

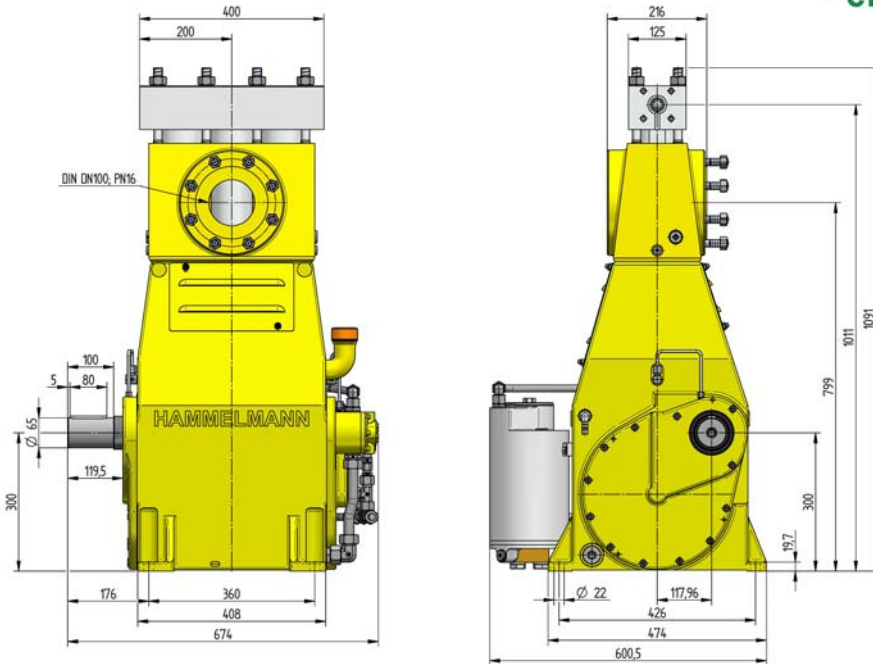
HDP 200 High Pressure Pump Series

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. 1,157 lbs



Features

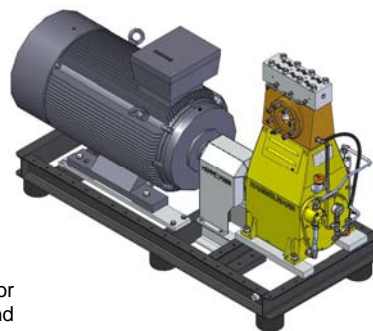
- Power ratings up to 270 HP
- Vertical 3 cylinder design
- Wide variety of complementary ancillaries

Quality and reliability

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

Stationary unit with electric motor

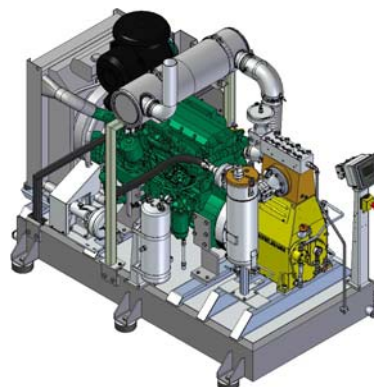
Length: 80.2 inch
 Width: 33.5 inch
 Height: 54.3 inch
 Weight: approx. 4,409 lbs at 215 HP



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: 100.8 inch
 Width: 60.6 inch
 Height: 80.7 inch
 Weight: approx. 7,055 lbs at 315 HP with full fuel tank



