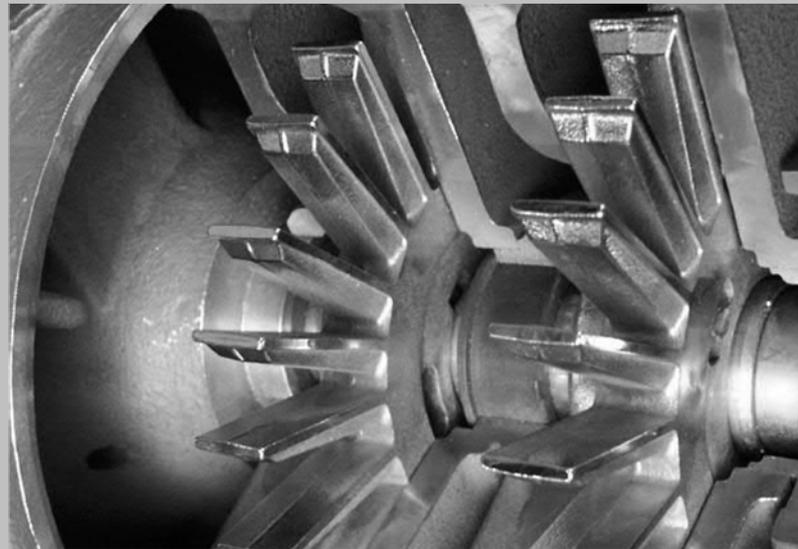


Seitenkanalpumpen • side channel pumps



Produktionsprogramm/ production program

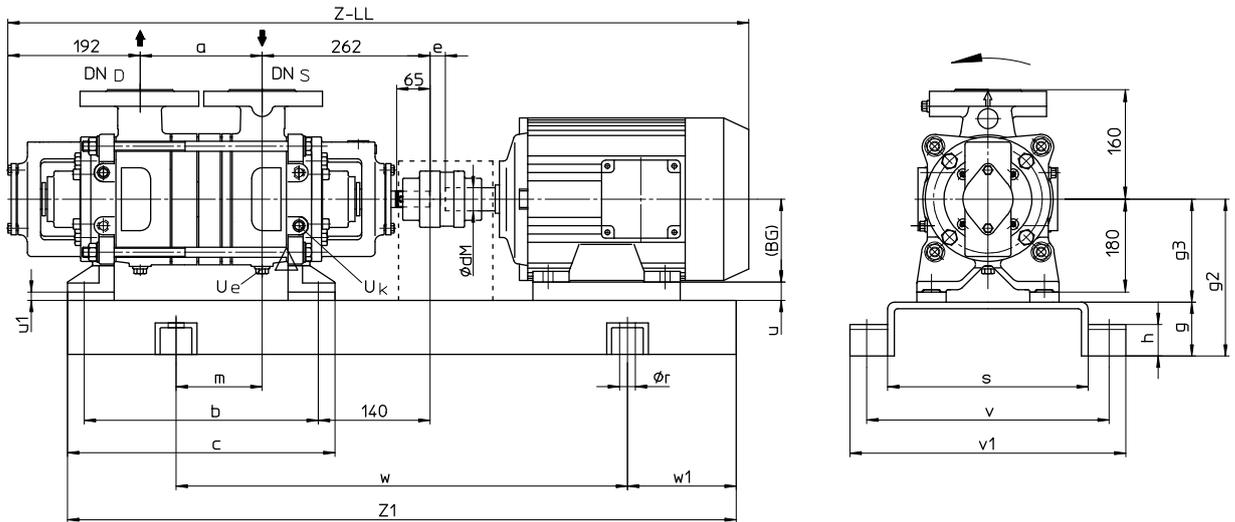
- Seitenkanalpumpen
side channel pumps
- Kleinpumpen
small centrifugal pumps
- Wärmeträgerölpumpen
thermal oil pumps
- Magnetpumpen
magnetic drive pumps
- Eintauchpumpen
submersible pumps
- Drehschieberpumpen
roller vane pumps
- Schwingankerpumpen
magnetic piston pumps
- Flüssigkeitsring-Vakuumpumpen
liquid ring vacuum pumps
- Vakuumpakktanlagen
vacuum package units

Anwendungsbereiche fields of application

- Medizintechnik
medical appliances
- Schweißmaschinen
welding machinery
- Schienenfahrzeuge
rail cars
- Luft- und Raumfahrt
aerospace equipment
- Temperiergeräte
temperature controllers
- Baumaschinen
construction machinery
- Getränkeautomaten
drink dispensers
- Industrie- und Apparatebau
industrial and mechanical engineering
- Automobilindustrie
automobile industry
- Anlagenbau
system manufacturing

Seitenkanalpumpen
SK
selbstansaugend

side channel pumps
SK
self priming



Anwendungen:

- Seitenkanalpumpe nach EN 734 (DIN 24254)
 - selbstansaugend – gasmitfördernd
- Einsatz unter schwierigen Bedingungen für reine Flüssigkeiten.
Beispiel: Allgemeine Verfahrenstechnik, Chemische Industrie, Apparatebau, Nahrungs- und Genussmittelindustrie.

Technische Daten:

| | |
|-----------------------------|--|
| Förderstrom: | max. 35 m ³ /h (50 Hz) max. 42 m ³ /h (60 Hz) |
| Förderhöhe: | max. 350 m (50 Hz) max. 490 m (60 Hz) |
| Drehzahl: | 1450 1/min (50 Hz) 1750 1/min (60 Hz) |
| Nenndruck: | PN 25 (PN 40 auf Anfrage) |
| Temperatur: | max. 120 °C (> 120 °C auf Anfrage) |
| Wellendichtung: | Gleitringdichtung |
| Anschlussmaße der Flansche: | DIN 2501 PN 40; ANSI möglich |

Ausführung:

| | |
|------------------|---|
| Enddruck: | zulässigen Pumpenenddruck beachten |
| Temperatur: | - 40 °C bis 120 °C (> 120 °C Drücke gemäß DIN 2401) |
| Stutzenstellung: | Saug- und Druckstutzen radial nach oben |
| Flansche: | EN 1092-2 PN 40, DIN 2512 mit Nut oder gebohrt nach ANSI möglich |
| Lagerung: | zwei dauergeschmierte Rillenkugellager nach DIN 625 - oder - ein dauergeschmiertes Rillenkugellager nach DIN 625 und ein flüssigkeits- umspültes Gleitlager |
| Drehrichtung: | vom Antrieb auf die Pumpe gesehen rechts |

applications:

- side channel pump according to EN 734 (DIN 24254)
 - self priming – gas delivering
- application under difficult conditions for pure liquids
examples: general process engineering, chemical industry, mechanical engineering, food and luxury food industry

technical data:

| | |
|-----------------------------------|--|
| capacity: | max. 160 U.S.GPM (50 cycles) max. 185 U.S.GPM (60 cycles) |
| total head: | max. 1150 feet (50 cycles) max. 1600 feet (60 cycles) |
| speed: | 1450 rpm (50 cycles) 1750 rpm (60 cycles) |
| nominal pressure: | 363 PSI (580 PSI upon request) |
| temperature: | max. 120 °C (> 120 °C upon request) |
| shaft sealing: | mechanical seal |
| connection dimensions of flanges: | DIN 2501 PN 40; ANSI optional |

execution:

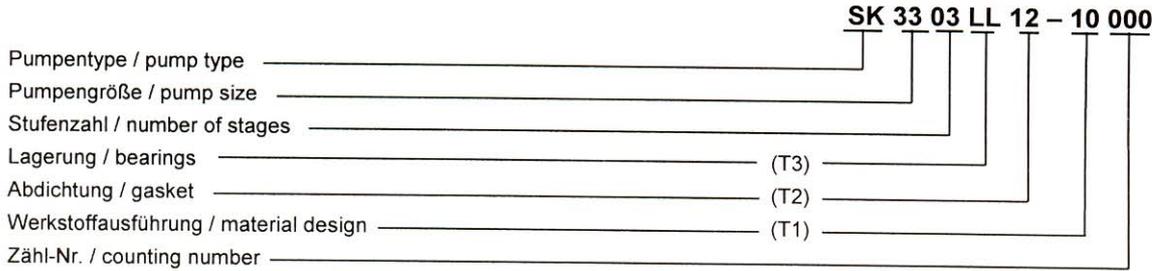
| | |
|-----------------------|--|
| final pressure: | admissible final pump end pressure to be observed |
| temperature: | - 40 °C to 120 °C (> 120 °C pressures according to DIN 2401) |
| position of fittings: | suction flanges and discharge flange positioned radially facing upwards |
| flanges: | EN 1092-2 PN 40, DIN 2512 possible with groove or drilled according to ANSI |
| bearings: | two lifetime lubricated deep groove ball bearings according to DIN 625 - or - one lifetime lubricated deep groove ball bearing according to DIN 625 and one sleeve bearing liquid rinsed |
| rotation direction: | clockwise, view towards pump |

Seitenkanalpumpen
SK
selbstansaugend

side channel pumps
SK
self priming



Beispiel / example
Typenschlüssel / type code



T1: Werkstoffausführung / material design

| Bauteile components | Nr. no. | Werkstoffausführung material design | | | | | Bauteile components | Nr. no. | Werkstoffausführung material design | | | | | |
|------------------------|------------|--|---------------|--------------------|--------|--|------------------------|--|--|---------------|---------------|-------------------------------|------|----|
| | | 10 | 30 | 40 | 50 | 60/65 | | | 10 | 30 | 40 | 50 | 60 | 65 |
| Gehäuse casing | 106 107 | GG-25 cast iron | GBZ bronze | GG-25 cast iron | 1.4581 | Laufrad impeller | 230 | Messing brass | 1.4408 | GBZ bronze | GBZ bronze | 1.4408 | Peek | |
| Stufe stage | 114 | | | GBZ bronze | | Gehäuse für Wellendichtung casing for shaft sealing | 441 | GG-25 cast iron | GG-25 cast iron | | 1.4581 | | | |
| Ständer pump frame | 180 | GG-25 cast iron | | | | Gleitringdichtung mechanical seal | 047 | SiC / Kohle SiC / carbon | | | | | | |
| Welle shaft | 211 | 1.4122 | 1.4571 | 1.4122 | 1.4571 | Gehäusedichtung casing gasket | | flüssige Dichtmasse 1) sealing liquid | | 2) | 1) | Weichteflon 2) soft Teflon | | |

T2: Wellendichtung / shaft sealing

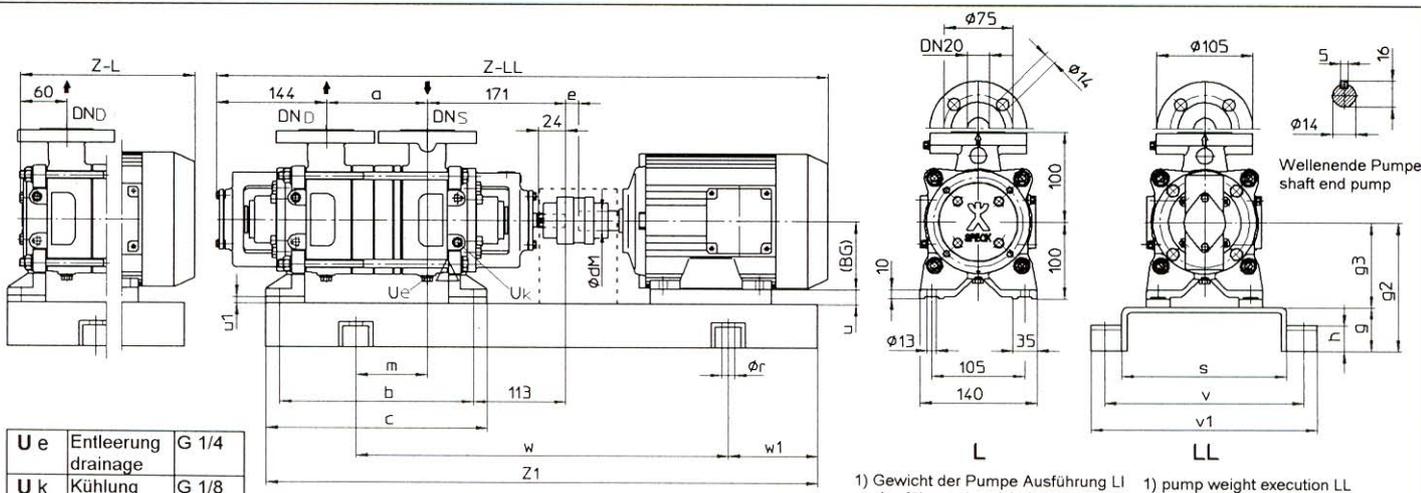
| GLRD belastet / GLRD unbalanced Gegenring SiC / Gleitring A-Kohle counter ring SiC / sealing ring A-carbon | | GLRD entlastet / GLRD balanced Gegenring SiC / Gleitring A-Kohle counter ring SiC / sealing ring A-carbon | | | | (GLRD = mechanical seal) | |
|--|--|---|------------------------------------|--|------------------------------------|--------------------------|--|
| ungekühlt / uncooled Temperatur / temperature < 140 °C | | ungekühlt / uncooled Temperatur / temperature < 140 °C | | gekühlt / cooled Temperatur / temperature > 140 °C – 200 °C | | | |
| P max 13 bar / 190 PSI | | P max 30 bar/435 PSI | P max 40 bar/580 PSI | P max 30 bar/435 PSI | P max 40 bar/580 PSI | | |
| 10 = FFKM 12 = EP 13 = Viton 17 = Viton (Gegenring SiC / Gleitring SiC) 17 = Viton (counter ring SiC / sealing ring SiC) | | 50 = FFKM 52 = EP 53 = Viton | 60 = FFKM 62 = EP 63 = Viton | 70 = FFKM 72 = EP 73 = Viton | 80 = FFKM 82 = EP 83 = Viton | | |

T3: Lagerung / bearing

| | | | | |
|----|--------------|--|----------------|---|
| L | bis 3 Stufen | 1 Kugellager, 1 Gleitlager | up to 3 stages | 1 ball bearing, 1 sleeve bearing |
| LA | bis 3 Stufen | 1 Kugellager, 1 Gleitlager (mit Laterne) | up to 3 stages | 1 ball bearing, 1 sleeve bearing (with bracket) |
| LL | bis 8 Stufen | 2 Kugellager | up to 8 stages | 2 ball bearings |

Seitenkanalpumpen
SK 20
selbstansaugend

side channel pumps
SK 20
self priming



| | | |
|------------|------------------------|-------|
| U e | Entleerung drainage | G 1/4 |
| U k | Kühlung cooling | G 1/8 |

1) Gewicht der Pumpe Ausführung LI
Ausführung L auf Anfrage
2) BG = Motorbaugröße

