



SCHÄFER & URBACH

System and High Pressure Technology

Pump Units

Process pumps

Series S&U PPK



Pump Units ◀

High- pressure technology ▶

Water hydraulics ▶

Service / After Sales ▶



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System and High Pressure Technology

Tradition as basis – high-pressure as motivation

As specialists for sophisticated solutions SCHÄFER & URBACH have become renowned in the following areas.

▶ Pump Units

- High-pressure pumps HDP
- Process pumps PPK
- Mud pumps BT
- Slurry-Pumps SPL
- Steam- and Duplex pumps
- Special pumps

▶ High-pressure technology

- Tank- and industrial cleaning systems
- HP Cleaning systems
- HP Cleaning accessories

▶ Water hydraulics

- Descaling systems
- Drive systems for presses

▶ Service / After Sales

- Engineering
- Welding technology
- Commissioning



For more than 80 years SCHÄFER & URBACH have developed and supplied equipment and components for systems and high-pressure plants to customers throughout the world. All of the supplied equipment is manufactured at the SCHÄFER & URBACH workshop. The company assumes responsibility, as it supplies complete high-pressure and systems solutions made up of components which all fit together seamlessly – forming a perfect match and being ... **all from one source.**



▶ Design

▶ Manufacture

▶ Commissioning

▶ After sales service

Industrial pumps – The right solution for any requirement

Reliability, robustness and high quality – these are the features on which SCHÄFER & URBACH has built the international success of its range of industrial pumps. The maintenance-friendly design, flexibility in combination and high manufacturing quality of the plunger and piston pumps make these industrial pumping units optimal conveying means for a broad bandwidth of applications.

All industrial pumps are tested for tightness, proper functioning and performance in a practice-oriented procedure. All data are digitally logged and evaluated.



Process pump S&U PPK

The lying triplex (three-plunger) pumps of the S&U PPK type have been designed as process pumps for operating pressures up to 1,000 bar and drive powers up to 450 kW.

Fluid section

- ▶ Depending on the design of the fluid section, the pump can convey aqueous and low-viscosity, as well as abrasive fluids up to 400 °C in a wide range of chemical, petrochemical and general process technological applications.

Specifications and standards

- ▶ The pumps are laid out according to the generally applicable standards, including EN 809, and EN ISO 16330 or EN ISO 13710, as well as the new API - Standard 674/3.

Accessory equipment

▶ Resonators – Pulsation dampening for piston and plunger pumps

Pump speed: >100 1/min/h

Pressure range: up to 500 bar

Pumping rate: < 3000 l/min

Temperature: -10 up to 200 °C

▶ New liner tensioning device – Replacement of wear parts in a matter of seconds

As liners in process pumps are wear parts, they must be replaced from time to time.

For faster and simpler replacement of the liners, SCHÄFER & URBACH has developed an innovative, fully hydraulic tensioning device.

