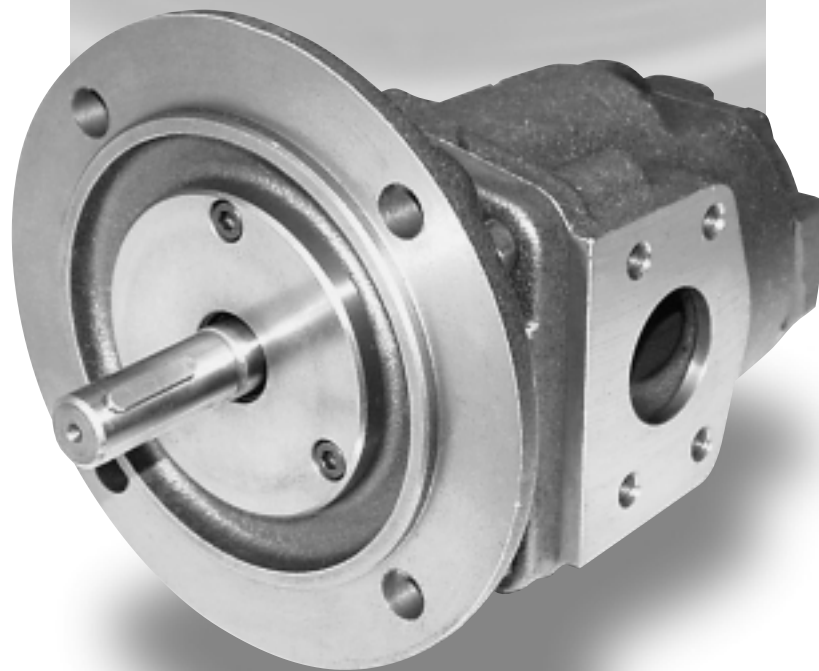
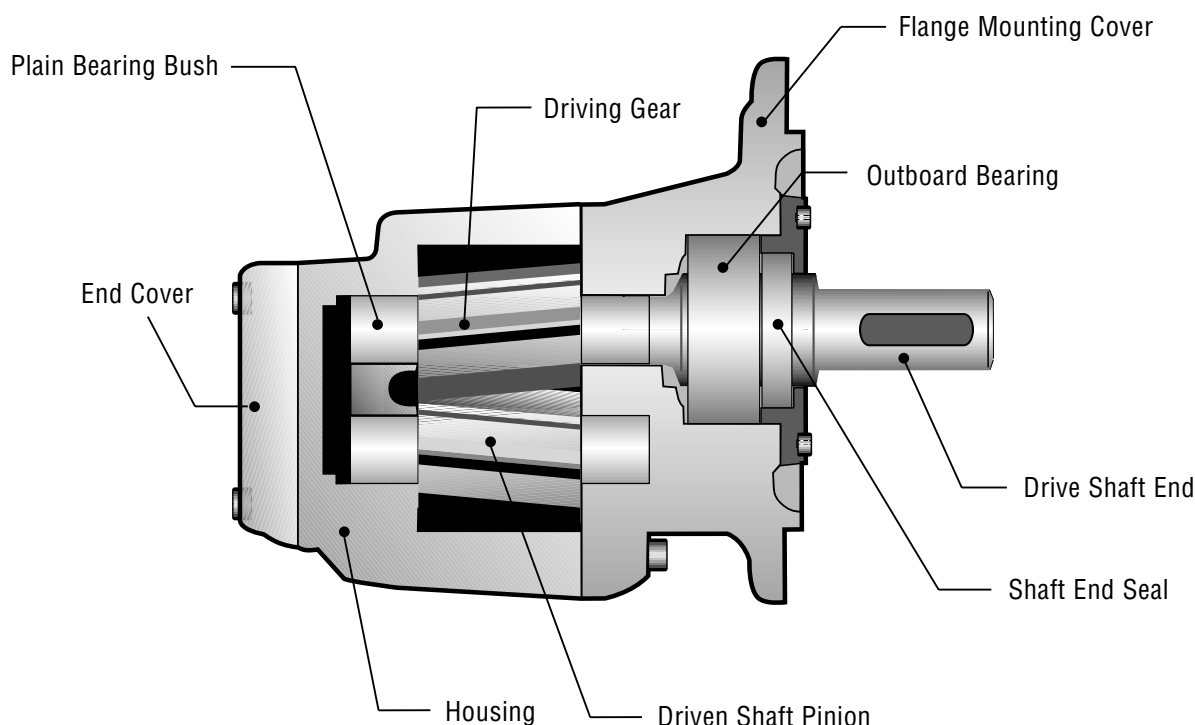


KRACHT



**Transfer Gear Pumps
KF 3/100...KF 6/630**

Construction of the Gear Pump KF



Product Features

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

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

The standard housing sections are of 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 rotary shaft lip-type seal.

All pump sizes incorporate helical tooth system.

This feature, combined with special gear geometry, results in extremely low noise levels and reduced pressure pulsation.

Variants:

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

Special Constructions

To meet your individual requirements on request special constructions are available: for instance mounting flange models, various types of plane bearings, etc. Our Sales engineers will be glad to help you to equipment most appropriate for your specific purpose.

Technical Data

| Size | Nominal displacement | Geometrical displacement | Operating pressure | Maximum pressure | Speed range | | Perm. forces (n = 1450 1/min) | | Moment of inertia* |
|------------|----------------------|-----------------------------------|-----------------------|-------------------------|---------------------------|---------------------------|-------------------------------|-------------------------|-----------------------|
| | | V _g cm ³ | p _b bar | p _{max} bar | n _{min} 1/min | n _{max} 1/min | F _{radial} N | F _{axial} N | J kgm ² |
| 3 / | 100 | 100.8 | 25 | 30 | 200 | 2000 | 1500 | 200 | 6.75 |
| | 112 | 112.6 | 25 | 25 | 200 | 2000 | 1500 | 200 | 7.5 |
| 4 / | 125 | 129 | 25 | 40 | 200 | 2000 | 1500 | 200 | 13.75 |
| | 150 | 153 | 25 | 30 | 200 | 2000 | 1500 | 200 | 16 |
| | 180 | 184 | 25 | 25 | 200 | 2000 | 1500 | 200 | 19.25 |
| 5 / | 200 | 204 | 25 | 30 | 200 | 2000 | 2000 | 300 | 27.5 |
| | 250 | 255 | 20 | 25 | 200 | 2000 | 2000 | 300 | 34.5 |
| | 315 | 321 | 16 | 20 | 200 | 2000 | 2000 | 300 | 43 |
| 6 / | 400 | 405 | 25 | 30 | 200 | 2000 | 3000 | 500 | 105 |
| | 500 | 505 | 20 | 25 | 200 | 2000 | 3000 | 500 | 130 |
| | 630 | 629 | 16 | 20 | 200 | 2000 | 3000 | 500 | 160 |

* (without coupling) x 10⁻⁴

Remark

Operating Pressure p_b = Permissible Continuous Pressure

Maximum Pressure p_{max} = nur only applicable to the operation with Mineral Oils at Speed n > 700 1/min and Viscosities v = 30 mm²/s up to 1000 mm²/s.

Permissible Forces only applicable to the Types fitted with Outboard Bearing.

F_{radial} to the middle of the Shaft End.

Characteristic Data at speed n = 1450 1/min

| Operating Pressure p _b in bar | | | | | | | | | | | | | Nom. Displ. Size | Operating Pressure p _b in bar | | | | | | | | | | | | |
|--|-----|-----|-----|-----|-----|-----|-----|------------|-----|------------|------------|-----------|------------------|--|------|------|------|------|------|------|------|------|------|------|------|--|
| 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 25 | 2 | | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 25 | | |
| 142 | 141 | 140 | 139 | 138 | 137 | 136 | 135 | 134 | 133 | 132 | 130 | 3/ | 100 | 1.2 | 1.7 | 2.2 | 2.7 | 3.2 | 3.7 | 4.2 | 4.7 | 5.2 | 5.7 | 6.2 | 6.9 | |
| 157 | 156 | 155 | 154 | 153 | 152 | 151 | 150 | 149 | 148 | 147 | 145 | | 112 | 1.4 | 2.0 | 2.6 | 3.1 | 3.7 | 4.3 | 4.7 | 5.3 | 5.8 | 6.4 | 7.0 | 7.8 | |
| 180 | 178 | 176 | 175 | 173 | 171 | 169 | 168 | 166 | 164 | 162 | 160 | 4/ | 125 | 1.6 | 2.2 | 2.8 | 3.4 | 4.0 | 4.6 | 5.2 | 5.8 | 6.4 | 7.0 | 7.6 | 8.5 | |
| 215 | 213 | 212 | 210 | 208 | 206 | 205 | 203 | 201 | 199 | 197 | 195 | | 150 | 1.9 | 2.6 | 3.3 | 4.0 | 4.8 | 5.5 | 6.2 | 7.0 | 7.7 | 8.4 | 9.2 | 10.6 | |
| 262 | 260 | 258 | 257 | 255 | 254 | 253 | 251 | 250 | 248 | 247 | 245 | 5/ | 180 | 2.2 | 3.0 | 3.9 | 4.8 | 5.7 | 6.6 | 7.5 | 8.4 | 9.3 | 10.2 | 11.0 | 12.4 | |
| 285 | 283 | 281 | 279 | 278 | 276 | 274 | 273 | 271 | 269 | 267 | 265 | | 200 | 2.4 | 3.4 | 4.4 | 5.4 | 6.5 | 7.5 | 8.6 | 9.6 | 10.7 | 11.7 | 12.7 | 14.2 | |
| 356 | 354 | 351 | 349 | 347 | 344 | 342 | 340 | 338 | 335 | 6/ | 250 | 3.0 | 4.3 | 5.5 | 6.8 | 8.1 | 9.4 | 10.7 | 12.0 | 13.3 | 14.6 | | | | | |
| 450 | 448 | 447 | 446 | 444 | 443 | 442 | 441 | 315 | 3.7 | | 5.3 | 6.9 | 8.6 | 10.2 | 11.7 | 13.4 | 15.0 | | | | | | | | | |
| 575 | 572 | 569 | 566 | 563 | 560 | 557 | 554 | 551 | 548 | 545 | 540 | 6/ | 400 | 5.8 | 7.7 | 9.6 | 11.6 | 13.5 | 15.5 | 17.5 | 19.5 | 21.4 | 23.3 | 25.3 | 28.3 | |
| 715 | 711 | 707 | 703 | 699 | 695 | 691 | 688 | 685 | 681 | 500 | 7.3 | | 9.8 | 12.3 | 14.7 | 17.2 | 19.6 | 22.0 | 24.5 | 27.0 | 29.4 | | | | | |
| 895 | 891 | 887 | 883 | 878 | 874 | 870 | 865 | 630 | 9.3 | 12.0 | 15.0 | 18.0 | 21.0 | 24.0 | 27.0 | 30.0 | | | | | | | | | | |

Discharge Flow Q in l/min

Power Input Required P in kW

The Dispersion of Discharge Flow Q as specified in the above Table may be: Q +2,5% up to -5%.