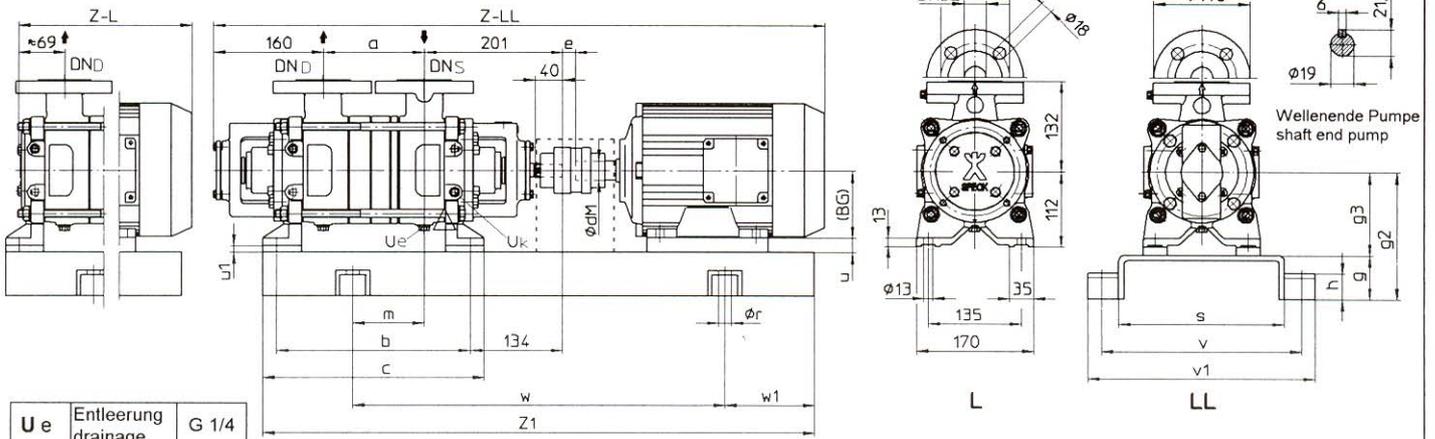
1) pump weight execution LL
execution L upon request
2) BG = motor frame size

| Type type | Pumpe / pump | | Motor / motor | | | a | b | c | ØdM | e | g | g2 | g3 | h | m | Ør |
|--------------|--------------|----------|---------------|------|------|-----|-----|-----|-----|----|----|-----|-----|----|-----|----|
| | 1) [kg] | 1) [lbs] | 2) BG | [kW] | [HP] | | | | | | | | | | | |
| 2001 | 20,5 | 45.1 | 71 | 0,37 | 0.5 | 120 | 236 | 265 | 14 | 16 | 65 | 165 | 100 | 38 | 87 | 19 |
| 2002 | 21,5 | 47.3 | 80 | 0,55 | 0.74 | | | | 19 | | | | | | | |
| 2003 | 23,5 | 51.7 | 90S | 1,10 | 1.5 | 154 | 270 | 299 | 24 | 16 | 65 | 165 | 100 | 38 | 121 | 19 |
| | | | 80 | 0,75 | 1.0 | | | | 19 | | | | | | | |
| | | | 90L | 1,50 | 2.0 | | | | 24 | | | | | | | |
| 2004 | 25,5 | 56.1 | 90S | 1,10 | 1.5 | 188 | 304 | 333 | 24 | 18 | 65 | 165 | 100 | 38 | 145 | 19 |
| | | | 90L | 1,50 | 2.0 | | | | 28 | | | | | | | |
| | | | 100L | 2,20 | 3.0 | | | | 28 | | | | | | | |
| 2005 | 26,5 | 58.3 | 90S | 1,10 | 1.5 | 222 | 338 | 367 | 24 | 18 | 65 | 165 | 100 | 38 | 179 | 19 |
| | | | 90L | 1,50 | 2.0 | | | | 28 | | | | | | | |
| | | | 100L | 2,20 | 3.0 | | | | 28 | | | | | | | |
| 2006 | 28,5 | 62.7 | 90L | 1,50 | 2.0 | 256 | 372 | 401 | 24 | 18 | 65 | 165 | 100 | 38 | 198 | 19 |
| | | | 100L | 2,20 | 3.0 | | | | 28 | | | | | | | |
| | | | 100L | 3,00 | 4.0 | | | | 28 | | | | | | | |
| 2007 | 30,5 | 67.1 | 90L | 1,50 | 2.0 | 290 | 406 | 435 | 24 | 18 | 65 | 165 | 100 | 38 | 212 | 19 |
| | | | 100L | 2,20 | 3.0 | | | | 28 | | | | | | | |
| | | | 100L | 3,00 | 4.0 | | | | 28 | | | | | | | |
| 2008 | 33,5 | 73.7 | 90L | 1,50 | 2.0 | 324 | 440 | 469 | 24 | 18 | 65 | 165 | 100 | 38 | 212 | 19 |
| | | | 100L | 2,20 | 3.0 | | | | 28 | | | | | | | |
| | | | 100L | 3,00 | 4.0 | | | | 28 | | | | | | | |

| Type type | s | u | u1 | v | v1 | w | w1 | Z-L | Z-LL | Z1 | Grundplatte base plate | Kupplung coupling | Berührungsschutz coupling protection |
|--------------|-----|-----|----|-----|-----|-----|-----|------|------|-----|---------------------------|----------------------|---|
| 2001 | 210 | 29 | 0 | 260 | 300 | 420 | 105 | 598 | 682 | 630 | 0/210 | 19/24 | 31.681.031-32 |
| 2002 | | 20 | | | | | | 639 | 723 | | | | |
| 2003 | | 10 | | | | | | 663 | 747 | | | | |
| 2003 | 240 | 20 | 0 | 290 | 330 | 480 | 115 | 673 | 757 | 710 | 1/240 | 19/24 | 31.681.031-32 |
| | | 697 | | | | | | 781 | | | | | |
| 2004 | 270 | 0 | 0 | 320 | 360 | 540 | 130 | 722 | 806 | 800 | 2/270 | 24/28 | 31.681.031-02 |
| | | 815 | | | | | | 840 | | | | | |
| | | 884 | | | | | | 800 | | | | | |
| 2005 | 240 | 10 | 0 | 290 | 330 | 480 | 115 | 846 | 710 | 800 | 2/270 | 24/28 | 31.681.031-02 |
| | | 874 | | | | | | 800 | | | | | |
| 2005 | 270 | 0 | 0 | 320 | 360 | 540 | 130 | 916 | 800 | 800 | 2/270 | 24/28 | 31.681.031-02 |
| | | 908 | | | | | | 800 | | | | | |
| 2006 | 300 | 0 | 0 | 350 | 390 | 600 | 150 | 952 | 900 | 900 | 3/300 | 24/28 | 31.681.031-02 |
| | | 942 | | | | | | 900 | | | | | |
| 2007 | 300 | 10 | 0 | 350 | 390 | 600 | 150 | 986 | 900 | 900 | 3/300 | 24/28 | 31.681.031-02 |
| 2008 | | 0 | | | | | | 1020 | 900 | | | | |

Seitenkanalpumpen
SK 32
selbstansaugend

side channel pumps
SK 32
self priming



| | | |
|------------|------------------------|-------|
| U e | Entleerung drainage | G 1/4 |
| U k | Kühlung cooling | G 1/8 |

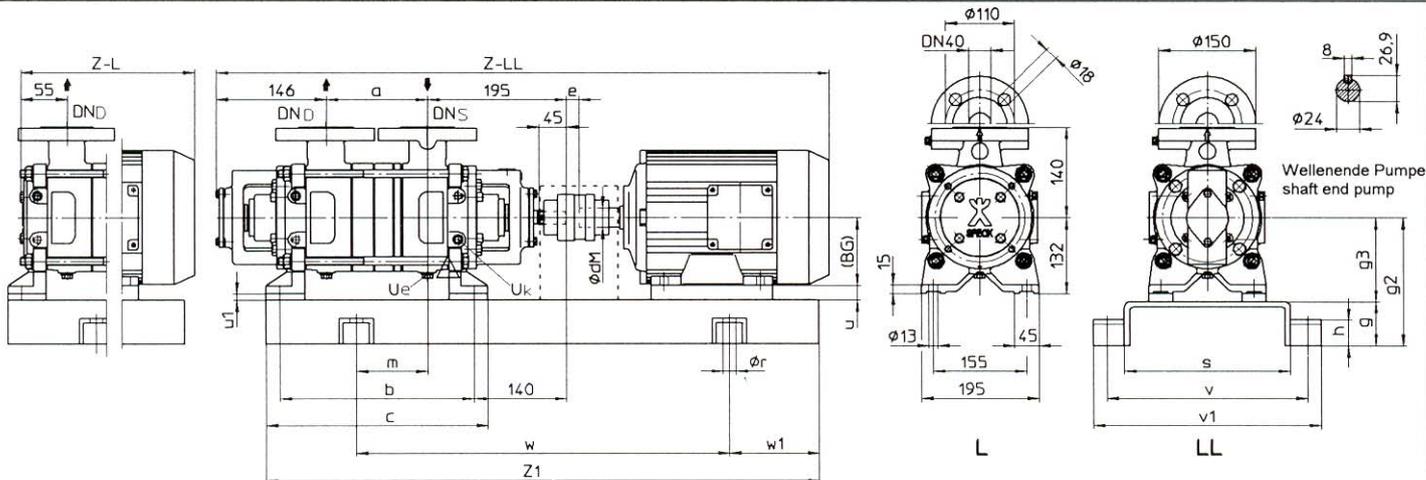
1) Gewicht der Pumpe Ausführung L 1) pump weight execution LL
Ausführung L auf Anfrage execution L upon request
2) BG = Motorbaugröße 2) BG = motor frame size

| Type type | Pumpe / pump | | Motor / motor | | | a | b | c | ØdM | e | g | g2 | g3 | h | m | Ør |
|-------------|--------------|----------|---------------|------|------|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|
| | 1) [kg] | 1) [lbs] | 2) BG | [kW] | [HP] | | | | | | | | | | | |
| 3201 | 32,5 | 71 | 80 | 0,75 | 1.0 | 146 | 280 | 320 | 19 | 18 | 65 | 177 | 112 | 38 | 206 | 19 |
| | | | 90S | 1,1 | 1.5 | | | | 24 | | | | | | | |
| 3202 | 34,5 | 76 | 90L | 1,5 | 2.0 | 186 | 320 | 360 | 28 | 18 | 65 | 177 | 112 | 38 | 106 | 146 |
| | | | 100L | 2,2 | 3.0 | | | | | | | | | | 226 | |
| 3203 | 38,5 | 85 | | 3,0 | 4.0 | 226 | 360 | 400 | 28 | 18 | 65 | 177 | 112 | 38 | | 166 |
| | | | 2,2 | 3.0 | 226 | | | | | | | | | | 360 | 400 |
| 3204 | 41,5 | 91 | 3,0 | 4.0 | | 226 | 360 | 400 | 28 | 18 | 65 | 177 | 112 | 38 | | |
| | | | 112M | 4,0 | 5.4 | | | | | | | | | | 226 | 360 |
| 3205 | 45,5 | 100 | 100L | 3,0 | 4.0 | 266 | 400 | 440 | 38 | 20 | 197 | 132 | 38 | 186 | | |
| | | | 112M | 4,0 | 5.4 | | | | | | | | | 266 | 400 | 440 |
| 3206 | 48,5 | 107 | 132S | 5,5 | 7.4 | 306 | 440 | 480 | 38 | 20 | 197 | 132 | 38 | | | |
| | | | 132M | 7,5 | 10 | | | | | | | | | 306 | 440 | 480 |
| 3207 | 52,5 | 116 | 112M | 4,0 | 5.4 | 346 | 480 | 520 | 28 | 20 | 197 | 132 | 38 | | | |
| | | | 132S | 5,5 | 7.4 | | | | | | | | | 346 | 480 | 520 |
| 3208 | 56,5 | 124 | 132M | 7,5 | 10 | 386 | 520 | 560 | 28 | 20 | 197 | 132 | 38 | | | |
| | | | 160M | 11,0 | 15 | | | | | | | | | 386 | 520 | 560 |
| | | | | | | | | | 42 | 24 | 80 | 240 | 160 | | | |

| Type type | s | u | u1 | v | v1 | w | w1 | Z-L | Z-LL | Z1 | Grundplatte base plate | Kupplung coupling | Berührungsschutz coupling protection |
|-------------|-----|----|----|-----|-----|-----|-----|------|------|------|---------------------------|----------------------|---|
| 3201 | 210 | 32 | 0 | 260 | 300 | 480 | 115 | 707 | 797 | 710 | 1/210 | 24/28 | 31.681.031-03 |
| | | 22 | | | | | | 729 | 819 | | | | |
| 3202 | 240 | 12 | 0 | 290 | 330 | 540 | 130 | 754 | 844 | 800 | 2/240 | 24/28 | 31.681.031-04 |
| | | | | | | | | 798 | 888 | | | | |
| 3203 | 240 | 12 | 0 | 290 | 330 | 540 | 130 | 838 | 928 | 800 | 2/240 | 24/28 | 31.681.031-04 |
| | | | | | | | | 968 | 1008 | | | | |
| 3204 | 270 | 0 | 0 | 320 | 360 | 600 | 150 | 985 | 1025 | 900 | 3/240 | 24/28 | 31.681.031-04 |
| | | | | | | | | 1008 | 1025 | | | | |
| 3205 | 240 | 12 | 0 | 290 | 330 | 540 | 130 | 1025 | 1132 | 1000 | 3/270 | 28/38 | 31.681.031-07 |
| | | | | | | | | 1025 | 1132 | | | | |
| 3206 | 270 | 0 | 0 | 320 | 360 | 660 | 170 | 1132 | 1065 | 1000 | 4/300 | 28/38 | 31.681.031-07 |
| | | | | | | | | 1065 | 1172 | | | | |
| 3207 | 300 | 0 | 0 | 320 | 360 | 660 | 170 | 1172 | 1105 | 1120 | 4/270 | 24/28 | 31.681.031-04 |
| | | | | | | | | 1105 | 1212 | | | | |
| 3208 | 270 | 0 | 0 | 320 | 360 | 740 | 190 | 1212 | 1252 | 1120 | 5/300 | 28/38 | 31.681.031-07 |
| | | | | | | | | 1212 | 1252 | | | | |
| 3208 | 380 | 0 | 0 | 440 | 490 | 840 | 205 | 1354 | 1250 | 1250 | 6/380 | 38/45 | 31.681.031-13 |
| | | | | | | | | 1250 | 1250 | | | | |

Seitenkanalumpen
SK 40
selbstansaugend

side channel pumps
SK 40
self priming



| | | |
|-----|------------------------|-------|
| U e | Entleerung drainage | G 1/4 |
| U k | Kühlung cooling | G 1/8 |