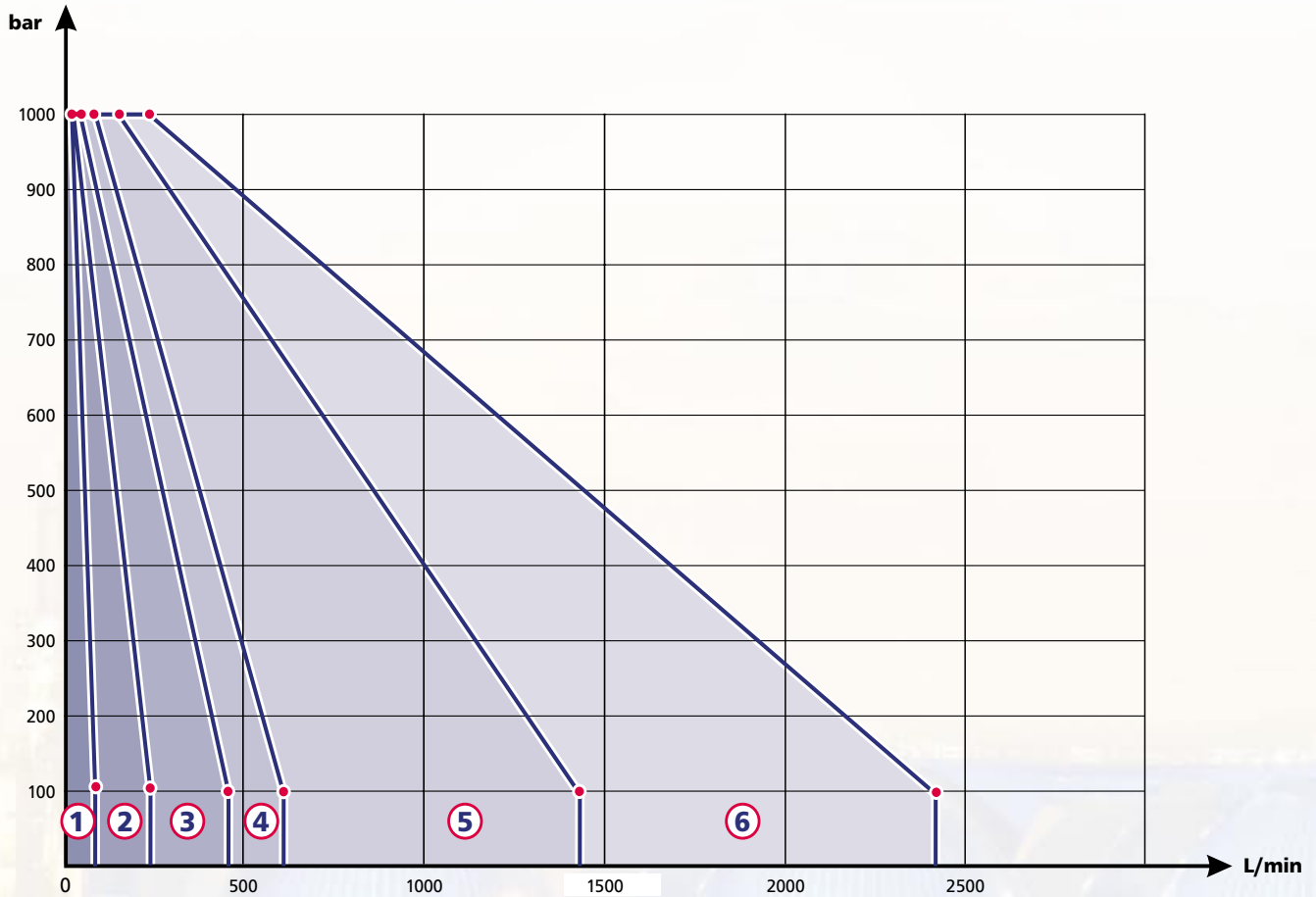
▶ Valve cap tensioning device – Re-tensioning of valve cap in a matter of seconds

Valve caps must be re-tensioned from time to time. An innovative tensioning device developed by SCHÄFER & URBACH now speeds up and facilitates this operation.



Technical specifications overview

Serie BT



Section	Description	Image	Section	Description	Image
1	PPK 16 kW max.: 15 bar max.: 1000 l/min max.: 77,3		4	PPK 80 kW max.: 150 bar max.: 1000 l/min max.: 634,6	
2	PPK 32 kW max.: 50 bar max.: 1000 l/min max.: 235,7		5	PPK 125 kW max.: 270 bar max.: 1000 l/min max.: 1426,6	
3	PPK 50 kW max.: 85 bar max.: 1000 l/min max.: 458,4		6	PPK 200 kW max.: 450 bar max.: 1000 l/min max.: 2412,7	



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Triplex - process pump S&U PPK 16

The process pump S&U PPK 16 is a compact casting construction with a two-bearing crankshaft and a maximum piston force of 16 kN.

