PRK Centrifugal pumps, hydrostatic sealing

Technical data

- Delivery rate
  Q_{max} = 175 l/min
- Delivery head
  H_{max} = 33 m
- Temperature range
  T = +5 °C to +60 °C
- Kinematic viscosity
  ν_{max} = 20 mm^2/s

Quality Management
DIN EN ISO 9001:2008

Environmental Management
DIN EN ISO 14001

Health and Safety Management
OHSAS 18001

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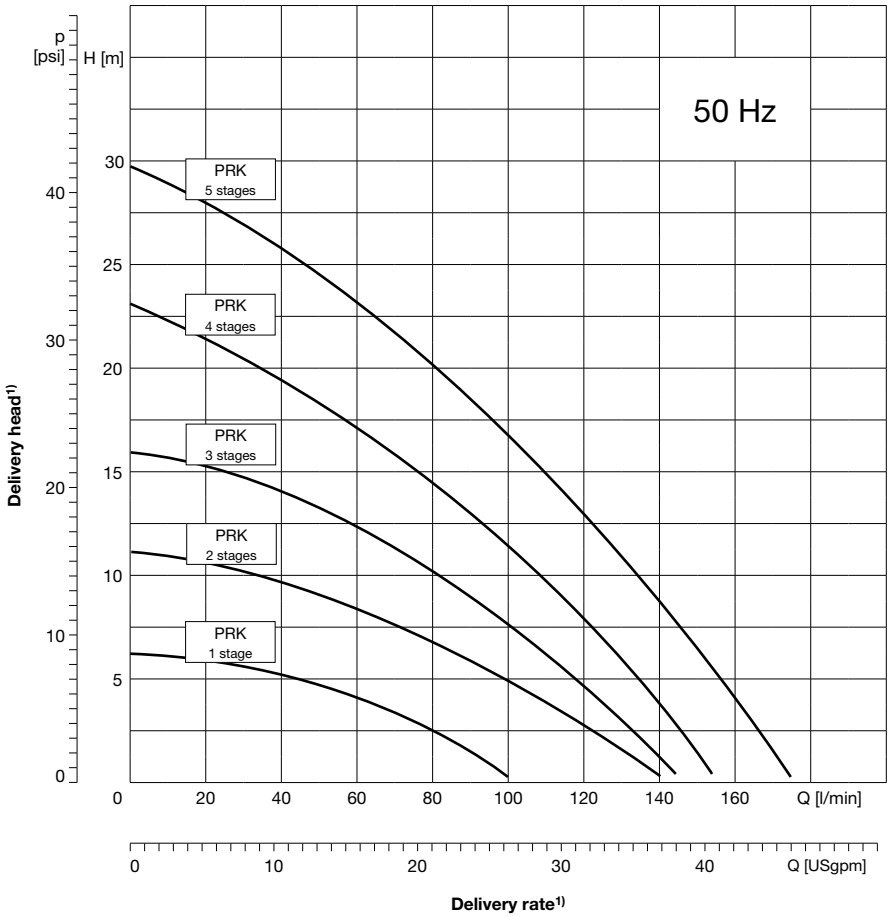
Spandau pumpen®

PRK – Immersion pumps, hydrostatic sealing

50 Hz, open impellers



Features

- Vertical multistage pump, hydrostatic sealing
- For delivery of slightly contaminated types of fluids
- Installation direcly into the reservoir
- Pressure port is located above the reservoir plate and designed with internal thread G3/4
- Wide range of immersion depths 90-410 mm

Technical data

Delivery rate Q_{max}	175 l/min
Delivery head H_{max}	29 m
Immersion depth t_{max}	375 mm
Kinematic viscosity	max. 20 mm^2/s
Delivery temperature	+5 °C to +60 °C
Grain size	max. Ø3 mm
Contamination	max. 50 g/m^3
Direction of rotation	anti-clockwise (as viewed looking down on the motor's ventilation side)
Fluids delivered	Emulsions, cooling and cutting oils, cleaning liquids, water, mild acids