HDP 200 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 [gpm]	Required power rating [HP]						D	r.p.m.	
		100	120	150	175	215	270		n 1	n 2
		Operating pressure [psig]								
204	5.5/5.3*	27550	33350*	41330*	46400*			17,5	1500	416
	6.6/6.1*	22480	27550	34080*	40600*	46400*	1500/1800		495	
	7.9/7.4*	19580	23200	29000*	34080*	41330*	1800/2150		593	
	7.7/7.4*	21030	25380	30450*	36250*	40600*	20	1500	416	
	9/8.7*	17400	21030	25380	31180*	37700*		1500/1800	495	
	10.8/10.6*	14500	17400	21750	25380	31180*		1800/2150	593	
203	11.4	13780	16680	19580	23930	26100	25	1500	416	
	13.7	11600	14500	16680	19580	23930		1500/1800	495	
	16.4	9430	11600	13780	16680	20300		1800/2150	593	
	14.5	10880	13050	15950	18850	20740	28	1500	416	
	17.2	8700	10880	13050	15950	18850		1500/1800	495	
	20.6	7250	8700	10880	13050	15950		1800/2150	593	
202	16.1	9430	11170	13780	16680	17980	30	1500	416	
	19.3	7830	9430	11600	13780	16680		1500/1800	495	
	23.0	6530	7980	9430	11600	13780		1800/2150	593	
	20.6	7540	9140	11170	13490	14940	33	1500	416	
	24.3	6380	7690	9430	11310	13780		1500/1800	495	
	29.0	5370	6530	980	9570	11600		1800/2150	593	
	22.2	6820	8270	10010	12040	13200	35	1500	416	
	26.4	5800	6960	8410	10150	12330		1500/1800	495	
	31.7	4790	5800	7110	8410	10300		1800/2150	593	
	29.3	5220	6380	7690	9280	10150	40	1500	416	
	34.8	4350	5370	6530	7830	9430		1500/1800	495	
	41.7	3630	4500	5370	6530	7830		1800/2150	593	
	37.8	4210	5080	6090	7400	7980	45	1500	416	
	44.6	3480	4210	5080	6090	7400		1500/1800	495	
	53.3	2900	3480	4350	5220	6240		1800/2150	593	
	47.0	3340	4060	4930	5950	6530	50	1500	416	
	55.7	2900	3340	4210	4930	6090		1500/1800	495	
	66.5	2320	2900	3480	4210	5080		1800/2150	593	
	57.0	2760	3340	4060	4930	5370	55	1500	416	
	67.1	2320	2760	3480	4060	4930		1500/1800	495	
	80.0	2030	2320	2900	3480	4210		1800/2150	593	
	67.1	2320	2760	3480	4060	4500	60	1500	416	
	79.2	2030	2320	2900	3480	4210		1500/1800	495	
	94.8	1600	2760	2470	2900	3480		1800/2150	593	
	78.7	2030	2470	2900	3480	3920	65	1500	416	
	93.7	1740	2030	2470	2900	3630		1500/1800	495	
	112.2	1450	1740	2030	2470	3050		1800/2150	593	
	91.3	1740	2030	2470	3050	3340	70	1500	416	
108.0	1450	1740	2180	2610	3050	1500/1800		495		
129.1	1160	1450	1740	2180	2610	1800/2150		593		

*Ultra high pressure

- Rod force: 19,783 lbf
- Stroke: 2.95 inch
- Mean piston speed at n₂
416 r.p.m. = 3.4 feet/sec
495 r.p.m. = 4.1 feet/sec
593 r.p.m. = 4.9 feet/sec

Typical high pressure pump units



- Mobile unit with electric motor



- Road going trailer or stationary units with sound damping cover



- 10 or 20 foot sound damped container versions

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

HDP	Seal **	Sealing system
174	Dynamic	Tungsten carbide plunger & bushing
	Packing	Special ceramic plunger *** / packing
173	Dynamic	Ceramic plunger / bronze bushing
	Packing	Ceramic plunger / packing
172	Dynamic	Ceramic plunger / bronze bushing
	Packing	Ceramik plunger / packing

** The dynamic high pressure sealing extends the advantages of the labyrinth design with further increased efficiency.

*** Special ceramic plungers up to max. 43,500 psi

D = Piston/Plunger dia. [mm]

n1 = Motor/Engine r.p.m.

n2 = Crankshaft r.p.m.

Conversion table

Rating 1 hp = 0,746 kW

Op. pressure 1 psi = 0,069 bar

Flow rate 1 gpm = 0,227 m³/h



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