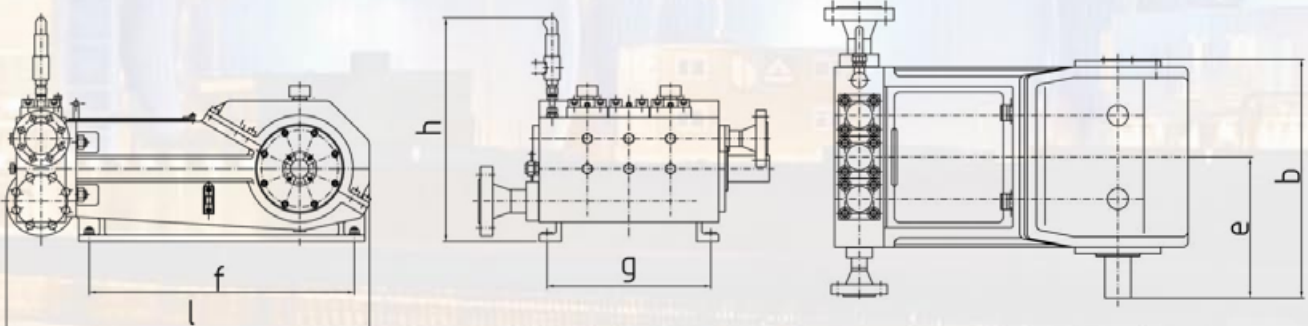
- ▶ Drive power max.: **15 kW**
- ▶ Piston force max.: **16.000 N**
- ▶ Stroke: **36 mm**



Piston-Ø	Inch	1,772	1,575	1,378	1,181	0,984	0,787	0,551
	mm	45	40	35	30	25	20	14
Operating press. max	bar	100	125	165	225	325	510	1000
Revolutions per min		Pumping rate in l/min						
450 min ⁻¹		77,3	61,1	46,8	34,4	23,9	15,3	7,5
400 min ⁻¹		68,7	54,3	41,6	30,5	21,2	13,6	6,7
300 min ⁻¹		51,5	40,7	31,2	22,9	15,9	10,2	5,0
200 min ⁻¹		34,4	27,1	20,8	15,3	10,6	6,8	3,3
150 min ⁻¹		25,8	20,4	15,6	11,5	8,0	5,1	2,5
100 min ⁻¹		17,2	13,6	10,4	7,6	5,3	3,4	1,7
50 min ⁻¹		8,6	6,8	5,2	3,8	2,7	1,7	0,8

Pumping rates at 100% vol. efficiency. Other speeds and capacities on request.

Dimensions and weight



	l (mm)	b (mm)	h (mm)	e (mm)	f (mm)	g (mm)
PPK 16	760	680	350	324	505	370
Weight:	Approx. 600 kg					



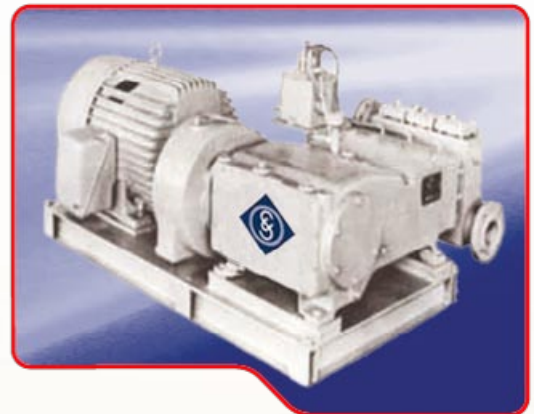
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Triplex - process pump S&U PPK 32

The process pump S&U PPK 32 is a compact casting construction with a two-bearing crankshaft and a maximum piston force of 32 kN.