Mechanical design

Component	Material
Flange	POM
Base	PPS
Shaft	Stainless steel 1.4122
Impeller	POM
Diffuser	PP
Intermediate chamber	PPS
Bearings	Deep groove ball bearing with covering disk
Pumps bottom	PP
Elastomers	NBR

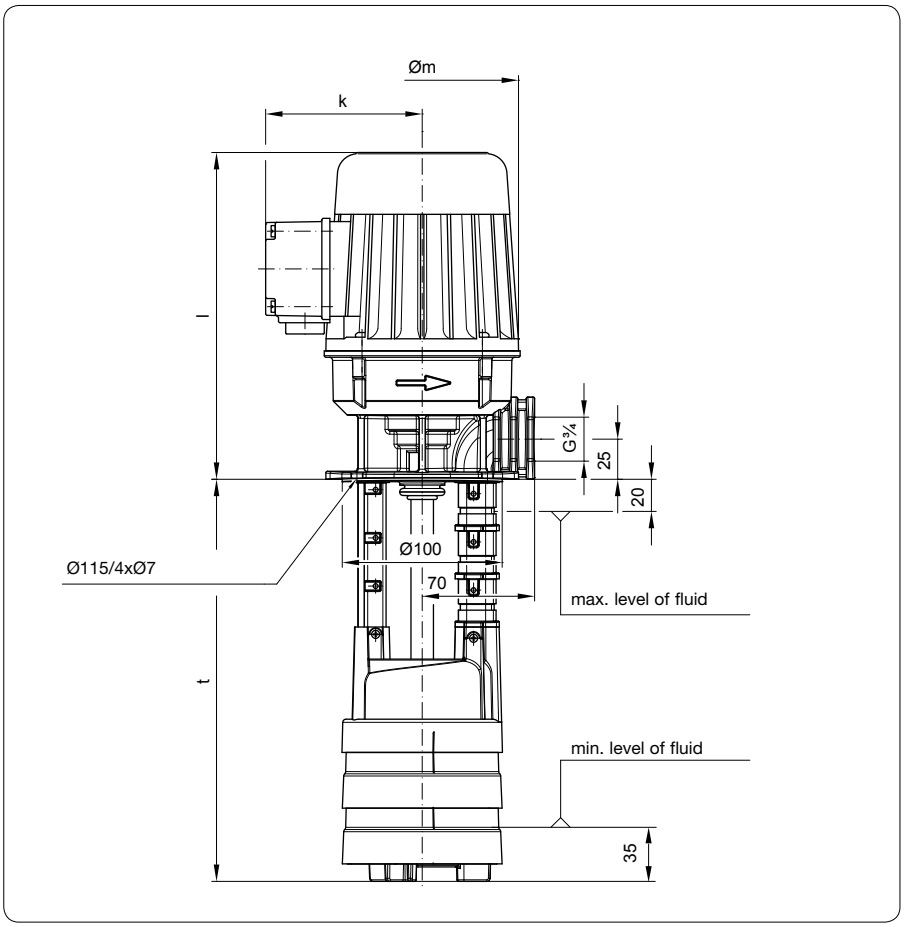
Variations

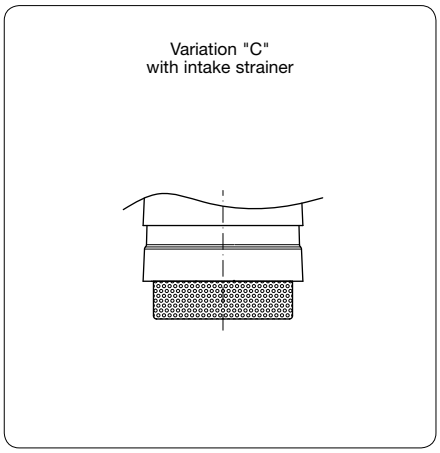
Component	Material
Intake strainer	Stainless steel 1.4301
Extension tube	PP

[1)] Data for viscosity of ~1 mm^2/s at a density of ~1 kg/dm^3. Minimum volumetric flow: 5 to 10 % of nominal delivery rate.