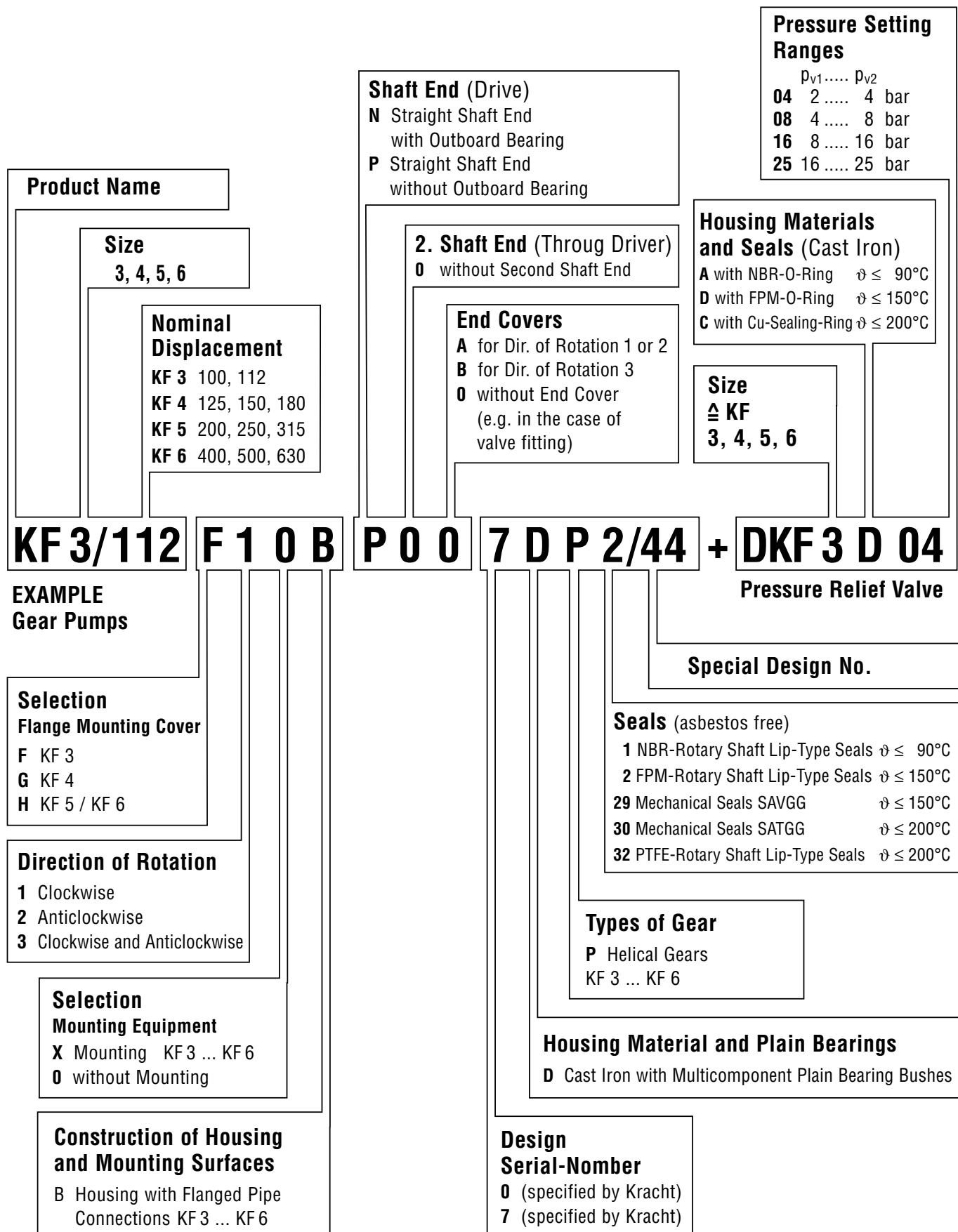
At Viscosities of v < 30 mm²/s Reduction of the Discharge Flow Q.

At Viscosities of v > 300 mm²/s, the Speed must be reduced.

The Drive Motor Output must be selected 20% higher than the Data for P as specified in the above Table.

For Viscosities of v > 100 mm²/s the Power Input must be increased.

Type Key



Characteristics

General Characteristics

| | |
|---------------------------------------|---|
| Mounting | Flange- and Angle Foot-Type |
| Pipe Connection | Flanged Pipe Connections, 4-Bolt-Type (Straight Flange Couplings, Welding Connectors, in addition Intermediate Flange-Heatable). Threaded Ports |
| Direction of Rotation | Clockwise or Anticlockwise Clockwise and Anticlockwise |
| Weight | Refer to Dimensional Sheets |
| Fitting Position | Optional (for exeptions refer to Universal Arrangement) |
| Permissible Ambient Temperature Range | $\vartheta_{u \min}$ = - 20 °C $\vartheta_{u \max}$ = + 60 °C |

Operating Characteristics

| | |
|--|---|
| Operating Pressures | |
| Suction Side $p_{e \min}$ (Inlet Port) | = - 0.4 bar (Vacuum), for short time duty e.g. when starting: down to -0.6 bars are permissible. Observe the limitation of $p_{e \min}$ for pumps with "Universal Arrangement" |
| $p_{e \max}$ | = 0.5 bar for PTFE-Rotary Shaft Lip-Type Seals = 1.0 bar for NBR- and FPM Rotary Shaft Lip-Type Seals = 10 bars for Mechanical Seals |
| Pres. Side p_n (Outlet Port) | = 25 bars |
| Fluid Temperature Range | $\vartheta_{m \min}$ = - 10°C $\vartheta_{m \max}$ = 90°C for NBR-Rotary Shaft Lip-Type Seals = 150°C for FPM Rotary Shaft Lip-Type Seals and Mechanical Seals SAVGG = 200°C for PTFE Rotary Shaft Lip-Type Seals = 200°C for Mechanical Seals SATGG or Ord. Code refer to Page 4 + 5 |
| Viscosity Range | v_{\min} = 12 mm ² /s v_{\max} = 15000 mm ² /s Viscosities other than within this range on request |
| Discharge Flow | Refer to Table Page 3 |
| Power Input | Refer to Table Page 3 |
| Speeds | n_{\min} = 200 1/min n_{\max} = 2000 1/mn The permissible max. speed depends upon the viscosity of the medium operated acc. to the table on the right site |

Suitable Fluids

| | | |
|---------------|-------------------------|---------------------|
| Waste oils | Resins | Paraffins |
| Soluble oils | Hardening oils | Polyols |
| Diesel oils | Fuel oils, L, EL, H | Lubricating oils |
| Printing inks | Hydraulic fluids | Cutting oils |
| Emulsions | Isocyanate | Heavy oils |
| Dyes | Adhesives | Heat transfer media |
| Fats | Plastics | Processing oils |
| Antifreeze | Engine oilse | Waxes |
| Gear oils | Nitrocellulose lacquers | Rolling oils |
| | | Drawing compounds |

Accessories

| | |
|--|---|
| Flanged Pipe Connections 4-Bolt-Type | Foot Mounting Flanges for the Adaptor Flanges below |
| Mounting Angles | Base Plates |
| Pressure Relief Valves (attachable subsequently) | Couplings |
| | Adaptor Flanges (Pump Carrier) |

Other Types

ZM; ZN Pump with Electric Motor directly connected to each other by an Adaptor Flange.

Kinematic Viscosity v mm²/s

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

max. Speed n_{\max} 1/min

Note:

The above specified Minimum and Maximum Characteristics are NOT applicable for some specific operating conditions: Maximum Operating Pressure is NOT permissible in conjunction with low speeds and low viscosities. Please contact us whenever such critical ranges are encountered.

Operating Notes

Operating Notes:

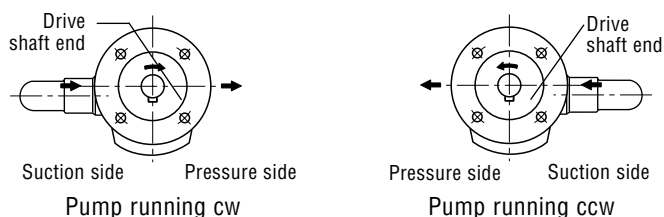
- The fluids should ensure a certain minimum lubricating properties, should not contain solids and should be chemically compatible.
- Avoid dry operation.
- The pumps may only be operated in the specified direction of rotation, as otherwise the shaft seal will be destroyed.
- In order to prevent excessive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

Direction of Rotation:

The following should be noted for direction of rotation:

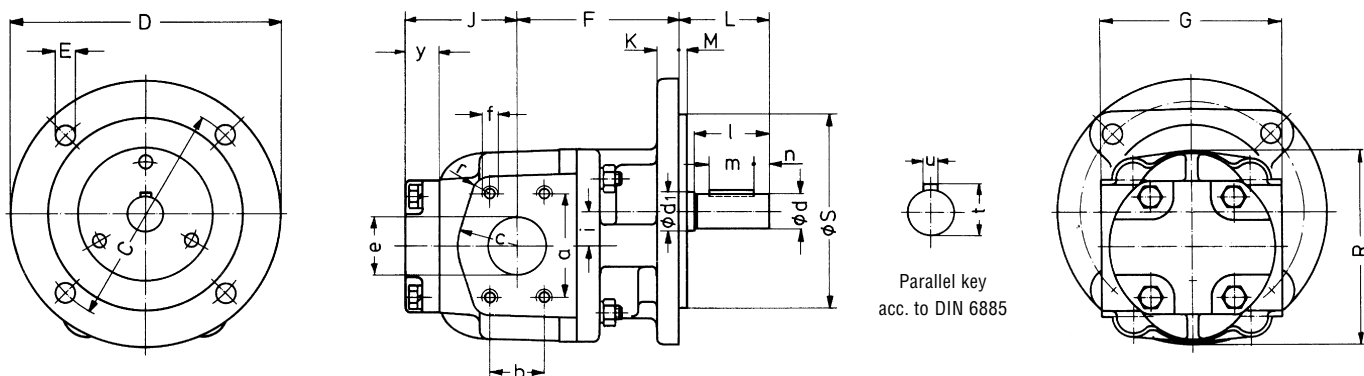
- when looking at the pump shaft end, the direction of pumping is from left to right if the shaft rotates **clockwise**.
- when looking at the pump shaft end, the direction of pumping is from right to left if the shaft rotates **counterclockwise**.