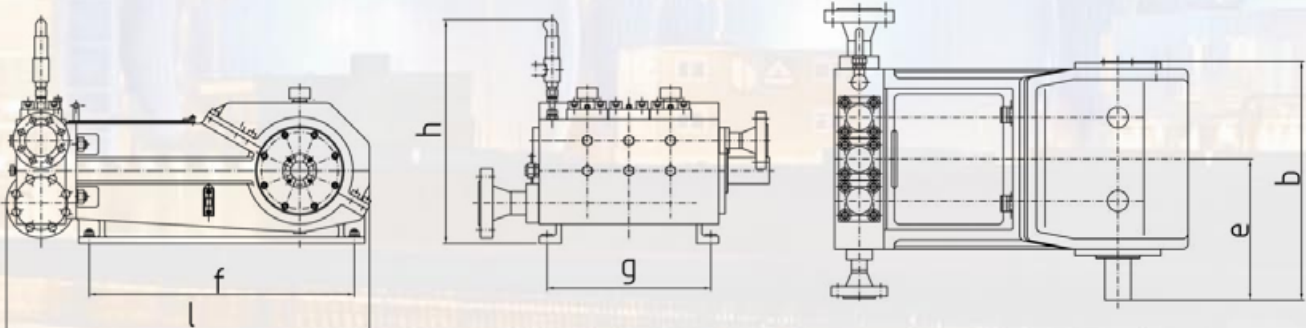
- ▶ Drive power max.: **50 kW**
- ▶ Piston force max.: **32.000 N**
- ▶ Stroke: **63 mm**



Piston-Ø	Inch	2,480	2,165	1,772	1,378	1,181	0,984	0,787
	mm	63	55	45	35	30	25	20
Operating press. max	bar	100	135	200	330	450	650	1000
Revolutions per min		Pumping rate in l/min						
400 min ⁻¹		235,7	179,6	120,2	72,7	53,4	37,1	23,8
350 min ⁻¹		206,2	157,2	105,2	63,6	46,8	32,5	20,8
300 min ⁻¹		176,7	134,7	90,2	54,6	40,1	27,8	17,8
200 min ⁻¹		117,8	89,8	60,1	36,4	26,7	18,6	11,9
150 min ⁻¹		88,4	67,4	45,1	27,3	20,0	13,9	8,9
100 min ⁻¹		58,9	44,9	30,1	18,2	13,4	9,3	5,9
50 min ⁻¹		29,5	22,5	15,0	9,1	6,7	4,6	3,0

Pumping rates at 100% vol. efficiency. Other speeds and capacities on request.

Dimensions and weight



	l (mm)	b (mm)	h (mm)	e (mm)	f (mm)	g (mm)
PPK 32	1170	840	460	461	760	470
Weight:	Approx. 1.200 kg					



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Triplex - process pump S&U PPK 50

The process pump S&U PPK 50 is a compact casting construction with a diagonally split housing and a two-bearing crankshaft and a maximum piston force of 50 kN.

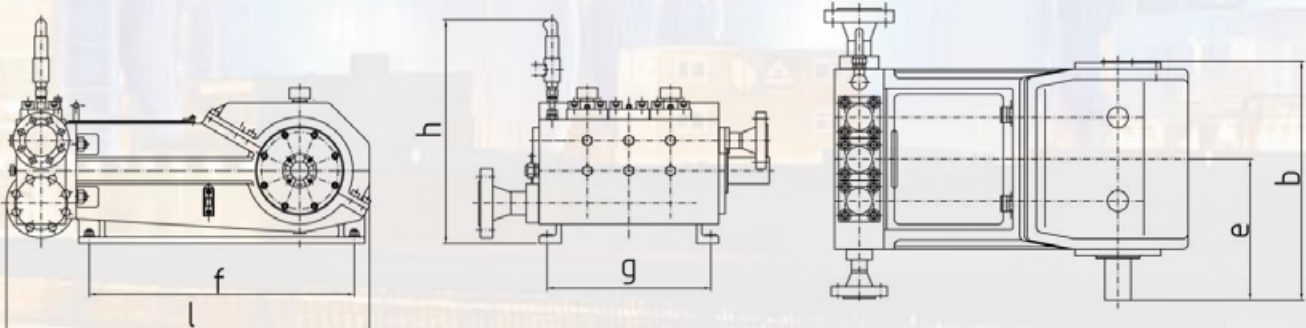
- ▶ Drive power max.: **85 kW**
- ▶ Piston force max.: **50.000 N**
- ▶ Stroke: **80 mm**