PRK – Immersion pumps, hydrostatic sealing

50 Hz, open impellers



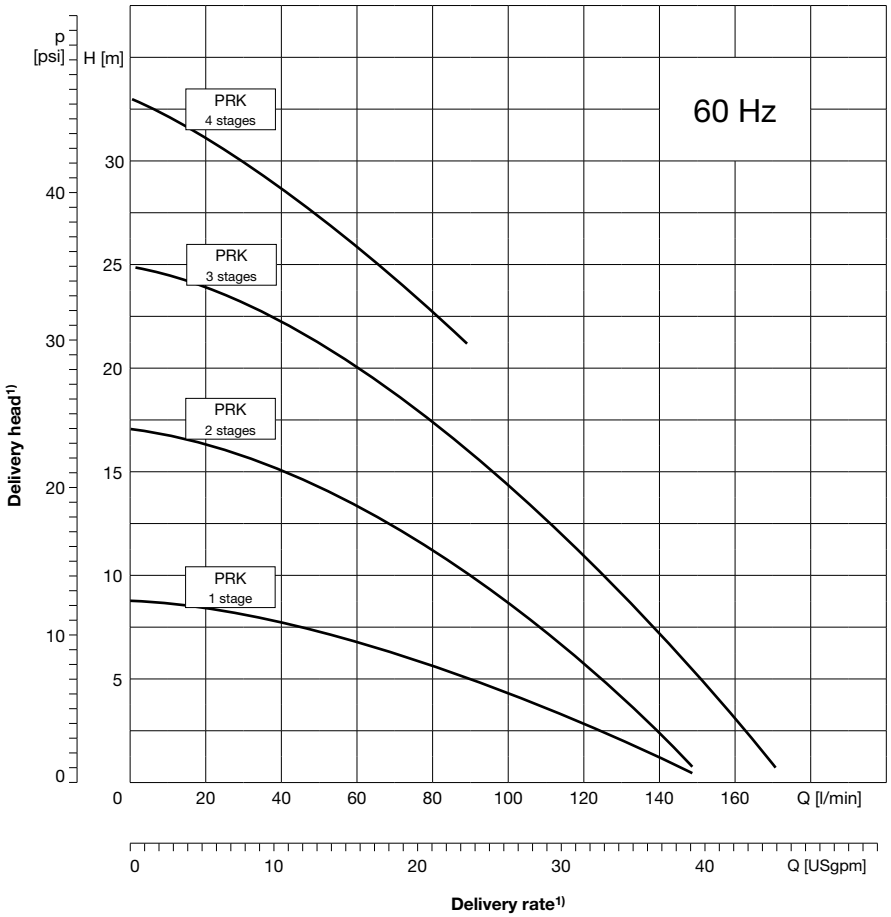


Electrical data, dimensions and weights at 50 Hz

Type of pump			Immersion depth t [mm]	Rated motor values					Dimensions [mm]			Weight [kg]	Sonic pressure [dBA]	Pressure port series (DIN ISO 228)
Series	Frame size	Stages		Voltage Δ/Y U [V]	Motor index	Output P_N [kW]	Current Δ/Y I_N [A]	Speed n_N [min^{-1}]	Øm	k	l			
PRK	03	01	90 120 150 180 210 240 270	230/400	D	0,25	1,11/0,64	2701	122	99	204	4,0 – 4,4	45	G¾
		02	125 155 185 215 245 275 305	230/400	E	0,37	1,72/1,00	2667	122	99	204	4,2 – 4,6	48	G¾
		03	160 190 220 250 280 310 340	230/400	F	0,55	2,06/1,19	2836	122	99	204	4,4 – 4,8	52	G¾
		04	195 225 255 285 315 345 375	230/400	G	0,75	2,56/1,48	2870	140	114	283	8,1 – 8,5	54	G¾
		05	230 260 290 320 350 380 410	230/400	H	1,1	4,07/2,35	2730	140	114	283	8,3 – 8,7	58	G¾

