02	1467 / 57.76	1414 / 55.67	1476 / 58.11	1520 / 59.84	262 / 10.32	400 / 15.75	400 / 15.75	450 / 17.72	20 / 0.79	295 / 11.61	110 / 4.33	335 / 13.19	138 / 5.43	385 / 15.16	18 / 0.71	12 / 0.47	384 / 15.12	295.0 / 11.61	261 / 10.28	292 / 11.50	465 / 18.31
250M	1416 / 55.75	1478 / 58.19	1522 / 59.92	1469 / 57.83	1531 / 60.28	1575 / 62.01	262 / 10.32	400 / 15.75	400 / 15.75	550 / 21.65	25 / 0.98	350 / 13.78	140 / 5.51	415 / 16.34	165 / 6.50	385 / 15.16	18 / 0.71	12 / 0.47	410 / 16.14	342.0 / 13.46	261 / 10.28	319 / 12.56	506 / 19.92

KF 250 ... 630 – Dimensions of the pump

Nominal size	Dimensions		
	F	J	J1
250 / 315	155 / 6.10	311 / 12.24	364 / 14.33
400 / 500	200 / 7.87	373 / 14.69	426 / 16.77
630	200 / 7.87	417 / 16.42	470 / 18.50

Notes

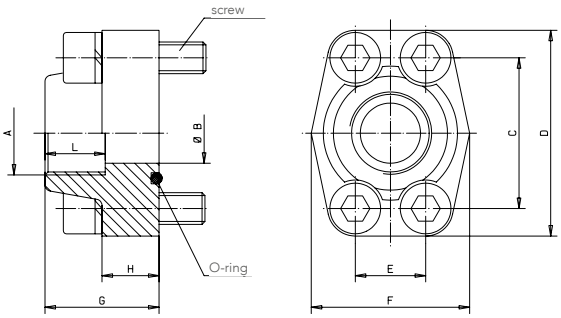
* Dimensions dependent on motor manufacturer.

Motor frame sizes are based on DIN 42673/677.
All pump and motor sizes can be combined.