1) Gewicht der Pumpe Ausführung LL
Ausführung L auf Anfrage
2) BG = Motorbaugröße

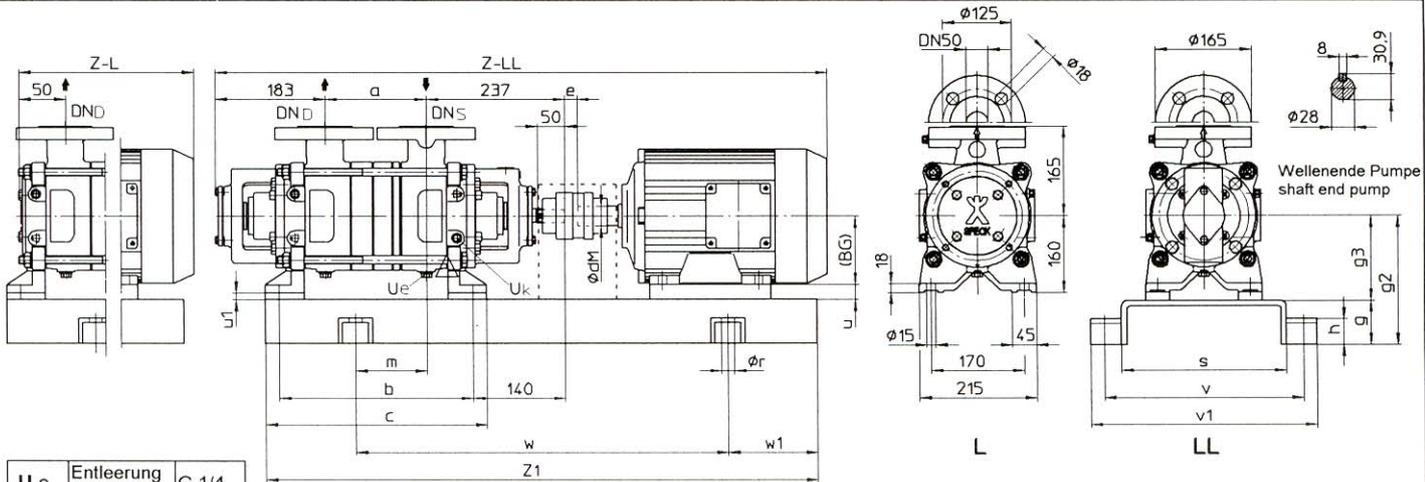
1) pump weight execution LL
execution L upon request
2) BG = motor frame size

| Type type | Pumpe / pump | | Motor / motor | | | a | b | c | ØdM | e | g | g2 | g3 | h | m | Ør |
|--------------|--------------|----------|---------------|------|------|-----|-----|-----|-----|----|----|-----|-----|----|-----|----|
| | 1) [kg] | 1) [lbs] | 2) BG | [kW] | [HP] | | | | | | | | | | | |
| 4001 | 43,5 | 96 | 90L | 1,5 | 2.0 | 160 | 269 | 302 | 24 | 18 | 65 | 197 | 132 | 38 | 220 | 19 |
| | | | 100L | 2,2 | 3.0 | | | | | | | | | | 205 | |
| 4002 | 49,5 | 109 | 112M | 4,0 | 5.4 | 215 | 324 | 357 | 28 | 20 | 65 | 197 | 132 | 38 | 160 | 19 |
| | | | 132S | 5,5 | 7.4 | | | | | | | | | | 195 | |
| 4003 | 56,5 | 124 | 132M | 7,5 | 10 | 270 | 379 | 412 | 38 | 20 | 65 | 197 | 132 | 38 | 175 | 19 |
| | | | 132S | 5,5 | 7.4 | | | | | | | | | | 230 | |
| 4004 | 62,5 | 138 | 132M | 7,5 | 10 | 325 | 434 | 467 | 38 | 20 | 65 | 197 | 132 | 38 | 265 | 19 |
| | | | 132S | 5,5 | 7.4 | | | | | | | | | | 230 | |
| 4005 | 68,5 | 151 | 160M | 11,0 | 15 | 380 | 489 | 522 | 42 | 24 | 80 | 240 | 160 | 42 | 250 | 24 |
| | | | 132M | 7,5 | 10 | | | | | | | | | | 320 | |
| 4006 | 74,5 | 164 | 160M | 11,0 | 15 | 435 | 544 | 577 | 38 | 20 | 65 | 197 | 132 | 38 | 305 | 24 |
| | | | 132M | 7,5 | 10 | | | | | | | | | | 360 | |
| 4007 | 80,5 | 177 | 160M | 11,0 | 15 | 490 | 599 | 632 | 38 | 20 | 65 | 197 | 197 | 38 | 335 | 19 |
| | | | 160L | 15,0 | 20 | | | | | | | | | | 390 | |
| 4008 | 86,5 | 190 | 160M | 11,0 | 15 | 545 | 654 | 687 | 42 | 24 | 80 | 240 | 160 | 42 | 390 | 24 |
| | | | 160L | 15,0 | 20 | | | | | | | | | | 390 | |

| Type type | s | u | u1 | v | v1 | w | w1 | Z-L | Z-LL | Z1 | Grundplatte base plate | Kupplung coupling | Berührungsschutz coupling protection |
|--------------|-----|----|----|-----|-----|-----|-----|------|------|------|---------------------------|----------------------|---|
| 4001 | 240 | 42 | 0 | 290 | 330 | 480 | 115 | 747 | 838 | 710 | 1/240 | 24/28 | 31.681.031-05 |
| | | 32 | | | | 540 | 130 | 791 | 882 | 800 | 2/240 | | |
| 4002 | 270 | 20 | 0 | 320 | 360 | 600 | 150 | 863 | 954 | 900 | 3/270 | 28/38 | 31.681.031-06 |
| | | | | | | | | | | | | | |
| 4003 | 300 | 0 | 0 | 350 | 390 | 660 | 170 | 918 | 1009 | 900 | 3/270 | 28/38 | 31.681.031-07 |
| | | | | | | | | | | | | | |
| 4004 | 380 | 0 | 0 | 440 | 490 | 840 | 205 | 1025 | 1116 | 1000 | 3/270 | 28/38 | 31.681.031-07 |
| | | | | | | | | | | | | | |
| 4005 | 300 | 0 | 0 | 350 | 390 | 740 | 190 | 1025 | 1116 | 1000 | 3/270 | 28/38 | 31.681.031-07 |
| | | | | | | | | | | | | | |
| 4006 | 380 | 0 | 0 | 440 | 490 | 840 | 205 | 1025 | 1116 | 1000 | 3/270 | 28/38 | 31.681.031-07 |
| | | | | | | | | | | | | | |
| 4007 | 300 | 0 | 0 | 350 | 390 | 840 | 205 | 1025 | 1116 | 1000 | 3/270 | 28/38 | 31.681.031-07 |
| | | | | | | | | | | | | | |
| 4008 | 380 | 0 | 0 | 440 | 490 | 940 | 230 | 1025 | 1116 | 1000 | 3/270 | 28/38 | 31.681.031-07 |
| | | | | | | | | | | | | | |

Seitenkanalpumpen
SK 50
selbstansaugend

side channel pumps
SK 50
self priming



| | | |
|-----|------------------------|-------|
| U e | Entleerung drainage | G 1/4 |
| U k | Kühlung cooling | G 1/8 |

1) Gewicht der Pumpe Ausführung LL
Ausführung L auf Anfrage
2) BG = Motorbaugröße

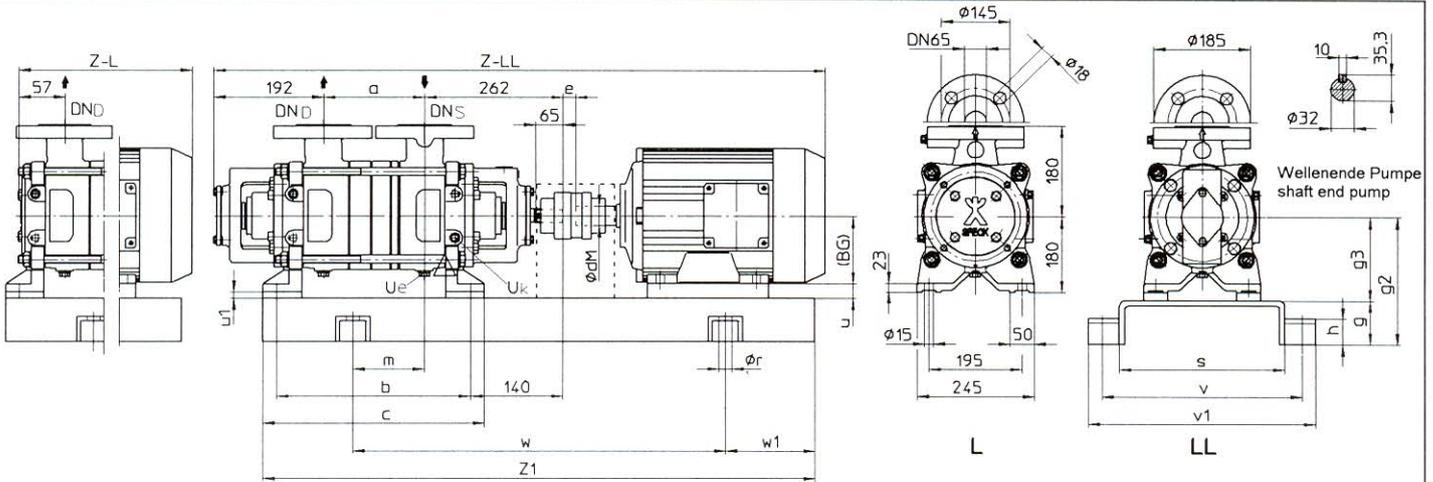
1) pump weight execution LL
execution L upon request
2) BG = motor frame size

| Type type | Pumpe / pump | | Motor / motor | | | a | b | c | ØdM | e | g | g2 | g3 | h | m | Ør | | |
|--------------|--------------|----------|---------------|------|------|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 1) [kg] | 1) [lbs] | 2) BG | [kW] | [HP] | | | | | | | | | | | | | |
| 5001 | 61 | 134 | 100L | 3,0 | 4,0 | 175 | 330 | 395 | 28 | 18 | 65 | 225 | 160 | 38 | 140 | 19 | | |
| | | | 112M | 4,0 | 5,4 | | | | | | | | | | | | 120 | |
| | | | 132S | 5,5 | 7,4 | | | | | | | | | | | | | 195 |
| 5002 | 72 | 158 | 132M | 7,5 | 10 | 250 | 405 | 470 | 42 | 24 | 80 | 240 | 42 | 175 | 24 | | | |
| | | | 160M | 11 | 15 | | | | | | | | | | | 38 | 20 | 65 |
| 5003 | 83 | 183 | 132M | 7,5 | 10 | 325 | 480 | 545 | 38 | 20 | 65 | 225 | 38 | 250 | 19 | | | |
| | | | 160M | 11 | 15 | | | | | | | | | | | 235 | | |
| 5004 | 93 | 205 | 160L | 15,0 | 20 | 400 | 555 | 620 | 42 | 24 | 240 | 240 | 240 | 310 | 285 | | 24 | |
| | | | 160L | 15,0 | 20 | | | | | | | | | | | 360 | | |
| 5005 | 104 | 229 | 180M | 18,5 | 25 | 475 | 630 | 695 | 48 | 26 | 260 | 180 | 42 | 385 | 470 | | 24 | |
| | | | 180L | 22,0 | 30 | | | | | | | | | | | 240 | | 160 |
| 5006 | 115 | 253 | 160L | 15,0 | 20 | 550 | 705 | 770 | 42 | 24 | 80 | 240 | 180 | 42 | 385 | | 24 | |
| | | | 180M | 18,5 | 25 | | | | | | | | | | | 260 | | 180 |
| | | | 180L | 22,0 | 30 | | | | | | | | | | | | | |
| 5007 | 126 | 277 | 200L | 30,0 | 40 | 625 | 780 | 845 | 48 | 26 | 260 | 180 | 280 | 200 | 470 | 24 | | |
| | | | 180M | 18,5 | 25 | | | | | | | | | | | | 280 | 200 |
| 5008 | 137 | 301 | 180L | 22,0 | 30 | 700 | 855 | 920 | 48 | 26 | 260 | 180 | 260 | 180 | 515 | 24 | | |
| | | | 200L | 30,0 | 40 | | | | | | | | | | | | 280 | 200 |

| Type type | s | u | u1 | v | v1 | w | w1 | Z-L | Z-LL | Z1 | Grundplatte base plate | Kupplung coupling | Berührungsschutz coupling protection | | | | |
|--------------|-----|----|----|-----|-----|------|-----|------|------|-------|---------------------------|----------------------|---|-------|-------|---------------|---------------|
| 5001 | 270 | 60 | 0 | 320 | 360 | 600 | 150 | 843 | 976 | 900 | 3/270 | 24/28 | 31.681.031-20 | | | | |
| | | | | | | | | 860 | 993 | | | | | | | | |
| | | | | | | | | 967 | 1100 | | | | | | | | |
| 5002 | 300 | 28 | 0 | 350 | 390 | 660 | 170 | 1042 | 1175 | 1000 | 4/300 | 28/38 | 31.681.031-11 | | | | |
| | | | | | | | | 1188 | 1321 | | | | | | | | |
| 5003 | 380 | 0 | 0 | 440 | 490 | 740 | 190 | 1127 | 1260 | 1120 | 5/380 | 38/45 | 31.681.031-13 | | | | |
| | | | | | | | | 1127 | 1260 | | | | | 5/300 | 28/38 | 31.681.031-11 | |
| 5004 | 380 | 0 | 0 | 440 | 490 | 840 | 205 | 1406 | 1250 | 6/380 | 38/45 | 31.681.031-13 | | | | | |
| 5005 | 430 | 0 | 0 | 490 | 540 | 940 | 230 | 1471 | 1546 | 1400 | 7/380 | 38/45 | 31.681.031-13 | | | | |
| | | | | | | | | 1609 | 1621 | | | | | 1400 | 7/430 | 42/55 | 31.681.031-16 |
| 5006 | 380 | 0 | 0 | 440 | 490 | 1060 | 270 | 1684 | 1736 | 1600 | 8/380 | 38/45 | 31.681.031-13 | | | | |
| | | | | | | | | 1684 | 1736 | | | | | 1600 | 8/430 | 42/55 | 31.681.031-16 |
| | | | | | | | | 1736 | 1736 | | | | | | | | |
| 5007 | 430 | 0 | 0 | 490 | 540 | 1060 | 270 | 1759 | 1811 | 1600 | 8/430 | 42/55 | 31.681.031-16 | | | | |
| | | | | | | | | 1759 | 1811 | | | | | 1600 | 8/480 | 48/60 | 31.681.031-19 |
| 5008 | 430 | 0 | 0 | 490 | 640 | 1200 | 300 | 1834 | 1886 | 1800 | 9/430 | 42/55 | 31.681.031-16 | | | | |
| | | | | | | | | 1834 | 1886 | | | | | 1800 | 9/480 | 48/60 | 31.681.031-19 |