PRK – Immersion pumps, hydrostatic sealing

60 Hz, open impellers



Features

- Vertical multistage pump, hydrostatic sealing
- For delivery of slightly contaminated types of fluids
- Installation direcly into the reservoir
- Pressure port is located above the reservoir plate and designed with internal thread G3/4
- Wide range of immersion depths 90-410 mm

Technical data

Delivery rate Q_{max}	170 l/min
Delivery head H_{max}	33 m
Immersion depth t_{max}	375 mm
Kinematic viscosity	max. 20 mm^2/s
Delivery temperature	+5 °C to +60 °C
Grain size	max. Ø3 mm
Contamination	max. 50 g/m^3
Direction of rotation	anti-clockwise (as viewed looking down on the motor's ventilation side)
Fluids delivered	Emulsions, cooling and cutting oils, cleaning liquids, water, mild acids

Mechanical design

Component	Material
Flange	POM
Base	PPS
Shaft	Stainless steel 1.4122
Impeller	POM
Diffuser	PP
Intermediate chamber	PPS
Bearings	Deep groove ball bearing with covering disk
Pumps bottom	PP
Elastomers	NBR

Variations

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Intake strainer	Stainless steel 1.4301
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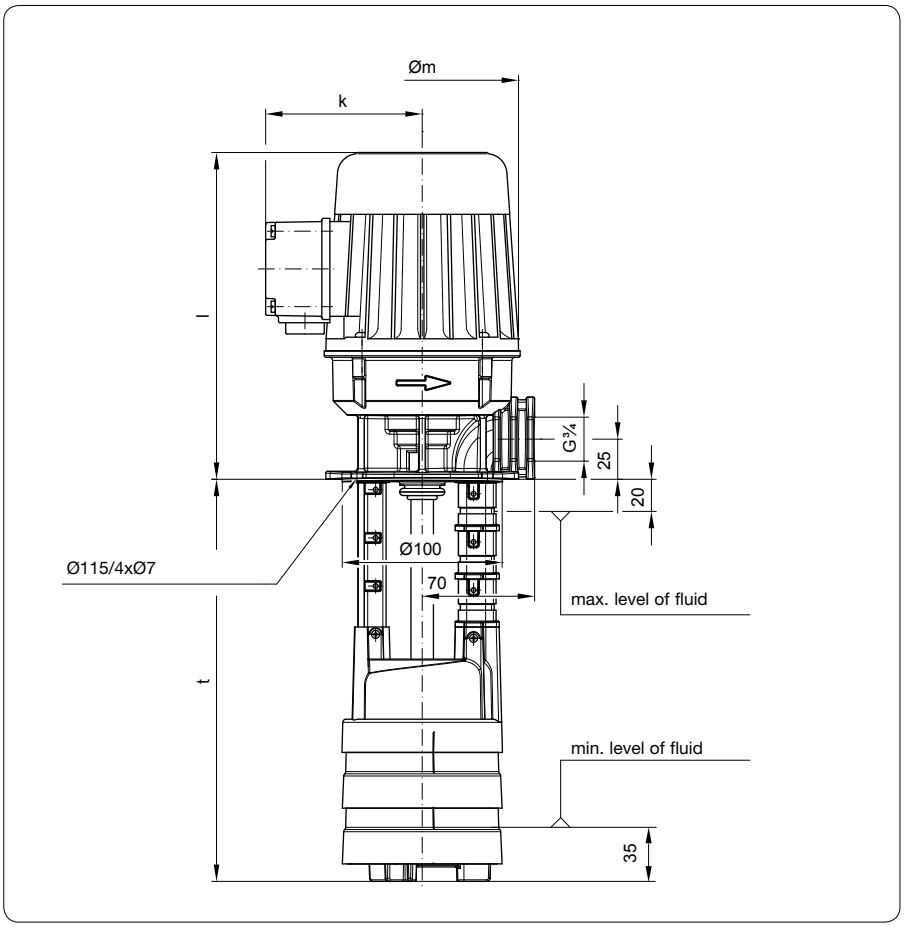
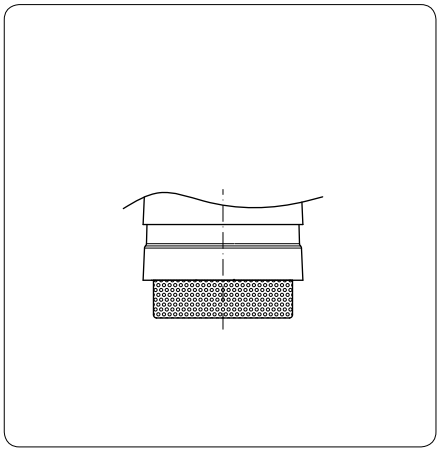
[1)] Data for viscosity of ~1 mm^2/s at a density of ~1 kg/dm^3. Minimum volumetric flow: 5 to 10 % of nominal delivery rate.