With Pressure Relief Valve



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

Flange-Type Pumps



| Size | Inlet- and outlet port pipe thread | | | | | | | Shaft end | | | | | | | | | | | | | Weight kg | | | | | | | | |
|---------------------|------------------------------------|------|----|-----|-----|---------|----------------|-----------|-----|----|-----|-----|-----|-----|----|----|-----------------|-----|-----|----------------|--------------|-----------------|----|----|----|------|----|------|------------------|
| | a | b | c | e | f | r | C | D | E | F | G | J | K | L | M | R | S _{h6} | i | y | d ₁ | | d _{k6} | l | m | n | t | u | | |
| 3/100 112 | 69,9 | 35,7 | 40 | 40 | M10 | 16 tief | 12 | 150 | 180 | 14 | 108 | 120 | 92 | 15 | 60 | 5 | 130 | 130 | 23 | 20 | 25 | 24 | 50 | 30 | 10 | 27 | 8 | 13,5 | |
| | | | | | | | | | | | | | | | | | | | | | *20 | 19 | 50 | 30 | 5 | 21,5 | 6 | | |
| 125 4/150 180 | 77,8 | 42,9 | 50 | 50 | M12 | 18 tief | 12 | 185 | 220 | 18 | 110 | 125 | 130 | 77 | 19 | 60 | 8 | 160 | 150 | 28,3 | 20 | 25 | 24 | 50 | 40 | 5 | 27 | 8 | 18,5 20 21 |
| | | | | | | | | | | | 80 | | | | | | | | | | | | | | | | | | |
| 200 5/250 315 | 88,9 | 50,8 | 55 | 63 | M12 | 20 tief | 13 15 15 | 215 | 250 | 18 | 155 | 170 | 150 | 109 | 22 | 70 | 8 | 198 | 180 | 32 | 24 | 30 | 28 | 60 | 40 | 10 | 31 | 8 | 28 33 33 |
| | | | | | | | | | | | 93 | | | | | | | | | | | | | | | | | | |
| 400 6/500 630 | 130,2 | 77,8 | 80 | 100 | M16 | 32 tief | 20 | 215 | 250 | 18 | 180 | 200 | 200 | 126 | 25 | 95 | 8 | 244 | 180 | 40 | 24 | 40 | 38 | 80 | 63 | 8 | 41 | 10 | 51 55 65 |
| | | | | | | | | | | | 124 | | | | | | | | | | | | | | | | | | |

* KF3: Dimensions of Shaft End line below for Shaft-P

Ordering Example

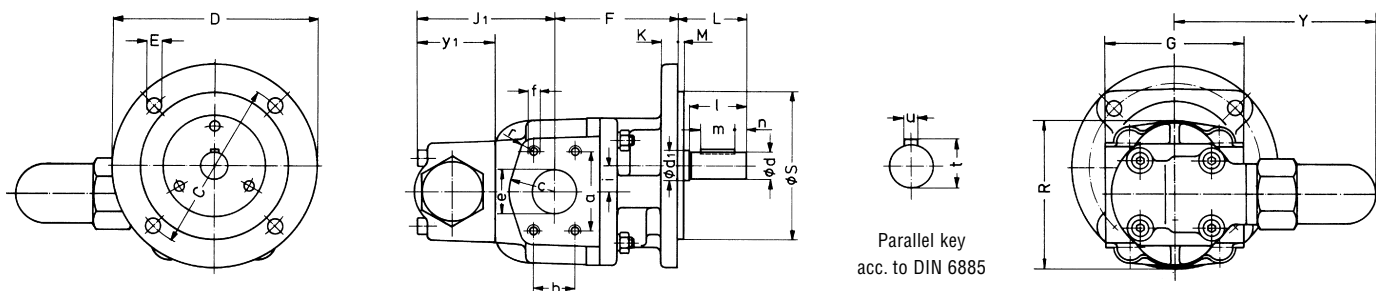
KF 3/. F $\frac{1}{2}$ /₃ N P O A B 7DP $\frac{1}{2}$ /₃₂

KF 4/. G $\frac{1}{2}$ /₃ N P O A B 7DP $\frac{1}{2}$ /₃₂

KF 5/. H $\frac{1}{2}$ /₃ N P O A B ODP $\frac{1}{2}$ /₃₂

KF 6/. H $\frac{1}{2}$ /₃ N P O A B 7DP $\frac{1}{2}$ /₃₂

Flange-Type Pumps with Pressure Relief Valve



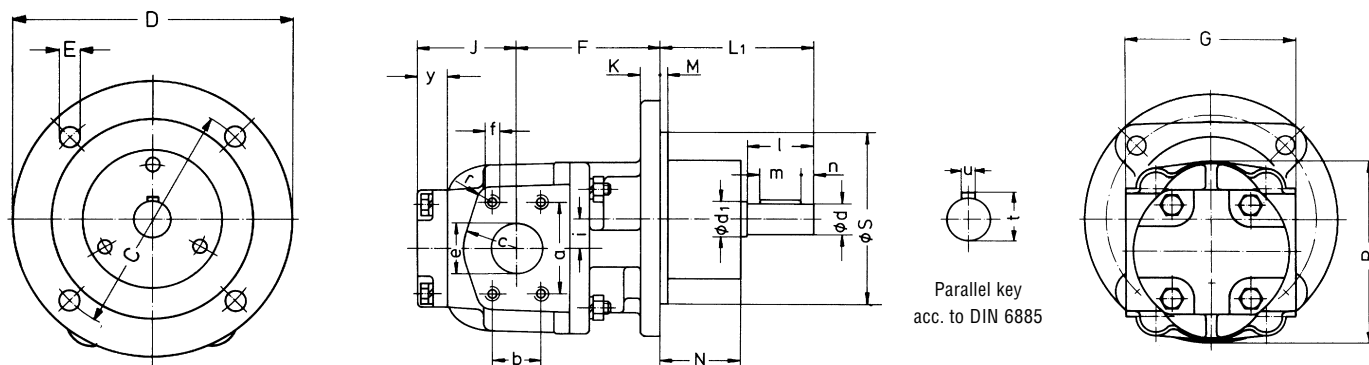
| Size | Inlet- and outlet port pipe thread | | | | | | | Shaft end | | | | | | | | | | | | | | Weight kg | | | | | | | | | |
|--|------------------------------------|------|----|-----|-----|---------|----|-----------|-----|----|-----|----------------|-----|----|----|---|-----------------|-----|-----|----------------|----------------|--------------|-----------------|----|----|----|----|----|----|------|------|
| | a | b | c | e | f | r | C | D | E | F | G | J ₁ | K | L | M | R | S _{h6} | Y | i | y ₁ | d ₁ | | d _{k6} | l | m | n | t | u | | | |
| 3/100 112 | 69,9 | 35,7 | 40 | 40 | M10 | 16 tief | 12 | 150 | 180 | 14 | 108 | 120 | 137 | 15 | 60 | 5 | 130 | 130 | 160 | 23 | 65 | 25 | 24 | 50 | 30 | 10 | 27 | 8 | 15 | | |
| 125 4/150 180 | 77,8 | 42,9 | 50 | 50 | M12 | 18 tief | 12 | 185 | 220 | 18 | 125 | 130 | 129 | 19 | 60 | 8 | 160 | 150 | 171 | 28,3 | 72 | 25 | 24 | 50 | 40 | 5 | 27 | 8 | 20 | 21,5 | 21,5 |
| 200 5/250 315 | 88,9 | 50,8 | 55 | 63 | M12 | 20 tief | 13 | 215 | 250 | 18 | 170 | 150 | 165 | 22 | 70 | 8 | 198 | 180 | 196 | 32 | 80 | 30 | 28 | 60 | 40 | 10 | 31 | 8 | 30 | 35 | 35 |
| 400 6/500 630 | 130,2 | 77,8 | 80 | 100 | M16 | 32 tief | 20 | 215 | 250 | 18 | 200 | 200 | 219 | 25 | 95 | 8 | 244 | 180 | 238 | 40 | 117 | 40 | 38 | 80 | 63 | 8 | 41 | 10 | 59 | 63 | 73 |

* KF3: Dimensions of Shaft End line below for Shaft-P

Ordering Example

| |
|--|
| KF 3/ . F ¹/₂ OB N_P 00 7DP ¹/₃₂ + DKF 3 ^A/_D/_C • |
| KF 4/ . G ¹/₂ OB N_P 00 7DP ¹/₃₂ + DKF 4 ^A/_D/_C • |
| KF 5/ . H ¹/₂ OB N_P 00 ODP ¹/₃₂ + DKF 5 ^A/_D/_C • |
| KF 6/ . H ¹/₂ OB N_P 00 7DP ¹/₃₂ + DKF 6 ^A/_D/_C • |

Flange-Type Pumps with Mechanical Seal



Parallel key
acc. to DIN 6885

| Size | Inlet- and outlet port pipe thread | | | | | | | Shaft end | | | | | | | | | | | | | Weight kg | | | | | | | | |
|---------------------------------------|---------------------------------------|------|----|-----|-----|---------|----|-----------|-----|----|-----|-----|-----|----------------|-----|---|----|-----------------|-----|------|--------------|----------------|-----------------|----|----|----|----|----|--------------------|
| | a | b | c | e | f | r | C | D | E | F | G | J | K | L ₁ | M | N | R | S _{h6} | i | y | | d ₁ | d _{k6} | l | m | n | t | u | |
| 3/ 100 112 | 69.9 | 35.7 | 40 | 40 | M10 | 16 deep | 12 | 150 | 180 | 14 | 108 | 120 | 92 | 15 | 120 | 5 | 69 | 130 | 130 | 23 | 20 | 25 | 24 | 50 | 30 | 10 | 27 | 8 | 15 |
| 125 4/ 150 180 | 77.8 | 42.9 | 50 | 50 | M12 | 18 deep | 12 | 185 | 220 | 18 | 125 | 130 | 77 | 19 | 125 | 8 | 69 | 160 | 150 | 28.3 | 20 | 25 | 24 | 50 | 40 | 5 | 27 | 8 | 20 21.5 22.5 |
| 200 5/ 250 315 | 88.9 | 50.8 | 55 | 63 | | | 13 | | | | 155 | | 93 | | | | | | | | | | | | | | | | 30 35 35 |
| 400 6/ 500 630 | 130.2 | 77.8 | 80 | 100 | M16 | 32 deep | 20 | 215 | 250 | 18 | 200 | 200 | 126 | 25 | 160 | 8 | 72 | 244 | 180 | 40 | 24 | 40 | 38 | 80 | 63 | 8 | 41 | 10 | 54 58 68 |