Seitenkanalumpen
SK 65
selbstansaugend

side channel pumps
SK 65
self priming



| | | |
|----------------|------------------------|-------|
| U _e | Entleerung drainage | G 1/4 |
| U _k | Kühlung cooling | G 1/8 |

1) Gewicht der Pumpe Ausführung LL
Ausführung L auf Anfrage
2) BG = Motorbaugröße

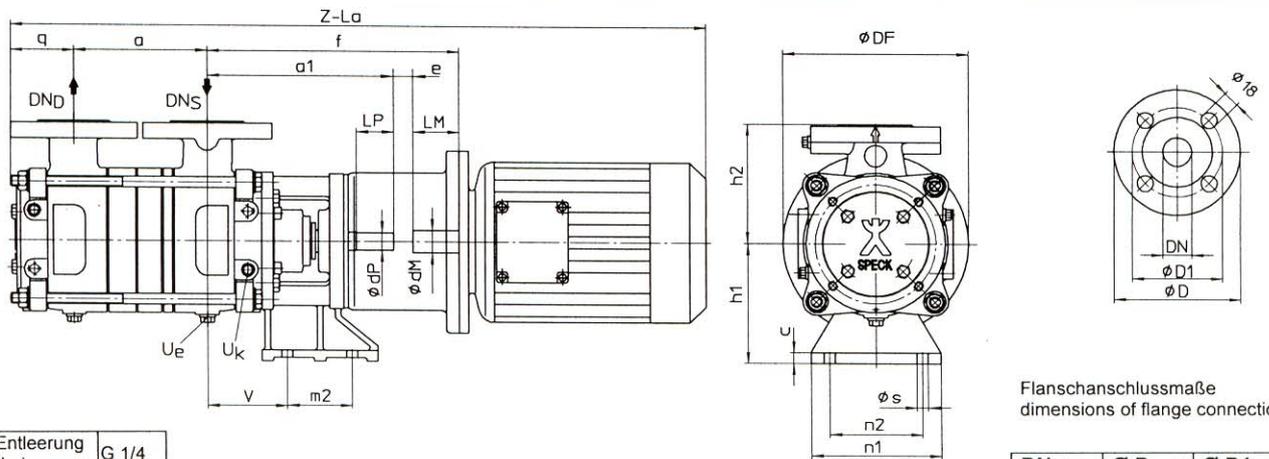
1) pump weight execution LL
execution L upon request
2) BG = motor frame size

| Type type | Pumpe / pump 1) [kg] 1) [lbs] | | Motor / motor 2)BG [kW] [HP] | | | a | b | c | ØdM | e | g | g2 | g3 | h | m | Ør |
|--------------|----------------------------------|-----|---------------------------------|------|-----|-----|------|------|-----|----|-----|-----|-----|----|-----|----|
| 6501 | 85 | 187 | 132S | 5,5 | 7,5 | 195 | 374 | 426 | 38 | 20 | 65 | 245 | 180 | 38 | 145 | 19 |
| | | | 132M | 7,5 | 10 | | | | | | | | | | | |
| 6502 | 98 | 216 | 160M | 11 | 15 | 285 | 464 | 516 | 42 | 24 | 80 | 260 | 180 | 42 | 215 | 24 |
| | | | 160L | 15,0 | 20 | | | | | | | | | | | |
| 6503 | 110 | 242 | 180M | 18,5 | 25 | 375 | 554 | 606 | 48 | 26 | 80 | 260 | 180 | 42 | 265 | 24 |
| | | | 180L | 22 | 30 | | | | | | | | | | | |
| 6504 | 123 | 270 | 200L | 30,0 | 40 | 465 | 644 | 696 | 55 | 28 | 100 | 325 | 200 | 42 | 315 | 28 |
| 6505 | 135 | 297 | 225S | 37,0 | 50 | 555 | 734 | 786 | 60 | 28 | 100 | 325 | 225 | 42 | 405 | 28 |
| | | | 200L | 30,0 | 40 | | | | | | | | | | | |
| 6506 | 148 | 326 | 225S | 37,0 | 50 | 645 | 824 | 876 | 55 | 28 | 100 | 280 | 200 | 42 | 465 | 28 |
| | | | 225M | 45,0 | 60 | | | | | | | | | | | |
| | | | 200L | 30,0 | 40 | | | | | | | | | | | |
| | | | 225S | 37,0 | 50 | | | | | | | | | | | |
| 6507 | 160 | 352 | 225M | 45,0 | 60 | 735 | 914 | 966 | 60 | 30 | 100 | 325 | 225 | 42 | 555 | 28 |
| | | | 250M | 55,0 | 75 | | | | | | | | | | | |
| | | | 225S | 37,0 | 50 | | | | | | | | | | | |
| | | | 225M | 45,0 | 60 | | | | | | | | | | | |
| 6508 | 173 | 380 | 225S | 37,0 | 50 | 825 | 1004 | 1056 | 60 | 28 | 100 | 325 | 225 | 42 | 625 | 28 |
| | | | 225M | 45,0 | 60 | | | | | | | | | | | |
| | | | 250M | 55,0 | 75 | | | | | | | | | | | |
| | | | 250M | 55,0 | 75 | | | | | | | | | | | |

| Type type | s | u | u1 | v | v1 | w | w1 | Z-L | Z-LL | Z1 | Grundplatte base plate | Kupplung coupling | Berührungsschutz coupling protection |
|--------------|-----|-----|-----|------|-------|-------|---------------|--------|---------------|---------------|---------------------------|----------------------|---|
| 6501 | 300 | 48 | 0 | 350 | 390 | 660 | 170 | 1019 | 1154 | 1000 | 4/300 | 28/38 | 31.681.031-15 |
| 6502 | 380 | 20 | | 440 | 490 | 840 | 205 | 1255 | 1390 | 1250 | 6/380 | 38/45 | 31.681.031-17 |
| 6503 | 430 | 20 | | 490 | 540 | 940 | 230 | 1408 | 1543 | 1400 | 7/430 | 42/55 | |
| 6504 | 480 | | | 1600 | 8/430 | 48/60 | 31.681.031-19 | | | | | | |
| 6505 | 480 | 20 | 550 | 610 | 1060 | | | 270 | 1633 | 1685 | 1775 | 8/480 | 31.681.031-21 |
| | 530 | 45 | 600 | 660 | 1912 | | | 8/530 | 31.681.031-19 | | | | |
| 6506 | 480 | 20 | 550 | 610 | 1200 | | | 300 | 1865 | 9/480 | 31.681.031-21 | | |
| | 530 | 45 | 600 | 660 | | 2002 | 9/530 | | 31.681.031-21 | | | | |
| 6507 | 480 | 20 | 550 | 610 | 1260 | 320 | 1955 | 9/480 | 31.681.031-19 | | | | |
| | 530 | 45 | 600 | 660 | | | 2092 | 9/530 | 31.681.031-21 | | | | |
| 6508 | 600 | 70 | 670 | 730 | 1330 | 335 | 2189 | 10/600 | 55/70 | 31.681.031-22 | | | |
| | 530 | 45 | 600 | 660 | | | 2182 | 10/530 | 48/60 | 31.681.031-21 | | | |
| | | 600 | 70 | 670 | | | 730 | 2279 | 2000 | 11/600 | 55/70 | 31.681.031-22 | |

Seitenkanalpumpen
SK 20/32/33 La
 selbstansaugend

side channel pumps
SK 20/32/33 La
 self priming



Flanschanschlussmaße
 dimensions of flange connections

| | | |
|-----|------------------------|-------|
| U e | Entleerung drainage | G 1/4 |
| U k | Kühlung cooling | G 1/8 |

1) Gewicht der Pumpe / pump weight
 2) BG=Motorbaugröße / motor frame size
 3) Kupplung / coupling

| DN | Ø D | Ø D1 |
|----|-----|------|
| 20 | 105 | 75 |
| 32 | 140 | 100 |

| Type / type | Pumpe / pump | | Motor / motor | | | DN | a | a1 | c | ØdP | ØdM | e | f |
|-------------|--------------|----------|---------------|------|------|----|-----|-----|----|-----|-----|----|-----|
| | 1) [kg] | 1) [lbs] | 2) BG | [kW] | [HP] | | | | | | | | |
| 2001 | 21 | 46 | 71 | 0,37 | 0,5 | 20 | 120 | 171 | 10 | 14 | 14 | 18 | 219 |
| | | | 80 | 0,55 | 0,74 | | | | | | 19 | | 229 |
| 2002 | 22 | 48 | 80 | 0,75 | 1,0 | 20 | 120 | 171 | 10 | 14 | 24 | 26 | 247 |
| | | | 90S | 1,10 | 1,5 | | | | | | 19 | | 229 |
| 2003 | 24 | 53 | 80 | 0,75 | 1,0 | 20 | 154 | 171 | 10 | 14 | 19 | 26 | 247 |
| | | | 90S | 1,10 | 1,5 | | | | | | 24 | | 247 |
| | | | 90L | 1,50 | 2,0 | | | | | | 24 | | 247 |

| Type / type | h1 | h2 | LP | LM | m2 | n1 | n2 | q | V | Øs | ØDF | Z-La | 3) |
|-------------|-----|-----|----|----|-----|-----|-----|----|----|----|-----|------|-------|
| 2001 | 100 | 100 | 24 | 30 | 114 | 140 | 105 | 60 | 32 | 12 | 200 | 599 | 19/24 |
| 2002 | | | | 40 | | | | | | | | 640 | |
| 2003 | | | | 40 | | | | | | | | 668 | 24/28 |
| | | | | 50 | | | | | | | | 674 | 19/24 |
| | | | | 40 | | | | | | | | 702 | 24/28 |
| | | | | 50 | | | | | | | | 727 | 24/28 |

| Type / type | Pumpe / pump | | Motor / motor | | | DN | a | a1 | c | ØdP | ØdM | e | f |
|-------------|--------------|----------|---------------|------|------|----|-----|-----|----|-----|-----|----|-----|
| | 1) [kg] | 1) [lbs] | 2) BG | [kW] | [HP] | | | | | | | | |
| 3201 | 33 | 73 | 80 | 0,75 | 1,0 | 32 | 146 | 201 | 12 | 19 | 19 | 18 | 272 |
| | | | 90S | 1,10 | 1,5 | | | | | | 24 | | |
| 3202 | 35 | 77 | 90L | 1,50 | 2,0 | 32 | 146 | 201 | 12 | 19 | 28 | 18 | 282 |
| 3203 | 39 | 86 | 100L | 2,20 | 3,0 | | | | | | | | |
| | | | | 3,00 | 4,0 | | | | | | | | |

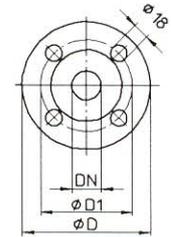
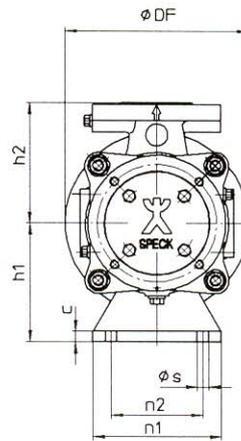
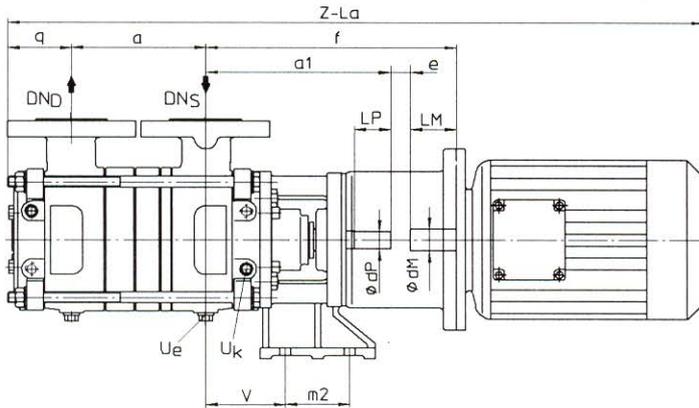
| Type / type | h1 | h2 | LP | LM | m2 | n1 | n2 | q | V | Øs | ØDF | Z-La | 3) |
|-------------|-----|-----|----|----|----|-----|-----|----|----|----|-----|------|-------|
| 3201 | 132 | 132 | 40 | 40 | 70 | 140 | 100 | 70 | 86 | 12 | 200 | 720 | 24/28 |
| 3202 | | | | 50 | | | | | | | | 732 | |
| 3203 | | | | 60 | | | | | | | | 757 | 801 |
| | | | | | | | | | | | | 841 | |

| Type / type | Pumpe / pump | | Motor / motor | | | DN | a | a1 | c | ØdP | ØdM | e | f |
|-------------|--------------|----------|---------------|------|------|----|-----|-----|----|-----|-----|----|-----|
| | 1) [kg] | 1) [lbs] | 2) BG | [kW] | [HP] | | | | | | | | |
| 3301 | 33 | 73 | 80 | 0,75 | 1,0 | 32 | 146 | 201 | 12 | 19 | 19 | 18 | 272 |
| | | | 90S | 1,10 | 1,5 | | | | | | 24 | | |
| 3302 | 35 | 77 | 90L | 1,50 | 2,0 | 32 | 146 | 201 | 12 | 19 | 28 | 18 | 282 |
| | | | 100L | 2,20 | 3,0 | | | | | | | | |
| 3303 | 39 | 86 | | 3,00 | 4,0 | | | | | | | | |
| | | | | 4,00 | 5,4 | | | | | | | | |

| Type / type | h1 | h2 | LP | LM | m2 | n1 | n2 | q | V | Øs | ØDF | Z-La | 3) |
|-------------|-----|-----|----|----|----|-----|-----|----|----|----|-----|------|-------|
| 3301 | 132 | 132 | 40 | 40 | 70 | 140 | 100 | 70 | 86 | 12 | 200 | 720 | 24/28 |
| 3302 | | | | 50 | | | | | | | | 732 | |
| 3303 | | | | 60 | | | | | | | | 757 | 801 |
| | | | | | | | | | | | | 841 | |
| | | | | | | | | | | | | 858 | |

Seitenkanalpumpen
SK 40/50/65 La
selbstansaugend

side channel pumps
SK 40/50/65 La
self priming



Flanschanschlussmaße
dimensions of flange connections

| DN | Ø D | Ø D1 |
|----|-----|------|
| 40 | 150 | 110 |
| 50 | 165 | 125 |
| 65 | 185 | 145 |

| | | |
|-----|------------------------|-------|
| U e | Entleerung drainage | G 1/4 |
| U k | Kühlung cooling | G 1/8 |