Dimensions in mm / inch

Dimensions and weights

SAE threaded flange



Nominal size SAE	A	B max.	C	D*	E	F*	G	H*	L min.	Screws 10.9	O-ring	Working pressure max.** in bar/psi	Weight approx. in kg/lbs
3/4"	G 1/2"	13 / 0.51	47.63 / 1.88	65 / 2.56	22.23 / 0.88	50 / 1.97	36 / 1.42	18 / 0.71	14 / 0.55	M 10x35 / 1.38	24.99 x 3.53 / 0.98 x 0.14	350 / 5076	0.54 / 1.19
	G 3/4"	19 / 0.75	47.63 / 1.88	65 / 2.56	22.23 / 0.88	50 / 1.97	36 / 1.42	18 / 0.71	16 / 0.63	M 10x35 / 1.38	24.99 x 3.53 / 0.98 x 0.14	350 / 5076	0.51 / 1.12
1"	G 1/2"	13 / 0.51	52.37 / 2.06	70 / 2.76	26.19 / 1.03	55 / 2.17	38 / 1.50	18 / 0.71	14 / 0.55	M 10x35 / 1.38	32.92 x 3.53 / 1.30 x 0.14	315 / 4569	0.64 / 1.41
	G 3/4"	19 / 0.75	52.37 / 2.06	70 / 2.76	26.19 / 1.03	55 / 2.17	38 / 1.50	18 / 0.71	16 / 0.63	M 10x35 / 1.38	32.92 x 3.53 / 1.30 x 0.14	315 / 4569	0.61/ 1.34
	G 1"	25 / 0.98	52.37 / 2.06	70 / 2.76	26.19 / 1.03	55 / 2.17	38 / 1.50	18 / 0.71	18 / 0.71	M 10x35 / 1.38	32.92 x 3.53 / 1.30 x 0.14	315 / 4569	0.58 / 1.28
1 1/4"	G 3/4"	19 / 0.75	58.72 / 2.31	79 / 3.11	30.18 / 1.19	68 / 2.70	41 / 1.61	21 / 0.83	16 / 0.63	M 10x40 / 1.57	37.69 x 3.53 / 1.48 x 0.14	250 / 3626	0.92 / 2.03
	G 1"	25 / 0.98	58.72 / 2.31	79 / 3.11	30.18 / 1.19	68 / 2.68	42 / 1.65	25 / 0.98	18 / 0.71	M 10x40 / 1.57	37.69 x 3.53 / 1.48 x 0.14	250 / 3626	0.88 / 1.94
	G 1 1/4"	32 / 1.26	58.72 / 2.31	79 / 3.11	30.18 / 1.19	68 / 2.68	41 / 1.61	21 / 0.83	20 / 0.79	M 10x40 / 1.57	37.69 x 3.53 / 1.48 x 0.14	250 / 3626	0.79 / 1.74
1 1/2"	G 1"	25 / 0.98	69.85 / 2.75	93 / 3.66	35.71 / 1.41	78 / 3.07	45 / 1.77	25 / 0.98	18 / 0.71	M 12x45 / 1.77	47.22 x 3.53 / 1.86 x 0.14	200 / 2901	1.36 / 3.00
	G 1 1/4"	32 / 1.26	69.85 / 2.75	93 / 3.66	35.71 / 1.41	78 / 3.07	45 / 1.77	27 / 1.06	20 / 0.79	M 12x45 / 1.77	47.22 x 3.53 / 1.86 x 0.14	200 / 2901	1.30 / 2.87
	G 1 1/2"	38 / 1.50	69.85 / 2.75	93 / 3.66	35.71 / 1.41	78 / 3.07	45 / 1.77	25 / 0.98	22 / 0.87	M 12x45 / 1.77	47.22 x 3.53 / 1.86 x 0.14	200 / 2901	1.25 / 2.76
2"	G 1"	25 / 0.98	77.77 / 3.06	102 / 4.02	42.88 / 1.69	90 / 3.54	45 / 1.77	25 / 0.98	18 / 0.71	M 12x45 / 1.77	56.74 x 3.53 / 2.23 x 0.14	200 / 2901	1.64 / 3.62
	G 1 1/4"	32 / 1.26	77.77 / 3.06	102 / 4.02	42.88 / 1.69	90 / 3.54	45 / 1.77	25 / 0.98	20 / 0.79	M 12x45 / 1.77	56.74 x 3.53 / 2.23 x 0.14	200 / 2901	1.60 / 3.53
	G 1 1/2"	38 / 1.50	77.77 / 3.06	102 / 4.02	42.88 / 1.69	90 / 3.54	45 / 1.77	25 / 0.98	22 / 0.87	M 12x45 / 1.77	56.74 x 3.53 / 2.23 x 0.14	200 / 2901	1.45 / 3.20
	G 2"	51 / 2.01	77.77 / 3.06	102 / 4.02	42.88 / 1.69	90 / 3.54	45 / 1.77	25 / 0.98	26 / 1.02	M 12x45 / 1.77	56.74 x 3.53 / 2.23 x 0.14	200 / 2901	1.39 / 3.06
2 1/2"	G 2"	51 / 2.01	88.90 / 3.50	114 / 4.49	50.80 / 2.00	105 / 4.13	50 / 1.97	25 / 0.98	26 / 1.02	M 12x45 / 1.77	69.44 x 3.53 / 2.73 x 0.14	160 / 2321	1.65 / 3.64
	G 2 1/2"	63 / 2.48	88.90 / 3.50	114 / 4.49	50.80 / 2.00	105 / 4.13	50 / 1.97	25 / 0.98	30 / 1.18	M 12x45 / 1.77	69.44 x 3.53 / 2.73 x 0.14	160 / 2321	1.60 / 3.53
3"	G 2 1/2 "	63 / 2.48	106.38 / 4.19	134 / 5.28	61.93 / 2.44	124 / 4.88	50 / 1.97	27 / 1.06	30 / 1.18	M 16x50 / 1.97	85.32 x 3.53 / 3.36 x 0.14	138 / 2002	2.68 / 5.91
	G 3"	73 / 2.87	106.38 / 4.19	134 / 5.28	61.93 / 2.44	124 / 4.88	50 / 1.97	27 / 1.06	30 / 1.18	M 16x50 / 1.97	85.32 x 3.53 / 3.36 x 0.14	138 / 2002	2.58 / 5.69
3 1/2"	G 3"	73 / 2.87	120.65 / 4.75	152 / 5.98	69.85 / 2.75	136 / 5.35	48 / 1.89	27 / 1.06	30 / 1.18	M 16x50 / 1.97	98.02 x 3.53 / 3.86 x 0.14	35 / 508	2.93 / 6.46
	G 3 1/2 "	89 / 3.50	120.65 / 4.75	152 / 5.98	69.85 / 2.75	136 / 5.35	48 / 1.89	27 / 1.06	30 / 1.18	M 16x50 / 1.97	98.02 x 3.53 / 3.86 x 0.14	35 / 508	2.83 / 6.24
4"	G 3 1/2 "	89 / 3.50	130.20 / 5.13	162 / 6.38	77.80 / 3.06	146 / 5.75	48 / 1.89	27 / 1.06	30 / 1.18	M 16x50 / 1.97	110.72 x 3.53 / 4.36 x 0.14	35 / 508	3.42 / 7.54
	G 4"	99 / 3.90	130.20 / 5.13	162 / 6.38	77.80 / 3.06	146 / 5.75	48 / 1.89	27 / 1.06	30 / 1.18	M 16x50 / 1.97	110.72 x 3.53 / 4.36 x 0.14	35 / 508	3.27 / 7.21