Ordering Example

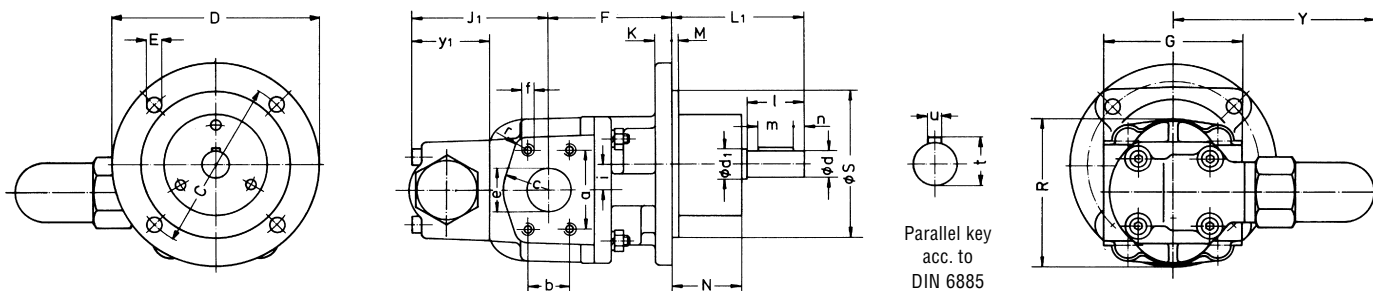
KF 3/. F₂¹ OB NOA 7DP₃₀²⁹

KF 4/. G₂¹ OB NOA 7DP₃₀²⁹

KF 5/. H₂¹ OB NOA ODP₃₀²⁹

KF 6/. H₂¹ OB NOA 7DP₃₀²⁹

Flange-Type Pumps with Mechanical Seal and Pressure Relief Valve



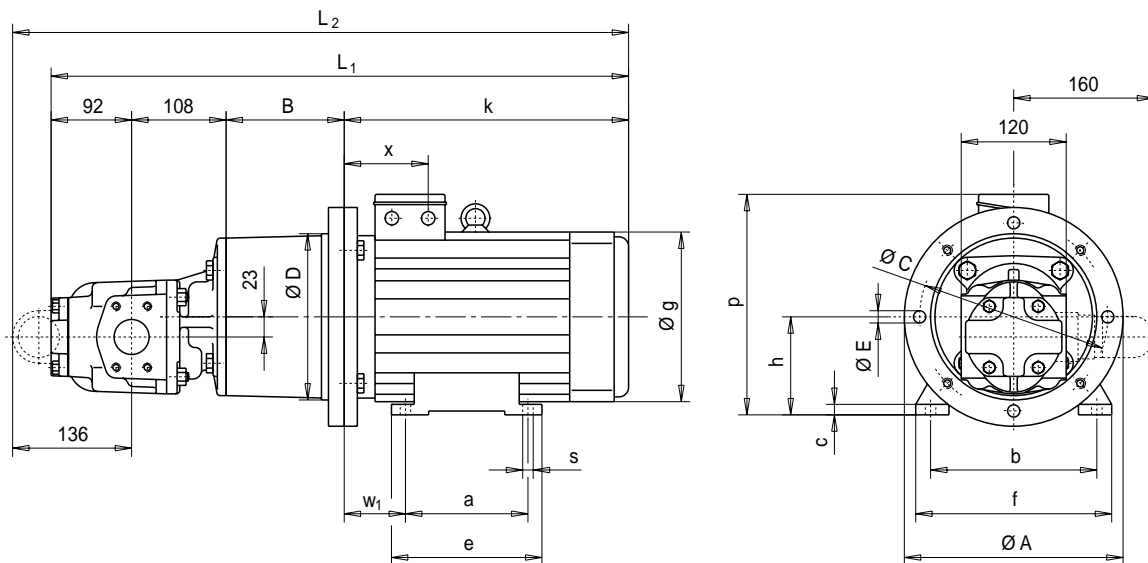
| Size | Inlet- and outlet ports pipe thread | | | | | | | Shaft end | | | | | | | | | | | | | | Weight kg | | | | | | | | |
|--|--|------|----|-----|-----|------------|----------|-----------|-----|----|-----|----------------|-----|----------------|-----|---|----|-----------------|-----|------|----------------|--------------|----------------|-----------------|----|----|----|----|----|------------------|
| | a | b | c | e | f | r | C | D | E | F | G | J ₁ | K | L ₁ | M | N | R | Sh ₆ | i | Y | y ₁ | | d ₁ | d _{k6} | l | m | n | t | u | |
| 3/100 112 | 69,9 | 35,7 | 40 | 40 | M10 | 16 tief | 12 | 150 | 180 | 14 | 108 | 120 | 137 | 15 | 120 | 5 | 69 | 130 | 130 | 23 | 160 | 65 | 25 | 24 | 50 | 30 | 10 | 27 | 8 | 16,5 |
| 125 4/150 180 | 77,8 | 42,9 | 50 | 50 | M12 | 18 tief | 12 | 185 | 220 | 18 | 125 | 130 | 129 | 19 | 125 | 8 | 69 | 160 | 150 | 28,3 | 171 | 72 | 25 | 24 | 50 | 40 | 5 | 27 | 8 | 21,5 23 24 |
| 200 5/250 315 | 88,9 | 50,8 | 55 | 63 | M12 | 20 tief | 13 15 | 215 | 250 | 18 | 170 | 150 | 165 | 22 | 125 | 8 | 61 | 198 | 180 | 32 | 196 | 80 | 30 | 28 | 60 | 40 | 10 | 31 | 8 | 32 35 35 |
| 400 6/500 630 | 130,2 | 77,8 | 80 | 100 | M16 | 32 tief | 20 | 215 | 250 | 18 | 200 | 200 | 219 | 25 | 160 | 8 | 72 | 244 | 180 | 40 | 238 | 117 | 40 | 38 | 80 | 63 | 8 | 41 | 10 | 62 66 76 |

Ordering Example

| |
|--|
| KF 3/ . F $\frac{1}{2}$ OB NOA 7DP $\frac{29}{30}$ + DKF 3 $\frac{D}{C}$. |
| KF 4/ . G $\frac{1}{2}$ OB NOA 7DP $\frac{29}{30}$ + DKF 4 $\frac{D}{C}$. |
| KF 5/ . H $\frac{1}{2}$ OB NOA ODP $\frac{29}{30}$ + DKF 5 $\frac{D}{C}$. |
| KF 6/ . H $\frac{1}{2}$ OB NOA 7DP $\frac{29}{30}$ + DKF 6 $\frac{D}{C}$. |

Motor-Pump-Assemblies KF 3

Pumps with electric motor



Mounting arrangement: IM B35 (IM V15; IM V36)

| Size | Power kW | Speed 1/min | Version designation | Coupling size | Total weight * kg | L ₁ | L ₂ |
|----------------|-------------|----------------|------------------------|------------------------------|-------------------------|----------------|----------------|
| 100 L4A | 2,2 | 1420 | Z3/250/135 | RA28-Z35/19-Z35/28 | 37 | 633 | 677 |
| 100 L4B | 3,0 | 1430 | | | 40 | 633 | 677 |
| 112 M4B | 4,0 | 1440 | | | 47 | 670 | 714 |
| 132 S4C | 5,5 | 1450 | Z3/300/180 | RA38-Z45/19-Z45/38 | 58 | 748 | 792 |
| 132 M4B | 7,5 | 1450 | | | 79 | 779 | 823 |
| 160 M4B | 11,0 | 1450 | Z3/350/204 | RA38/45-Z45/19-Z45/42 | 94 | 870 | 914 |
| 160 L4A | 15,0 | 1450 | | | 108 | | |
| 180 M4B | 18,5 | 1450 | Z3/350/204 | RA42/55-Z50/19-Z50/48 | 138 | 923 | 967 |
| 180 L4B | 22,0 | 1455 | | | 146 | | |

* Additional weight for units with pressure relief valve 1.5 kg

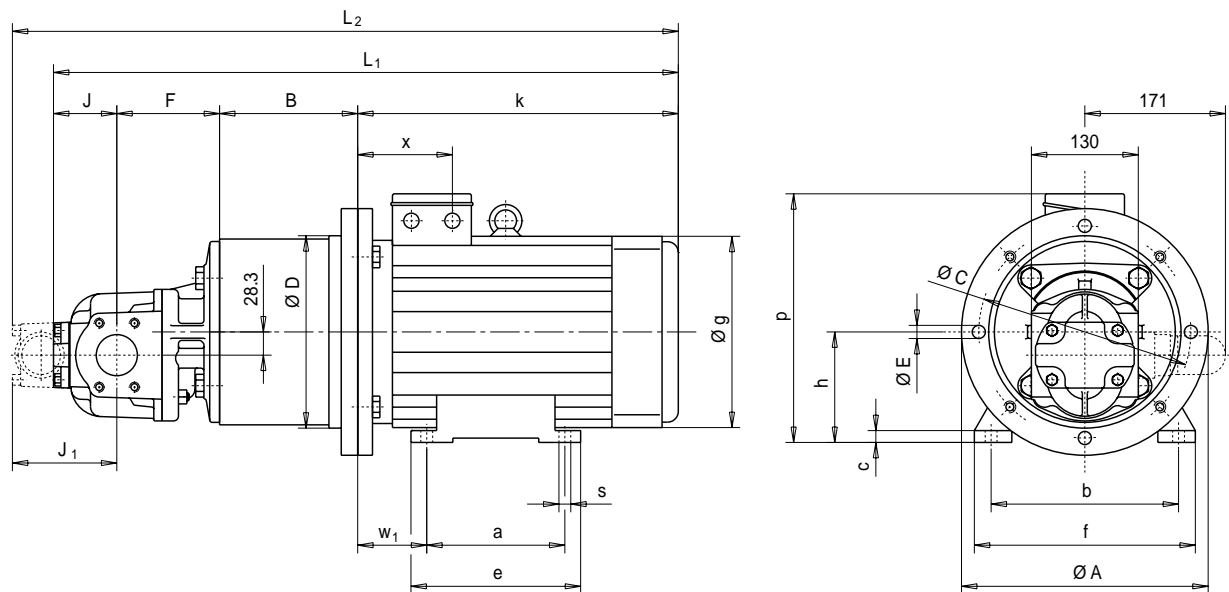
| Size | Ø A | B | Ø C | Ø D | Ø E | a | b | c | e | f | g | h | k | p | s | w1 | x |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| 100 | 250 | 135 | 215 | 190 | 14 | 140 | 160 | 12 | 172 | 192 | 213 | 100 | 298 | 232 | 12 | 63 | 96 |
| 112 | | | | | | | | | | | | | 335 | 252 | | | |
| 132 S | 300 | 180 | 265 | 234 | 14 | 140 | 216 | 12 | 187 | 264 | 265 | 132 | 368 | 283 | 12 | 89 | 112 |
| 132 M | | | | | | | | | | | | | 399 | 303 | | | |
| 160 M | 350 | 204 | 300 | 260 | 17 | 210 | 254 | 254 | 306 | 306 | 323 | 160 | 466 | 341 | 15 | 108 | 114 |
| 160 L | | | | | | 254 | | | | | | | | | | | |
| 180 M | 350 | 204 | 300 | 260 | 17 | 241 | 279 | 279 | 343 | 344 | 370 | 180 | 519 | 387 | 15 | 121 | 136 |
| 180 L | | | | | | 279 | | | | | | | | | | | |

The values specified in the table above relate to Schäfer motors only. (Motors from other manufacturers are available on request)

When ordering a flange-type pump with electric motor please specify the rated voltage, the frequency, the speed and the enclose requested.

Motor-Pump-Assemblies KF 4

Pumps with electric motor



Mounting arrangement: IM B35 (IM V15; IM V36)

| Size | power kW | Speed 1/min | Version designation | Coupling size | Total weight ** kg | | | L ₁ | | | L ₂ | | |
|----------------|-------------|----------------|------------------------|------------------------------|-----------------------|-------|-------|----------------|-------|-------|----------------|-------|-------|
| | | | | | 4/125 | 4/150 | 4/180 | 4/125 | 4/150 | 4/180 | 4/125 | 4/150 | 4/180 |
| 100 L4A | 2,2 | 1420 | Z4/250/138 * | RA24/28-Z30/24-Z30/28 | 44 | 46 | 47 | 623 | 635 | 645 | 675 | 687 | 697 |
| 100 L4B | 3,0 | 1430 | | | 47 | 49 | 50 | 623 | 635 | 645 | 675 | 687 | 697 |
| 112 M4B | 4,0 | 1440 | | | 54 | 56 | 57 | 660 | 672 | 682 | 712 | 724 | 734 |
| 132 S4C | 5,5 | 1450 | Z4/300/168 | RA28/38-Z35/24-Z35/38 | 61 | 63 | 64 | 738 | 750 | 760 | 790 | 802 | 812 |
| 132 M4B | 7,5 | 1450 | | | 82 | 84 | 85 | 769 | 781 | 791 | 821 | 833 | 843 |
| 160 M4B | 11,0 | 1450 | Z4/350/204 | RA38/45-Z45/24-Z45/42 | 99 | 101 | 102 | 860 | 872 | 882 | 912 | 924 | 934 |
| 160 L4A | 15,0 | 1450 | | | 113 | 115 | 116 | | | | | | |
| 180 M4B | 18,5 | 1450 | Z4/350/204 | RA42/55-Z50/24-Z50/48 | 142 | 144 | 145 | 913 | 925 | 935 | 965 | 977 | 987 |
| 180 L4B | 22,0 | 1455 | | | 150 | 152 | 153 | | | | | | |

Those adaptors flanges marked by * are not suitable for installations into reservoirs the pump flange dia. is larger than than the centering dia. of the adaptor flange.