- 1) Gewicht der Pumpe / pump weight
2) BG=Motorbaugröße / motor frame size
3) Kupplung / coupling

| Type / type | Pumpe / pump 1) [kg] 1) [lbs] | | Motor / motor 2) BG [kW] [HP] | | DN | a | a1 | c | ØdP | ØdM | e | f |
|-------------|----------------------------------|-----|----------------------------------|-----|-----|----|-----|-----|-----|-----|----|-----|
| 4001 | 44 | 97 | 90L | 1,5 | 2.0 | 40 | 160 | 195 | 12 | 24 | 18 | 160 |
| | 44,5 | 98 | | 2,2 | | | | | | | | 3.0 |
| 4002 | 50 | 110 | 100L | 3 | 4.0 | 40 | 215 | 195 | 12 | 24 | 18 | 215 |
| 4003 | 57 | 125 | 112M | 4 | 5.4 | 40 | 270 | 195 | 12 | 24 | 18 | 270 |
| | 57,5 | 127 | | 5,5 | | | | | | | | 7.4 |

| Type / type | h1 | h2 | LP | LM | m2 | n1 | n2 | q | V | Øs | ØDF | Z-La | 3) |
|-------------|-----|-----|----|-----|----|-----|-----|----|----|----|-----|------|-------|
| 4001 | | | | 50 | | | | | | | 200 | 744 | 24/28 |
| | | | | 788 | | | | | | | | | |
| 4002 | 132 | 140 | 45 | 60 | 70 | 140 | 100 | 55 | 70 | 12 | 250 | 843 | 24/28 |
| 4003 | | | | 80 | | | | | | | | 915 | 28/38 |
| | | | | | | | | | | | | 1021 | |

| Type / type | Pumpe / pump 1) [kg] 1) [lbs] | | Motor / motor 2) BG [kW] [HP] | | DN | a | a1 | c | ØdP | ØdM | e | f |
|-------------|----------------------------------|-----|----------------------------------|------|-----|----|-----|-----|-----|-----|----|-----|
| 5001 | 62 | 136 | 100L | 3 | 4.0 | 50 | 175 | 237 | 14 | 28 | 18 | 309 |
| | 62,5 | 138 | | 4 | | | | | | | | 5.4 |
| 5002 | 73 | 161 | 132M | 7,5 | 10 | 50 | 250 | 237 | 14 | 28 | 20 | 331 |
| | | | | 160M | | | | | | | | 11 |
| 5003 | 84 | 185 | 132M | 7,5 | 10 | 50 | 325 | 237 | 14 | 28 | 20 | 331 |
| | | | | 160M | | | | | | | | 11 |
| | | | 160L | 15 | 20 | | | | | | 24 | 365 |

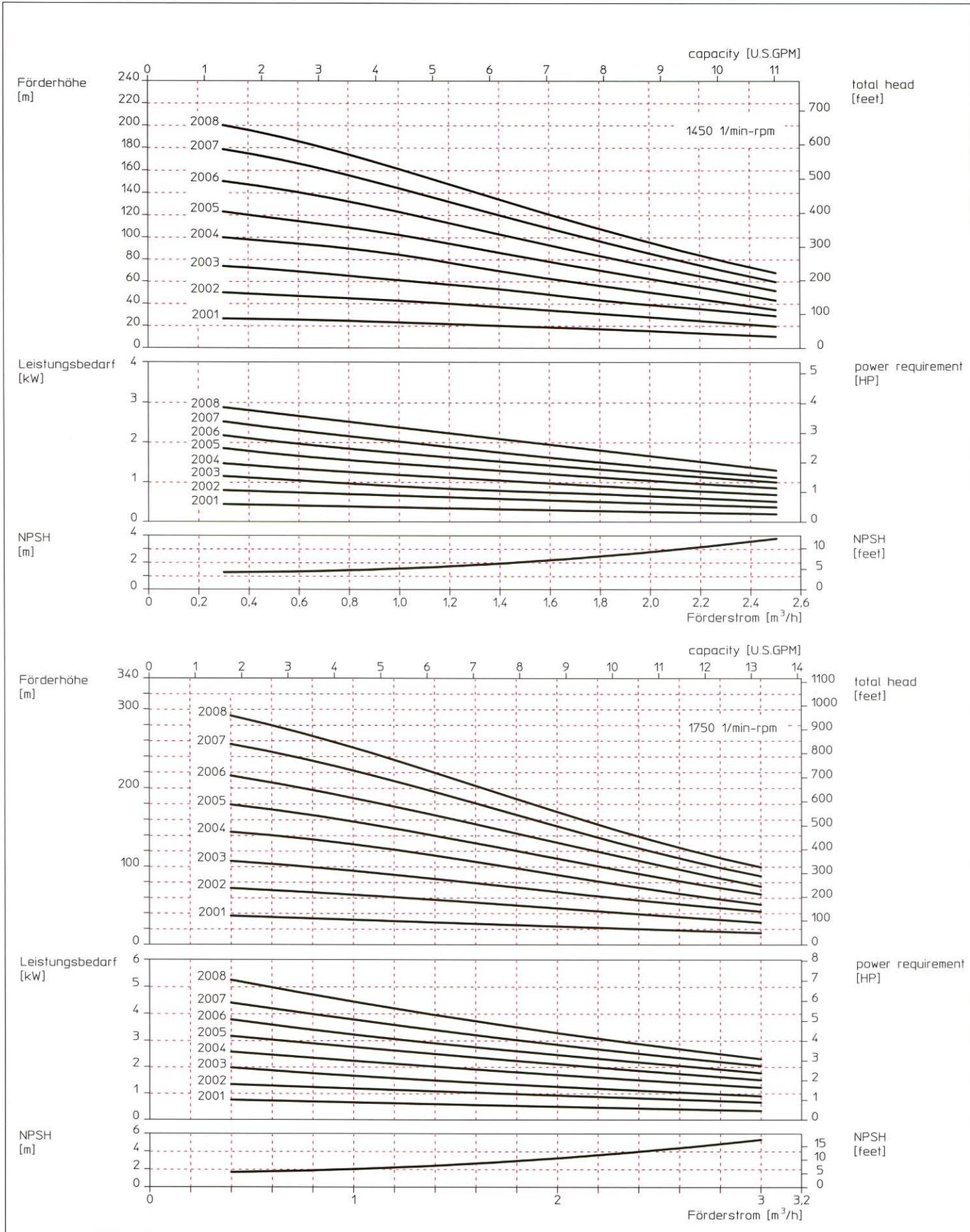
| Type / type | h1 | h2 | LP | LM | m2 | n1 | n2 | q | V | Øs | ØDF | Z-La | 3) |
|-------------|-----|-----|----|-----|----|-----|-----|----|----|----|-----|------|-------|
| 5001 | 160 | 165 | 50 | 60 | 80 | 200 | 150 | 50 | 81 | 14 | 250 | 837 | 24/28 |
| | | | | 854 | | | | | | | | | |
| 5002 | | | | 80 | | | | | | | | 961 | 28/38 |
| | | | | | | | | | | | | 1036 | |
| 5003 | | | | 110 | | | | | | | | 1182 | 38/45 |
| | | | | | | | | | | | | 80 | |
| | | | | 110 | | | | | | | | 1257 | 38/45 |

| Type / type | Pumpe / pump 1) [kg] 1) [lbs] | | Motor / motor 2) BG [kW] [HP] | | DN | a | a1 | c | ØdP | ØdM | e | f |
|-------------|----------------------------------|-----|----------------------------------|------|-----|----|-----|-----|-----|-----|----|-----|
| 6501 | 86 | 189 | 132S | 5,5 | 7.4 | 65 | 195 | 164 | 14 | 32 | 24 | 364 |
| | | | | 132M | | | | | | | | 7,5 |
| 6502 | 99 | 218 | 160M | 11 | 15 | 65 | 285 | 164 | 14 | 32 | 24 | 400 |
| | | | | 160L | | | | | | | | 15 |
| 6503 | 111 | 244 | 180M | 18,5 | 25 | 65 | 375 | 164 | 14 | 32 | 26 | 400 |
| | | | | 180L | | | | | | | | 22 |

| Type / type | h1 | h2 | LP | LM | m2 | n1 | n2 | q | V | Øs | ØDF | Z-La | 3) |
|-------------|-----|-----|----|------|----|-----|-----|----|----|----|-----|------|-------|
| 6501 | 160 | 180 | 67 | 80 | 80 | 200 | 150 | 57 | 94 | 14 | 300 | 1021 | 28/38 |
| | | | | 1259 | | | | | | | | | |
| 6502 | | | | 110 | | | | | | | | 1372 | 42/55 |
| 6503 | | | | | | | | | | | | 1410 | |

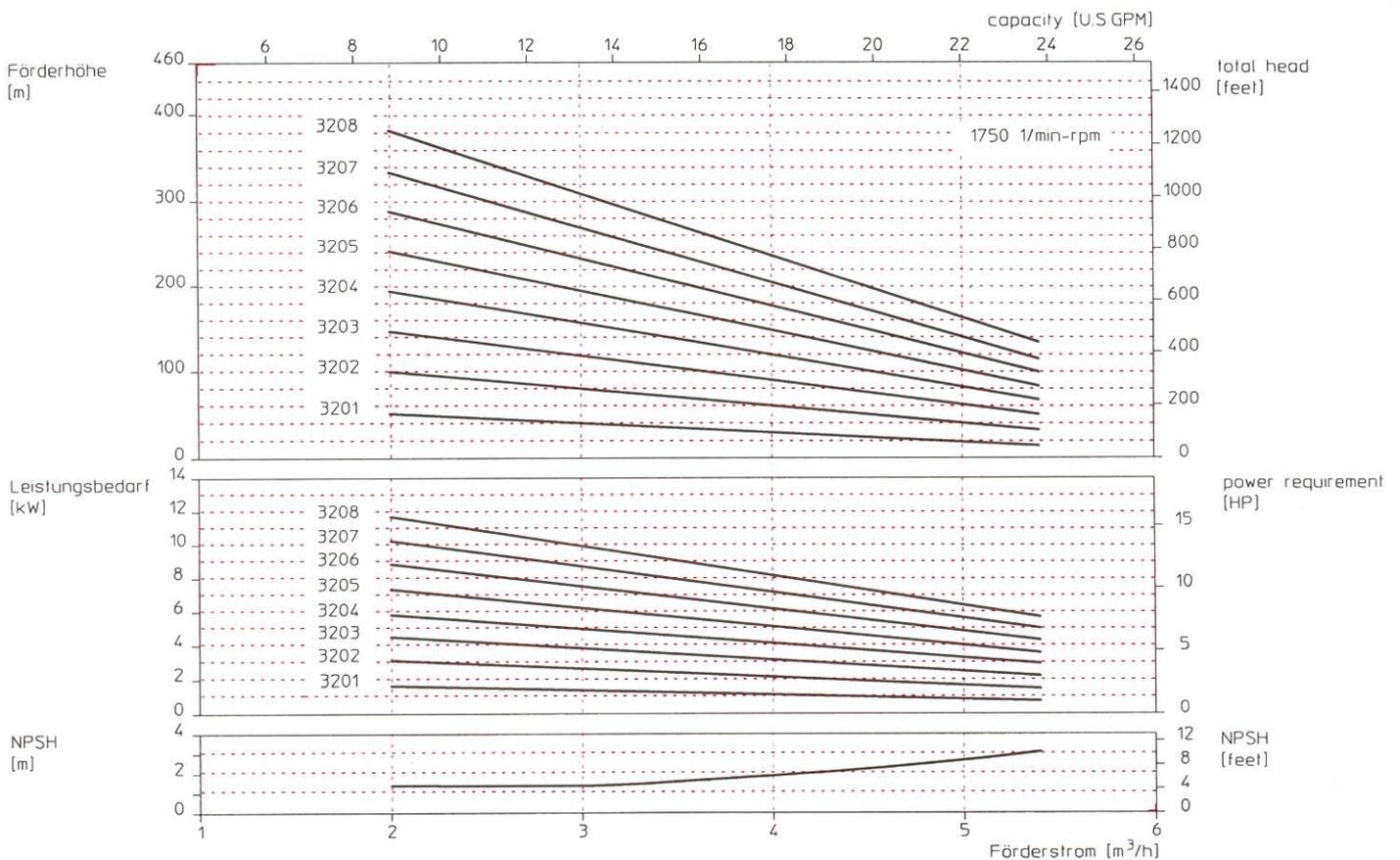
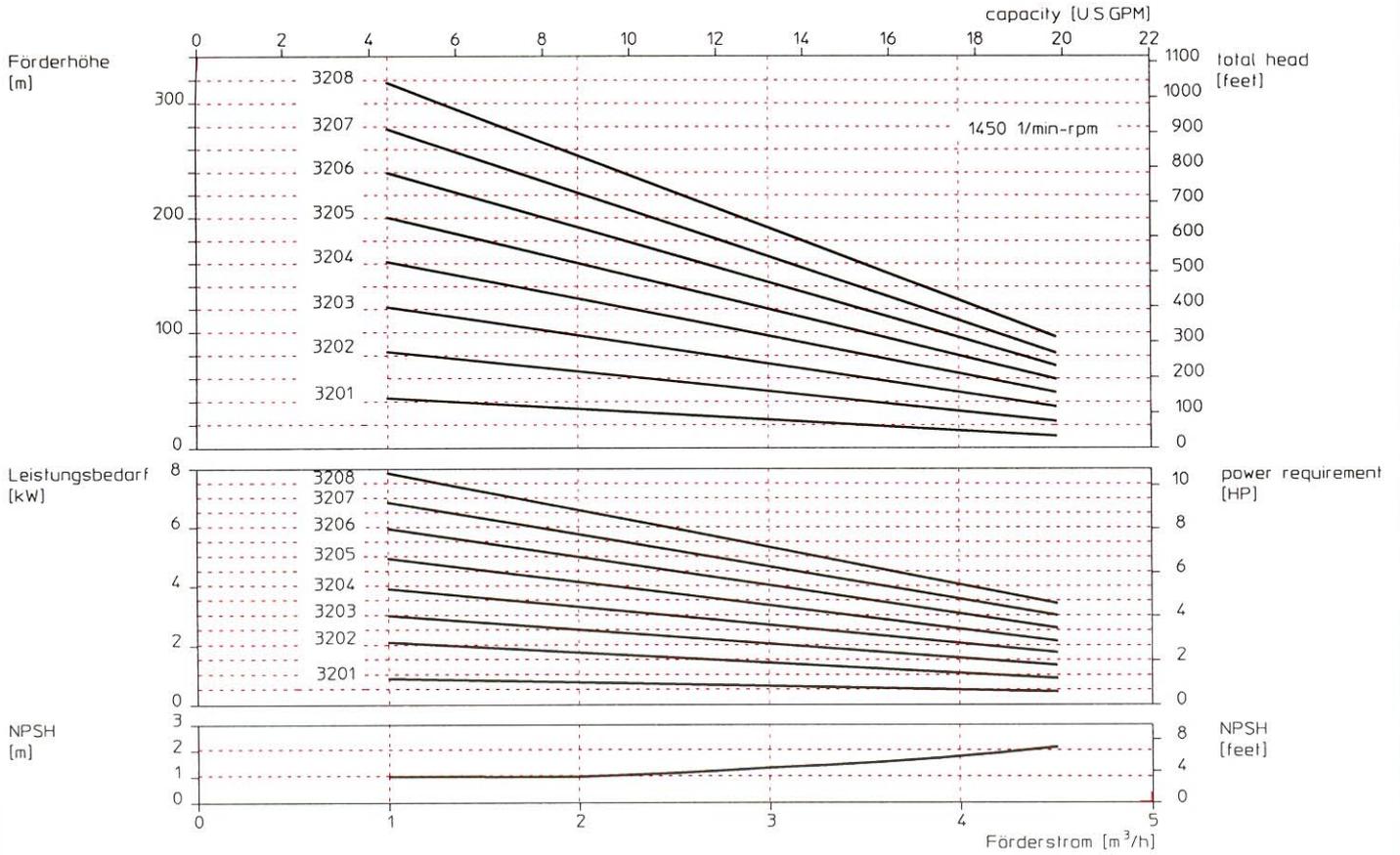
Seitenkanalpumpen
SK 20
 selbstansaugend