PRK – Immersion pumps, hydrostatic sealing

60 Hz, open impellers





Electrical data, dimensions and weights at 60 Hz

Type of pump			Immersion depth t [mm]	Rated motor values					Dimensions [mm]			Weight [kg]	Sonic pressure [dBA]	Pressure port series (DIN ISO 228)
Series	Frame size	Stages		Voltage Δ/Y U [V]	Motor index	Output P_N [kW]	Current Δ/Y I_N [A]	Speed n_N [min^{-1}]	Øm	k	l			
PRK	03	01	90	265/460	E	0,42	1,72/1,00	3329	122	99	204	4,0 – 4,4	48	G¾
			120											
			150											
			180											
			210											
			240											
			270											
		02	125	265/460	F	0,62	2,06/1,19	3446	122	99	204	4,2 – 4,6	52	G¾
			155											
			185											
			215											
			245											
			275											
			305											
		03	160	265/460	G	0,86	2,56/1,48	3410	140	114	283	7,9 – 8,3	54	G¾
			190											
			220											
			250											
			280											
			310											
			340											
		04	195	265/460	H	1,26	4,07/2,35	3368	140	114	283	8,1 – 8,5	58	G¾
			225											
			255											
			285											
			315											
			345											
			375											

PRK – Immersion pumps, hydrostatic sealing

Order key

P R K [ ][ ] [ ][ ] [ ] [ ][ ] [ ][ ][ ] [ ][ ] [ ][ ] [ ][ ]

Series

Frame size

03

Stages

To determine the desired number of stages
the corresponding characteristics has to be used.
01 = 1 stage
...
05 = 5 stages

Materials

P = POM (standard))

Seal

B = gap bush (standard)

Pump design

S = standard design (bottom prepared for extension tube)
C = bottom equipped with intake strainer

Immersion depth in mm

To determine the desired immersion depth the appropriate table
"Electrical data, dimensions and weights" has to be used.
090 = 90 mm
...
410 = 410 mm

Motor index

To determine the desired motor index the appropriate table
"Electrical data, dimensions and weights" has to be used.
Example:
E = 0,55 kW

Power supply

01 = 230/400 V bei 50 Hz; 265/460 V bei 60Hz
05 = 230/400 V 50 Hz
Further designs on request.

Motorausführung

AA = standard to 0,55 kW (insulation class F, IP 54, 2-pole,)
BA = standard from 0,75 kW (insulation class F, IP 54, 2-pole,, IE2)
Further designs on request.

Order example: PRK0304PBS255G05BA
Series:: **PRK**, frame size: **03**, **4** stages,, material: **P** POM plastic, seal: **B** gap bush, pump design: **S** standard design, immersion depth: **225** mm, motor index:: **G** 0,75 kW, power supply: **05** 230/400 V 50 Hz;
Motor design: **BA** standard (IE2)

Notes

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