** Additional weight for units with pressure relief valve 1.5 kg

| Size | Ø A | B | Ø C | Ø D | Ø E | a | b | c | e | f | g | h | k | p | s | w1 | x |
|------------------------------|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| 100 112 | 250 | 135 | 215 | 190 | 14 | 140 | 160 | 12 | 172 | 192 | 213 | 100 | 298 | 232 | 12 | 63 | 96 |
| | | | | | | | 190 | | | 224 | 234 | 112 | 335 | 252 | | 70 | 106 |
| 132 S 132 M | 300 | 180 | 265 | 234 | 13 | 140 | 216 | 12 | 187 | 264 | 265 | 132 | 368 | 283 | 12 | 89 | 112 |
| | | | | | | 178 | | | 218 | 266 | 298 | | 399 | 303 | | | 118 |
| 160 M 160 L | 350 | 204 | 300 | 260 | 17 | 210 | 254 | 18 | 306 | 306 | 323 | 160 | 466 | 341 | 15 | 108 | 114 |
| | | | | | | 254 | | | | | | | | | | | |
| 180 M 180 L | 350 | 204 | 300 | 260 | 17 | 241 | 279 | 22 | 343 | 344 | 370 | 180 | 519 | 387 | 15 | 121 | 136 |
| | | | | | | 279 | | | | | | | | | | | |

The values specified in the table above relate to Schäfer motors only. (Motors from other manufactures are available on request)

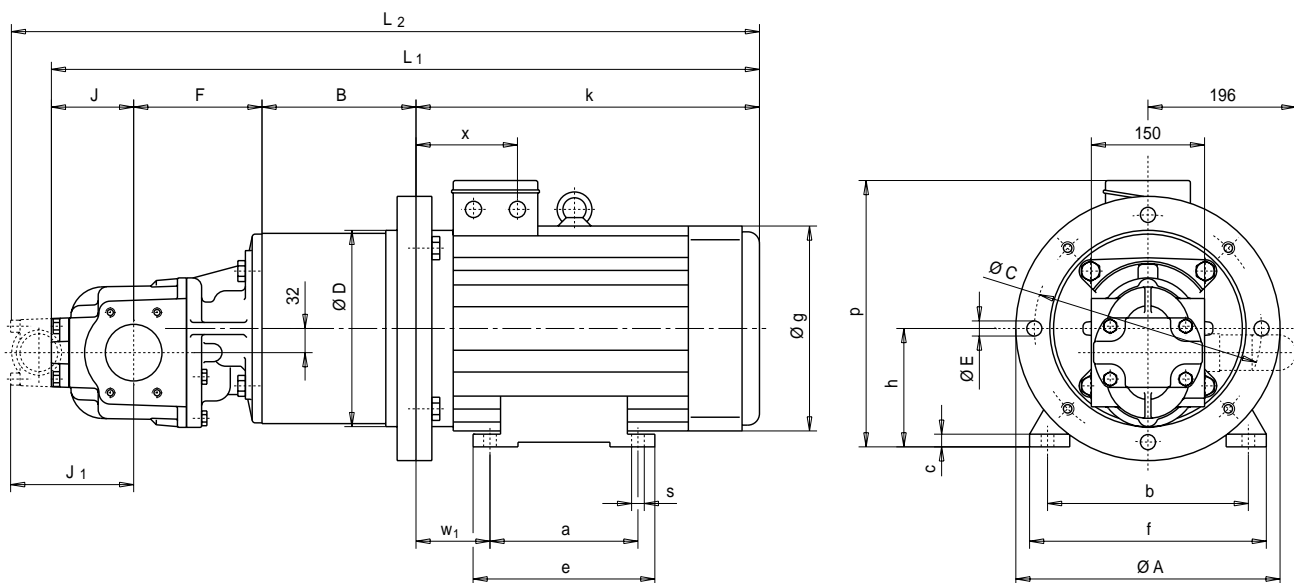
Pump dimensions

| | KF4/125 | KF4/150 | KF4/180 |
|----------------|---------|---------|---------|
| F | 110 | 125 | 135 |
| J | 80 | 77 | 77 |
| J ₁ | 132 | 129 | 129 |

When ordering a flange-type pump with electric motor please specify the rated voltage, the frequency, the speed and the enclose requested.

Motor-Pump-Assemblies KF 5

Pumps with electric motor



Mounting arrangement: IM B35 (IM V15; IM V36)

| Size | Power kW | Speed 1/min | Version designation | Coupling size | Total weight ** | | | L ₁ | | | L ₂ | | |
|----------------------------------|--------------|----------------|------------------------|------------------------------|-----------------|------------|------------|----------------|------------|------------|----------------|------------|------------|
| | | | | | kg | 5/200 | 5/250 | 5/315 | 5/200 | 5/250 | 5/315 | 5/200 | 5/250 |
| 132 S4C 132 M4B | 5,5 7,5 | 1450 1450 | Z5/300/195 * | RA38/45-Z45/28-Z45/38 | 73 94 | 78 99 | 78 99 | 811 842 | 842 873 | 842 873 | 867 898 | 898 929 | 898 929 |
| 160 M4B 160 L4A | 11,0 15,0 | 1450 1450 | Z5/350/204 | RA38/45-Z45/28-Z45/42 | 109 123 | 114 128 | 114 128 | 918 | 949 | 949 | 974 | 1005 | 1005 |
| 180 M4B 180 L4B | 18,5 22,0 | 1450 1455 | Z5/350/204 | RA42/55-Z50/28-Z50/48 | 153 161 | 158 166 | 158 166 | 971 | 1002 | 1002 | 1027 | 1058 | 1058 |

Those adaptor flanges marked by * are not suitable for installations into reservoirs the pump flange dia. is larger than than the centering dia. of the adaptor flange.

** Additional weight for units with pressure relief valve 2 kg

| Size | Ø A | B | Ø C | Ø D | Ø E | a | b | c | e | f | g | h | k | p | s | w1 | x |
|------------------------------|-----|-----|-----|-----|-----|------------|-----|----|------------|------------|------------|-----|------------|------------|----|-----|------------|
| 132 S 132 M | 300 | 195 | 265 | 234 | 14 | 140 178 | 216 | 12 | 187 218 | 264 266 | 265 298 | 132 | 368 399 | 283 303 | 12 | 89 | 112 118 |
| 160 M 160 L | 350 | 204 | 300 | 260 | 17 | 210 254 | 254 | 18 | 306 | 306 | 323 | 160 | 466 | 341 | 15 | 108 | 114 |
| 180 M 180 L | 350 | 204 | 300 | 260 | 17 | 241 279 | 279 | 22 | 343 | 344 | 370 | 180 | 519 | 387 | 15 | 121 | 136 |

The values specified in the table above relate to Schäfer motors only. (Motors from other manufactures are available on request)

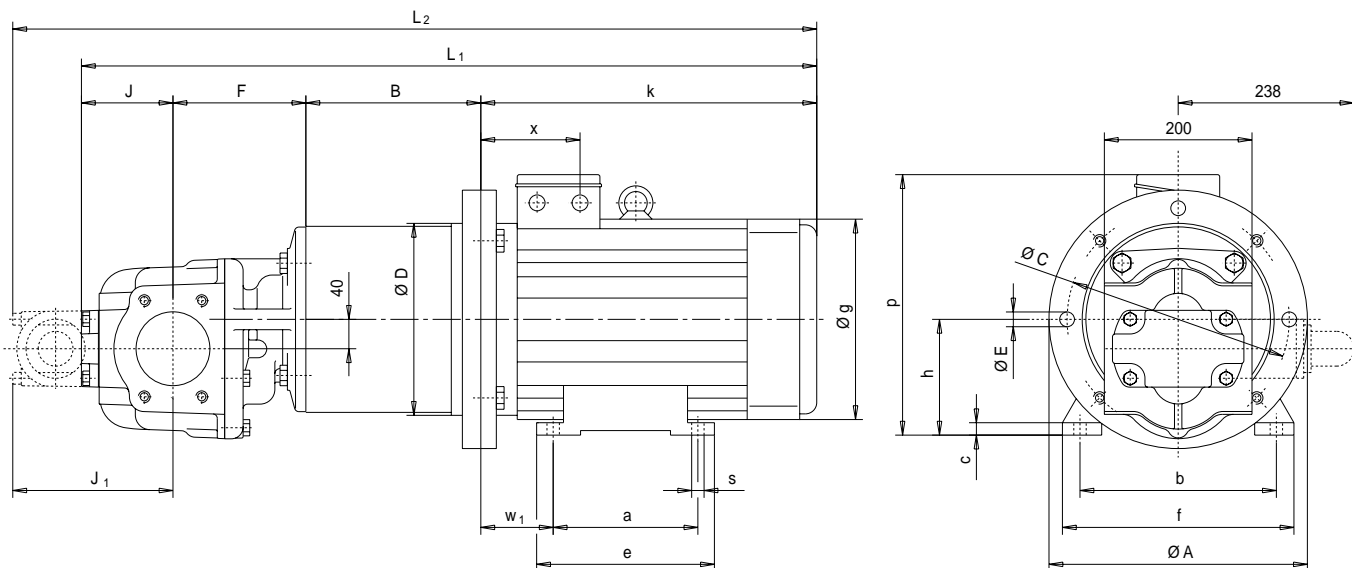
Pump dimensions

| | KF5/200 | KF5/250 | KF5/315 |
|----------------|---------|---------|---------|
| F | 155 | 170 | 170 |
| J | 93 | 109 | 109 |
| J ₁ | 149 | 165 | 165 |

When ordering a flange-type pump with electric motor please specify the rated voltage, the frequency, the speed and the enclose requested.

Motor-Pump-Assemblies KF 6

Pumps with electric motor



Mounting arrangement: IM B35 (IM V15; IM V36)

| Size | Power kW | Speed 1/min | Version designation | Coupling size | Total weight * | | | L ₁ | | | L ₂ | | |
|----------------------------------|--------------|----------------|------------------------|------------------------------|----------------|------------|------------|----------------|-------|-------|----------------|-------|-------|
| | | | | | kg | 6/400 | 6/500 | 6/630 | 6/400 | 6/500 | 6/630 | 6/400 | 6/500 |
| 160 M4B 160 L4A | 11,0 15,0 | 1450 1450 | Z6/350/237 | RA38/45-Z45/38-Z45/42 | 134 148 | 138 152 | 148 162 | 1007 | 1029 | 1062 | 1100 | 1122 | 1155 |
| 180 M4B 180 L4B | 18,5 22,0 | 1450 1455 | Z6/350/237 | RA42/55-Z50/38-Z50/48 | 177 185 | 181 189 | 191 199 | 1060 | 1082 | 1115 | 1153 | 1175 | 1208 |
| 200 L4C | 30,0 | 1450 | Z6/400/228 | RA42/55-Z50/38-Z50/55 | 235 | 239 | 249 | 1087 | 1109 | 1142 | 1180 | 1202 | 1235 |
| 225 S4A 225 M4C | 37,0 45,0 | 1460 1460 | Z6/450/262 | RA48/60-Z56/38-Z56/60 | 285 322 | 289 326 | 299 336 | 1192 | 1214 | 1247 | 1285 | 1307 | 1340 |
| 250 M4C | 55,0 | 1465 | Z6/550/275 | RG55/70-Z65/38-Z65/65 | 352 | 356 | 366 | 1223 | 1245 | 1278 | 1316 | 1338 | 1371 |