side channel pumps
SK 20
 self priming



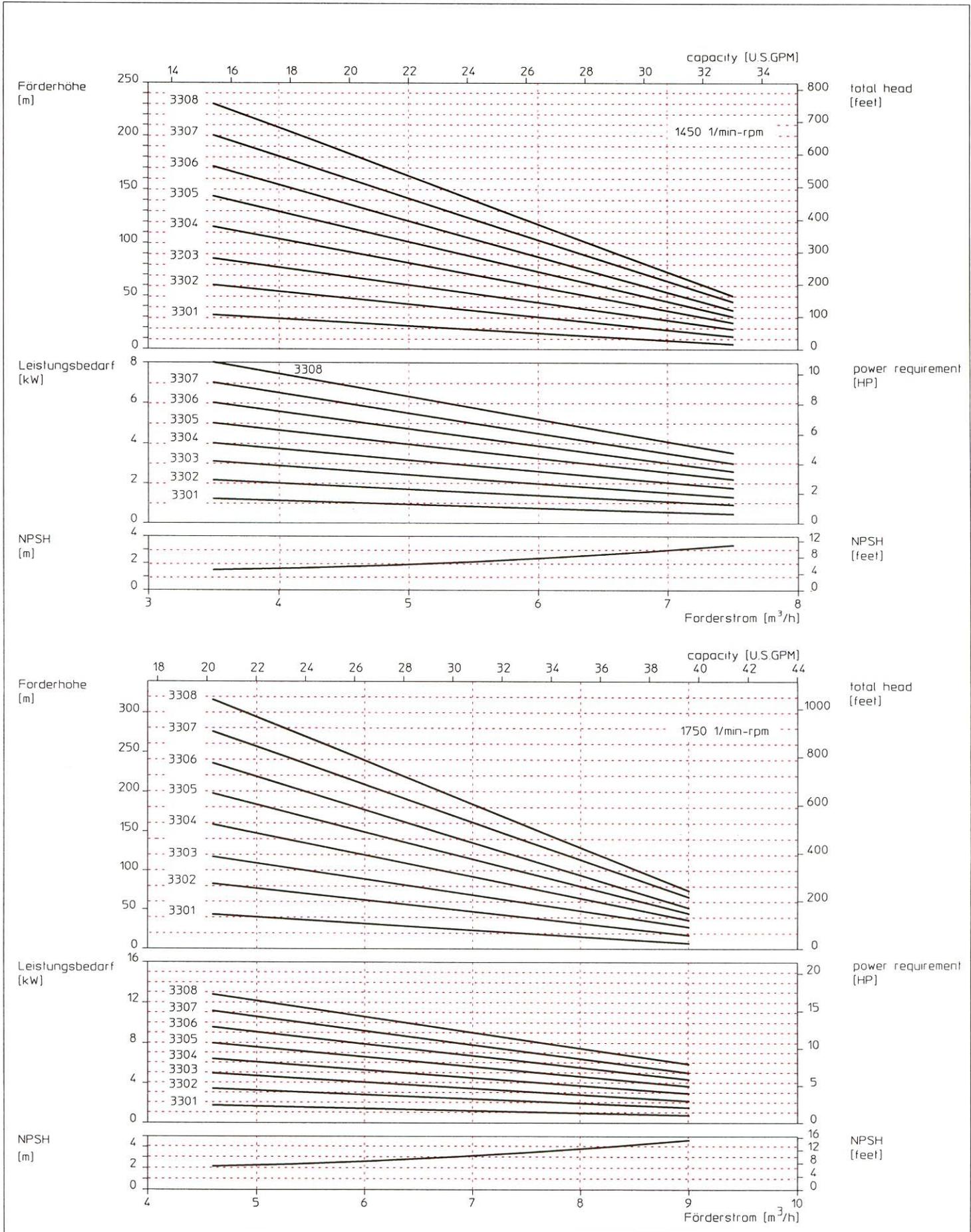
Seitenkanalpumpen
SK 32
selbstansaugend

side channel pumps
SK 32
self priming



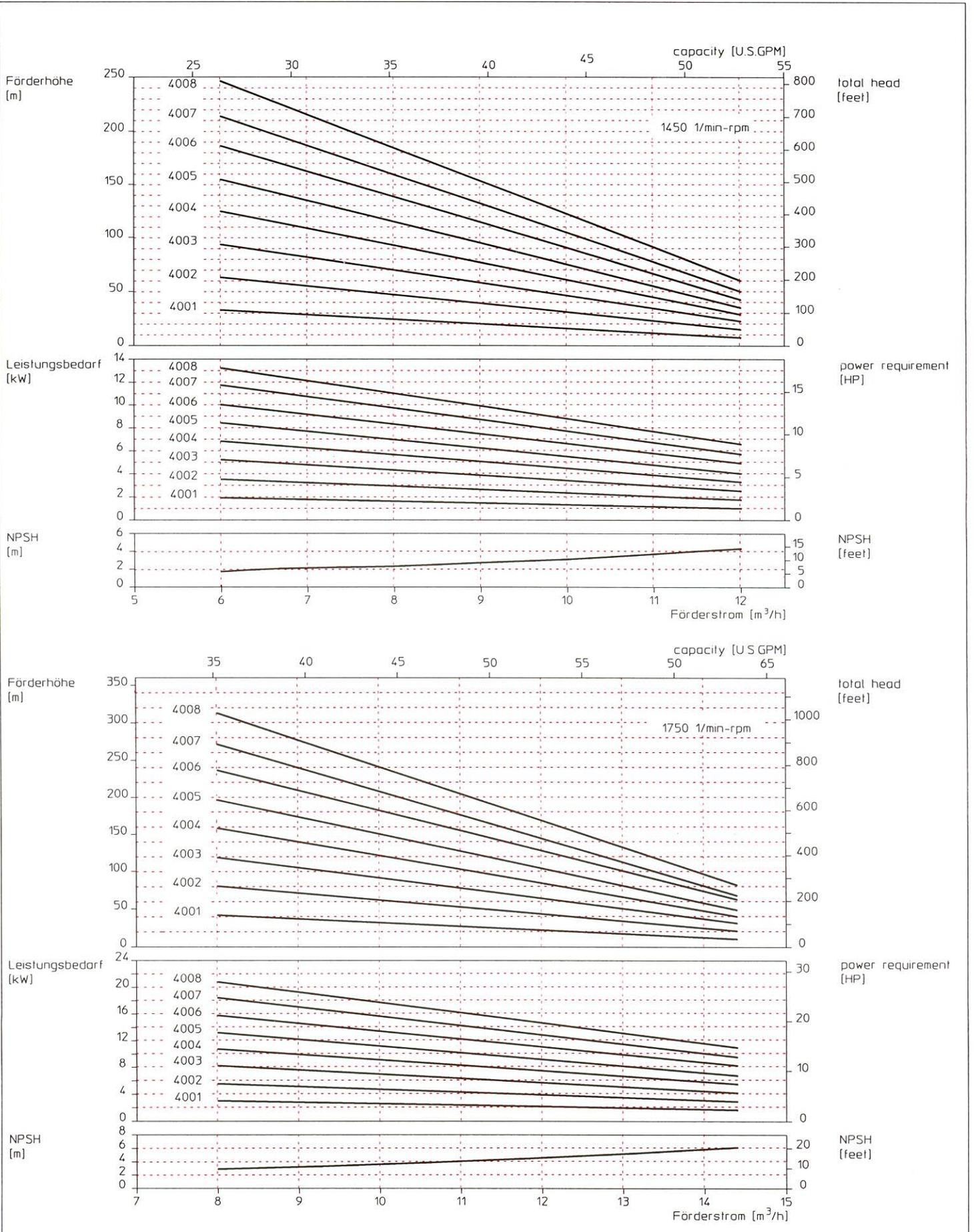
Seitenkanalpumpen
SK 33
 selbstansaugend

side channel pumps
SK 33
 self priming



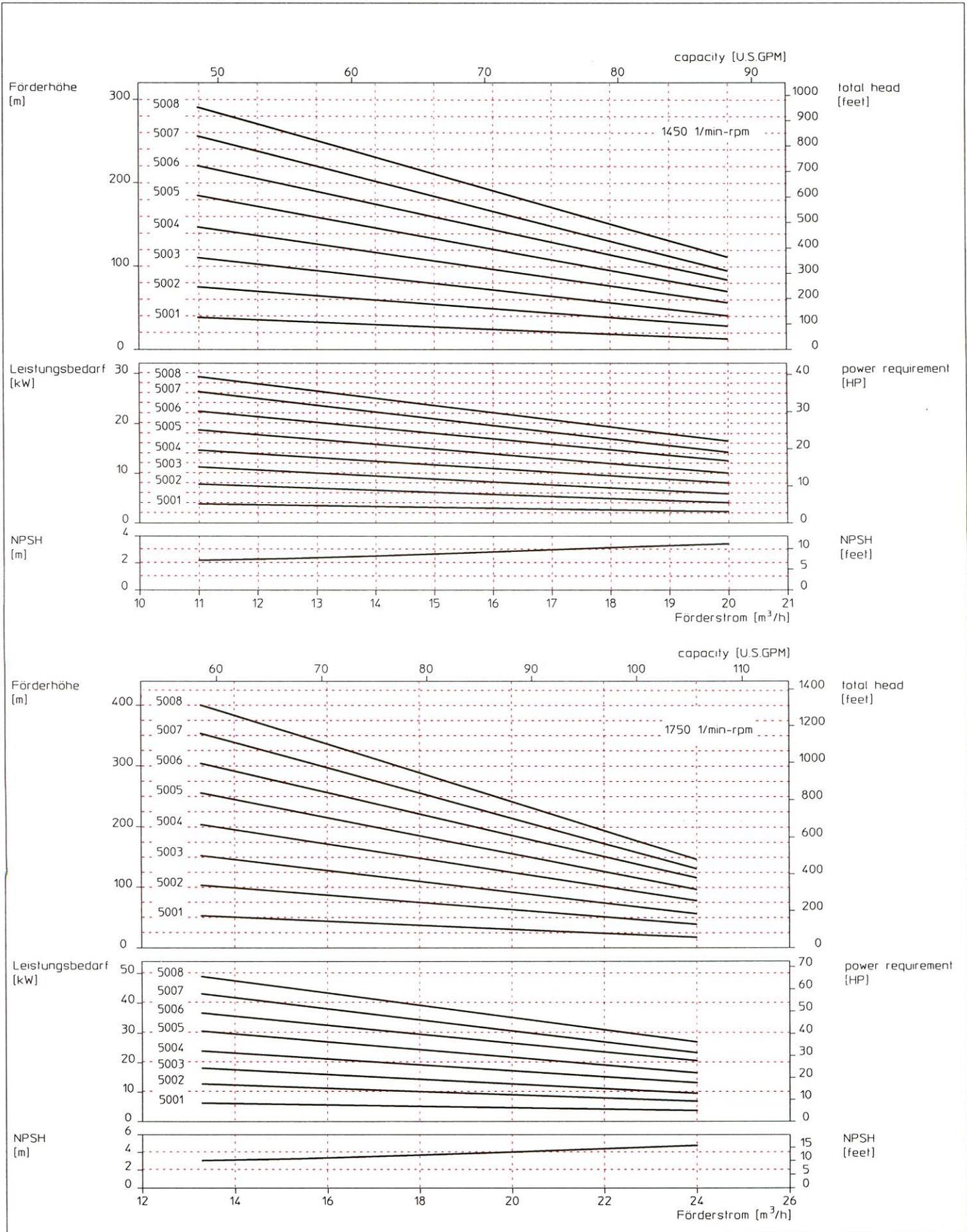
Seitenkanalpumpen
SK 40
 selbstansaugend