Piston-Ø	Inch	3,150	2,756	2,362	1,969	1,575	1,181	0,984
	mm	80	70	60	50	40	30	25
Operating press. max	bar	100	130	175	225	395	705	1000
Revolutions per min		Pumping rate in l/min						
	380 min⁻¹	458,4	351,0	257,9	179,1	114,6	64,5	44,8
	350 min⁻¹	422,2	323,3	237,5	164,9	105,6	59,4	41,2
	300 min⁻¹	361,9	277,1	203,6	141,4	90,5	50,9	35,3
	200 min⁻¹	241,3	184,7	135,7	94,2	60,3	33,9	23,6
	150 min⁻¹	181,0	138,5	101,8	70,7	45,2	25,4	17,7
	100 min⁻¹	120,6	92,4	67,9	47,1	30,2	17,0	11,8
	50 min⁻¹	60,3	46,2	33,9	23,6	15,1	8,5	5,9

Pumping rates at 100% vol. efficiency. Other speeds and capacities on request.

Dimensions and weight



	l (mm)	b (mm)	h (mm)	e (mm)	f (mm)	g (mm)
PPK 50	1340	952	600	507	900	620
Weight:	Approx. 1.500 kg					



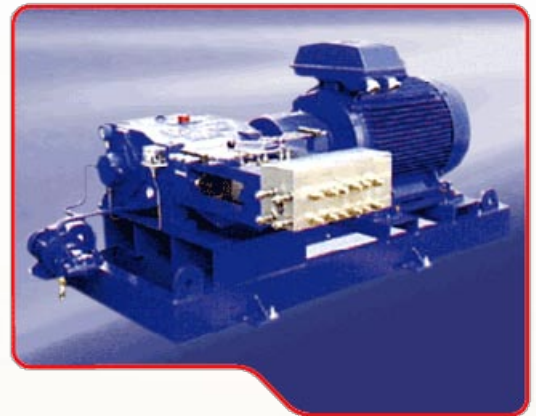
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Triplex - process pump S&U PPK 80

The process pump S&U PPK 80 is a modern casting construction with a split housing, a two-bearing crankshaft and a maximum piston force of 80 kN.

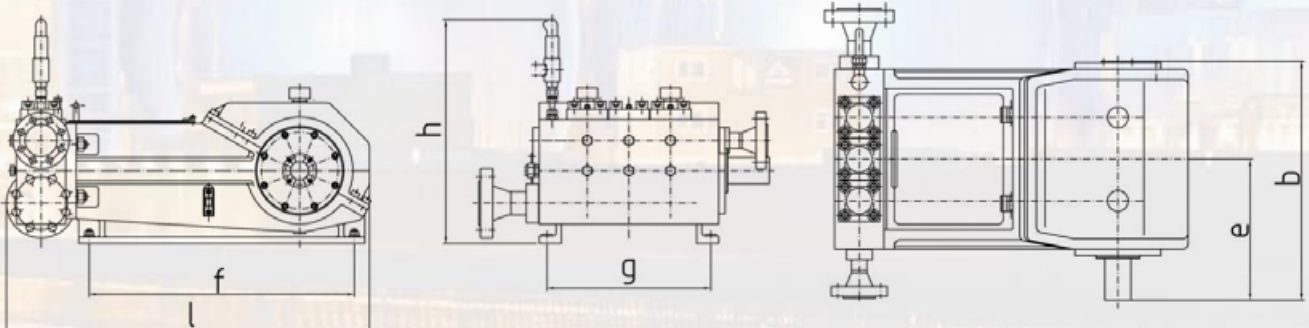
- ▶ Drive power max.: **150 kW**
- ▶ Piston force max.: **80.000 N**
- ▶ Stroke: **95 mm**