* Additional weight for units with pressure relief valve 8 kg

| Size | Ø A | B | Ø C | Ø D | Ø E | a | b | c | e | f | g | h | k | p | s | w1 | x |
|------------------------------|-----|-----|-----|-----|-----|------------|-----|----|-----|-----|-----|-----|-----|-----|----|-----|-----|
| 160 M 160 L | 350 | 237 | 300 | 260 | 17 | 210 254 | 254 | 18 | 306 | 306 | 323 | 160 | 466 | 341 | 15 | 108 | 114 |
| 180 M 180 L | 350 | 237 | 300 | 260 | 17 | 241 279 | 279 | 22 | 343 | 344 | 370 | 180 | 519 | 387 | 15 | 121 | 136 |
| 200 L | 400 | 228 | 350 | 300 | 17 | 306 | 318 | 24 | 365 | 388 | 415 | 200 | 555 | 435 | 19 | 133 | 175 |
| 225 S 225 M | 450 | 262 | 400 | 350 | 17 | 286 311 | 356 | 26 | 383 | 442 | 456 | 225 | 626 | 485 | 19 | 149 | 189 |
| 250 M | 550 | 275 | 500 | 450 | 17 | 349 | 406 | 27 | 415 | 495 | 456 | 250 | 644 | 510 | 24 | 168 | 207 |

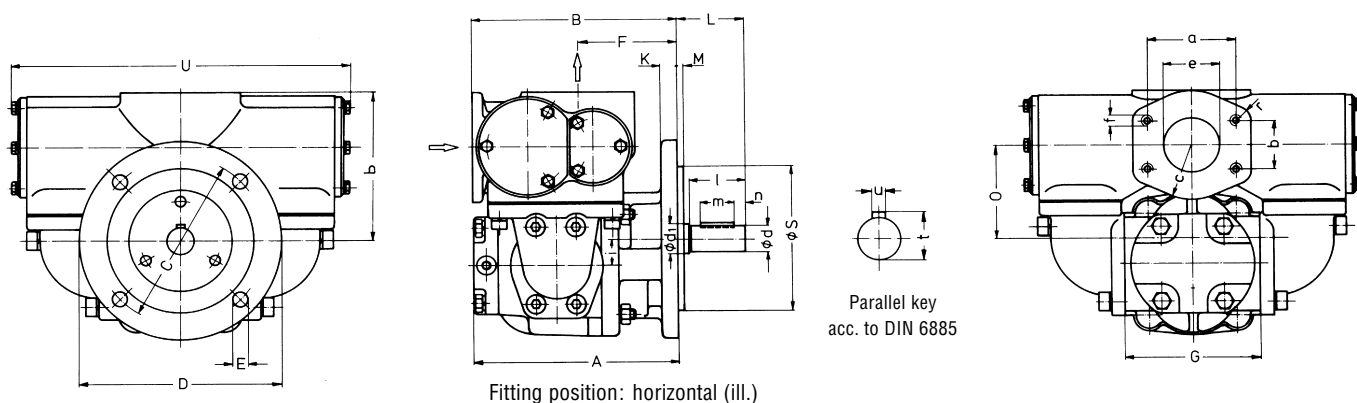
The values specified in the table above relate to Schäfer motors only.
(Motors from other manufactures are available on request)

Pump dimensions

| | KF6/400 | KF6/500 | KF6/630 |
|----------------|---------|---------|---------|
| F | 180 | 200 | 200 |
| J | 124 | 126 | 159 |
| J ₁ | 217 | 219 | 252 |

When ordering a flange-type pump with electric motor please specify the rated voltage, the frequency, the speed and the enclose requested.

Flange-Type Pumps with Universal Arrangement



| Size | Inlet- and outlet port pipe thread | | | | | | | Shaft end | | | | | | | | | | | Weight kg | permissible manometric vacuum at the pump-inlet port P _e in bar | | | | | | | | | | | | |
|----------------------------|------------------------------------|------|----|----|-----|----|-----|-----------|-----|-----|----|-----|-----|----|----|---|-----|-----|--------------|---|-----------------|----|----|----------------|-----------------|----|----|----|----------------|----------------------|----------------------|--|
| | a | b | c | e | f | r | A | B | C | D | E | F | G | K | L | M | O | P | | | S _{h6} | U | i | d ₁ | d _{k6} | l | m | n | t | u | | |
| 3/100 112 | 77,8 | 42,9 | 50 | 50 | M12 | 12 | 200 | 183 | 150 | 180 | 14 | 93 | 120 | 15 | 60 | 5 | 90 | 140 | 130 | 298 | 23 | 25 | 24 | 50 | 30 | 10 | 27 | 8 | 34 | 0,36 0,35 | | |
| 4/150 180 | 77,8 | 42,9 | 50 | 50 | M12 | 12 | 190 | 185 | | | | 95 | | | | | | | | | | 25 | 24 | 50 | 40 | 5 | 27 | 8 | 39 | 0,34 0,33 0,32 | | |
| 5/250 315 | 106,4 | 61,9 | 65 | 75 | M12 | 15 | 248 | 252 | | | | 122 | | | | | | | | | | 30 | 28 | 60 | 40 | 10 | 31 | 8 | 80 85 85 | 0,38 0,37 0,36 | | |
| 6/500 630 | Sauganschluss | | | | | | 304 | 277 | | | | 147 | | | | | | | | | | | 40 | 38 | 80 | 63 | 8 | 41 | 10 | 103 107 117 | 0,37 0,36 0,33 | |
| | Druckanschluss | | | | | | 326 | 297 | 215 | 250 | 18 | 167 | 200 | 25 | 95 | 8 | 171 | 241 | 180 | 442 | 40 | | | | | | | | | | | |
| | 106,4 | 61,9 | 65 | 75 | M12 | 15 | 359 | 297 | | | | 167 | | | | | | | | | | | | | | | | | | | | |

- KF 3/ . F3 OB NOB 7DP . + KF4U 04**
- KF 4/ . G3 OB NOB 7DP . + KF4U 05**
- KF 5/200 H3 OB NOB ODP . + KF5U 06**
- KF 5/250 H3 OB NOB ODP . + KF5U 07**
- KF 5/315 H3 OB NOB ODP . + KF5U 07**
- KF 6/ . H3 OB NOB 7DP . + KF6U 08**

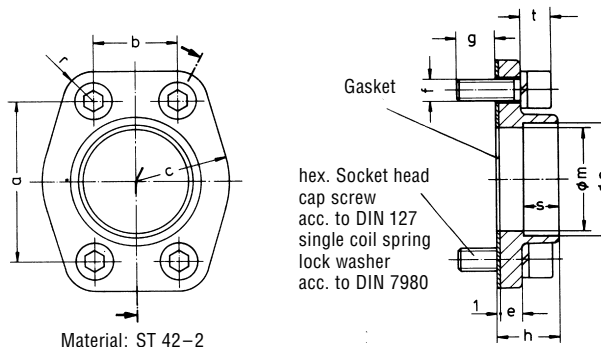
Accessories, 4-bolt, Flanged Pipe Connections

Welding connector KF 3, KF 4

Ordering Example:

2 Pieces Welding Connector KF 4

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

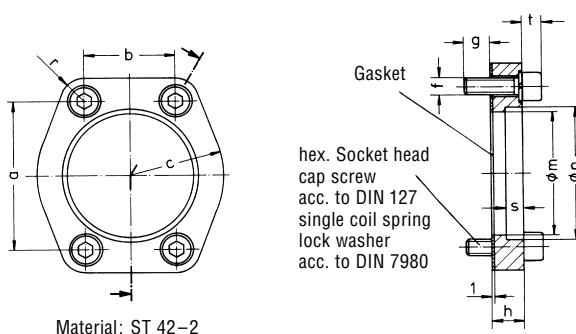


Welding connector KF 5, KF 6

Ordering Example:

2 Pieces Welding Connector KF 5

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



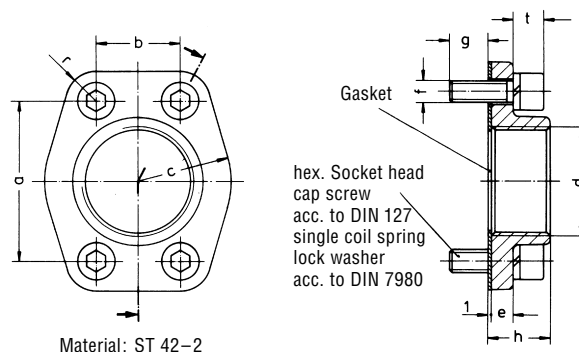
| Size | Nom-displacement | | | | | | | | | | | | | | Screws DIN 912-8.8 | Nom-size | Pipe external Ø | Weight kg |
|-----------------|------------------|-------|------|----|---|-----|----|----|-----|-------|----|----|----|--------|--------------------------|----------|-----------------------|--------------|
| | | a | b | c | e | f | g | h | m | n | r | s | t | | | | | |
| KF3 | | 69.9 | 35.7 | 40 | 9 | M10 | 13 | 26 | 45 | 49 | 13 | 15 | - | M10x25 | 40 | 448.3 | 0.44 | |
| KF4 | | 77.8 | 42.9 | 50 | 9 | M12 | 17 | 26 | 57 | 61 | 13 | 15 | - | M12x30 | 50 | 60.3 | 0.63 | |
| KF5 / 200 | | 88.9 | 50.8 | 55 | - | M12 | 16 | 18 | 68 | 77 | 15 | 12 | 12 | M12x35 | 65 | 76.1 | 0.86 | |
| KF5 / 250 / 315 | | 106.4 | 61.9 | 65 | - | M12 | 16 | 18 | 82 | 90 | 15 | 12 | 12 | M12x35 | 80 | 88.9 | 1.2 | |
| KF6 | | 130.2 | 77.8 | 80 | - | M16 | 24 | 24 | 107 | 115.3 | 20 | 15 | 20 | M16x50 | 100 | 114.3 | 2.5 | |

Threaded connector KF 3, KF 4

Ordering Example:

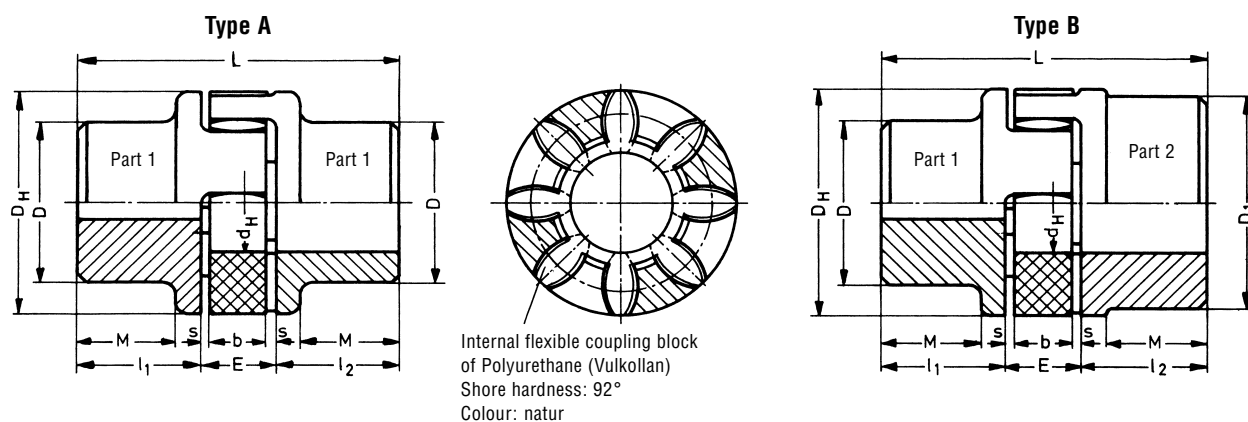
2 Pieces Threaded Connector KF 4

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



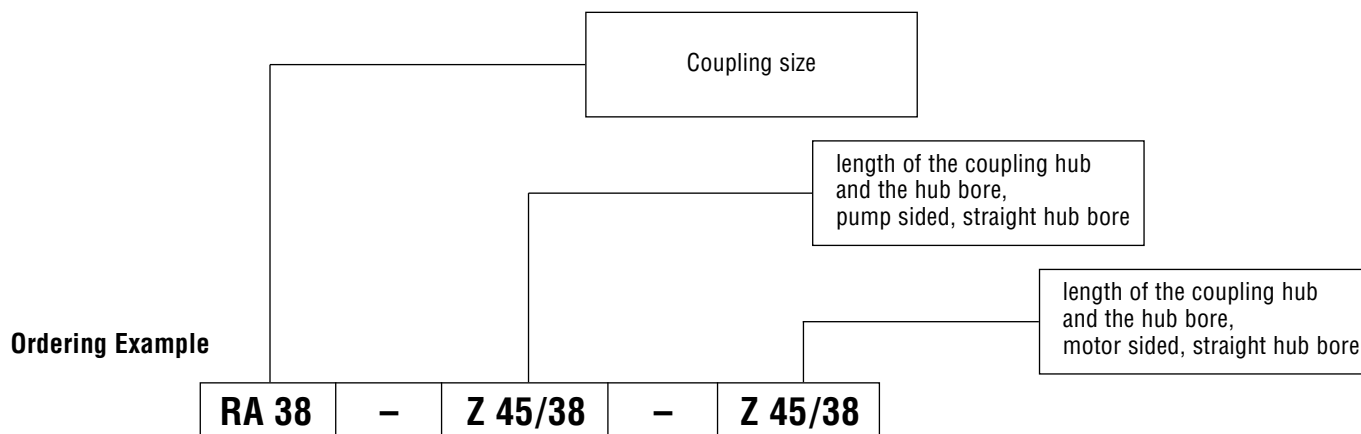
| Size | a | b | c | d | e | f | g | h | r | t | Screws DIN 912-8.8 | Weight kg |
|------|------|------|----|---------|---|-----|----|----|----|---|-----------------------|--------------|
| KF3 | 69.9 | 35.7 | 40 | G 1 1/2 | 9 | M10 | 13 | 26 | 13 | - | M10x25 | 0.44 |
| KF4 | 77.8 | 42.9 | 50 | G 2 | 9 | M12 | 17 | 26 | 13 | - | M12x30 | 0.63 |

Accessories, Couplings



| | Coupling-size | Hub material: Aluminium | | Rough bore | | Finished bore | | | | Dimensions | | | | | | | | Ordering code | | |
|--------|---------------|-------------------------|---------------------------------------|------------|--------|---------------|-------------|-------------|-------------|---------------------------------|----|-----|-----|-----|-----|----------------|-----|---------------|--------------------------|--------------------------|
| | | Weight Kg | Moment of inertia Kgm ² | Part 1 | Part 2 | min. Part 1 | min. Part 2 | max. Part 1 | max. Part 2 | l ₁ ; l ₂ | E | s | b | L | M | D _H | D | | D ₁ | d _h |
| | | | | | | | | | | | | | | | | | | | | |
| Type A | 28 | 0.39 | 0.0002 | 8 | - | 10 | - | 28 | - | 35 | 20 | 2.5 | 15 | 90 | 28 | 65 | 48 | - | 30 | RA 28-Z 35/..-Z 35/.. |
| | 38 | 0.82 | 0.0007 | 10 | - | 12 | - | 38 | - | 45 | 24 | 3 | 18 | 114 | 37 | 80 | 66 | - | 38 | RA 38-Z 45/..-Z 45/.. |
| Type B | 24/28 | 0.26 | 0.0001 | 6 | 22 | 8 | 24 | 24 | 28 | 30 | 18 | 2 | 14 | 78 | 24 | 55 | 40 | 48 | 27 | RA 24/28-Z 30/..-Z 30/.. |
| | 28/38 | 0.46 | 0.0003 | 8 | 26 | 10 | 28 | 28 | 38 | 35 | 20 | 2.5 | 15 | 90 | 28 | 65 | 48 | 65 | 30 | RA 28/28-Z 35/..-Z 35/.. |
| | 38/45 | 0.89 | 0.0008 | 10 | 36 | 12 | 38 | 38 | 45 | 45 | 24 | 3 | 18 | 114 | 37 | 80 | 66 | 76 | 38 | RA 38/45-Z 45/..-Z 45/.. |
| | 38/45 | 0.89 | 0.002 | 10 | 36 | 12 | 38 | 38 | 45 | 45/70 | 24 | 3 | 18 | 139 | 37 | 80 | 66 | 76 | 38 | RA 38/45-Z 45/..-Z 70/.. |
| | 42/55 | 1.39 | 0.0018 | 12 | 40 | 14 | 42 | 42 | 55 | 50 | 26 | 3 | 20 | 126 | 40 | 95 | 75 | 94 | 46 | RA 42/55-Z 35/..-Z 50/.. |
| | 42/55 | 1.39 | 0.005 | 12 | 40 | 14 | 42 | 42 | 55 | 50/75 | 26 | 3 | 20 | 151 | 40 | 95 | 75 | 94 | 46 | RA 42/55-Z 35/..-Z 75/.. |
| | 48/60 | 1.86 | 0.003 | 13 | 46 | 15 | 48 | 48 | 60 | 56 | 28 | 3.5 | 21 | 140 | 45 | 105 | 85 | 102 | 51 | RA 48/60-Z 35/..-Z 56/.. |
| 55/70 | 7.37 | 0.016 | 18 | 52 | 20 | 55 | 55 | 70 | 65 | 30 | 4 | 22 | 160 | - | 120 | 98 | 120 | 60 | RG 55/70-Z 65/..-Z 65/.. | |

Operating temperature: -10 °C to +80 °C (short-time temperature peaks up to +120 °C are permissible)
 Weights as well as moments of inertia relate to the max. bore dia. after final machining – but without key way.
 Bore finish acc. to ISO – fit, class H7;
 Key-ways acc. to DIN 6885 / part 1

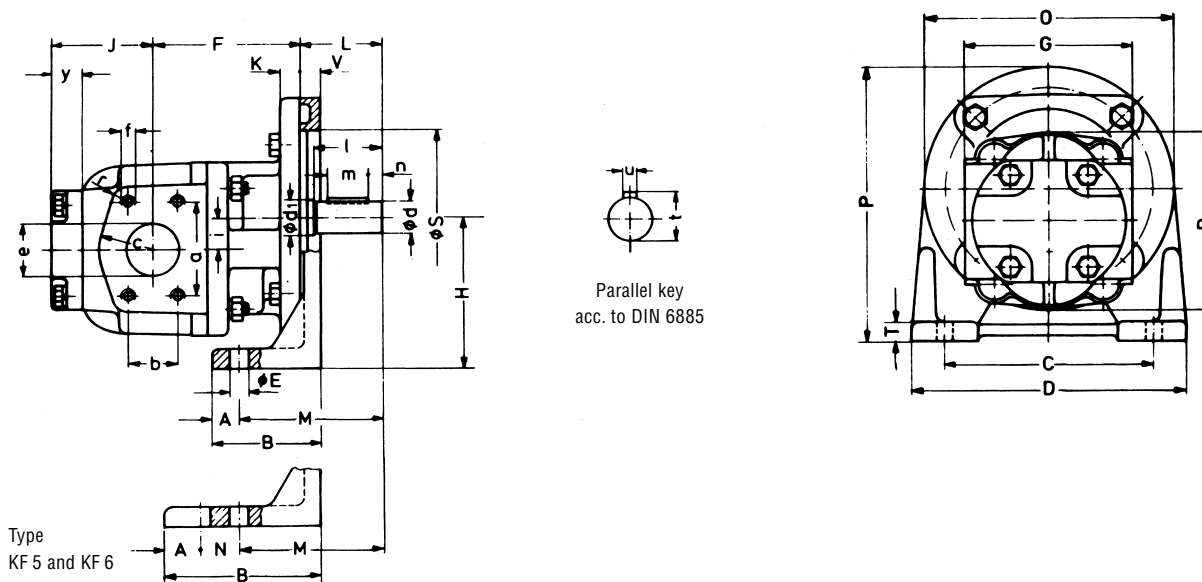


Flange-Type Pumps with Mounting Angle

Materials

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

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



Mounting angle dimensions

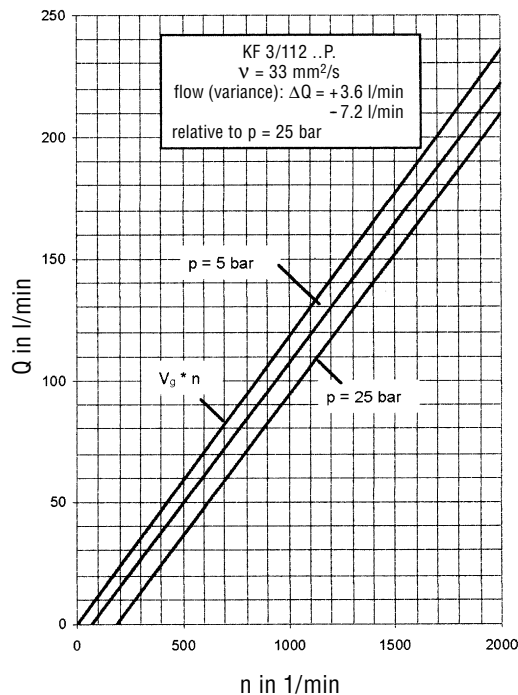
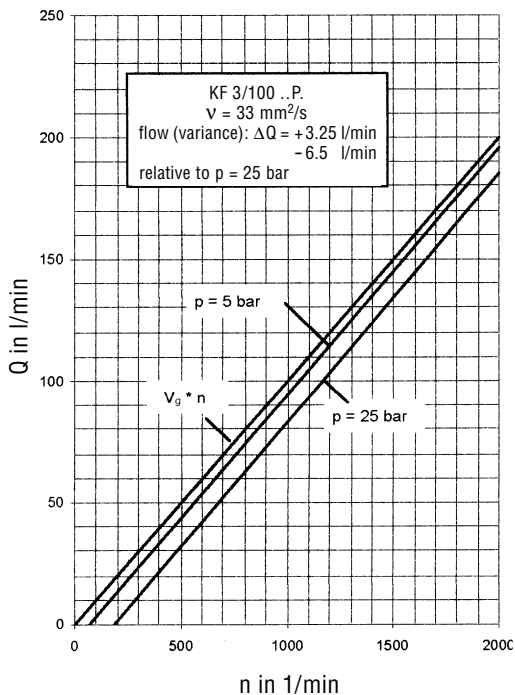
| | A | B | C | D | E | H | M | N | O | P | T | V |
|-------------|----|-----|-----|-----|----|-----|-----|----|-----|-----|----|----|
| KF 3 | 20 | 80 | 150 | 180 | 14 | 112 | 105 | - | 180 | 202 | 15 | 15 |
| KF 4 | 20 | 95 | 170 | 200 | 14 | 132 | 115 | - | 220 | 242 | 15 | 20 |
| KF 5 | 40 | 220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

| Size | Inlet- and outlet port flange | | | | | | | Shaft end | | | | | | | | | | Weight kg | | | | | | |
|--|-------------------------------|----------------------|----------------|----------------|-----|---------|----------------|-------------------|-----|-------------------|----|----|-----------------|-----|------|----------------|-----------------|--------------|----|----|---------|------------|--------|----------------------|
| | a | b | c | e | f | r | F | G | J | K | L | R | S _{H7} | i | Y | d ₁ | d _{k6} | | l | m | n | t | u | |
| 3/100 112 | 69.9 | 35.7 | 40 | 40 | M10 | 16 deep | 12 | 108 | 120 | 92 | 15 | 60 | 130 | 130 | 23 | 20 | 25 *20 | 24 19 | 50 | 30 | 10 5 | 27 21.5 | 8 6 | 14 |
| 125 4/150 180 | 77.8 | 42.9 | 50 | 50 | M12 | 18 deep | 12 | 110 125 135 | | 80 77 77 | 19 | 60 | 160 | 150 | 28.3 | 20 | 25 | 24 | 50 | 40 | 5 | 27 | 8 | 20 22 23 |
| 200 5/250 315 | 88.9 106.4 106.4 | 50.8 61.9 61.9 | 50 65 65 | 63 75 75 | M12 | 20 deep | 13 15 15 | 155 170 170 | | 93 109 109 | 22 | 70 | 198 | 180 | 32 | 24 | 30 | 28 | 60 | 40 | 10 | 31 | 8 | 31.5 36.5 36.5 |
| 400 6/500 630 | 130.2 | 77.8 | 80 | 100 | M16 | 32 tief | 20 | 180 200 200 | | 124 126 159 | 25 | 95 | 244 | 180 | 40 | 24 | 40 | 38 | 80 | 63 | 8 | 41 | 10 | 59 63 73 |

