

HDP 120 High Pressure Pump Series

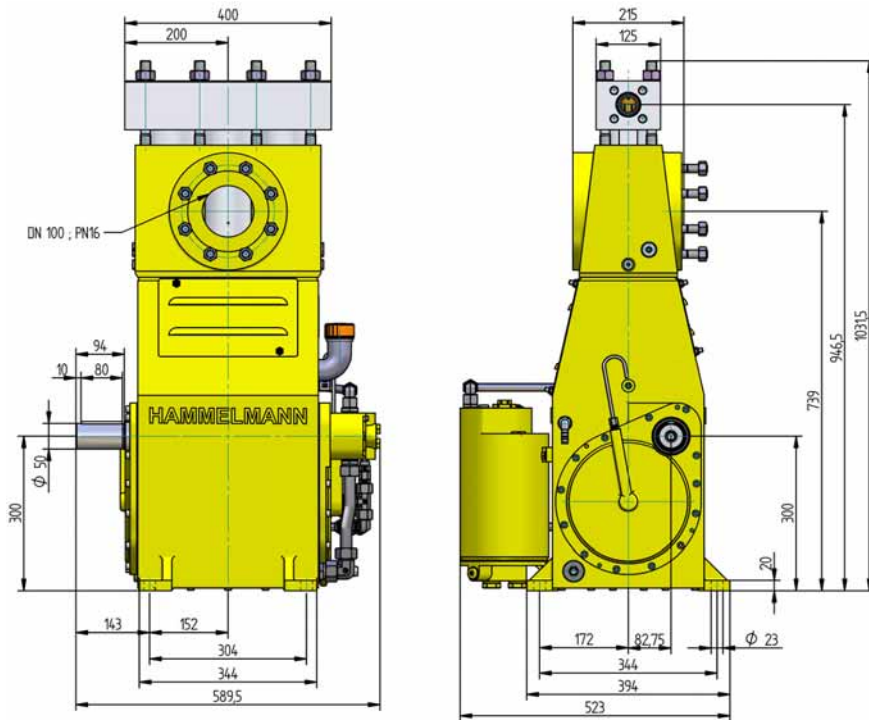
Design criteria

Hammelmann high pressure pumps are built to operate at the continuous maximum duty stated in the performance parameters. Just compare the crankshaft speed, average plunger speed, plunger diameter and power rating.

High pressure pump

Weight: approx. 380 kg

Energy efficient →



Features

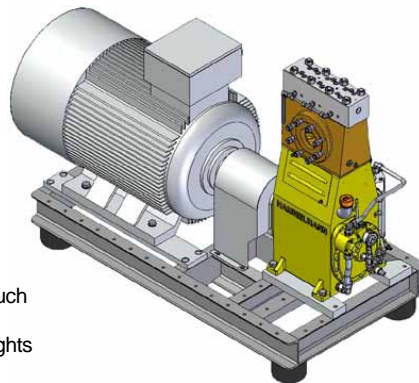
- Power ratings up to 120 kW
- Vertical 3 cylinder design
- Wide variety of complementary ancillaries

Quality and reliability

- Stainless steel pump head free of alternating stress
- Bellows form hermetic seal between the suction chamber and crank section
- Choice of application specific seal assemblies
- Solid ceramic or tungsten carbide plungers
- Choice of bronze (standard) or stainless steel suction chamber
- Crank section calculation by 'Finite element method' ensures long working life under continuous load
- Integral speed reduction gear
- Pressurised oil lubrication system with oil cooler/filter

Stationary unit with electric motor

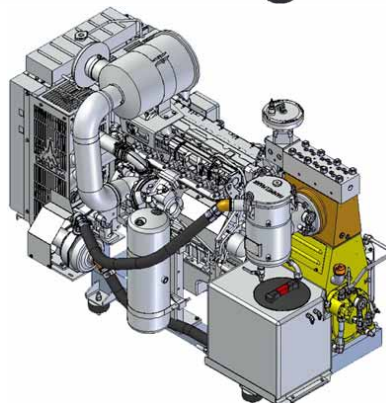
Length: 1856 mm
Width: 850 mm
Height: 1290 mm
Weight: approx. 1600 kg at 110 kW



Main dimensions without accessories such as suction line, pressure regulator etc. Detailed dimensional drawings and weights available on request.