Piston-Ø	Inch	3,543	3,150	2,756	2,362	1,969	1,575	1,260
	mm	90	80	70	60	50	40	32
Operating press. max	bar	125	160	205	280	405	635	1000
Revolutions per min		Pumping rate in l/min						
	350 min⁻¹	634,6	501,4	383,9	282,0	195,9	125,3	80,2
	300 min⁻¹	543,9	429,8	329,0	241,7	167,9	107,4	68,8
	250 min⁻¹	453,3	358,1	274,2	201,5	139,9	89,5	57,3
	200 min⁻¹	362,6	286,5	219,4	161,2	111,9	71,6	45,8
	150 min⁻¹	272,0	214,9	164,5	120,9	83,9	53,7	34,4
	100 min⁻¹	181,3	143,3	109,7	80,6	56,0	35,8	22,9
	50 min⁻¹	90,7	71,6	54,8	40,3	28,0	17,9	11,5

Pumping rates at 100% vol. efficiency. Other speeds and capacities on request.

Dimensions and weight



	l (mm)	b (mm)	h (mm)	e (mm)	f (mm)	g (mm)
PPK 80	1425	1034	665	548	1030	700
Weight:	Approx. 1.800 kg					



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Triplex - process pump S&U PPK 125

The process pump S&U PPK 125 is a modern casting construction with a split housing, a four-bearing crankshaft and a maximum piston force of 125 kN.

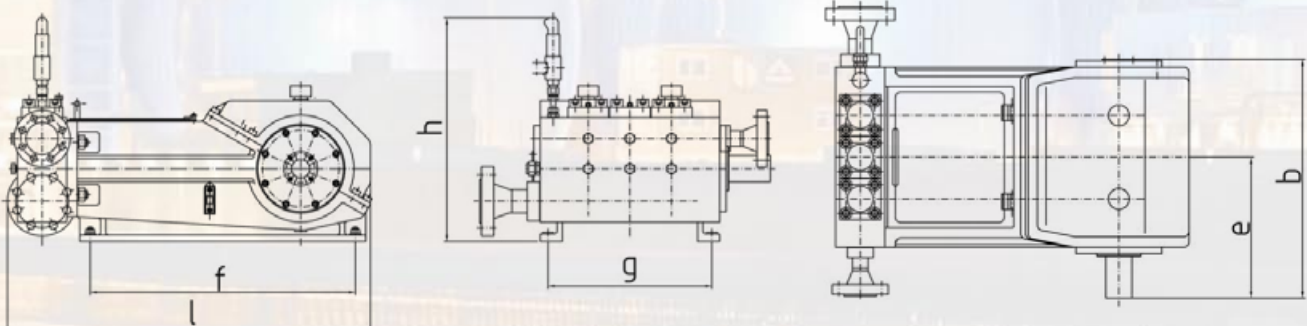
- ▶ Drive power max.: **270 kW**
- ▶ Piston force max.: **125.000 N**
- ▶ Stroke: **125 mm**



Piston-Ø	Inch	4,921	3,937	3,150	2,756	2,362	1,969	1,575
	mm	125	100	80	70	60	50	40
Operating press. max	bar	100	160	245	325	440	635	1000
Revolutions per min		Pumping rate in l/min						
	310 min⁻¹	1426,6	913,0	584,3	447,4	328,7	228,3	146,1
	250 min⁻¹	1150,5	736,3	471,2	360,8	265,1	184,1	117,8
	200 min⁻¹	920,4	589,0	377,0	288,6	212,1	147,3	94,2
	150 min⁻¹	690,3	441,8	282,7	216,5	159,0	110,4	70,7
	100 min⁻¹	460,2	294,5	188,5	144,3	106,0	73,6	47,1
	50 min⁻¹	230,1	147,3	94,2	72,2	53,0	36,8	23,6

Pumping rates at 100% vol. efficiency. Other speeds and capacities on request.