side channel pumps
SK 40
 self priming



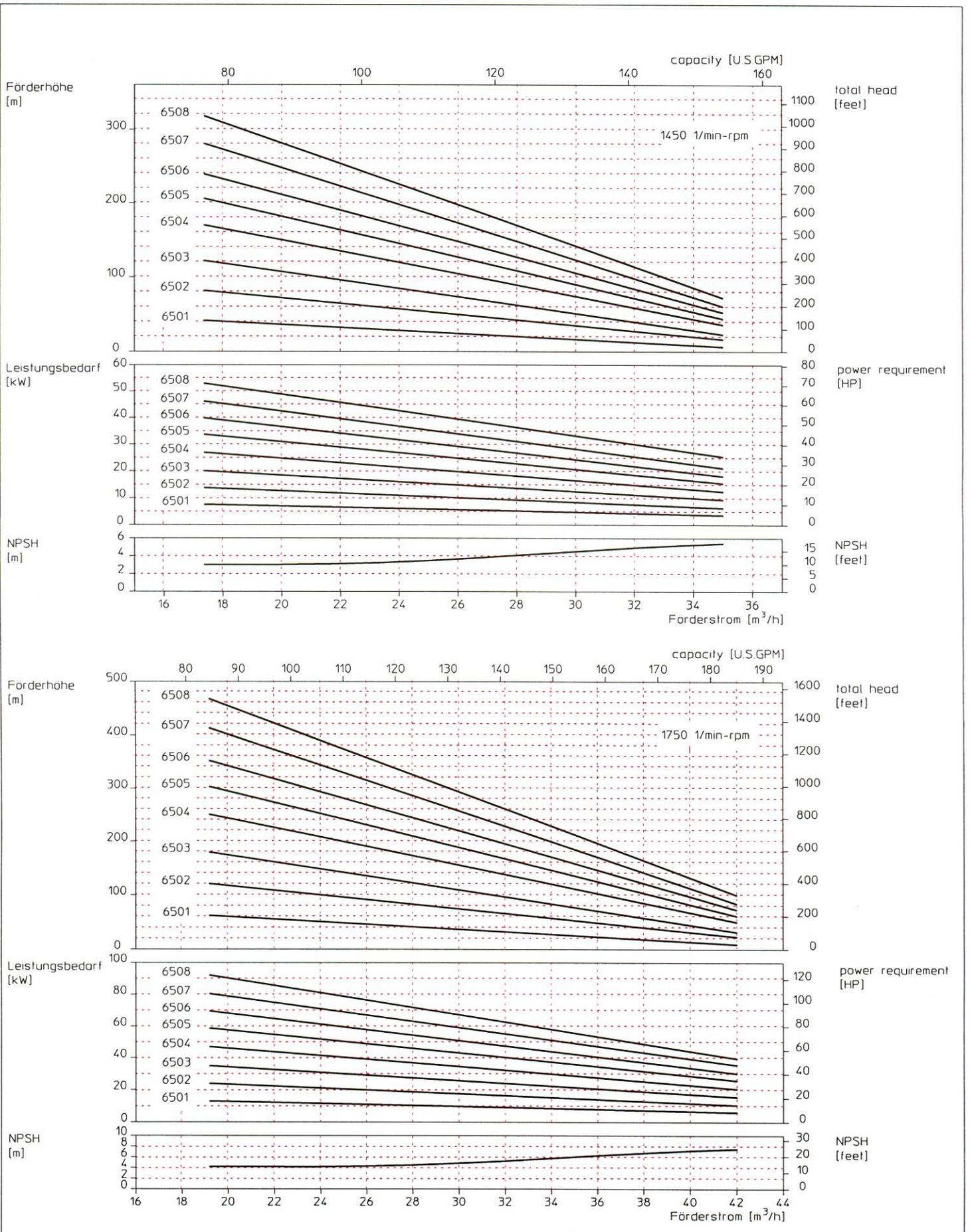
Seitenkanalpumpen
SK 50
 selbstansaugend

side channel pumps
SK 50
 self priming



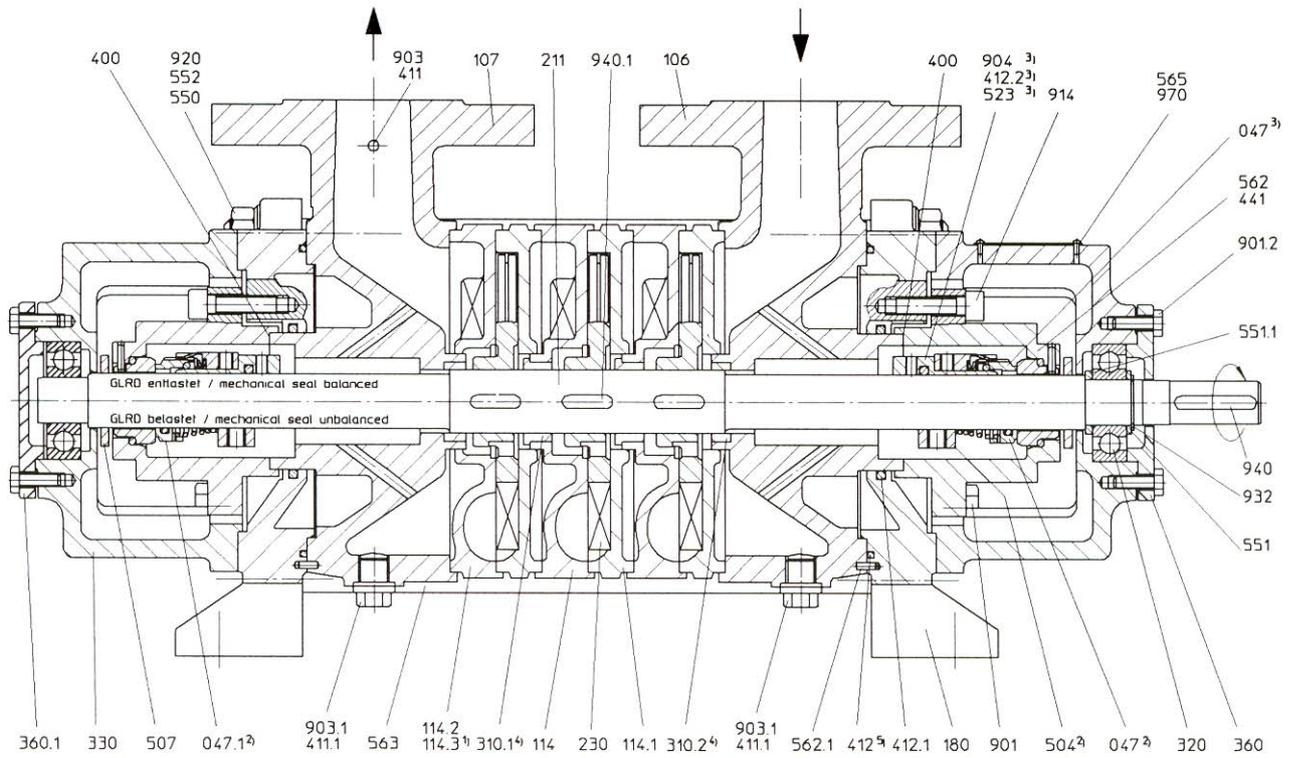
Seitenkanalpumpen
SK 65
 selbstansaugend

side channel pumps
SK 65
 self priming



Seitenkanalpumpen
SK 20 – 65 LL
 selbstansaugend

side channel pumps
SK 20 – 65 LL
 self priming



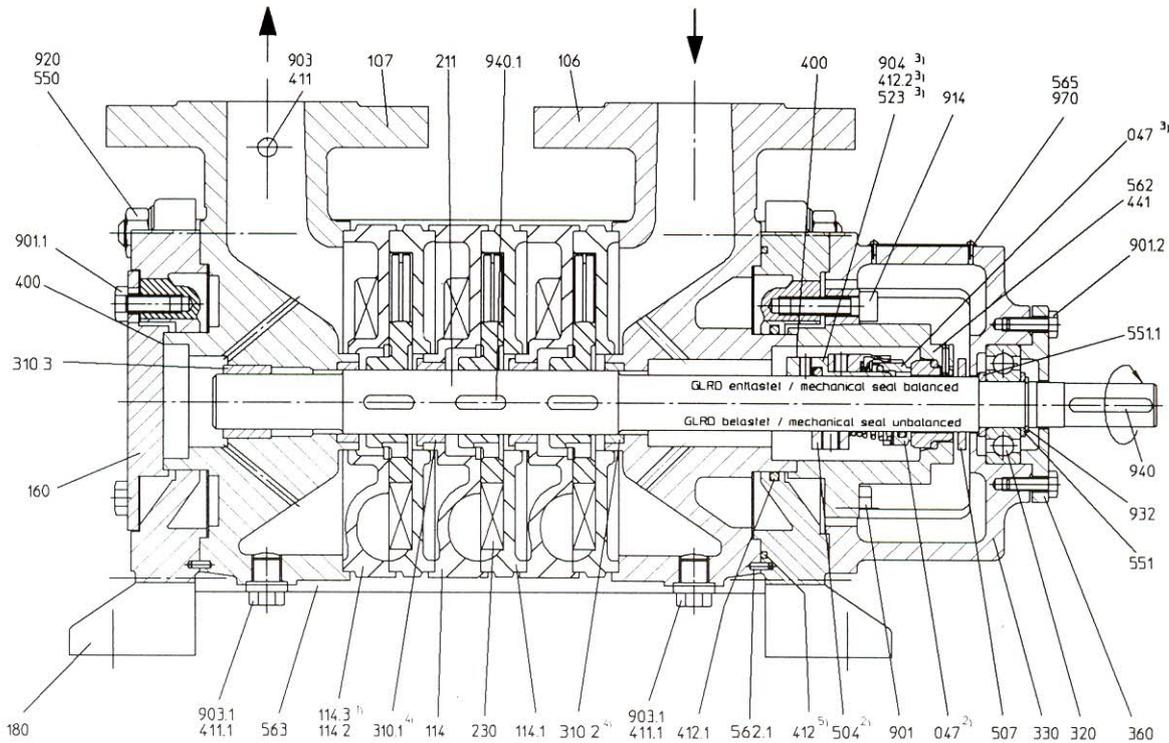
- 1) nur SK 2001/3201/3301 mit Blindstufe (114.3)
- 2) bis 2 Stufen GLRD belastet, mit Stelling (504)
- 3) ab 3 Stufen GLRD entlastet, mit Wellenhülse (523), O-Ring (412.2), Gewindestift (904)
- 4) **GG-Ausführung**
 bis 3 Stufen ohne Stufengleitlager (310.1)
 ab 4 Stufen mit Stufengleitlager (310.1)
VA-Ausführung
 Druckstufen mit Stufengleitlager (310.1)
 Saug- und Druckgehäuse mit Gleitlager (310.2)
- 5) nur bei gekühltem Ständer

- 1) only SK 3201/3301 with blind stage (114.3)
- 2) up to 2 stages mechanical seal unbalanced, with adjusting ring (504)
- 3) from 3 stages mechanical seal balanced, with shaft sleeve (523), O-ring (412.2), set screw (904)
- 4) **cast iron version**
 up to 3 stages without stage sleeve bearing (310.1)
 from 4 stages with stage sleeve bearing (310.1)
stainless steel version
 discharge stages with stage sleeve bearing (310.1)
 suction- and discharge casing with sleeve bearing (310.2)
- 5) for cooled pump frame only

| | | | | | |
|-------|---------------------------|--------------------------|-------|----------------------|-------------------------------|
| 047 | Gleitringdichtung | mechanical seal | 504 | Stelling | adjusting ring |
| 047.1 | Gleitringdichtung | mechanical seal | 507 | Spritzring | splash ring |
| 106 | Sauggehäuse | suction casing | 523 | Wellenhülse | shaft sleeve |
| 107 | Druckgehäuse | discharge casing | 550 | Scheibe | disk |
| 114 | Druckstufe I | discharge stage I | 551 | Abstandscheibe | spacer disk |
| 114.1 | Saugstufe | suction stage | 551.1 | Abstandscheibe | spacer disk |
| 114.2 | Druckstufe II | discharge stage II | 552 | Spannscheibe | locking ring |
| 114.3 | Blindstufe | blind stage | 562 | Zylinderstift | parallel pin |
| 180 | Ständer | pump frame | 562.1 | Zylinderstift | parallel pin |
| 211 | Welle | shaft | 563 | Gehäusebolzen | casing bolt |
| 230 | Laufgrad | impeller | 565 | Niet | rivet |
| 310.1 | Gleitlager | sleeve bearing | 901 | 6-kt. Schraube | hexagon head cap screw |
| 310.2 | Gleitlager | sleeve bearing | 901.2 | 6-kt. Schraube | hexagon head cap screw |
| 320 | Kugellager | ball bearing | 903 | Verschlussschraube | screwed plug |
| 330 | Lagerkörper | bearing housing | 903.1 | Verschlussschraube | screwed plug |
| 360.1 | Lagerdeckel | bearing cover | 904 | Gewindestift | set screw |
| 400 | Flachdichtung | gasket | 914 | Innen 6-kt. Schraube | hexagon socket head cap screw |
| 411 | Dichtring | sealing gasket | 920 | 6-kt. Mutter | hexagon nut |
| 411.1 | Dichtring | sealing gasket | 932 | Sicherungsring | locking ring |
| 412 | O-Ring | O-ring | 940 | Passfeder | feather key |
| 412.1 | O-Ring | O-ring | 940.1 | Passfeder | feather key |
| 412.2 | O-Ring | O-ring | 970 | Typenschild | name plate |
| 441 | Gehäuse f. Wellendichtung | casing for shaft sealing | | | |

Seitenkanalpumpen
SK 20 – 65 L
selbstansaugend

side channel pumps
SK 20 – 65 L
self priming



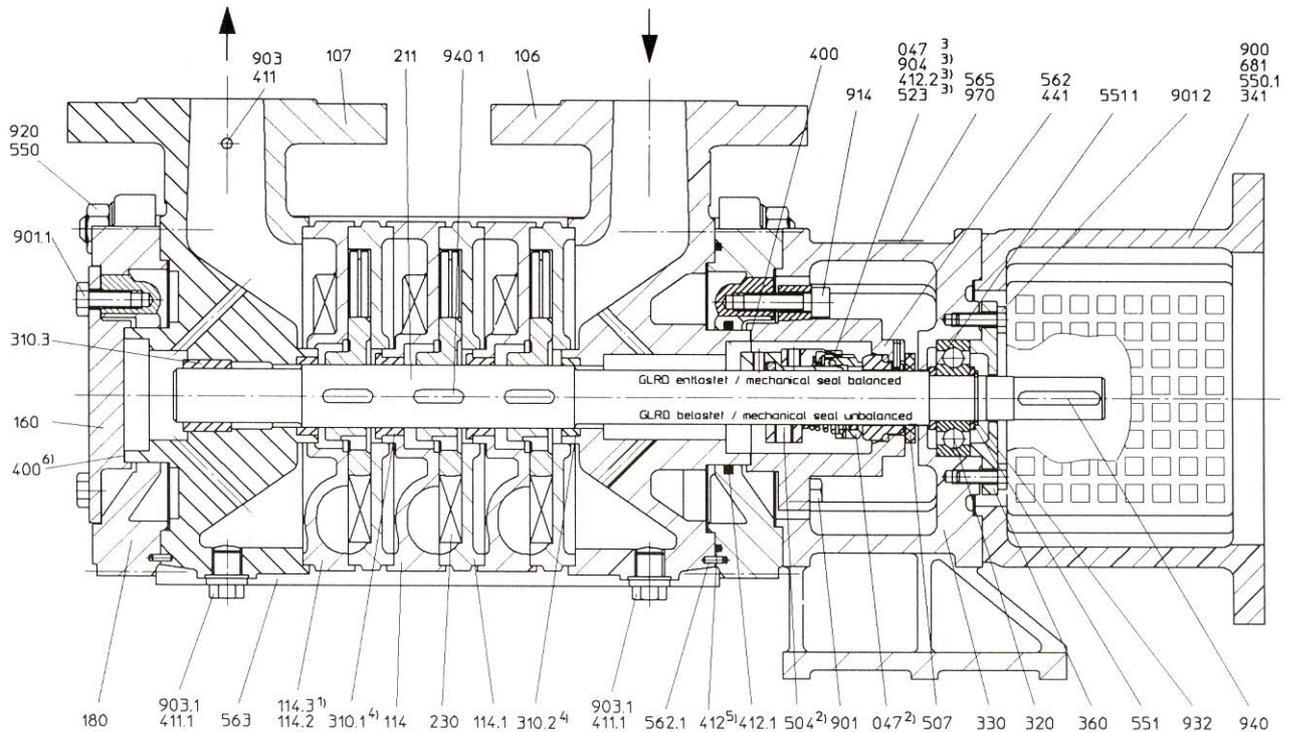
- 1) nur SK 2001/3201/3301 mit Blindstufe (114.3)
- 2) bis 2 Stufen GLRD belastet, mit Stellring (504)
- 3) ab 3 Stufen GLRD entlastet, mit Wellenhülse (523), O-Ring (412.2), Gewindestift (904)
- 4) **GG-Ausführung**
bis 3 Stufen ohne Stufengleitlager (310.1)
ab 4 Stufen mit Stufengleitlager (310.1)
VA-Ausführung
Druckstufen mit Stufengleitlager (310.1)
Saug- und Druckgehäuse mit Gleitlager (310.2)
- 5) nur bei gekühltem Ständer