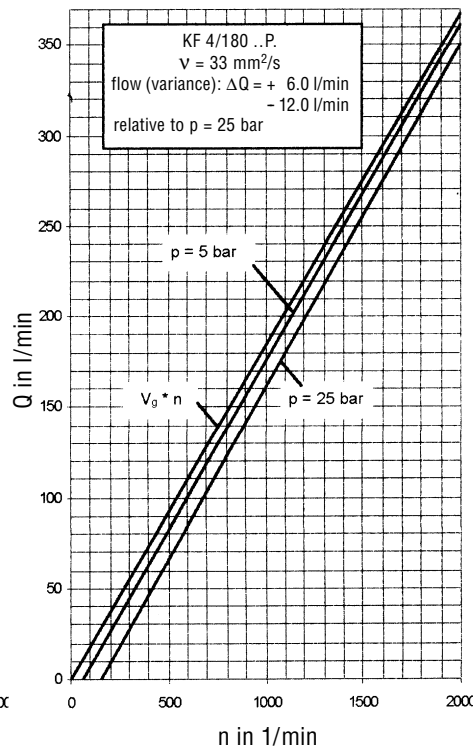
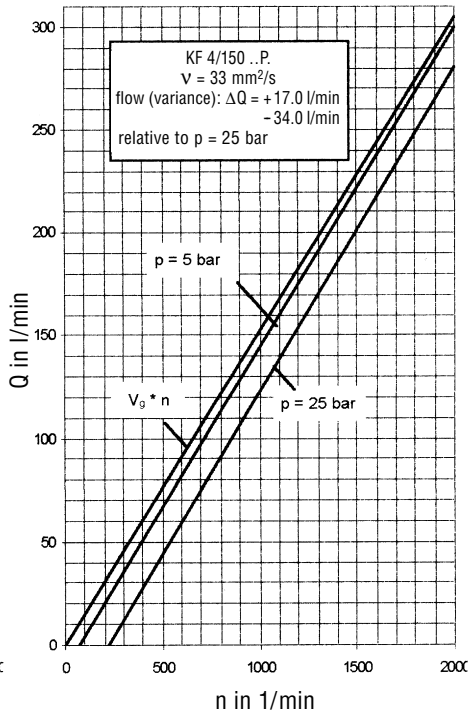
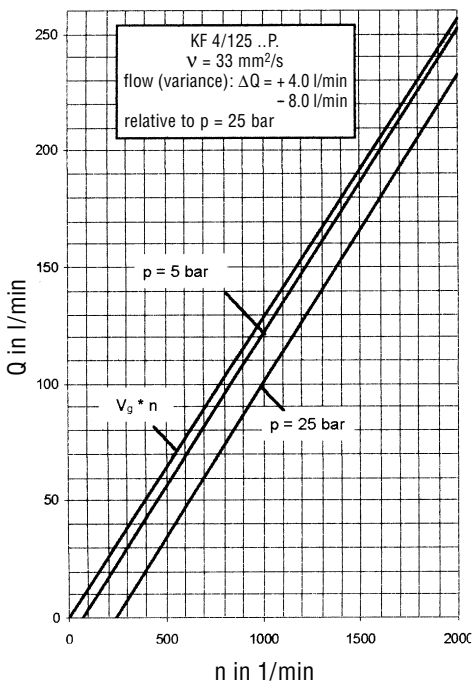
*KF3:

Characteristic Curves

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

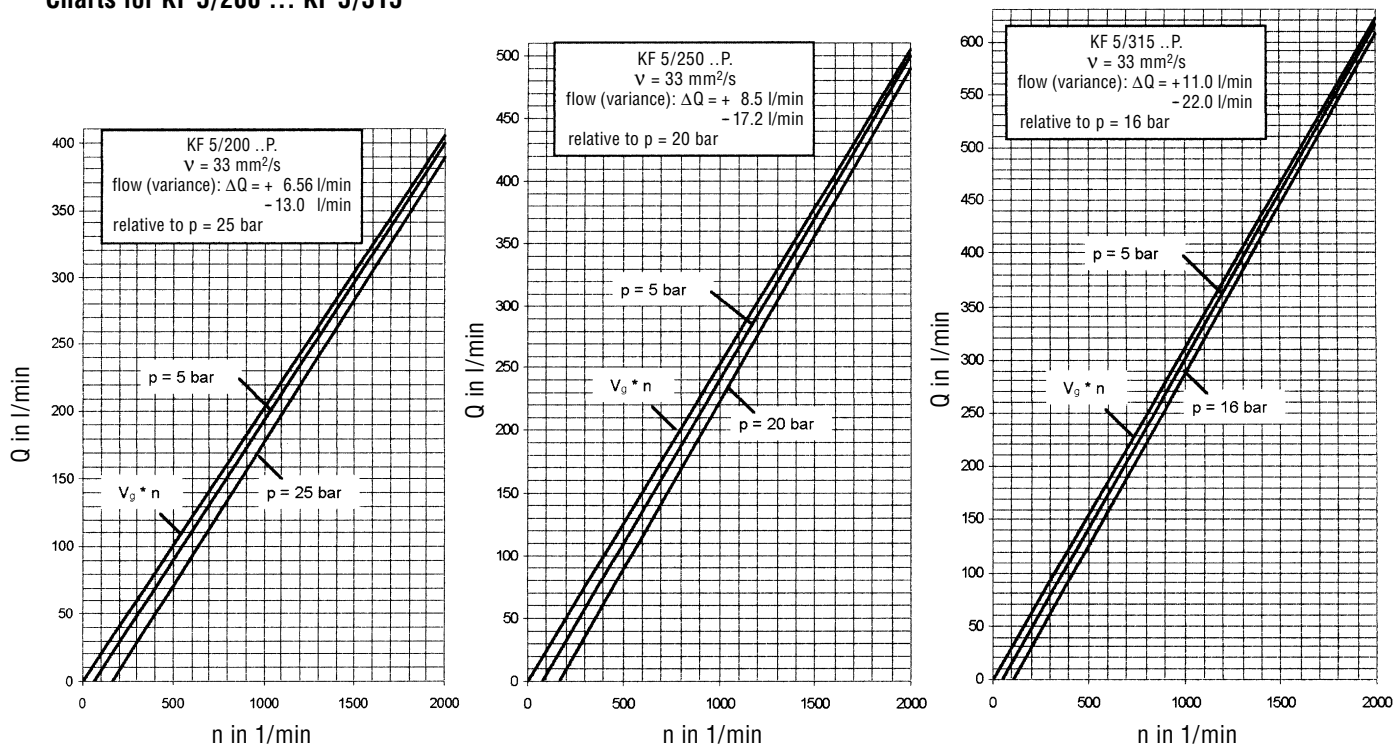


Charts for KF 4/125 ... KF 4/180

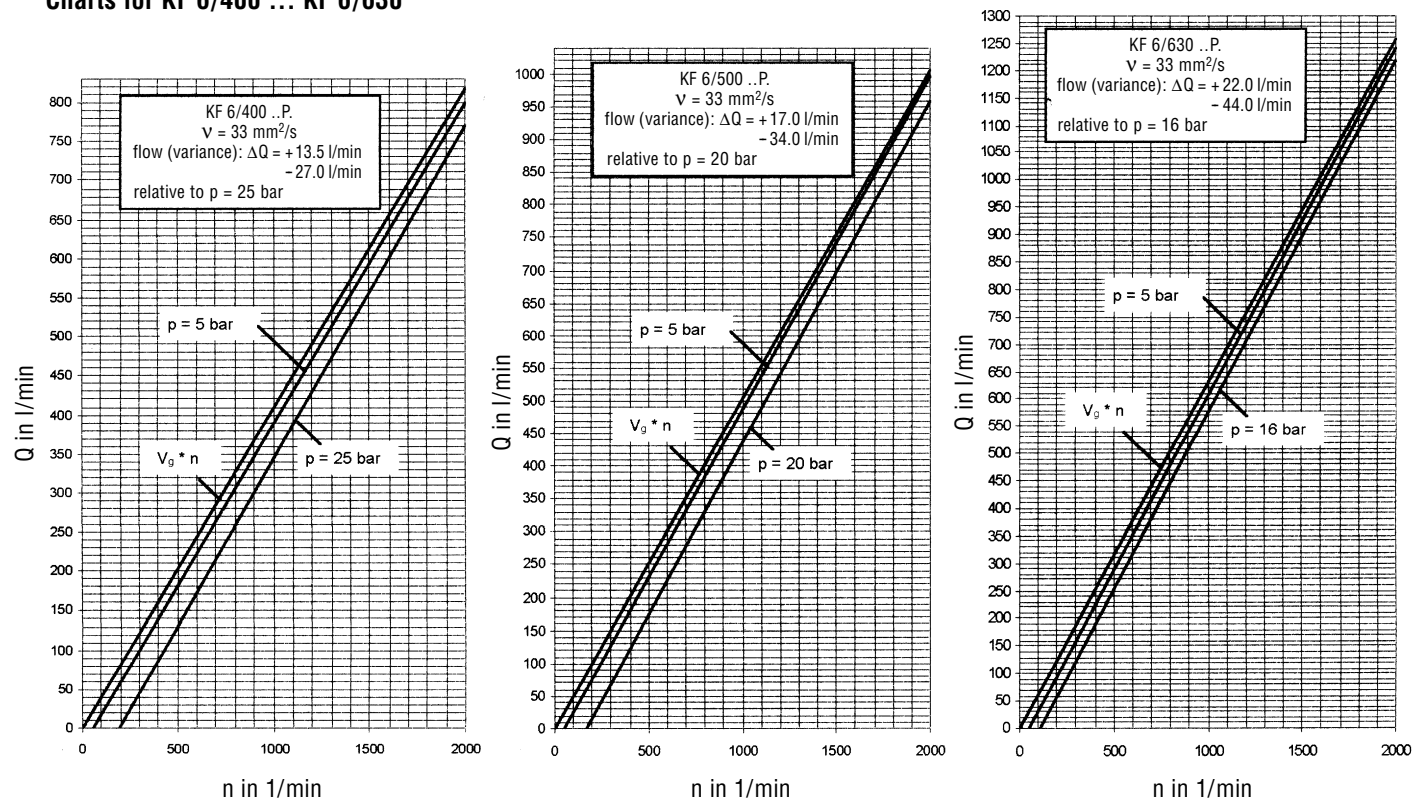


Characteristic Curves

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



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



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

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

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KF3-6.e.10.01