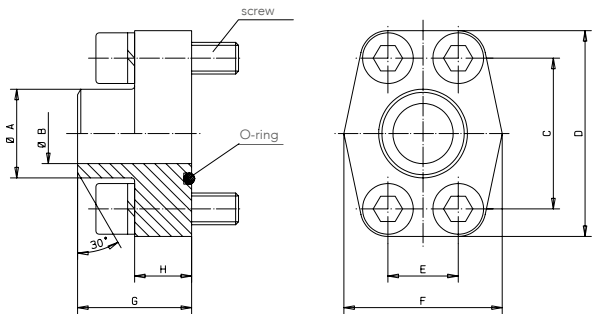
* Dimensions depending on the manufacturer.
** O-ring material with hardness 90 Shore A

Materials:
Steel S355J2G3 or equivalent
Stainless steel 1.4404 or equivalent

Dimensions in mm / inch

Dimensions and weights

I SAE welding flange



Nominal size SAE	A	B max.	C	D*	E	F*	G	H*	Screws 10.9	O-ring	Working pressure max.** in bar/psi	Weight approx. in kg/lbs
3/4"	28.0 / 1.10	19 / 0.75	47.63 / 1.88	65 / 2.56	22.23 / 0.88	50 / 1.97	36 / 1.42	18 / 0.71	M 10x35 / 1.38	24.99 x 3.53 / 0.98 x 0.14	350 / 5076	0.51 / 1.12
1"	34.0 / 1.34	25 / 0.98	52.37 / 2.06	70 / 2.76	26.19 / 1.03	55 / 2.17	38 / 1.50	18 / 0.71	M 10x35 / 1.38	32.92 x 3.53 / 1.30 x 0.14	315 / 4569	0.58 / 1.28
1 1/4"	42.8 / 1.69	32 / 1.26	58.72 / 2.31	79 / 3.11	30.18 / 1.19	68 / 2.68	41 / 1.61	21 / 0.83	M 10x40 / 1.57	37.69 x 3.53 / 1.48 x 0.14	250 / 3626	0.79 / 1.74
1 1/2"	48.6 / 1.91	38 / 1.50	69.85 / 2.75	93 / 3.66	35.71 / 1.41	78 / 3.07	44 / 1.73	25 / 0.98	M 12x45 / 1.77	47.22 x 3.53 / 1.86 x 0.14	200 / 2901	1.25 / 2.76
2"	61.0 / 2.40	51 / 2.01	77.77 / 3.06	102 / 4.02	42.88 / 1.69	90 / 3.54	45 / 1.77	25 / 0.98	M 12x45 / 1.77	56.74 x 3.53 / 2.23 x 0.14	200 / 2901	1.39 / 3.06
2 1/2"	77.0 / 3.03	63 / 2.48	88.90 / 3.50	114 / 4.49	50.80 / 2.00	105 / 4.13	50 / 1.97	25 / 0.98	M 12x45 / 1.77	69.44 x 3.53 / 2.73 x 0.14	160 / 2321	1.60 / 3.53
3"	92.0 / 3.62	73 / 2.87	106.38 / 4.19	134 / 5.28	61.93 / 2.44	124 / 4.88	50 / 1.97	27 / 1.06	M 16x50 / 1.97	85.32 x 3.53 / 3.36 x 0.14	138 / 2002	2.58 / 5.69
3 1/2"	103.0 / 4.06	89 / 3.50	120.65 / 4.75	152 / 5.98	69.85 / 2.75	136 / 5.35	48 / 1.89	27 / 1.06	M 16x50 / 1.97	98.02 x 3.53 / 3.86 x 0.14	35 / 508	2.83 / 6.24
4"	115.5 / 4.55	99 / 3.90	130.20 / 5.13	162 / 6.38	77.80 / 3.06	146 / 5.75	48 / 1.89	27 / 1.06	M 16x50 / 1.97	110.72 x 3.53 / 4.36 x 0.14	35 / 508	3.27 / 7.21

* Dimensions depending on the manufacturer.
** O-ring material with hardness 90 Shore A

Materials:
Steel S355J2G3 or equivalent
Stainless steel 1.4404 or equivalent

Dimensions in mm / inch

Pump technology

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