Dimensions and weight



	l (mm)	b (mm)	h (mm)	e (mm)	f (mm)	g (mm)
PPK 125	2000	1438	840	775	1030	1000
Weight:	Approx. 3.800 kg					



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Triplex - process pump S&U PPK 200

The process pump S&U PPK 200 is a compact casting construction with a split housing and a four-bearing crankshaft and a maximum piston force of 200 kN.

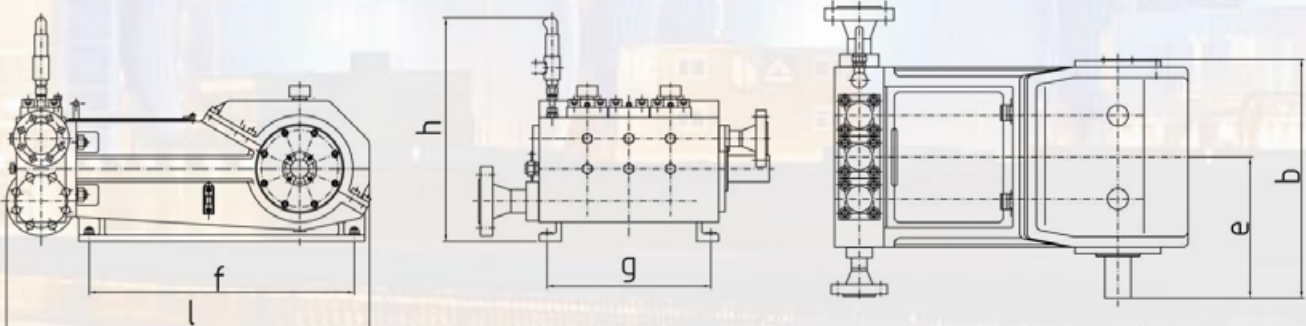
- ▶ Drive power max.: **450 kW**
- ▶ Piston force max.: **200.000 N**
- ▶ Stroke: **160 mm**



Piston-Ø	Inch	6,299	4,921	3,937	3,150	2,756	2,362	1,969
	mm	160	125	100	80	70	60	50
Operating press. max	bar	100	160	255	395	520	705	1000
Revolutions per min		Pumping rate in l/min						
	250 min⁻¹	2412,7	1472,6	942,5	603,2	461,8	339,3	235,6
	200 min⁻¹	1930,2	1178,1	754,0	482,5	369,5	271,4	188,5
	150 min⁻¹	1447,6	883,6	565,5	361,9	277,1	203,6	141,4
	100 min⁻¹	965,1	589,0	377,0	241,3	184,7	135,7	94,2
	50 min⁻¹	482,5	294,5	188,5	120,6	92,4	67,9	47,1

Pumping rates at 100% vol. efficiency. Other speeds and capacities on request.

Dimensions and weight



	l (mm)	b (mm)	h (mm)	e (mm)	f (mm)	g (mm)
PPK 200	2500	1500	1000	830	1220	1100
Weight:	Approx. 6.200 kg					



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Tradition as basis – high-pressure as motivation



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DIN EN ISO 9001:2008 ◀

EU Guidelines: 97/23/EG pressure equipment ◀

EU Guidelines: 94/9/EG ATEX for
cleaning lances and high-pressure equipment ◀

EU Guidelines: ZH 1/406 for
liquid jets ◀

Qualification according
to DIN 18800 Part 7 ◀

Certificate according to
DIN EN 3834-2 for welded structures ◀

Certificate according to
AD Guidelines HP 0 (TRB 200), TRD and TRR 100 ◀

Specialist firm according to §19 WHG ◀