- 1) only SK 3201/3301 with blind stage (114.3)
- 2) up to 2 stages mechanical seal unbalanced, with adjusting ring (504)
- 3) from 3 stages mechanical seal balanced, with shaft sleeve (523), O-ring (412.2), set screw (904)
- 4) **cast iron version**
up to 3 stages without stage sleeve bearing (310.1)
from 4 stages with stage sleeve bearing (310.1)
stainless steel version
discharge stages with stage sleeve bearing (310.1)
suction- and discharge casing with sleeve bearing (310.2)
- 5) for cooled pump frame only

| | | | | | |
|-------|-------------------|--------------------|-------|---------------------------|-------------------------------|
| 047 | Gleitringdichtung | mechanical seal | 441 | Gehäuse f. Wellendichtung | casing for shaft sealing |
| 106 | Sauggehäuse | suction casing | 504 | Stellring | adjusting ring |
| 107 | Druckgehäuse | discharge casing | 507 | Spritzring | splash ring |
| 114 | Druckstufe I | discharge stage I | 523 | Wellenhülse | shaft sleeve |
| 114.1 | Saugstufe | suction stage | 550 | Scheibe | disk |
| 114.2 | Druckstufe II | discharge stage II | 551 | Abstandscheibe | spacer disk |
| 114.3 | Blindstufe | blind stage | 551.1 | Abstandscheibe | spacer disk |
| 160 | Deckel | cover | 562 | Zylinderstift | parallel pin |
| 180 | Ständer | pump frame | 562.1 | Zylinderstift | parallel pin |
| 211 | Welle | shaft | 563 | Gehäusebolzen | casing bolt |
| 230 | Laufgrad | impeller | 565 | Niet | rivet |
| 310.1 | Gleitlager | sleeve bearing | 901 | 6-kt. Schraube | hexagon head cap screw |
| 310.2 | Gleitlager | sleeve bearing | 901.1 | 6-kt. Schraube | hexagon head cap screw |
| 310.3 | Gleitlager | sleeve bearing | 901.2 | 6-kt. Schraube | hexagon head cap screw |
| 320 | Kugellager | ball bearing | 903 | Verschlussschraube | screwed plug |
| 330 | Lagerkörper | bearing housing | 903.1 | Verschlussschraube | screwed plug |
| 360 | Lagerdeckel | bearing cover | 904 | Gewindestift | set screw |
| 400 | Flachdichtung | gasket | 914 | Innen 6-kt. Schraube | hexagon socket head cap screw |
| 411 | Dichtring | sealing gasket | 920 | 6-kt. Mutter | hexagon nut |
| 411.1 | Dichtring | sealing gasket | 932 | Sicherungsring | locking ring |
| 412 | O-Ring | O-ring | 940 | Passfeder | feather key |
| 412.1 | O-Ring | O-ring | 940.1 | Passfeder | feather key |
| 412.2 | O-Ring | O-ring | 970 | Typenschild | name plate |

Seitenkanalpumpen
SK 20 – 65 La
 selbstansaugend

side channel pumps
SK 20 – 65 La
 self priming



- 1) nur SK 2001/3201/3301 mit Blindstufe (114.3)
- 2) bis 2 Stufen GLRD belastet, mit Stelling (504)
- 3) ab 3 Stufen GLRD entlastet, mit Wellenhülse (523), O-Ring (412.2), Gewindestift (904)
- 4) **GG-Ausführung**
 bis 3 Stufen ohne Stufengleitlager (310.1)
 ab 4 Stufen mit Stufengleitlager (310.1)
VA-Ausführung
 alle Druckstufen mit Stufengleitlager (310.1)
 Saug- und Druckgehäuse mit Gleitlager (310.2)
- 5) nur bei gekühltem Ständer
- 6) nur SK 50/65

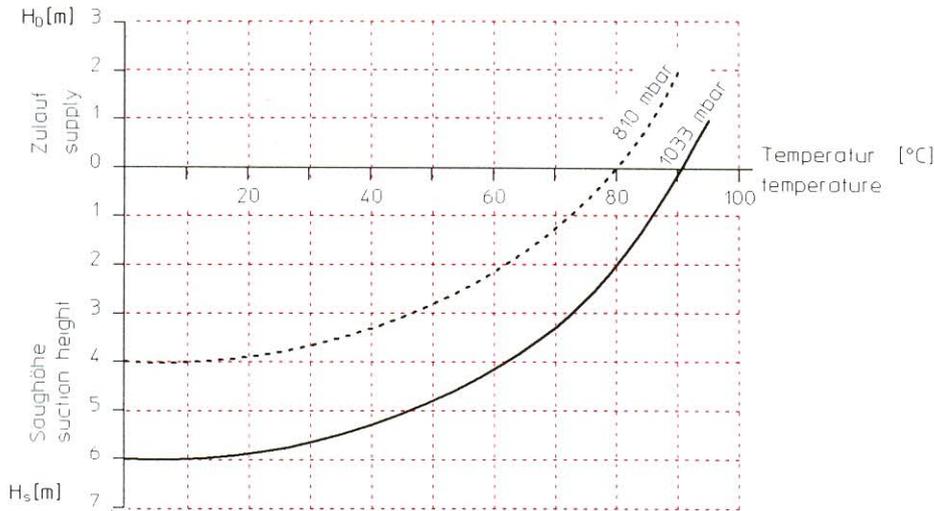
- 1) only SK 3201/3301 with blind stage (114.3)
- 2) up to 2 stages mechanical seal unbalanced, with adjusting ring (504)
- 3) from 3 stages mechanical seal balanced, with shaft sleeve (523), O-ring (412.2), set screw (904)
- 4) **cast iron version**
 up to 3 stages without stage sleeve bearing (310.1)
 from 4 stages with stage sleeve bearing (310.1)
stainless steel version
 all discharge stages with stage sleeve bearing (310.1)
 suction- and discharge casing with sleeve bearing (310.2)
- 5) for cooled pump frame only
- 6) only SK 50/65

| | | | | | |
|-------|---------------------------|--------------------------|-------|----------------------|-------------------------------|
| 047 | Gleitringdichtung | mechanical seal | 504 | Stelling | adjusting ring |
| 106 | Sauggehäuse | suction casing | 507 | Spritzring | splash ring |
| 107 | Druckgehäuse | discharge casing | 523 | Wellenhülse | shaft sleeve |
| 114 | Druckstufe I | discharge stage I | 550 | Scheibe | disk |
| 114.1 | Saugstufe | suction stage | 550.1 | Scheibe | disk |
| 114.2 | Druckstufe II | discharge stage II | 551 | Abstandscheibe | spacer disk |
| 114.3 | Blindstufe | blind stage | 551.1 | Abstandscheibe | spacer disk |
| 160 | Deckel | cover | 562 | Zylinderstift | parallel pin |
| 180 | Ständer | pump frame | 562.1 | Zylinderstift | parallel pin |
| 211 | Welle | shaft | 563 | Gehäusebolzen | casing bolt |
| 230 | Laufgrad | impeller | 565 | Niet | rivet |
| 310.1 | Gleitlager | sleeve bearing | 681 | Kupplungsschutz | coupling protection |
| 310.2 | Gleitlager | sleeve bearing | 900 | Schraube | screw |
| 310.3 | Gleitlager | sleeve bearing | 901 | 6-kt. Schraube | hexagon head cap screw |
| 320 | Kugellager | ball bearing | 901.1 | 6-kt. Schraube | hexagon head cap screw |
| 330 | Lagerkörper | bearing housing | 901.2 | 6-kt. Schraube | hexagon head cap screw |
| 341 | Laterne | bearing cover | 903 | Verschlussschraube | screwed plug |
| 360 | Lagerdeckel | bearing cover | 903.1 | Verschlussschraube | screwed plug |
| 400 | Flachdichtung | gasket | 904 | Gewindestift | set screw |
| 411 | Dichtring | sealing gasket | 914 | Innen 6-kt. Schraube | hexagon socket head cap screw |
| 411.1 | Dichtring | sealing gasket | 920 | 6-kt. Mutter | hexagon nut |
| 412 | O-Ring | O-ring | 932 | Sicherungsring | locking ring |
| 412.1 | O-Ring | O-ring | 940 | Passfeder | feather key |
| 412.2 | O-Ring | O-ring | 940.1 | Passfeder | feather key |
| 441 | Gehäuse f. Wellendichtung | casing for shaft sealing | 970 | Typenschild | name plate |

Tab.1

Richtwerte für Evakuierung bei Seitenkanalpumpen in Abhängigkeit der Temperatur (gültig für Wasser)

approximate values for evacuation of side channel pumps depending on the temperature (valid for water)



Tab.2

Atmosphärendruck in Abhängigkeit von der Meereshöhe

atmospheric pressure depending on sea level

| | | | | | | | | | | |
|--|--------|------|------|------|-----|-----|-----|------|------|------|
| Höhe über Meeresspiegel height over sea level | [m] | 0 | 100 | 200 | 300 | 500 | 700 | 1000 | 1500 | 2000 |
| Atmosphärendruck atmospheric pressure | [mbar] | 1033 | 1020 | 1008 | 997 | 973 | 950 | 920 | 860 | 810 |

Tab.3

Dampfdruck p_D [bar] verschiedener Flüssigkeiten

vapour pressure p_D [bar] of various liquids

| Temperatur temperature | Äthan ethan | Aceton acetone | Ammoniak ammonia | Äthylalkohol ethyl alcohol | n-Butan n-butane | i-Butan i-butane | Anilin aniline | Äther ether | Ameisensäure formic acid | Essigsäure ethanoic acid | n-Propan n-propane | Methylalkohol methyl alcohol | Schwefeldioxyd sulphur dioxide | Schwefelkohlenstoff carbon disulphide | Toluol toluol | Wasser water |
|---------------------------|--|-------------------|---------------------|-------------------------------|---------------------|---------------------|-------------------|----------------|-----------------------------|-----------------------------|-----------------------|---------------------------------|-----------------------------------|--|------------------|-----------------|
| t °C | Dampfdruck p _D in bar / vapour pressure p _D in bar | | | | | | | | | | | | | | | |
| -40 | 7,776 | | 0,0718 | | 0,179 | | | 0,0255 | | | 1,115 | | 0,2157 | | | |
| -30 | 10,65 | 0,0149 | 1,195 | | 0,294 | 0,483 | | 0,050 | | | 1,672 | | 0,3805 | 0,0335 | | |
| -20 | 14,23 | 0,0293 | 1,902 | | 0,469 | 0,748 | | 0,0883 | | | 2,423 | | 0,6355 | 0,0609 | | |
| -10 | 18,59 | 0,0516 | 2,909 | | 0,691 | 1,103 | | 0,150 | | | 3,405 | | 1,014 | 0,1047 | | |
| ± 0 | 23,75 | 0,0856 | 4,294 | 0,0159 | 1,039 | 1,613 | | 0,247 | | 0,0044 | 4,684 | 0,0381 | 1,554 | 0,1697 | | 0,00611 |
| 10 | 30,16 | 0,1542 | 6,149 | 0,0306 | 1,50 | 2,201 | | 0,389 | 0,0245 | 0,0085 | 6,339 | 0,0699 | 2,302 | 0,2648 | 0,017 | 0,01227 |
| 20 | 37,75 | 0,246 | 8,572 | 0,0568 | 2,069 | 3,119 | | 0,589 | 0,0419 | 0,0156 | 8,334 | 0,1227 | 3,305 | 0,3996 | 0,0298 | 0,02337 |
| 30 | 47,07 | 0,377 | 11,67 | 0,1008 | 2,824 | 4,232 | | 0,864 | 0,0688 | 0,0275 | 10,807 | 0,2068 | 4,619 | 0,5848 | 0,0489 | 0,04241 |
| 40 | | 0,562 | 15,54 | 0,1722 | 3,765 | 5,609 | | 1,228 | 0,1097 | 0,0464 | 13,739 | 0,336 | 6,303 | 0,8306 | 0,0784 | 0,07375 |
| 50 | | 0,817 | 20,33 | 0,2836 | 4,98 | 7,257 | 0,00319 | 1,702 | 0,1696 | 0,0754 | 17,269 | 0,5283 | 8,417 | 1,1466 | 0,121 | 0,12335 |
| 60 | | 1,118 | | 0,4519 | 6,37 | 9,267 | 0,0075 | 2,306 | 0,2549 | 0,1186 | 20,89 | 0,8095 | | 1,549 | 0,1863 | 0,19920 |
| 70 | | 1,55 | | 0,6979 | 8,14 | 11,719 | 0,0139 | 3,061 | 0,3733 | 0,1812 | 25,79 | 1,1954 | | | 0,2689 | 0,3116 |
| 80 | | 2,08 | | 1,047 | 10,198 | | 0,0239 | 3,991 | 0,533 | 0,269 | 31,38 | 1,7298 | | 2,6998 | 0,3818 | 0,4736 |
| 90 | | 2,76 | | 1,531 | 12,55 | | 0,0389 | 5,121 | 0,7439 | 0,3915 | 36,579 | 2,445 | | | 0,5369 | 0,7011 |
| 100 | | 3,599 | | 2,184 | 15,396 | | 0,0609 | 6,478 | 1,0159 | 0,556 | | 3,384 | | 4,333 | 0,7354 | 1,0133 |
| 120 | | 5,89 | | 4,159 | 21,77 | | 0,0922 | 9,992 | | 1,059 | | 6,131 | | 6,999 | 1,267 | 1,9854 |
| 140 | | 9,149 | | 29,52 | | | 0,1327 | 14,768 | | 1,885 | | | | 10,399 | 2,2457 | 3,614 |



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