Stationary unit with diesel motor

Length: 1990 mm
Width: 1160 mm
Height: 1405 mm
Weight: approx. 1420 kg at 120 kW without full fuel tank



HDP 120 series, technical data

Performance parameters (Standard design)

Note: Actual flow rates for water as pumped medium (volumetric efficiency has already been taken into account).

HDP	Q [l/min]	Required power rating [kW]						D	r.p.m.	
		45	55	75	90	110	120		n 1	n 2
		Operating pressure [bar]								
124	14 / 12*	1750	2150*	2950*				17,5	1500	370
	17 / 15*	1450	1750	2450*	2900*		1500/1800		440	
	20 / 18*	1200	1500	2050*	2450*	3000*	1800/2150		530	
124	18 / 17*	1300	1600	2150*	2600*		20	1500	370	
	22 / 20*	1100	1350	1850	2200*	2600*		1500/1800	440	
	26 / 24*	930	1150	1550	1850	2250*		1800/2150	530	
*Ultra high pressure										
123	28	850	1050	1400	1650		25	1500	370	
	33	700	850	1200	1400	1650		1500/1800	440	
	40	600	700	1000	1200	1450		1800/2150	530	
122	40	600	700	1000	1150		30	1500	370	
	48	500	600	800	1000	1150		1500/1800	440	
	57	400	500	700	830	1000		1800/2150	530	
	55	430	530	720	850		35	1500	370	
	66	360	440	600	720	850		1500/1800	440	
	78	300	370	510	610	750		1800/2150	530	
	72	330	410	560	650		40	1500	370	
	87	280	340	460	550	650		1500/1800	440	
	104	230	280	390	460	570		1800/2150	530	
	92	260	320	440	520		45	1500	370	
	111	220	270	370	440	520		1500/1800	440	
	133	180	220	310	370	450		1800/2150	530	
	115	210	260	360	420		50	1500	370	
	138	180	220	300	360	420		1500/1800	440	
	165	150	180	250	300	360		1800/2150	530	
139	180	220	290	350		55	1500	370		
166	140	180	250	290	350		1500/1800	440		
199	120	150	200	240	300		1800/2150	530		
167	150	180	250	290		60	1500	370		
200	120	150	210	250	290		1500/1800	440		
239	100	120	170	200	250		1800/2150	530		
227	110	130	180	210		70	1500	370		
272	90	110	150	180	210		1500/1800	440		
326	70	90	120	150	180		1800/2150	530		

- Rod force: 82 kN
- Stroke: 55 mm
- Mean piston speed at n₂
- 370 r.p.m. = 0,67 m/sec
- 440 r.p.m. = 0,81 m/sec
- 530 r.p.m. = 0,96 m/sec

Typical high pressure pump units



- Stationary unit with electric motor



- Road going or stationary trailer units with sound damping cover

HDP	Seal **	Sealing system
124	Dynamic	Tungsten carbide plunger & bushing
	Packing	Special ceramic plunger *** / packing
123	Dynamic	Ceramic plunger / bronze bushing
	Packing	Ceramic plunger / packing
122	Dynamic	Ceramic plunger / bronze bushing
	Packing	Ceramik plunger / packing

D = Piston/Plunger dia. [mm]

n1 = Motor/Engine r.p.m.

n2 = Crankshaft r.p.m.

Conversion table

Rating 1 kW = 1.34 HP

Op. pressure 1 bar = 14.5 psi

Flow rate 1 l = 0.264 US gallon

1 l = 0.22 Imp. gallon



- 10 or 20 foot sound damped container versions



Hammelmann plunger pumps convert 93 to 98 % of the shaft power to hydraulic energy.

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